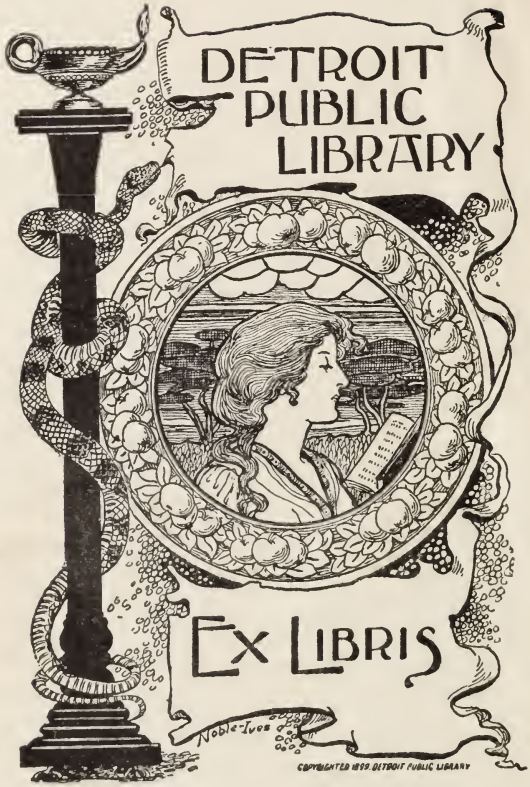

YEAR BOOK

of the

STATE OF COLORADO

1918

DETAILED INFORMATION REGARDING THE STATE, ITS RESOURCES, OPPORTUNITIES AND ATTRACTIONS, COMPILED FROM OFFICIAL AND SEMI-OFFICIAL SOURCES FOR THE USE OF ALL WHO ARE INTERESTED IN ITS WELFARE AND DEVELOPMENT

STATE BOARD OF IMMIGRATION

Governor Julius C. Gunter, President
Thomas B. Stearns, Denver — L. Wirt Markham, Lamar
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Howard D. Sullivan, Statistician

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Table of Contents

Foreword

IN the preparation of data for the first Year Book ever issued by the State of Colorado the Immigration Bureau has had in mind the necessity of preserving information which cannot fail to be of value from year to year—a need which has been peculiarly emphasized during the past few months by reason of the constant demands of state and national authorities for information as to the part the state can play in the national program of preparedness.

No pretense is made that this book contains all the data which a work of such character should contain. Limited time and the lack of legislation which will require the compilation of authoritative statistics by local authorities tended to hinder the work and to render impossible some features which had been planned when the publication was first determined upon. In a number of instances local authorities failed to send the information requested, and in such cases it has been necessary to make estimates with the best information available. These estimates, of course, may not be absolutely accurate, but are as nearly accurate as possible under the circumstances. It is believed, however, that the book will meet a wide demand for information and will be of material aid to all who are interested in the progress, development and opportunities of Colorado.

The Bureau acknowledges with thanks the willing assistance of county authorities, state officials and commercial club executives, to whose co-operation much of the success of this work is to be attributed. In future years, with this as a guide, more comprehensive data will be made possible.

THE COLORADO STATE BOARD OF IMMIGRATION.

Denver, Colorado, May 15, 1918.

What States Are Doing to Promote Immigration

THE work carried on by the Colorado State Board of Immigration is best described by the statute creating the board, which was adopted in 1909 and which provides that the duties shall be:

"To collect reliable information and statistics regarding agriculture, stock-growing and feeding, horticulture, mining, manufacturing, climate and health in Colorado, and to publish the same with a view to attracting health-seekers, tourists, investors and prospective settlers to the state; to prepare and cause to be circulated books, pamphlets, leaflets and other literature, illustrated or otherwise, regarding Colorado and the various localities of the state; to personally visit the various localities of the state, investigate the resources and possibilities thereof and stimulate their proper advertising and exploitation; to personally and by deputies and employes visit other states and there distribute advertising matter, call personally upon intending investors, visitors or immigrants, install exhibits of Colorado views and products, give lectures on Colorado and in general further the advertising of Colorado."

The department is also given authority to conduct advertising campaigns and to take charge of state exhibits at national or international expositions.

The work of the department is in charge of a commissioner, who is the executive officer of the board. The board is composed of three members appointed by the governor and confirmed by the senate, with the governor himself a member *ex-officio* and president. For the purpose of determining what other states are doing in this direction, a questionnaire was sent to the various states, and the following information was obtained:

In nineteen of the states, including most of the eastern and middle western states, where lands are thickly settled, there is no immigration service. The list includes Alabama, Arkansas, Connecticut, Illinois, Indiana, Maine, Massachusetts, Mississippi, Missouri, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, South Carolina, Texas, Utah and Vermont.

In four states—Idaho, Nevada, Tennessee and Wyoming—legislative acts provide for the establishment of Bureaus of Immigration, but the service is not maintained because of the failure of the legislatures to make the necessary appropriations.

In Delaware, Maryland, West Virginia, Georgia, Kentucky, North Carolina and North Dakota some provision is made for immigration work, but little or nothing is done, either because of limited authority or because of the lack of financial support.

The statutes of Florida, Iowa, Kansas, Louisiana, Montana and Wisconsin provide that the work ordinarily handled by an immigration bureau shall be carried on through the agricultural department of the state. In Arizona the state takes no part in the work, but each county has an immigration agent and extensive work is done by these officials. No report was received from Oklahoma.

In Oregon, Washington and California special emphasis is laid on work of this sort, both by individual state organizations and in company with other states. The California Development league, which is in effect the immigration department of the state, spends annually from $30,000 to $50,000 in the promotion of tourist business and the development of the resources of the state. Oregon and Washington have combined with British Columbia, Canada, in the organization of the Pacific-Northwestern Tourist association, each of the two states contributing more than $20,000 a year to that organization. Oregon also maintains an organization known as the Oregon Development league, which receives substantial support from the state.

Eleven of the states, including the three named in the last paragraph, lead the rest in development work done through immigration commissions. Colorado, Minnesota, South Dakota, Virginia, Michigan, New Mexico, Nebraska and Washington have provided by statute for the establishment of immigration commissions, and the work conducted through such commissions is identical with or similar to that described in the Colorado statute. In each of these states appropriations ranging as high as $25,000 a year have been made. In the six states in which the work is carried on through the agricultural department it follows much the same line as that prescribed for Colorado and similar states, in so far as the collection of statistical data and the promotion of constructive work for the agricultural development of the state are concerned.

Colorado—General Description

COLORADO lies in the east-central part of the Rocky Mountain region and contains the most elevated portions of the Rocky mountains in the United States, though there are higher altitudes in both California and Washington, in the Cascade mountains, than are found in Colorado. Two peaks in Lake county share the honor of having the greatest altitude in the state. They are Mount Elbert and Mount Massive, each 14,402 feet above sea level. The highest point in the United States is Mount Whitney, California, 14,501 feet. Colorado has the highest mean altitude of any state, only about one-fourth of its area being below 5,000 feet, while approximately two-thirds of it ranges from 6,000 feet to 14,000 feet. It has more than 40 peaks that tower 14,000 feet or higher above sea level, and approximately 325 having an altitude of more than 10,000 feet. The eastern two-fifths of the state lies in the Great Plains, and is a level or broken prairie, crossed by the valleys of the Arkansas and South Platte rivers and their numerous tributaries, and rising gradually from the state line westward to the foothills of the Rockies. The main range of the Rocky mountains passes north and south through the central part of the state, with numerous secondary ranges and spurs running in all directions, giving Colorado the greatest extent and widest variety of mountain scenery found in any state. The western part lies in the Pacific watershed and contains the largest streams in the state. Its surface is much more broken than that of the eastern part, embracing numerous high mesas and fertile, narrow agricultural valleys, and rising to the rugged and wonderfully picturesque San Juan mountains in the southwest. In outline the state is almost a perfect rectangle, having the most regular form of any state in the Union. It ranks seventh in size, with an area of 66,341,120 acres. It is more than twelve times as large as the state of Massachusetts, nearly twice as large as Iowa and about the same size as New York, Ohio, Connecticut and New Hampshire combined. Its extreme length, east and west, is about 387 miles, or 37 miles more than the distance from New York City to Portland, Maine, and its width is approximately 276 miles, or about the same as the distance from Chicago to St. Louis.

Natural Divisions—As a result of its large size and the extreme irregularity of its surface the state is divided into a number of districts that show considerable variation in topography, soil, climatic conditions, industries and products. The most important of these are the nonirrigated prairie section in the eastern part of the state, popularly referred to as "Eastern Colorado;" the South Platte valley, in the north and northeast; the Arkansas valley, extending through the southern part of the eastern half of the state; the San Luis valley, a vast basin, the bed of an ancient lake, lying in the south-central part of the state, almost wholly surrounded by mountain ranges; the San Juan basin, in the southwest; the valleys of the Grand river and numerous tributary streams in the central-western part; the rugged plateau districts drained by the White and Yampa rivers, in the northwest; the mountainous, mineral-bearing districts, extending in a broad, irregular belt across the central part of the state from the Wyoming to the New Mexico line; and the mountain park districts, chief of which are North park, in Jackson county; Middle park, in Grand county; and South park, in Park county. These last are very similar to the San Luis valley, but all have higher average altitudes and consequently enjoy less intensive agricultural development. In climatic conditions the South Platte and Arkansas valleys are very similar to the nonirrigated sections of eastern Colorado, but by reason of the fact that a large supply of water is available in these valleys for irrigation they enjoy the most extensive agricultural development found in the state and produce a wider range and greater yield of crops than the nonirrigated districts. The San Luis valley has very light rainfall, but an abundant water supply for irrigation is derived from the Rio Grande river and its tributaries. The average altitude is in the neighborhood of 7,000 feet, which limits the range of crops grown, but the fertile soil, abundant water supply and good climate make this valley one of the finest general farming and stockraising districts in the state. The San Juan basin is a region of from moderate to heavy rainfall, having a considerable area of irrigated land in the river valleys and much good nonirrigated agricultural land on the higher mesas. This is also an excellent stockraising district. The valleys of the Grand, Gunnison, Uncompahgre and

other rivers and smaller streams of the Grand river watershed contain the principal fruitgrowing areas of the state, as well as a large amount of fine general agricultural land. The rainfall in this area is generally inadequate for farming without irrigation, but the water supply is adequate for all land that can be irrigated, and recently farming without irrigation has been undertaken successfully on some of the higher mesa lands, where rainfall is somewhat heavier than in the valleys. The northwestern part of the state is less developed than any other district, chiefly because of lack of transportation facilities, but it contains some of the best agricultural and grazing land in Colorado. The mineral area is very extensive, but the principal producing areas are somewhat restricted and are outlined in tables published elsewhere in this volume.

Early History — That part of Colorado lying east of the Rocky mountains was included in the territory acquired by purchase from France in 1803, usually referred to as the Louisiana Purchase. All the southeastern part of the state, lying south of the Arkansas river, and a narrow strip extending north through the mountain district into Wyoming, was claimed by the state of Texas and became a part of the United States when Texas was annexed in 1845. This included a considerable amount of the territory belonging to the Louisiana Purchase, but the controversy regarding the northern boundary of Texas was settled long before Colorado became a state. The western part of what is now Colorado and an additional strip lying west and south of the Rio Grande river was ceded to the United States by Mexico in 1848, following the war with Mexico. The actual settlement of Colorado began with the discovery of gold in the summer of 1858, at which time most of the eastern half of the state was included in Kansas territory, under the name of Arapahoe county. The boundaries of this county were very imperfectly defined, and the settlers in the new gold camps, moreover, objected to being governed by a set of territorial officials 400 miles away. They appealed to the federal government for the organization of a new state or territorial government, and finally, in February, 1861, the territory of Colorado was organized, about a month after statehood had been conferred upon the territory of Kansas. The boundaries of the territory were substantially the same as are those of the state at present. In 1876 Colorado was admitted to the Union as the thirty-eighth state.

Population—The population of Colorado has increased steadily and rapidly since its actual settlement began, immediately following the discovery of gold in 1858. The following table shows its growth from 1860 to the present time, as compared with the growth for the entire country, all figures being taken from census reports except those for 1918:

Year	Pop'lation	Pct. of Increase Over Previous Census	Pct. of Increase For United States
1860	34,277	...	...
1870	39,864	16.3	22.6
1880	194,327	387.5	30.1
1890	413,249	112.7	25.5
1900	539,700	30.6	20.7
1910	799,024	48.0	21.0
1918	1,022,639	27.9	14.5

During the two decades following 1860 the population was confined largely to the mining districts and to the city of Denver. The cities of Pueblo, Colorado Springs and Trinidad do not make their appearance in the census population statistics until 1880, when the three had a combined population of less than 10,000. During the early 80's the period of agricultural development began and the decade ending with 1890 was in many ways the most important in the history of the state. During that period 24 new counties were organized and scores of new towns were laid out in the agricultural districts. The percentage of increase in population dropped off materially in the succeeding decades, but remained considerably greater than the percentage of increase for the country at large. In 1910 the density of population for the state was 7.7 per square mile, as compared with 30.9 for the United States. Denver county ranked first in this respect, with 3,679, and Dolores and Jackson counties were tied for last place, with 0.6. The rural population in 1910, including all people except those living in cities and towns of 2,500 or more, was 394,184, or 49.3 per cent of the total. Indications are that the rural population at present is somewhat greater than the urban population, though no exact data are available. In 1910 the foreign-born white population was 15.9 per cent of the total, the principal foreign nationalities being, in the order named, as follows: German, Italian, Russian, Austrian, English, Swedish, Canadian, Irish and Scotch.

Drainage and Water Supply — Containing, as it does, the most elevated portions of the Rocky mountains, Colo-

rado is quite naturally the source of many of the important streams in the west. The Continental divide crosses the west-central part of the state, and the streams in the western part flow to the Pacific, while those in the east find their way to the Gulf of Mexico. The streams of the western slope are all tributaries of the Colorado river, from which this state derives its name. The Grand river, the largest stream in Colorado, and one of the two rivers which unite to form the Colorado river, has its source in Grand county, and the Green river, which joins with the Grand to form the Colorado, flows through the northwestern corner of Moffat county. The northwestern corner of the state is drained by tributaries of the Green river, chief of which are the Yampa and White rivers. The principal tributary of the Grand river is the Gunnison, which has its source in Gunnison county and enters the Grand at the city of Grand Junction. The southwestern corner of the state is drained by the San Juan and Dolores rivers, both tributaries of the Colorado. The south-central part of the state, including the San Luis valley, is drained by the Rio Grande river. The southeastern part is drained by the Arkansas river and its tributaries, and the northeastern part by the South Platte river. The North Platte river has its headwaters in Jackson county and unites with the South Platte in Nebraska to form the Platte river. The Republican river, a tributary of the Kansas, drains a considerable area in the eastern part of the state. These streams have hundreds of small tributaries, most of which have their sources in the mountains where the snowfall is heavy. They furnish the principal water supply for irrigation and for the development of hydro-electric power. Water for domestic purposes is obtained principally from these streams, but in most agricultural sections wells are utilized as a secondary source of domestic water supply. Most of these wells are pumped, but there is a well defined artesian belt in the San Luis valley and artesian water is found in numerous other places. There are more than 500 artesian wells in the state, fully two-thirds of which are in the San Luis valley.

Land Classification — A table published elsewhere in this volume gives a classification of the 66,341,120 acres of land in the state as far as is practicable from available records. It is divided into 63 counties, of which Denver county is the smallest, with an area of 37,120 acres, and Las Animas county the largest, with 3,077,760 acres. According to the records of the county assessors, 26,374,003 acres was patented land in 1917. The records of the federal and state government show that 32,176,223 acres of nonpatented land is included in the national forest, homestead areas open to entry or withdrawn from entry, unsold and unpatented state lands and national parks, monuments and Indian lands. This leaves a total of 7,790,893.72 acres not at present classified according to ownership. Most of this is homestead land which has been filed upon but not yet patented. In the 12 months ending July 1, 1917, approximately 4,500,000 acres of government land was filed on in Colorado. Since at least three years must elapse between the time of filing on homestead land and the issue of patent, all of the land filed on in the last three years is still unclassified as to ownership. There is also a considerable amount of mineral land which has been filed upon and not patented. In two counties, Hinsdale and Lake, the total amount of land in the various classifications is slightly in excess of the area of the counties, as shown by the government records. These discrepancies are, perhaps, due to errors in surveys, as considerable portions of the mountainous sections of the state have not been accurately surveyed. Of the land in private ownership, 23,748,719 acres is classed by the county assessors as farm land, of which 2,114,917 acres was farmed under irrigation in 1917. The remaining privately owned land is principally mineral area, town and city lots and railroad and other rights of way.

National Parks and Monuments— There are two national parks and two national monuments in Colorado. Rocky Mountain national park, with an approximate area of 253,440 acres, lies in Larimer, Boulder and Grand counties, and includes some of the most picturesque portions of the Rocky mountains. It is one of the newest of the national parks, having been created by an act of congress, approved January 26, 1915. Its highest point is Longs peak, 14,255 feet, and there are within its boundaries 13 other mountain peaks more than 13,000 feet above sea level. It is the most accessible of the large western parks and this fact, together with its wide range of picturesque mountain scenery and its delightful climate, has made it the most popular of the nation's great public playgrounds. The

report of the secretary of interior places the number of visitors to this park in 1915 at 31,000. The following year the number had increased to 51,000, and in 1917 it was 117,186. The nearest approach to this was recorded at the Mount Ranier national park, which had 35,568 visitors in 1917. Mesa Verde national park is located in Montezuma county and is especially noted for the ruins of homes and villages of the ancient Cliff Dwellers, supposed to have been the earliest inhabitants of this part of the continent. Travel to this park has increased very materially in the past few years, as the result of the construction of good highways leading to it. It was established by an act of congress June 29, 1906. Its area is 48,966 acres. The Colorado national monument, in Mesa county, near Grand Junction, was established by presidential proclamation on May 24, 1911. Its area is 13,883 acres. The site is in a picturesque canon which has long been an attractive feature of that part of Colorado. The formation is similar to that of the Garden of the Gods at Colorado Springs, but is generally conceded to be much more picturesque. There are many caverns in the monument, several of which have not yet been explored. Wheeler national monument, located in Mineral county, northeast of Creede, was established by presidential proclamation on December 7, 1908. Its area is approximately 300 acres. It is especially noted for its weird and very picturesque rock formation, unlike anything found elsewhere in Colorado. It is somewhat difficult of access at present on account of the fact that the approaches from the main highway by way of Creede and Wagon Wheel Gap have never been put in first-class condition. A movement is now under way to have a first-class automobile road built from Creede to the monument.

Industries—The principal industries of the state are agriculture, stockraising in its various branches, dairying, bee keeping, manufacturing, mining, quarrying, lumbering and commerce. These are treated in detail elsewhere.

Climatological Data—As a result of its great size and the extreme irregularity of its surface, the climate of Colorado is wonderfully varied and cannot be described in detail here. Various tables contained in this publication show the most important climatic data for different sections of the state. The mean annual temperature for the entire state is 44.6 degrees, but it varies from about 31 degrees in some of the higher mountain districts to 52 degrees in parts of the Arkansas valley. The average annual precipitation for the state is 17.54 inches, but there is also a very wide range here in the different sections of the state. The lowest average precipitation is about 6.5 inches, in the San Luis valley, and the highest about 30 inches, in the San Juan mountains. The delightful and wonderfully healthful qualities of Colorado's climate are well known throughout the country. The tables before referred to show that the rainfall is comparatively light in all sections of the state and the percentage of sunshine is very high. The range of temperatures is wide. The amount of moisture in the air is always low and as a result the unpleasant effects of extremely low or high temperatures are greatly modified. The relative annual humidity ranges from 45 to 60 per cent, being lower than in any other state except Arizona. The high altitude is another important factor in governing climatic conditions in the state. As a result of this high altitude and the correspondingly low atmospheric pressure, impurities in the air are quickly dissipated and the depressing effects common at low altitudes, especially during periods of warm, damp weather, are entirely foreign to this state.

Railroads, Telegraph and Telephone Facilities—There are 44 railroad companies represented in Colorado, operating an aggregate of 5,586.96 miles of main line track. Every county in the state except Baca county has some railroad mileage. The total value of railroad property in the state as returned by the state tax commission for 1917 was $169,796,900. The following table shows the mileage of main line track owned by the various railroads:

Road	Mileage
Atchison, Topeka & Santa Fe Railway	504.96
Beaver, Penrose & Northern Railway	6.49
Book Cliff Railroad	11.50
Chicago, Burlington & Quincy Railroad	395.39
Chicago, Rock Island & Pacific Railway	165.05
Colorado Railroad	108.17
Colorado-Kansas Railway	22.20
Colorado Midland Railway	258.74
Colorado Springs & Cripple Creek District Railway	61.04
Colorado, Wyoming & Eastern Railway	43.88
Colorado & Southeastern Railroad	6.27
Colorado & Southern Railway	790.35
Colorado & Wyoming Railway	41.82
Cripple Creek & Colorado Springs Railroad	11.66
Crystal River Railroad	20.60

Road	Mileage
Crystal River & San Juan Railroad	7.32
Denver, Boulder & Western Railroad	45.99
Denver, Laramie & Northwestern Railroad	51.38
Denver & Intermountain Railroad	15.01
Denver & Interurban Railroad	12.88
Denver & Rio Grande Railroad	1,504.15
Denver & Salt Lake Railroad	252.36
Georgetown & Gray's Peak Railway	15.90
Gilpin Railroad	16.50
Greeley Terminal Railway	1.36
Great Western Railway	57.79
Manitou & Pikes Peak Railway	8.70
Midland Terminal Railway	29.40
Missouri Pacific Railway	152.12
Northwestern Terminal Railway	3.11
Oak Creek Railroad	1.68
Rio Grande Junction Railway	62.08
Rio Grande Southern Railroad	171.16
Rio Grande & Pagosa Springs Railroad	.22
Rocky Mountain Railway	12.60
San Luis Central Railroad	12.21
San Luis Southern Railway	31.53
Silverton Railroad	14.00
Silverton, Gladstone & Northerly Railroad	7.00
Silverton Northern Railroad	13.00
Treasury Mountain Railroad	4.50
Uintah Railway	50.80
Union Pacific Railroad	583.09
Wolf Creek Railroad	1.00

Since these figures were compiled the Denver, Laramie & Northwestern and Greeley Terminal railways have gone out of existence and the mileage of the Great Western railway has been increased.

Several of the companies above named operate extensively under leasing arrangements over tracks owned by other companies.

Eighty-nine telephone companies in the state operate a total of 276,506.95 miles of telephone line, and own property valued by the state tax commission at $12,741,550 for 1917. Most of these companies are small and operate in but one or two counties. The Colorado & Eastern Telegraph & Telephone company operates in 15 counties in the eastern part of the state and the Mountain States Telephone & Telegraph company operates its own lines in all counties but two, Baca and Dolores, and has a total of 269,893 miles of line in Colorado. Four telegraph companies operate a total of 21,248.32 miles of line in the state. Four counties, Baca, Jackson, Moffat and Rio Blanco, had no telegraph lines in operation when returns were made to the tax commission in 1917. A table published elsewhere in this volume shows the mileage of railroads, telegraph and telephone lines in operation in the various counties as reported to the state tax commission for 1917.

Cities and Towns—In 1910 there were 36 cities in Colorado, according to the census classification. (The census bureau classes all incorporated places of 2,500 population, or more, as cities.) These cities, at that time, had a population of 413,939, or 51.8 per cent of the total population of the state. At the present time the number of cities is about 42. There were 212 incorporated cities and towns in the state on January 1, 1918. Weld county leads in the number of incorporated places, with 20, and Archuleta, Bent, Cheyenne, Costilla, Denver, Dolores, Douglas, Hinsdale, Kiowa, Lake, Mineral, Moffat, Pitkin, Rio Blanco and Sedgwick counties are tied for last place, with 1 each. Denver county includes only the city of Denver. Tables published elsewhere in this volume give the population and other data for all incorporated places in the state.

AVERAGE YIELD OF PRINCIPAL CROPS FOR PAST TEN YEARS AS COMPILED BY THE UNITED STATES DEPARTMENT OF AGRICULTURE

STATE	Wheat, Bushels	Oats, Bushels	Rye, Bushels	Barley, Bushels	Corn, Bushels	Hay, Tons	Potatoes, Bushels
United States	14.7	29.9	16.3	25.2	26.0	1.44	95.4
Ohio	15.9	32.5	16.4	27.6	38.0	1.36	79.0
Indiana	15.0	29.6	15.4	25.5	36.3	1.28	77.0
Illinois	15.5	33.1	17.0	29.6	33.7	1.26	75.0
Wisconsin	18.5	33.2	17.3	28.0	34.3	1.52	97.0
Minnesota	13.5	30.8	18.7	23.6	32.3	1.58	99.0
Iowa	18.0	32.8	18.4	26.8	34.2	1.43	79.0
Missouri	13.5	24.3	14.1	23.4	26.4	1.16	68.0
North Dakota	11.2	26.7	15.5	20.1	23.8	1.28	95.0
South Dakota	11.1	26.8	16.6	21.4	27.4	1.40	82.0
Nebraska	17.6	26.0	15.8	21.6	24.2	1.56	73.0
Kansas	13.6	24.8	14.5	17.4	18.3	1.39	64.0
Oklahoma	12.1	22.5	12.1	19.8	17.4	1.24	62.0
Texas	12.4	28.4	13.2	23.2	19.9	1.33	59.0
Colorado	**23.4**	**37.9**	**17.0**	**34.8**	**20.0**	**2.26**	**127.0**

GENERAL TAXATION STATISTICS BY COUNTIES FOR 1917
STATE TAX LEVY 3.12 MILLS

COUNTY	Total Valuation	State Revenue	Total County Levy	County Revenue
Adams	26,098,020	81,425.82	5,500	143,539.10
Alamosa	8,291,469	25,869.38	9.000	74,623.22
Arapahoe	19,185,900	59,860.01	4.000	76,743.60
Archuleta	5,012,554	15,639.16	8.400	42,105.45
Baca	6,413,119	20,008.82	7.880	50,535.11
Bent	11,525,420	35,959.31	7.740	88,548.40
Boulder	42,999,630	134,158.84	4.980	214,137.84
Chaffee	11,035,515	24,430.80	8.000	88,284.12
Cheyenne	10,747,644	33,535.51	6.600	70,935.53
Clear Creek	5,346,050	16,679.67	10.000	53,460.50
Conejos	8,910,321	27,805.90	7.800	69,500.50
Costilla	5,477,097	17,088.54	9.060	49,622.50
Crowley	9,195,800	28,692.59	5.600	51,495.74
Custer	2,459,849	7,670.69	8.500	20,913.49
Delta	15,562,135	48,553.86	5.400	84,035.51
Denver	331,090,565	1,033,002.56	4.650	539,571.16
Dolores	1,582,545	4,937.53	12.050	19,069.88
Douglas	11,111,280	34,664.93	7.290	80,996.66
Eagle	7,254,308	22,633.44	11.740	85,165.55
Elbert	13,780,015	42,993.65	4.440	61,183.26
El Paso	65,482,710	204,306.05	6.500	425,637.61
Fremont	18,803,345	58,666.44	7.380	138,769.05
Garfield	18,315,130	57,145.85	11.200	205,131.16
Gilpin	3,343,779	10,432.59	15.000	50,156.69
Grand	4,745,790	14,806.86	11.671	55,388.12
Gunnison	15,791,390	49,269.14	8.100	127,910.26
Hinsdale	1,017,456	3,175.76	17.250	17,554.48
Huerfano	12,972,783	40,475.08	10.200	132,322.40
Jackson	5,178,330	16,156.39	4.630	23,975.67
Jefferson	22,760,270	71,012.04	6.000	136.561.62
Kiowa	9,072,285	28,305.52	3.180	28,849.86
Kit Carson	14,123,033	44,063.86	5.130	72,451.15
Lake	11,508,625	35,906.91	14.030	161,466.00
La Plata	15,273,419	47,653.07	8.310	126,922.11
Larimer	40,980,670	127,859.69	6.230	255,307.14
Las Animas	37,448,790	116,840.22	9.640	361,006.33
Lincoln	13,686,185	42,700.86	4.500	61,571.02
Logan	27,557,771	85,980.25	9.980	275,026.55
Mesa	27,378,175	85,419.90	6.600	180,695.96
Mineral	1,459,790	4,554.54	14.500	21,166.96
Moffat	5,754,690	17,954.63	12.200	70,207.22
Montezuma	5,835,963	18,208.20	17.000	99,211.37
Montrose	15,193,750	47,404.61	8.300	126,108.36
Morgan	21,581,970	67,335.75	7.880	170,065.94
Otero	27,650,280	86,268.87	5.080	140,463.42
Ouray	5,194,790	16,207.74	12.500	64,934.87
Park	8,565,960	26,725.80	10.400	89,085.99
Phillips	8,190,356	25,553.91	6.640	54,383.98
Pitkin	5,386,180	16,804.88	17.250	92,911.61
Prowers	18,861,330	58,847.35	6.000	113,167.98
Pueblo	66,178,236	206,476.10	5.000	330,891.18
Rio Blanco	5,737,100	17,899.73	9.080	52,092.86
Rio Grande	9,908,240	30,913.70	6.050	59,945.37
Routt	14,283,382	44,564.15	9.500	135,692.13
Saguache	11,939,652	37,252.00	6.000	71,638.00
San Juan	4,172,040	13,016.76	21.500	89,698.86
San Miguel	8,866,400	27,663.17	12.210	108,258.74
Sedgwick	6,892,911	21,505.52	7.000	48,251.78
Summit	6,474,337	20,199.93	6.800	44,025.50
Teller	13,895,770	43,351.11	11.590	161,047.35
Washington	17,848,878	55,688.00	4.600	82,103.00
Weld	84,010,750	262,113.23	5.780	485,581.57
Yuma	15,782,775	49,242.26	5.360	84,595.68
Totals	1,308,184,702	4,071,539.43		7,596,700.02

The county valuations given in this table are taken from the returns made by county treasurers to the state tax commission and are somewhat higher in most cases than the preliminary figures certified by county assessors, for the reason that some property is generally added to the assessment rolls after they are completed by the assessors. The original total, shown elsewhere in this volume, was $1,305,286,409.

FINANCIAL STATISTICS OF COUNTIES

COUNTY	Court House and Other Physical Properties	Bonds and Bond Interest	Warrants and Other Obligations	Total Debt	Population	County Debt Per Capita
Adams	$ 200,000	.....	$ 3,103	$ 3,103	12,500	$ .25
Alamosa	20,000	$ 65,310	19,306	84,616	6,500	.....
Arapahoe	100,000	.....	.....	.....	15,200	.....
Archuleta	3,000	5,250	51,013	56,263	4,600	12.23
Baca	10,000	30,240	8,000	38,240	12,500	3.06
Bent	100,000	12,680	.....	12,680	8,500	1.49
Boulder	125,000	.....	3,446	3,446	36,500	.09
Chaffee	100,000	234,000	.....	234,000	9,000	26.00
Cheyenne	66,000	6,200	.....	6,200	4,500	1.38
Clear Creek	10,000	.....	.....	.....	5,250	.....
Conejos	86,218	49,500	31,800	81,300	5,000	16.26
Costilla	40,000	7,837	15,000	22,837	5,000	4.57
Crowley	25,000	7,672	2,191	9,863	7,000	1.41
Custer	5,000	.....	.....	.....	2,800	.....
Delta	190,211	50,000	.....	50,000	15,000	3.33
Denver	16,500,000	411,327	86,359	497,686	268,439	1.85
Dolores	.....	.....	.....	.....	1,000	.....
Douglas	100,000	3,675	500	4,175	5,000	.83
Eagle	15,000	23,220	1,844	25,064	4,500	5.57
Elbert	40,000	.....	1,314	1,314	5,500	.24
El Paso	557,045	.....	22,333	22,333	50,000	.45
Fremont	142,300	.....	868	868	21,000	.04
Garfield	75,000	230,290	.....	230,290	13,500	17.06
Gilpin	50,000	.....	11,066	11,066	4,150	2.67
Grand	10,000	.....	17,000	17,000	2,500	6.80
Gunnison	48,000	252,000	7,000	259,000	6,100	42.46
Hinsdale	.....	.....	.....	.....	700	.....
Huerfano	65,000	20,000	12,000	32,000	17,300	1.85
Jackson	40,000	14,400	.....	14,400	1,950	7.38
Jefferson	90,000	.....	5,764	5,764	19,000	.30
Kiowa	40,000	.....	.....	.....	6,200	.....
Kit Carson	65,000	.....	8,400	8,400	10,000	.84
Lake	100,000	159,000	.....	159,000	11,000	14.45
La Plata	83,000	123,310	.....	123,310	14,900	8.27
Larimer	116,900	22,440	71,086	93,526	35,000	2.67
Las Animas	400,000	158,487	7,203	165,690	41,000	4.04
Lincoln	109,961	.....	13,969	13,969	9,000	1.55
Logan	280,000	131,250	25,000	156,250	15,000	10.42
Mesa	64,515	17,000	41,742	58,742	25,000	2.35
Mineral	16,250	7,705	8,302	16,007	1,150	13.92
Moffat	36,288	40,000	2,038	42,038	5,800	7.25
Montezuma	6,000	10,725	.....	10,725	7,100	1.51
Montrose	195,000	141,000	.....	141,000	12,000	11.75
Morgan	56,882	.....	2,537	2,537	14,600	.17
Otero	87,460	.....	35,821	35,821	18,000	1.99
Ouray	44,000	154,180	1,919	156,099	4,000	39.02
Park	22,000	.....	4,172	4,172	3,500	.....
Phillips	5,000	42,800	1,337	44,137	5,000	8.83
Pitkin	80,477	315,000	23,054	338,054	5,000	67.61
Prowers	30,000	7,000	8,200	15,200	15,000	1.01
Pueblo	1,105,071	350,000	255,762	605,762	64,000	9.46
Rio Blanco	8,000	20,583	140	20,723	4,500	4.60
Rio Grande	50,000	91,300	.....	91,300	7,500	12.17
Routt	10,000	.....	21,000	21,000	8,500	2.47
Saguache	150,000	.....	.....	.....	6,200	.....
San Juan	150,000	100,800	.....	100,800	3,100	32.52
San Miguel	88,000	109,925	498	110,423	5,200	21.23
Sedgwick	20,000	23,000	109	23,109	4,200	5.50
Summit	55,000	.....	.....	.....	3,200	.....
Teller	100,000	13,931	.....	13,931	16,500	.84
Washington	56,278	6,000	10,221	16,221	9,500	1.71
Weld	618,748	.....	324,772	324,772	49,500	6.56
Yuma	31,000	.....	.....	.....	12,000	.....
State	$23,093,604	$3,469,037	$1,167,189	$4,636,226	1,022,639	

Owing to the fact the reports as to cash and outstanding taxes for the various counties were sent in during the three or four months immediately before and after the 1917 taxes became due, it was impossible to include this item among the assets on a uniform basis for all counties.

MISCELLANEOUS COUNTY STATISTICS

COUNTY	Estimated Population, 1918	Land Area, Square Miles	Population Per Square Mile, 1918	Assessed Valuation Per Capita	Patent'd Land—Pct. of Total Area	Pct. of Area Cultivated in 1917	Homestead Land—Pct. of Total Area	National Forests—Pct. of Total Area
Adams	12,500	1,262	9.90	$2,093.65	83.3	13.52	0.01	.....
Alamosa	6,500	781	8.32	1,275.43	61.0	5.93	5.20	6.32
Arapahoe	15,200	842	18.05	1,223.59	88.7	10.71	0.03	.....
Archuleta	4,600	1,220	3.77	1,044.14	33.3	2.04	10.29	50.94
Baca	12,500	2,552	4.89	513.07	43.7	3.14	3.56	.....
Bent	8,500	1,524	5.57	1,356.02	22.9	4.41	6.37	.....
Boulder	36,500	764	47.77	1,175.13	54.1	25.15	0.15	25.97
Chaffee	9,000	1,083	8.31	1,221.90	15.7	3.03	10.76	61.88
Cheyenne	4,500	1,777	2.53	2,384.11	84.0	7.80	0.15	.....
Clear Creek	5,250	390	13.46	1,018.29	23.1	0.41	8.08	59.21
Conejos	5,000	1,117	4.47	1,787.39	30.4	7.36	20.23	37.96
Costilla	5,000	1,266	3.94	1,095.42	95.0	4.81	1.02	.....
Crowley	7,000	876	7.99	1,301.53	30.0	7.33	1.65	.....
Custer	2,800	747	3.74	878.51	26.7	5.24	8.01	33.63
Delta	15,000	1,201	12.48	1,024.90	26.6	6.13	32.60	30.18
Denver	268,439	58	4628.25	1,231.01	96.7	.....	.....	.....
Dolores	1,000	1,043	0.95	1,582.54	3.8	0.45	23.17	45.52
Douglas	5,000	845	5.91	2,222.63	69.4	11.54	0.48	27.62
Eagle	4,500	1,620	2.77	1,612.32	9.4	2.06	24.21	57.27
Elbert	5,500	1,857	2.96	2,495.04	83.6	6.75	0.11	.....
El Paso	50,000	2,121	23.57	1,314.20	66.2	6.75	0.38	10.01
Fremont	21,000	1,557	13.48	895.13	24.3	1.43	36.62	6.65
Garfield	13,500	3,107	4.34	1,356.35	11.6	3.28	39.78	27.12
Gilpin	4,150	132	31.43	807.39	37.4	2.02	14.16	47.81
Grand	2,500	1,866	1.33	1,895.02	16.3	2.18	10.38	44.75
Gunnison	6,100	3,179	1.91	2,627.17	9.0	1.60	28.55	55.73
Hinsdale	700	971	0.72	1,405.88	2.3	0.27	18.63	82.43
Huerfano	17,300	1,500	11.53	749.31	38.3	2.62	8.58	12.28
Jackson	1,950	1,632	1.19	2,594.33	20.0	9.61	21.68	37.97
Jefferson	19,000	838	22.67	1,193.67	57.9	12.82	1.87	14.39
Kiowa	6,200	1,798	3.44	1,465.36	69.1	3.99	0.41	.....
Kit Carson	10,000	2,159	4.63	1,412.30	87.2	17.26	0.40	.....
Lake	11,000	371	29.64	1,046.23	29.1	2.63	3.56	67.35
La Plata	14,900	1,851	8.04	1,023.11	24.6	4.68	8.83	31.31
Larimer	35,000	2,629	13.31	1,170.82	37.7	8.43	3.13	37.49
Las Animas	41,000	4,809	8.52	913.17	27.7	2.86	9.82	0.89
Lincoln	9,000	2,570	3.50	1,522.00	72.1	10.12	0.36	.....
Logan	15,000	1,822	8.23	1,836.32	68.5	21.25	0.45	.....
Mesa	25,000	3,163	7.90	1,096.33	15.9	2.37	47.94	24.68
Mineral	1,150	866	1.32	1,278.30	5.2	0.63	.....	93.64
Moffat	5,800	4,740	1.22	985.30	5.8	0.84	57.30	2.54
Montezuma	7,100	2,051	3.46	823.19	14.2	1.89	7.87	17.50
Montrose	12,000	2,264	5.30	1,266.07	18.2	3.51	46.26	21.89
Morgan	14,600	1,286	11.35	1,472.05	55.7	17.08	0.31	.....
Otero	18,000	1,191	15.11	1,536.12	34.2	11.21	1.81	.....
Ouray	4,000	519	7.70	1,298.58	35.2	2.93	8.86	40.46
Park	3,500	2,212	1.58	2,465.04	17.5	2.19	19.57	45.35
Phillips	5,000	688	7.26	1,638.07	89.2	13.28	0.28	.....
Pitkin	5,000	1,019	4.90	1,077.12	12.8	1.92	7.87	78.35
Prowers	15,000	1,630	9.20	1,252.29	50.0	8.41	1.63	.....
Pueblo	64,000	2,433	26.30	1,032.26	48.1	6.01	1.34	2.28
Rio Blanco	4,500	3,223	1.39	1,272.99	8.3	2.12	65.12	16.93
Rio Grande	7,500	898	8.35	1,320.87	30.8	14.05	9.68	40.84
Routt	8,500	2,227	3.81	1,676.15	26.3	4.54	16.08	43.49
Saguache	6,200	3,133	1.97	1,927.21	21.3	4.27	22.46	43.40
San Juan	3,100	453	6.84	1,345.87	9.0	.....	.....	69.06
San Miguel	5,200	1,288	4.03	1,701.10	14.2	1.55	41.46	21.36
Sedgwick	4,200	531	7.92	1,640.07	84.9	18.20	0.06	.....
Summit	3,200	649	4.93	2,023.24	7.3	1.57	2.53	70.06
Teller	16,500	547	30.16	839.28	41.5	4.09	9.71	21.00
Washington	9,500	2,521	3.76	1,884.66	70.1	6.99	3.18	.....
Weld	49,500	4,022	12.30	1,688.35	73.0	16.89	0.44	.....
Yuma	12,000	2,367	5.06	1,269.48	64.5	10.09	0.49	.....
State	1,022,639	103,658	9.86	$1,276.39	37.9	6.14	15.70	20.15

COLORADO BANK STATISTICS

COUNTY	DECEMBER 27, 1916		DECEMBER 31, 1917		
	Loans and Discounts	Deposits	Loans and Discounts	Deposits	Total Assets
Adams	$ 369,003.23	$ 677,480.46	$ 745,067.48	$ 1,351,591.99	$ 1,485,723.18
Alamosa	741,421.99	1,135,171.26	833,217.26	1,298,866.00	1,559,810.17
Arapahoe	663,776.54	994,280.59	995,298.27	1,319,530.04	1,564,710.57
Archuleta	268,663.57	311,914,93	360,145.01	429,941.14	488,723,92
Baca	139,608.07	271,681.13	265,609.02	344,231.92	406,596.19
Bent	693,533.45	850,877.74	852,682.48	1,165,047.52	1,375,680.76
Boulder	4,038,004.51	6,421,022.33	4,564,438.07	7,106,239.31	8,515,025.94
Chaffee	551,373.61	1,350,763.29	692,946.48	1,519,923.81	1,795,287.66
Cheyenne	184,130.50	209,517.38	296,073.38	339,716.20	393,578.93
Clear Creek	389,622.94	779,199.63	367,392.80	800,642.23	1,209,758.58
Conejos	729,446.52	1,182,437.26	615,783.10	728,480.43	839,059.78
Costilla	190,295.53	175,425.30	228,550.24	300,821.57	357,540.02
Crowley	288,560.38	385,582.94	506,170.34	618,095.61	835,926.54
Custer	121,578.00	223,240.03	118,525.80	393,275.25	432,278.46
Delta	1,398,705.15	2,199,687.71	1,507,538.13	2,268,761.85	3,007,398.51
Denver	64,017,720.42	118,968,782.03	73,961,880.52	123,154,164.07	140,151,998.88
Dolores*	.....	.....	.....	.....	.....
Douglas	263,124.68	397,146.55	396,575.81	528,385.64	608,524.50
Eagle	285,181.54	426,966.58	329,153.28	581,177.62	712,938.53
Elbert	398,138.18	525,153.39	573,100.29	773,753.89	852,482.89
El Paso	8,229,307.86	14,678,495.45	9,505,009.89	15,098,322.09	17,952,496.70
Fremont	1,465,789.72	2,147,792.71	1,837,398.23	2,910,736.70	3,379,028.84
Garfield	1,285,826.35	1,975,267.24	1,829,153.76	2,497,392.77	3,198,845.17
Gilpin	138,843.15	471,307.96	84,369.06	416,039.51	516,831.88
Grand	125,671.80	178,737.25	175,865.09	279,003.84	315,521.62
Gunnison	518,108.04	895,603.41	508,794.05	1,071,542.74	1,369,019.27
Hinsdale*	.....	.....	.....	.....	.....
Huerfano	683,271.86	1,241,661.53	845,471.63	1,575,267.33	1,760,158.66
Jackson	242,765.50	341,681.79	413,177.63	454,254.53	534,651.59
Jefferson	531,649.18	654,749.72	629,176.93	1,000,883.63	1,217,792.50
Kiowa	159,700.92	185,417.49	205,552.85	244,330.11	299,346.70
Kit Carson	596,472.96	745,596.66	907,533.99	1,021,183.31	1,199,739.24
Lake	459,275.77	2,778,089.56	464,497.94	2,640,782.76	3,129,550.24
La Plata	1,054,337.87	1,873,527.82	1,418,904.29	2,426,404.89	2,771,699.54
Larimer	5,000,573.23	5,718,613.02	6,248,789.25	7,236,280.64	9,402,913.53
Las Animas	3,276,141.10	5,347,750.19	3,701,384.30	6,330,601.10	7,428,724.28
Lincoln	870,408.46	839,868.37	1,026,351.87	983,641.69	1,363,444.12
Logan	1,875,856.74	2,592,337.46	2,863,014.67	3,613,907.38	4,498,797.20
Mesa	1,503,544.87	2,956,843.39	2,222,469.24	3,558,038.09	4,169,629.85
Mineral	53,530.11	79,972.91	48,039.20	94,631.39	109,131.39
Moffat	372,883.62	426,312.70	554,151.41	684,568.24	795,150.59
Montezuma	636,066.40	984,613.77	832,872.43	1,279,866.15	1,561,578.25
Montrose	658,013.91	996,386.94	1,867,262.93	2,565,709.12	3,062,077.07
Morgan	1,463,420.06	2,105,404.51	2,426,218.71	2,859,779.23	3,515,388.76
Otero	1,492,635.80	2,424,938.97	2,214,593.30	3,192,331.57	3,977,483.18
Ouray	229,633.48	452,113.29	263,461.05	468,313.90	635,998.28
Park	32,003.14	198,720.88	40,258.75	215,406.20	262,222.33
Phillips	619,402.46	728,687.46	1,041,942.24	1,267,696.32	1,468,550.97
Pitkin	196,928.12	502,401.92	213,098.36	582,090.90	625,693.74
Prowers	1,298,762.83	1,672,090.73	1,615,737.50	2,017,467.92	2,505,563.16
Pueblo	5,115,271.11	15,607,471.61	6,800,706.91	19,117,599.63	21,291,947.36
Rio Blanco	529,395.30	772,778.44	565,844.15	696,403.68	819,970.87
Rio Grande	1,108,138.46	1,513,619.74	1,347,200.64	1,806,478.76	2,069,890.00
Routt	873,852.62	975,655.50	1,125,848.48	1,471,289.25	1,753,384.54
Saguache	369,077.09	660,534.49	728,197.45	845,005.94	1,114,970.67
San Juan	241,141.88	522,922.43	308,624.60	591,062.41	677,489.84
San Miguel	659,278.36	1,182,937.29	704,319.44	1,354,159.39	1,689,126.61
Sedgwick	341,230.36	544,301.97	630,361.38	930,220.43	1,180,967.07
Summit	112,154.98	197,690.45	137,628.03	272,505.62	300,578.34
Teller	1,736,583.53	4,076,899.05	1,605,080.87	3,566,104.43	3,776,915.10
Washington	366,754.80	433,164.57	729,575.93	819,906.57	1,038,750.35
Weld	5,085,560.93	6,704,375.24	7,177,620.50	10,023,067.86	12,118,069.79
Yuma	1,029,994.16	1,280,861.73	1,481,185.95	2,012,290.28	2,432,926.32
Totals	$128,371,147.70	$228,154,528.14	$157,557,092.64	$257,115,214.39	$299,885,059.52

* There are no banks in county.

MILEAGE AND VALUE OF RAILROADS, TELEGRAPH AND TELEPHONE LINES AS RETURNED BY THE STATE TAX COMMISSION FOR 1917

COUNTY	Miles of Railroad	Value	Miles of Telephone	Value	Miles of Telegraph	Value
Adams	116.03	$ 4,555,540	2,049.68	$ 96,790	1,125.16	$ 84,320
Alamosa	51.45	1,419,700	1,476.00	65,060	151.62	12,480
Arapahoe	63.08	2,313,380	4,066.29	188,860	634.10	48,310
Archuleta	63.32	1,741,670	184.25	10,590	158.29	13,040
Baca	.....	.....	155.00	6,680	.....	.....
Bent	77.65	3,021,490	1,523.50	75,330	472.97	26,800
Boulder	151.08	3,683,330	8,846.00	410,590	344.79	28,400
Chaffee	156.91	3,618,930	1,839.00	85,360	513.20	41,500
Cheyenne	63.13	2,571,430	173.00	7,100	610.70	50,330
Clear Creek	41.67	767,400	1,283.00	59,550	33.40	2,750
Conejos	54.05	1,491,450	741.00	33,990	172.16	14,190
Costilla	63.63	1,139,400	602.00	28,310	97.77	8,060
Crowley	31.32	1,084,970	980.52	47,530	62.64	5,160
Custer	13.05	360,100	296.00	13,630	50.60	4,170
Delta	69.75	1,924,670	3,240.07	144,480	174.25	14,360
Denver	62.48	3,458,250	118,590.40	5,505,390	681.25	49,480
Dolores	17.72	243,090	17.00	1,130	35.00	2,880
Douglas	94.41	3,074,050	2,188.91	102,020	1,622.81	112,290
Eagle	102.62	2,209,320	945.50	38,930	402.01	33,130
Elbert	83.18	3,113,940	398.00	18,470	423.08	34,860
El Paso	252.30	8,690,100	19,500.26	908,590	2,311.68	163.820
Fremont	117.27	3,380,730	3,949.00	180,750	633.55	46,880
Garfield	162.88	4,083,910	3,070.75	134,290	606.12	49,230
Gilpin	53.58	826,140	796.00	36,950	63.88	5,260
Grand	89.30	1,306,470	877.08	40,180	74.41	6,130
Gunnison	195.74	5,286,590	929.66	45,080	450.79	32,710
Hinsdale	9.45	260,760	142.00	6,590	18.90	1,560
Huerfano	130.72	3,885,440	1,801.00	81,020	866.38	66,230
Jackson	43.88	207,750	182.00	8,450	.....	.....
Jefferson	100.63	2,731,010	5,053.00	232,270	271.57	22,380
Kiowa	87.50	3,031,120	150.00	6,960	175.00	14,420
Kit Carson	59.96	2,244,900	144.00	6,170	182.40	15,030
Lake	93.04	1,972,530	1,985.00	92,130	360.05	29,670
La Plata	121.05	2,927,420	1,672.75	76,040	285.99	23,570
Larimer	122.30	3,993,520	8,155.50	378,630	197.33	16,260
Las Animas	230.79	8,875,790	5,962.00	276,990	1,529.12	94,430
Lincoln	72.85	2,874,720	325.10	14,610	478.04	39,390
Logan	133.56	6,102,130	2,877.32	138,340	601.78	35,850
Mesa	123.72	4,313,360	6,888.87	316,260	548.97	45,240
Mineral	17.40	480,130	175.00	8,120	37.00	3,050
Moffat	7.61	128,370	374.00	14,400	.....	.....
Montezuma	62.69	859,980	713.40	28,610	123.00	10,140
Montrose	52.35	1,444,540	3,153.00	145,030	212.04	17,470
Morgan	90.84	4,043,350	1,853.28	87,500	800.89	55,120
Otero	92.12	3,583,770	4,563.92	212,980	859.98	44,930
Ouray	42.40	854,960	911.16	42,230	133.21	10,980
Park	154.16	3,358,250	1,183.00	54,810	576.57	47,510
Phillips	36.30	1,714,000	101.36	6,280	32.00	2,640
Pitkin	86.58	956,120	654.00	30,580	282.44	22,450
Prowers	80.38	3,127,710	3,193.21	152,520	503.26	28,730
Pueblo	245.31	7,949,660	19,810.44	923,400	1,879.73	128,210
Rio Blanco	7.80	130,880	530.50	23,000	.....	.....
Rio Grande	52.51	1,207,800	1,716.00	78,000	81.60	6,720
Routt	93.45	1,581,290	1,490.25	69,100	54.65	4,500
Saguache	107.10	2,945,000	1,475.50	61,730	339.23	26,430
San Juan	42.10	434,980	751.00	34,860	26.20	2,160
San Miguel	47.70	654,350	844.16	38,380	111.20	9,160
Sedgwick	32.07	1,311,990	510.58	26,280	371.13	24,630
Summit	68.72	1,969,150	846.00	37,120	138.27	11,390
Teller	102.48	3,373,960	4,728.25	219,670	244.48	20,150
Washington	40.33	1,908,490	314.72	14,830	402.79	32,480
Weld	407.00	15,078,890	13,978.46	639,860	3,018.93	213,520
Yuma	40.51	1,912,780	144.00	20,750	405.10	33,380
Totals	5,586.96	$169,796,900	278,071.60	$12,890,130	28,055.46	$2,050,320

CLIMATOLOGICAL DATA

COUNTY	STATION	Elevation, Feet	Mean Annual Temp.	Growing Season, Days	Average Annual Precipitation
Adams	Simpson	4,280	....	...	12.78
Alamosa	Garnett	7,576	40.8	111	6.68
Arapahoe		.....	....	...	.....
Archuleta	Pagosa Springs	7,078	....	81	.....
Baca	Two Buttes	4,100	53.4	160	15.59
Bent	Las Animas	3,899	52.0	162	12.19
Boulder	Boulder	5,347	50.2	152	18.14
	Frances	9,300	40.2	108	24.27
	Hawthorne	6,000	....	...	.....
	Longmont	4,960	47.5	153	15.77
Chaffee	Garfield	9,510	....	...	18.83
	St. Elmo	9,500	....	...	17.46
	Salida	7,035	45.4	115	12.85
Cheyenne	Cheyenne Wells	4,279	50.3	156	16.85
Clear Creek	Georgetown	8,550	....	...	14.97
	Idaho Springs	7,543	44.0	117	16.39
Conejos	Manassa	7,700	43.0	105	7.51
Costilla	San Luis	7,794	42.4	104	11.15
Crowley		.....	....	...	.....
Custer	Westcliffe	7,864	42.4	97	15.18
Delta	Cedaredge	6,175	48.0	153	11.62
	Delta	5,025	49.7	154	8.02
	Paonia	5,694	49.3	156	13.72
Denver	Denver	5,272	49.8	163	14.02
Dolores	Dove Creek	.....	....	...	.....
	Rico	8,824	....	...	26.06
Douglas	Castle Rock	6,202	....	121	.....
Eagle		.....	....	...	.....
Elbert	Hamps	5,400	46.3	139	14.52
	Limon (near)	5,360	46.7	143	13.43
El Paso	Calhan	6,508	45.5	131	17.19
	Colorado Springs	6,098	47.2	137	14.53
	Fremont Exp. Sta	8,850	38.1	107	.....
	Lake Moraine	10,265	36.2	96	24.98
	Monument	7,200	44.0	120	.....
Fremont	Canon City	5,343	52.9	157	12.30
Garfield	Rifle	5,437	47.7	151	12.27
Gilpin		.....	....	...	.....
Grand	Fraser	8,560	31.6	...	.....
	Grand Lake	8,153	....	...	.....
Gunnison	Crested Butte	8,867	31.3	...	20.55
	Gunnison	7,670	36.8	92	9.68
	Sapinero (near)	8,125	37.5	88	18.62
Hinsdale	Hermit	9,843	31.5	...	.....
Huerfano	Cuchara Camps	8,200	....	...	.....
Jackson	Spicer (near)	8,700	....	88	.....
Jefferson	Cheesman	6,890	46.6	132	16.58
	Platte Canon	5,492	50.0	147	16.36
Kiowa	Eads	4,207	....	184	.....
Kit Carson	Burlington	4,160	50.1	157	17.18
Lake	Leadville	10,248	34.9	93	15.20
La Plata	Durango	6,546	...	133	16.67
	Ignacio	6,425	44.1	120	10.90
Larimer	Estes Park Fish Hatchery	8,000	40.4	107	21.03
	Fort Collins	4,985	46.7	146	14.96
	Fry's Ranch	7,500	40.9	100	17.03
	Longs Peak (near)	8,600	37.6	...	20.91
Las Animas	Hoehne	8,700	50.5	149	.....
	North Lake	8,800	....	...	23.10
	Trinidad	5,994	51.4	168	16.98
Lincoln		.....	....	...	.....
Logan	LeRoy (near)	4,380	48.2	140	16.91
	Sterling	3,934	48.9	151	.....
Mesa	Collbran	6,000	46.2	146	15.47
	Fruita (near)	4,590	49.7	169	10.38
	Glade Park	7,000	....	...	.....
	Grand Junction	4,602	51.3	180	8.31
	Palisade	4,729	49.4	163	.....
Mineral	Wagon Wheel Gap Exp. Station	9,610	35.0	...	15.55
	Wagon Wheel Gap River Valley	8,434	35.1	64	.....
Moffat	Lay	6,172	41.9	90	12.98

CLIMATOLOGICAL DATA—(Continued)

COUNTY	STATION	Elevation, Feet	Mean Annual Temp.	Growing Season, Days	Average Annual Precipitation
Montezuma	Dolores	6,445	44.0	129	10.83
	Mancos	6,960	45.8	115	18.09
Montrose	Crawford	6,600	43.4	143	6.55
	Montrose	5,811	47.3	149	9.70
Morgan	Fort Morgan	4,319	48.7	155	14.06
	Wiggins	4,541	46.8	141	.....
Otero	La Junta	4,060	....	...	.....
	Rocky Ford	4,177	51.6	165	12.67
Ouray		.....	....	...	.....
Park	Fairplay	9,886	....	...	.....
Phillips	Holyoke	4,100	....	139	.....
Pitkin	Nast	8,800	35.0	83	.....
Prowers	Holly	3,380	54.1	166	14.77
	Lamar	3,592	54.2	169	15.74
Pueblo	Pueblo	4,734	51.2	173	11.95
Rio Blanco	Meeker (near)	6,182	43.1	88	15.90
Rio Grande	Monte Vista	7,660	....	...	.....
Routt	Columbine	8,766	....	...	24.33
	Yampa	7,884	....	...	.....
	Steamboat Springs	6,701	38.9	65	21.94
Saguache	Saguache	7,740	43.3	109	8.48
San Juan	Silverton (near)	9,400	34.0	...	29.16
San Miguel	Telluride	8,756	38.6	80	.....
	Trout Lake	9,800	....	...	.....
Sedgwick	Julesburg	3,465	47.3	...	16.27
Summit	Dillon	8,800	31.9	...	23.02
Teller	Cripple Creek	9,396	....	...	16.94
	Victor (near)	10,100	41.0	91	18.84
Washington	Akron	4,650	46.6	149	17.97
Weld	Fort Lupton	4,907	....	...	10.33
	Grover (near)	5,076	44.7	114	14.06
Yuma	Wray	3,750	....	147	.....

NOTE.—The averages given in this table are based upon records of the government weather bureau, furnished in most cases by voluntary observers. The length of the record varies considerably at different stations, being 46 years for Denver, 39 years for Colorado Springs, 30 years for Pueblo, 30 years for Canon City and more than 20 years for a great many places. The average length of the growing season is the time between the last killing frost in the spring and the first in the autumn. This record is for the most part calculated for only a few years, and is not so nearly accurate as the other figures given.

Financial Condition of Colorado

AN analysis of the financial condition of Colorado at the close of the fiscal year ending November 30, 1917, shows that the assets owned by the state were in excess of the state's liabilities by a total of $145,127,172.85. The following statement is taken from the report of the state treasurer, showing the condition of the various funds, and the report of the auditor, containing an inventory of all property owned by the state, including the state capitol and grounds, all educational, charitable and penal institutions and other physical properties owned by the state on November 30, 1917:

ASSETS

Land and improvements	$ 11,456,516.60
Furniture and fixtures	1,585,149.72
State land	29,757,941.97
Coal and mineral reserves	100,000,000.00
Certificates of purchase	5,000,000.00
Cash	2,571,394.91
Total	$150,371,003.20

LIABILITIES

Outstanding warrants	$ 714,030.35
Bonds	4,529,800.00
Total	$ 5,243,830.35

(NOTE.—The value of state lands is estimated on the basis of 3,162,374.10 acres still remaining the property of the state, at an average value of $9.41 per acre, being the average for a period of twenty years and being considerably lower than the prevailing price at the present time. The value of coal and mineral reserves has been conservatively estimated by Mr. Horace W. Havens, mineral superintendent of the state board of land commissioners, a more detailed estimate appearing elsewhere in this volume.)

COLORADO CITIES AND TOWNS

TOWN	COUNTY	Population	Valuation	Levy (Mills)	Revenue	Per Capita Valuation	City Hall and Other Property	Bonds and Interest	Warrants and Other Obligations	Total Debt	Per Capita Debt	Municipal Water System
Aguilar	Las Animas	1,800	$ 380,435	18.00	$ 6,847.83	$ 211.35	$ 25,000	$ 15,000	.....	$ 15,000	$ 8.33	Yes
Akron	Washington	1,200	737,584	10.00	7,376.00	614.65	37,000	33,132	$ 3,692	36,824	30.69	Yes
Alamosa	Alamosa	4,000	1,646,533	10.50	17,788.60	411.63	94,300	96,000	.....	96,000	24.00	Yes
Alma	Park	200	94,825	3.70	350.85	474.12	.....	.....	.....	.....	.....	No
Animas City	La Plata	300	191,874	10.50	2,014.67	639.58	25,500	25,000	.....	25,000	83.33	Yes
Antonito	Conejos	1,000	475,337	6.00	2,930.72	475.34	36,000	31,000	.....	31,000	31.00	Yes
Arvada	Jefferson	1,000	655,600	9.00	5,900.40	655.60	47,000	44,500	.....	44,500	44.50	Yes
Aspen	Pitkin	1,700	513,705	43.00	22,089.32	302.18	5,500	111,000	.....	111,000	65.29	No
Ault	Weld	800	450,020	10.50	4,725.52	562.52	32,000	24,700	3,000	27,700	34.62	Yes
Aurora	Adams / Arapahoe	1,500	1,034,005	30.00	31,020.15	689.34	21,000	400	.....	400	.27	No
Basalt	Eagle	310	68,929	2.88	198.51	222.35	15,350	.....	.....	.....	.....	Yes
Bayfield	La Plata	350	135,468	11.00	1,490.15	387.05	17,000	17,000	.....	17,000	48.57	Yes
Berthoud	Larimer	900	743,790	6.80	5,057.71	826.43	50,750	32,500	.....	32,500	36.11	Yes
Black Hawk	Gilpin	640	.....	.....	.....	.....	32,000	8,000	19,100	27,100	42.34	Yes
Blanca	Costilla	400	307,616	6.00	1,845.70	769.04	150	.....	700	700	17.50	No
Bonanza	Saguache	100	22,904	5.80	133.00	229.04	1,000	.....	.....	.....	.....	No
Boulder	Boulder	12,155	9,987,070	6.75	67,412.86	821.64	1,115,956	613,427	.....	613,427	50.47	Yes
Breckenridge	Summit	1,000	432,727	15.75	6,795.45	432.73	52,500	.....	14,400	14,400	14.40	Yes
Brighton	Adams	1,800	798,330	11.30	9,021.13	443.52	45,258	36,300	2,475	38,775	21.54	Yes
Brush	Morgan	2,000	998,747	13.70	13,628.26	499.37	117,550	76,020	.....	76,020	38.01	Yes
Buena Vista	Chaffee	1,000	491,177	8.80	4,322.36	491.18	30,000	20,100	.....	20,100	20.10	Yes
Burlington	Kit Carson	800	459,629	19.50	8,962.77	574.54	43,000	26,500	1,150	27,650	34.56	Yes
Canon City	Fremont	6,000	3,697,773	11.00	40,675.66	616.29	619,000	472,300	.....	472,300	78.72	Yes
Carbondale	Garfield	350	299,575	8.80	2,636.25	855.93	27,500	29,350	1,078	30,428	86.94	Yes
Castle Rock	Douglas	400	324,133	14.00	4,538.34	810.33	70,000	55,875	5,585	61,460	153.65	Yes
Cedaredge	Delta	400	265,585	13.00	3,452.60	663.96	40,300	40,000	3,556	43,556	108.89	Yes
Central City	Gilpin	1,000	672,846	18.00	12,111.23	672.85	131,300	92,000	.....	92,000	92.00	Yes
Center	Saguache	550	272,841	7.50	2,046.00	496.07	700	.....	.....	.....	.....	No
Cheyenne Wells	Cheyenne	500	211,430	17.00	3,615.55	422.86	.....	23,320	.....	23,320	46.64	Yes
Coal Creek	Fremont	475	68,724	20.00	1,374.48	144.68	.....	.....	.....	.....	.....	.....
Collbran	Mesa	225	109,836	13.96	1,533.31	488.16	11,500	9,170	2,070	11,240	49.95	Yes
Colorado Springs	El Paso	36,000	35,982,250	7.95	286,058.87	999.51	5,331,361	1,645,742	44,149	1,689,891	46.94	Yes
Cortez	Montezuma	550	326,493	15.00	4,897.40	593.62	.....	54,000	600	54,600	99.27	Yes
Craig	Moffat	1,000	608,260	13.50	8,211.51	608.26	.....	.....	.....	.....	.....	.....
Crawford	Delta	250	68,215	6.50	443.40	272.86	.....	.....	.....	.....	.....	No
Creede	Mineral	1,000	275,820	20.00	5,516.40	275.82	.....	.....	7,669	7,669	7.67	No
Crested Butte	Gunnison	1,100	340,250	18.00	6,124.50	309.32	4,000	.....	11,000	11,000	10.00	No
Creston	Saguache	150	30,066	10.30	310.00	200.44	.....	.....	475	475	3.17	No
Cripple Creek	Teller	3,500	1,237,470	55.00	68,060.85	353.56	.....	123,000	.....	123,000	35.14	No

COLORADO CITIES AND TOWNS—(Continued)

TOWN	COUNTY	Population	Valuation	Levy (Mills)	Revenue	Per Capita Valuation	City Hall and Other Property	Bonds and Interest	Warrants and Other Obligations	Total Debt	Per Capita Debt	Municipal Water System
Deacon	Weld	150	$ 44,430	11.50	$ 510.86	$ 296.20	$ 5,000	.....	.....	.....	.....	Yes
DeBeque	Mesa	300	143,729	13.72	1,971.96	479.10	20,200	$ 20,200	$ 1,200	$ 21,400	$ 71.33	Yes
Del Norte	Rio Grande	1,000	447,220	11.00	4,919.42	447.22	59,621	52,507	170	52,677	52.68	Yes
Delta	Delta	2,800	2,190,810	8.15	17,855.10	782.43	300,000	265,500	.....	265,500	94.82	Yes
Denver	Denver	268,439	331,090,565	7.89	2,612,304.61	1,233.39	16,500,000	411,327	86,359	497,686	1.85	No
Dillon	Summit	175	105,251	5.00	526.25	601.43	.....	.....	.....	.....	.....	.....
Dolores	Montezuma	450	308,056	33.00	10,165.48	684.57	.....	46,350	.....	46,350	103.00	Yes
Durango	La Plata	5,000	4,217,650	9.50	40,067.67	843.53	293,447	291,294	5,457	296,751	59.35	Yes
Eads	Kiowa	400	168,726	4.58	772.76	419.31	.....	.....	.....	.....	.....	.....
Eagle	Eagle	500	247,879	6.00	1,487.15	495.76	30,650	26,500	1,000	27,500	55.00	Yes
Eaton	Weld	1,400	1,155,970	7.50	8,669.78	825.69	38,188	22,000	.....	22,000	15.71	Yes
Edgewater	Jefferson	1,200	421,030	10.50	4,420.81	350.86	41,000	75,500	2,200	77,700	64.75	Yes
Eldora	Boulder	100	51,047	20.00	1,020.94	510.47	100	5,700	.....	5,700	57.00	No
Elizabeth	Elbert	250	174,546	6.41	1,119.71	698.18	2,500	.....	.....	.....	.....	No
Empire	Clear Creek	130	39,700	20.00	794.00	305.38	15,300	4,000	.....	4,000	30.77	Yes
Englewood	Arapahoe	4,200	2,151,200	7.00	15,058.40	512.19	5,000	5,000	.....	5,000	1.19	No
Erie	Weld	500	177,110	14.00	2,479.40	354.22	45,550	16,000	.....	16,000	32.00	Yes
Estes Park	Larimer	500	327,380	10.00	3,273.80	654.76	.....	.....	.....	.....	.....	.....
Eureka	San Juan	85	40,055	15.00	600.82	471.23	.....	.....	.....	.....	.....	.....
Evans	Weld	600	288,410	11.00	3,172.51	480.68	37,000	.....	.....	.....	.....	.....
Fairplay	Park	300	154,878	3.00	464.63	516.26	20,000	.....	.....	.....	.....	Yes
Firestone	Weld	250	66,550	15.00	998.25	266.20	.....	.....	.....	.....	.....	.....
Flagler	Kit Carson	600	267,934	5.00	1,339.67	446.56	.....	.....	.....	.....	.....	.....
Fleming	Logan	200	233,276	10.00	2,332.76	1,166.38	.....	.....	.....	.....	.....	.....
Florence	Fremont	3,000	2,050,297	9.40	19,272.64	683.43	172,582	116,975	49,726	166,701	55.57	.....
Fort Collins	Larimer	12,295	6,971,050	6.70	46,705.95	566.98	901,300	345,710	.....	345,710	28.12	Yes
Fort Lupton	Weld	1,010	546,250	10.50	5,735.86	540.84	43,500	38,692	.....	38,692	38.31	Yes
Fort Morgan	Morgan	4,000	2,209,224	7.50	16,569.18	552.31	250,000	74,392	.....	74,392	18.60	Yes
Fountain	El Paso	600	265,880	11.00	2,924.68	443.13	30,000	24,600	998	25,598	51.20	Yes
Fowler	Otero	1,500	719,791	7.70	5,312.41	479.86	55,000	48,000	2,000	50,000	33.33	Yes
Frederick	Weld	275	117,380	20.00	2,347.60	426.84	.....	.....	.....	.....	.....	.....
Frisco	Summit	80	26,589	3.00	79.77	332.36	.....	.....	.....	.....	.....	.....
Fruita	Mesa	1,075	626,820	14.00	8,775.48	583.09	160,000	129,000	.....	129,000	120.00	Yes
Georgetown	Clear Creek	1,000	531,485	10.00	5,314.85	531.48	10,000	.....	567	567	.57	Yes
Gilcrest	Weld	250	82,870	6.50	538.69	331.48	.....	.....	.....	.....	.....	No
Gillett	Teller	33	17,940	15.00	269.10	543.64	.....	.....	.....	.....	.....	.....
Glenwood Springs	Garfield	3,000	1,994,465	10.00	19,944.65	664.82	121,000	170,000	.....	170,000	56.67	Yes*
Golden	Jefferson	3,000	1,595,070	13.20	21,054.93	531.69	160,000	157,000	.....	157,000	52.33	Yes
Goldfield	Teller	1,000	542,200	40.00	21,688.00	542.20	1,000	37,000	9,000	46,000	46.00	Yes

Granada	Prowers	400	$ 184,294	10.00	$ 1,842.94	$ 460.73	.....	.....	.....	.....	.....	Yes
Granby	Grand	50	27,085	5.00	135.42	541.70	$ 1,800	.....	.....	.....	.....	Yes
Grand Junction	Mesa	9,000	6,816,792	7.70	52,489.30	757.42	1,004,925	$ 586,000	.....	$ 586,000	$ 65.11	Yes
Grand Valley	Garfield	300	151,625	7.80	1,182.75	505.42	30,000	30,000	.....	30,000	100.00	Yes
Greeley	Weld	12,264	8,563,610	9.50	81,353.16	698.27	1,250,000	475,000	.....	475,000	38.73	Yes
Green Mountain Falls	{El Paso / Teller}	80	111,450	7.00	780.15	1,393.12	750	.....	.....	.....	.....	No
Grover	Weld	500	194,810	15.00	2,922.15	389.62	.....	.....	.....	.....	.....	.....
Gunnison	Gunnison	1,500	1,232,150	7.20	8,871.48	821.43	75,000	69,000	.....	69,000	46.00	Yes
Gypsum	Eagle	220	121,393	13.90	1,687.36	551.79	20,000	19,260	1,335	20,595	93.61	Yes
Hartman	Prowers	300	123,167	17.80	2,192.37	410.56	.....	12,500	.....	.....	41.67	Yes
Haxtun	Phillips	800	303,668	20.00	6,073.36	379.58	45,000	35,000	7,000	42,000	52.50	Yes
Hayden	Routt	450	338,542	15.00	5,078.13	752.31	35,000	35,000	.....	35,000	77.78	Yes
Holly	Prowers	1,262	583,645	7.88	4,599.12	462.48	.....	51,500	1,839	53,339	42.26	Yes*
Holyoke	Phillips	1,000	404,000	14.00	5,656.00	404.00	40,000	33,000	.....	33,000	33.00	Yes
Hooper	Alamosa	150	79,510	1.00	79.51	530.07	.....	.....	.....	.....	.....	No
Hotchkiss	Delta	700	378,735	14.00	5,302.29	541.05	1,000	75,000	.....	75,000	107.14	Yes
Hot Sulphur Springs	Grand	300	87,945	5.00	439.73	293.15	12,500	10,653	1,152	11,805	39.35	Yes
Hudson	Weld	300	202,980	13.50	2,740.35	676.60	18,000	18,000	.....	18,000	60.00	Yes
Hugo	Lincoln	500	443,780	12.00	5,364.19	887.56	45,000	40,205	.....	40,205	80.41	Yes
Idaho Springs	Clear Creek	2,500	1,382,890	11.25	15,557.51	553.16	198,000	64,000	.....	64,000	25.60	Yes
Ignacio	La Plata	500	150,268	5.80	871.55	300.54	.....	.....	.....	.....	.....	No
Iliff	Logan	250	188,465	5.50	1,036.56	753.86	1,000	.....	250	250	1.00	.....†
Jamestown	Boulder	175	42,532	10.00	425.32	243.04	150	.....	.....	.....	.....	No
Johnstown	Weld	400	323,480	9.00	2,911.32	808.70	.....	23,332	600	23,932	59.83	Yes
Julesburg	Sedgwick	1,200	795,399	16.00	12,726.38	662.83	60,000	71,000	.....	71,000	59.17	Yes
Kersey	Weld	450	199,210	9.00	1,792.89	442.69	5,000	5,150	.....	5,150	11.44	Yes
Kiowa	Elbert	175	140,065	2.47	345.96	800.37	1,500	.....	.....	.....	.....	Yes‡
Kremmling	Grand	250	105,110	5.00	525.55	420.44	30,000	.....	.....	.....	.....	No
Lafayette	Boulder	1,800	593,925	40.00	23,757.00	329.96	94,480	170,000	.....	170,000	94.44	Yes
La Jara	Conejos	700	348,323	6.00	2,357.14	497.60	.....	.....	.....	.....	.....	No
La Junta	Otero	6,000	3,636,801	8.50	30,912.81	606.13	330,000	113,000	.....	113,000	18.83	Yes
Lake City	Hinsdale	600	145,378	18.00	2,616.81	242.30	27,000	21,000	6,000	27,000	45.00	Yes
Lamar	Prowers	5,274	1,850,504	15.75	29,145.45	350.87	245,000	221,000	2,500	223,500	42.38	Yes
LaSalle	Weld	500	279,490	22.20	6,204.57	558.98	31,500	25,000	1,500	26,500	53.00	Yes
Las Animas	Bent	3,000	1,095,870	20.90	22,903.68	365.29	.....	.....	.....	.....	.....	.....
LaVeta	Huerfano	750	421,112	7.00	2,947.78	561.48	.....	22,000	.....	22,000	29.33	Yes
Lawrence	Teller	62	10,590	15.00	158.85	170.81	.....	.....	.....	.....	.....	.....
Leadville	Lake	9,000	2,945,806	26.85	79,094.89	327.31	22,000	.....	185,550	185,550	20.62	Yes*
Limon	Lincoln	1,000	400,305	19.48	7,781.09	400.30	55,000	70,000	3,000	73,000	73.00	Yes
Littleton	Arapahoe	1,650	1,162,845	9.60	11,163.31	704.75	40,750	4,000	.....	4,000	2.42	Yes
Longmont	Boulder	6,000	4,430,547	6.10	27,026.20	738.42	592,828	264,000	.....	264,000	44.00	Yes
Louisville	Boulder	1,800	474,706	16.00	7,595.29	263.72	40,000	23,000	.....	23,000	12.78	Yes
Loveland	Larimer	5,000	3,021,880	5.30	16,015.47	604.38	186,233	102,000	.....	102,000	20.40	Yes
Lyons	Boulder	600	201,127	9.75	1,960.86	335.21	21,000	11,000	590	11,590	19.32	Yes
Manassa	Conejos	1,200	151,409	5.77	917.76	126.17	3,000	.....	450	450	.37	.....
Mancos	Montezuma	800	436,281	9.70	4,308.28	545.35	26,500	30,675	500	31,175	38.97	Yes

COLORADO CITIES AND TOWNS—(Continued)

TOWN	COUNTY	Population	Valuation	Levy (Mills)	Revenue	Per Capita Valuation	City Hall and Other Property	Bonds and Interest	Warrants and Other Obligations	Total Debt	Per Capita Debt	Municipal Water System
Manitou	El Paso	1,300	$ 2,423,140	7.50	$ 18,173.54	$ 1,863.95	$ 225,000	$ 176,400	.....	$ 176,400	$ 135.69	Yes
Manzanola	Otero	600	400,504	6.90	2,763.48	667.51	.....	28,500	.....	28,500	47.50	Yes
Marble	Gunnison	782	258,385	3.00	775.15	330.41	.....	.....	.....	.....	.....	.....
Mead	Weld	250	183,670	12.40	2,277.52	734.68	11,000	10,000	.....	10,000	40.00	Yes
Meeker	Rio Blanco	1,200	634,665	12.00	7,617.75	528.89	75,000	60,000	.....	60,000	50.00	Yes
Merino	Logan	250	164,277	7.00	1,150.00	657.11	.....	.....	.....	.....	.....	.....
Milliken	Weld	350	215,670	11.00	2,372.37	616.20	17,500	12,000	.....	12,000	34.28	Yes
Minturn	Eagle	250	56,047	21.70	1,216.22	224.19	20,900	20,600	.....	20,600	82.40	Yes
Moffat	Saguache	150	206,464	2.00	413.00	1,376.43	1,000	.....	.....	.....	.....	Yes
Monte Vista	Rio Grande	3,000	1,768,070	7.41	13,101.39	589.36	6,500	15,000	$ 7,411	22,411	7.47	No
Montrose	Montrose	4,500	3,056,880	8.30	25,372.69	679.31	91,640	24,429	20,070	44,499	9.89	Yes
Monument	El Paso	165	69,550	11.00	765.05	421.51	4,875	3,500	.....	3,500	21.21	Yes
Morrison	Jefferson	200	128,960	16.00	2,063.36	635.00	15,000	15,000	.....	15,000	75.00	Yes
Mountain View	Jefferson	400	127,040	10.30	1,308.51	317.60	.....	.....	.....	.....	.....	.....
Nederland	Boulder	2,000	260,907	29.60	7,722.94	130.45	22,500	21,740	1,932	23,672	11.84	Yes
Nevadaville	Gilpin	90	112,181	3.00	336.56	1,246.45	1,000	.....	100	100	1.11	Yes
New Castle	Garfield	350	173,270	5.00	866.86	495.06	25,500	5,125	.....	5,125	14.64	Yes
Nunn	Weld	300	128,160	5.00	640.80	427.20	500	.....	.....	.....	.....	No
Norwood	San Miguel	500	283,485	10.00	2,834.85	566.97	30,500	24,600	998	25,598	51.20	Yes
Nucla	Montrose	350	132,550	11.80	1,564.04	378.71	17,000	12,000	.....	12,000	34.28	Yes
Oak Creek	Routt	1,000	328,810	15.00	4,932.15	328.81	40,000	40,000	14,000	54,000	54.00	Yes
Olathe	Montrose	700	526,060	6.71	3,530.10	751.51	68,500	86,000	1,144	87,144	124.49	Yes
Olney Springs	Crowley	250	96,050	7.00	968.21	384.20	.....	.....	.....	.....	.....	No
Ophir	San Miguel	150	39,328	6.33	248.95	262.19	6,000	.....	.....	.....	.....	Yes
Orchard City	Delta	...	357,845	4.00	1,431.38	.....	.....	.....	.....	.....	.....	.....
Ordway	Crowley	1,500	807,750	11.30	11,408.49	538.50	70,000	55,000	.....	55,000	36.67	Yes
Otis	Washington	300	230,040	21.10	4,854.00	766.80	.....	.....	.....	.....	.....	.....
Ouray	Ouray	1,875	846,290	14.50	12,721.20	451.35	115,000	27,812	.....	27,812	14.83	Yes
Pagosa Springs	Archuleta	800	465,871	11.60	5,404.10	582.34	31,000	18,540	4,000	22,540	28.17	Yes
Palisade	Mesa	800	463,987	11.82	5,484.33	579.98	.....	79,500	.....	79,500	99.37	.....
Palmer Lake	El Paso	250	460,540	5.00	2,302.70	1,842.16	35,000	21,730	600	22,330	89.32	Yes
Paonia	Delta	1,004	609,520	7.50	4,571.40	607.09	98,050	65,694	.....	65,694	65.43	Yes
Peetz	Logan	200	155,136	16.00	2,482.18	775.68	.....	.....	.....	.....	.....	.....
Pitkin	Gunnison	250	111,280	5.00	556.40	445.12	3,000	.....	.....	.....	.....	.....
Platteville	Weld	450	263,030	16.00	4,208.48	584.51	47,500	35,500	1,000	36,500	81.11	Yes
Poncha Springs	Chaffee	75	73,164	4.50	329.23	975.52	550	.....	.....	.....	.....	No
Pueblo	Pueblo	56,000	31,730,000	12.70	402,971.00	566.61	1,838,878	851,000	.....	851,000	15.20	Yes
Prospect Heights	Fremont	54	12,545	5.00	62.73	232.31	700	.....	.....	.....	.....	No
Red Cliff	Eagle	600	157,088	26.00	4,084.29	261.81	22,500	21,200	.....	21,200	35.33	Yes

Rico	Dolores	400	$ 349,580	5.50	$ 1,922.69	$ 873.95	$ 5,000	$ 3,500	.....	$ 3,500	$ 8.75	Yes
Ridgeway	Ouray	400	246,071	13.00	3,198.92	615.18	33,000	30,000	.....	30,000	75.00	Yes
Rifle	Garfield	1,000	649,360	6.50	4,221.22	649.36	67,000	48,000	.....	48,000	48.00	Yes
Rockvale	Fremont	1,500	154,980	11.00	1,704.79	103.32	71,225	750	$ 4,134	4,884	3.26	Yes
Rocky Ford	Otero	5,000	2,516,856	11.00	27,685.42	503.37	105,330	173,000	.....	173,000	34.60	Yes
Saguache	Saguache	1,000	526,068	10.00	5,261.00	526.07	17,000	7,600	7,617	15,217	15.22	Yes
Salida	Chaffee	5,000	3,017,181	6.00	18,103.09	603.44	301,923	32,147	1,241	33,388	6.68	Yes
Sanford	Conejos	600	105,248	6.00	596.10	175.41	.....	.....	.....	.....	.....	.....
Seibert	Kit Carson	300	117,993	10.00	1,179.93	393.31	.....	.....	.....	.....	.....	.....
Sheridan	Arapahoe	500	487,955	6.60	3,220.50	975.90	1,000	.....	300	300	.60	No
Silt	Garfield	200	87,615	16.60	1,454.44	438.07	15,000	15,000	300	15,300	76.50	Yes
Silver Plume	Clear Creek	500	174,020	7.98	1,388.68	348.04	20,600	3,500	210	3,710	7.42	Yes
Silver Cliff	Custer	275	21,530	12.50	269.22	78.29	32,000	.....	.....	.....	.....	Yes
Silverton	San Juan	2,400	1,026,396	8.00	8,211.17	427.66	166,000	20,500	.....	20,500	8.54	Yes
Simla	Elbert	450	.....	.....	.....	.....	16,000	16,000	.....	16,000	35.55	Yes
Springfield	Baca	500	110,355	15.00	1,655.32	.....	.....	.....	.....	.....	.....	.....
Steamboat Springs	Routt	1,500	1,126,780	10.10	17,380.48	751.19	65,000	156,905	4,717	161,622	107.75	Yes
St. Elmo	Chaffee	125	19,175	20.00	383.50	153.40	3,250	.....	.....	.....	.....	Yes
Sterling	Logan	7,200	3,752,284	8.00	30,018.28	521.15	165,000	32,600	.....	32,600	4.53	Yes
Sugar City	Crowley	1,500	336,995	13.00	4,381.42	224.66	.....	.....	.....	.....	.....	.....
Superior	Boulder	350	51,034	22.00	1,122.75	145.81	.....	.....	.....	.....	.....	.....
Swink	Otero	350	175,370	9.70	1,701.09	501.06	14,000	.....	.....	.....	.....	Yes
Telluride	San Miguel	1,700	1,429,580	8.00	11,436.64	840.93	57,184	.....	.....	.....	.....	Yes
Trinidad	Las Animas	15,000	9,043,360	11.46	103,636.90	602.89	1,501,132	1,003,203	79,439	1,082,642	72.18	Yes
Two Buttes	Baca	125	77,610	2.00	155.22	620.88	3,000	.....	.....	.....	.....	No
Victor	Teller	3,500	886,100	50.00	44,305.00	253.17	539,301	513,900	.....	513,900	146.83	Yes
Walden	Jackson	300	219,245	16.00	3,507.93	730.82	.....	19,500	.....	19,500	65.00	Yes
Walsenburg	Huerfano	2,800	1,896,702	6.00	11,380.12	677.39	162,000	160,538	.....	160,538	57.73	Yes
Ward	Boulder	125	39,289	7.00	275.02	314.31	.....	.....	.....	.....	.....	.....
Wellington	Larimer	600	333,250	10.00	3,332.50	555.42	43,500	32,900	.....	32,900	54.83	Yes
Westcliffe	Custer	380	172,711	3.63	626.94	454.51	11,000	.....	.....	.....	.....	Yes
Westminster	Adams	400	358,455	11.30	2,688.41	896.14	27,454	28,000	.....	28,000	70.00	Yes
Wiley	Prowers	375	197,321	17.00	3,354.46	526.19	16,000	16,090	1,500	17,590	46.91	Yes
Williamsburg	Fremont	500	66,736	21.20	1,414.80	133.47	700	.....	.....	.....	.....	Yes
Windsor	Weld	2,000	859,430	9.40	8,078.59	429.71	12,000	17,000	.....	17,000	8.50	Yes§
Woodland Park	Teller	163	31,290	20.00	625.80	191.96	.....	.....	.....	.....	.....	.....
Wray	Yuma	1,400	839,287	14.80	12,421.45	599.49	38,000	37,100	.....	37,100	26.50	Yes
Yampa	Routt	400	178,020	19.00	3,382.38	445.05	20,000	15,000	.....	15,000	37.50	Yes
Yuma	Yuma	1,000	751,706	12.00	10,316.65	751.71	46,507	39,256	.....	39,256	39.26	Yes*

* Also municipal electric light plant.
† Bonds issued for waterworks, $15,000.
‡ Owned jointly with county.
§ Owns pipe line and standpipe for emergency use. Buys water from Greeley system.

Owing to the fact that reports from the various towns were sent in during the period of two or three months both before and after the date on which the 1917 taxes became due and payable, it was impossible to give all cities and towns credit for cash on hand and outstanding taxes on a uniform basis, consequently that item of assets was dropped. The column "City Hall and Other Physical Properties" includes all public properties except sewers and streets. In a few instances where towns reported no physical properties an estimate was made on the basis of the outstanding bonds. Items of bonds and outstanding warrants include only general city or town issues and do not include district obligations.

Colorado State Land

WHAT is popularly known as state land in Colorado and other western public land states is the various areas turned over by the federal government to the state governments under general acts of congress and various special statutory grants, to be administered by the various state governments for the particular state interests in those states for which the grants were made. The most important of these grants was made under an act of congress passed in 1875, the year before Colorado became a state, by which the United States gave to each of the public land states an amount of land equal to one-eighteenth of the area of the state, for the benefit of the public schools. This is known as school land, and quite generally in public land states all state land is referred to as school land, though various grants were made to the states for purposes in no way connected with the schools. The various grants made to Colorado, with the purposes for which they were made and the area acquired under each, are as follows:

	Acres
Public schools	3,678,026.14
Agricultural college	87,528.82
Internal improvements	473,118.52
Penitentiary	28,308.75
Public buildings	32,147.97
University	45,183.88
Reformatory	520.00
Saline lands	18,836.62
Total	4,363,670.70

The original school land grant gave to the state sections 16 and 36 in every township. As there were large Indian reservations in Colorado at the time the grant was made the state was permitted to select other public lands in lieu of those within these reservations. As a result, the state acquired large blocks of land in various localities, sometimes almost entire townships. Where sections 16 and 36 were in private ownership at the time the grant was made the state was also permitted to select other land elsewhere. When the national forests were created the state also exchanged considerable areas of state land within the forest boundaries for government land in other localities. By the terms of the grants from the government the funds derived from the sale of school land constitute a permanent school fund, only the interest and the revenue derived from the administration of unsold land being available for use. The total amount of state land sold up to December 1, 1917, excluding all cancellations, was 1,201,296.60 acres, leaving 3,162,374.10 acres of state land unsold. An accompanying table shows the amount of state land sold in each county during the twelve months ending November 30, 1917, and the average price received.

STATE LAND SOLD DURING TWELVE MONTHS ENDING NOV. 30, 1917

County	Acres	Average Price Per Acre
Adams	6,358.84	$13.10
Alamosa	9,982.60	5.88
Arapahoe	3,013.90	14.30
Baca	6,261.58	9.08
Bent	1,119.00	12.55
Boulder	1,036.00	9.60
Conejos	515.94	16.94
Clear Creek	80.00	5.00
Douglas	943.51	7.25
Elbert	5,959.98	9.67
El Paso	4,798.93	8.48
Fremont	92.64	5.00
Grand	1,680.00	5.57
Huerfano	1,600.00	9.45
Jackson	1,021.29	10.90
Jefferson	1,000.00	10.36
Kiowa	640.00	8.00
Kit Carson	2,048.86	10.29
La Plata	560.00	6.00
Larimer	2,880.00	10.92
Las Animas	3,360.00	7.32
Lincoln	2,051.81	13.79
Logan	7,184.63	19.02
Moffat	3,217.52	6.78
Montezuma	2,931.87	8.55
Morgan	5,067.31	13.05
Otero	80.00	12.50
Park	760.00	7.00
Phillips	2,714.95	28.02
Pitkin	543.80	4.94
Prowers	800.00	13.10
Pueblo	1,448.98	9.04
Rio Grande	3,064.71	19.32
Routt	1,689.00	5.92
Saguache	7,795.79	6.05
San Miguel	640.00	7.50
Sedgwick	1,231.76	11.38
Washington	14,324.22	11.62
Weld	13,941.62	16.22
Yuma	7,208.17	12.58
Total	131,649.21	Av. $11.52

COLORADO'S MINERAL OUTPUT

Gold	$ 620,800,000
Silver	458,500,000
Lead	172,190,000
Zinc	99,687,000
Copper	37,595,000
Tungsten	14,250,000
Vanadium, Uranium, etc.	11,800,000
Miscelaneous Metals	2,000,000
Coal	325,000,000
Petroleum	11,000,000
Stone	65,000,000
Cement, Lime, etc.	13,000,000
Miscellaneous Nonmetals	60,000,000
Total	$1,890,822,000

SCHOOL LAND IN COLORADO ON NOVEMBER 30, 1917, AND TOTAL AMOUNT SOLD TO DATE

COUNTY	Total Acreage Granted	Total Acreage Sold	Land Remaining Acres
Adams	51,749.31	24,406.00	27,343.31
Alamosa	127,551.00	15,462.60	44,540.30
Arapahoe	34,077.06	18,016.78	16,060.28
Archuleta	22,598.00	1,018.91	21,579.09
Baca	89,077.35	10,550.57	78,526.78
Bent	168,885.48	9,894.24	140,796.90
Boulder	19,680.92	10,670.76	9,010.16
Chaffee	14,653.37	1,097.00	19,352.19
Cheyenne	64,000.00	9,933.61	54,066.39
Clear Creek	7,227.01	720.00	5,414.41
Conejos	134,778.30	7,909.87	61,338.62
Costilla	.....	.....	.....
Crowley	121,791.82	19,617.33	62,904.90
Custer	15,345.57	1,200.00	14,145.57
Delta	.....	.....	.....
Denver	1,320.00	633.40	686.60
Dolores	11,000.00	.....	11,000.00
Douglas	22,360.00	11,638.08	10,721.92
Eagle	21,164.97	2,517.49	18,647.48
Elbert	147,128.40	60,533.24	86,595.16
El Paso	227,893.14	37,677.62	190,215.52
Fremont	16,021.48	5,137.88	59,216.56
Garfield	.....	.....	.....
Gilpin	2,920.00	200.00	2,720.00
Grand	75,422.47	12,294.61	63,127.86
Gunnison	20,688.45	498.48	20,189.97
Hinsdale	10,424.45	640.00	9,784.45
Huerfano	53,440.70	7,669.50	45,771.20
Jackson	62,151.12	9,730.00	52,421.12
Jefferson	30,949.76	11,043.38	17,274.89
Kiowa	106,947.54	29,683.97	77,263.57
Kit Carson	80,976.83	13,781.58	67,195.25
Lake	5,238.77	.....	2,496.17
La Plata	14,115.36	3,004.87	11,110.49
Larimer	89,764.68	15,622.46	73,982.22
Las Animas	153,018.71	12,165.98	140,852.73
Lincoln	162,675.75	30,193.32	132,482.43
Logan	197,496.20	31,207.59	142,292.18
Mesa	.....	.....	.....
Mineral	1,763.22	640.00	1,123.22
Moffat	211,038.02	19,584.98	190,396.28
Montezuma	48,895.28	6,411.87	36,369.90
Montrose	.....	.....	.....
Morgan	105,589.69	12,255.31	57,944.91
Otero	132,642.39	21,541.86	102,661.47
Ouray	3,001.42	.....	3,001.42
Park	117,241.32	6,944.79	95,469.80
Phillips	23,862.44	5,276.51	18,585.93
Pitkin	3,288.18	863.80	2,424.38
Prowers	73,098.87	12,914.97	55,521.43
Pueblo	274,351.70	59,508.48	208,413.47
Rio Blanco	.....	.....	.....
Rio Grande	101,635.82	10,734.49	20,868.39
Routt	112,371.43	38,830.11	73,541.32
Saguache	156,999.80	18,727.85	99,721.85
San Juan	8,840.00	.....	8,840.00
San Miguel	30,317.91	4,944.48	25,373.43
Sedgwick	36,866.59	7,877.89	28,988.70
Summit	1,571.08	160.00	1,411.08
Teller	12,880.00	1,000.00	11,880.00
Washington	137,564.79	32,321.72	95,710.03
Weld	225,329.76	51,447.36	173,799.40
Yuma	95,893.50	31,959.93	59,201.20
Totals	4,299,577.18	770,317.52	3,162,374.28

Slight discrepancies will be noted in the figures here given, due to variations in the sources from which they were obtained.

State Coal Land

OF THE 3,162,374 acres of state land in Colorado, approximately 473,732 acres is coal land according to estimates made by Horace W. Havens, mineral superintendent of the state land board. This is the most valuable asset owned by the state, practically all of which was granted to Colorado by the federal government for the benefit of the public school system. Mr. Havens estimates the value of this land at approximately $100,000,000. It is distributed through nearly every coal-bearing district in the state as follows:

	Total Acres
Canon City District	
Fremont county	1,960
Northern Coal Fields	
Adams county	9,600
Arapahoe county	9,080
Boulder county	760
Denver county	1,920
Douglas county	13,180
Elbert county	30,020
El Paso county	44,700
Jefferson county	1,820
Weld county (Including Denver district south to El Paso county)	75,560
Southern Coal Fields	
Huerfano county	11,440
Las Animas county	33,360
Yampa Coal Fields	
Moffat county	120,400
Routt county	69,720
Miscellaneous	
Archuleta county	732
Grand county	2,960
Gunnison county	3,440
Jackson county	25,080
La Plata county	9,960
Montezuma county	4,160
Park county	3,880
Total coal area	473,732

Mr. Havens' estimates of the acreage and distribution of state coal land is based on the reports of the United States geological survey. He assumes that a very large percentage of the coal acreage will not be found to contain workable coal and bases his estimate of value on this assumption. Government appraisers have placed the value of coal land in Colorado at from $100 to $400 per acre, depending on the character of the deposits and their accessibility. Mr. Havens has estimated the value of state coal lands at a little more than $200 per acre, which is generally conceded to be very reasonable.

Only a small amount of state coal land has ever been sold as such by the state board of land commissioners. When state land is sold for agricultural purposes the state reserves all coal that may underlay it. The revenue derived by the school fund from this land comes from rentals on nonoperative coal leases and from royalties on producing leases. At present there are outstanding eight producing leases covering 4,480 acres, and 16 nonproducing leases covering 5,874.46 acres. These leases are granted for a term of five years and require a minimum royalty of 10c per ton mine run upon at least 1,000 tons of coal annually whether any coal is mined or not, and 10c a ton on all coal in excess of the amount sufficient to produce the fixed annual rental. At the present time the income derived annually from these coal leases is approximately $50,000.

From the figures given above it will be seen that only a very small percentage of the coal land owned by the state is under lease. This, of course, is due to the fact that most of it lies at a considerable distance from any railroad and cannot be worked profitably under existing conditions. The most important producing leases are located in the Canon City, Northern and Southern coal fields, in Fremont, Las Animas, Huerfano and Weld counties.

The following tabulation shows the amount of income the state had derived from a few of these producing mines to the end of 1917:

Mine	Counties	Royalties
Delagua	Las Animas.	$148,713.36
Maitland	Huerfano	85,418.26
Forbes	Las Animas.	91,255.84
Baum	Weld	81,441.10
Berwin-Tobasca	Las Animas.	45,884.46
Southwestern	Las Animas.	39,899.52
Toller	Las Animas.	38,280.00
		$530,892.54

COAL PRODUCTION BY COUNTIES

County	1916 Short Tons	1917 Short Tons
Boulder	1,061,250	1,277,265
Delta	76,986	103,248
El Paso	313,184	374,620
Fremont	592,091	871,531
Garfield	132,540	104,608
Gunnison	511,755	653,233
Huerfano	1,811,585	2,375,562
Jackson	43,656	86,289
Jefferson	149,522	131,141
La Plata	111,406	138,523
Las Animas	4,154,334	4,447,726
Mesa	132,442	209,166
Moffat	200	250
Montezuma	2,855	1,600
Montrose	922	1,684
Ouray	.....	1,129
Pitkin	41,513	22,964
Rio Blanco	4,775	4,657
Routt	919,895	1,057,685
Weld	461,274	652,424
Totals	10,522,185	12,515,305

Homestead Land

ON July 1, 1917, there was 10,416,317 acres of homestead land open to entry in Colorado, of which 8,479,934 acres was surveyed. On July 1, 1916, the amount of government land open to homestead entry was 14,908,127 acres. Since practically no government land was withdrawn from entry between these two dates, it appears that nearly 4,500,000 acres of government land was entered by homesteaders during the 12 months ending July 1, 1917. There is land open to homestead entry in every county in the state except Denver, Mineral and San Juan. In most counties, however, the amount is very small, consisting principally of tracts considerably below the usual size of a government homestead. An accompanying table shows the distribution of the land open to entry. From this it may be seen that a very large percentage of the available homestead area is in the northwestern part of the state, principally in Moffat and Rio Blanco counties. On July 1, 1917, there was in the state 4,913,315 acres of government land temporarily withdrawn from entry for various reasons, divided as follows:

Coal land	4,503,417	acres
Oil land	87,474	"
Oil shale land	45,440	"
Power sites	276,504	"
Public water reserves	480	"
Total	4,913,315	"

In addition to these withdrawals there are a few comparatively small tracts of land withdrawn under the Carey act. These are turned over to the state government and are administered by the state land board, pending the construction of irrigation systems. Filing on public land has been comparatively rapid since last July, so that the amount of land open to entry at the present time is considerably less than shown in the accompanying tables. No revised data will be available, however, until after July 1 of this year. The unsurveyed homestead land shown in the table is open to entry, but cannot be proved up until surveyed.

HOMESTEAD LAND OPEN TO ENTRY

County	Total	Unsurveyed
Del Norte Land Office		
Alamosa	26,015	3,840
Chaffee	2,269	.....
Conejos	144,640	.....
Fremont	1,508	.....
Huerfano	9,769	3,840
Las Animas	29,440	29,440
Rio Grande	55,660	.....
Saguache	297,576	.....
Denver Land Office		
Adams	120	.....
Arapahoe	160	.....
Boulder	720	.....
Clear Creek	20,180	13,440
Douglas	2,620	.....
Eagle	20,240	.....
Elbert	720	.....
Gilpin	11,960	3,840
Grand	123,960	13,860
Jackson	226,440	.....
Jefferson	10,060	.....
Larimer	52,720	.....
Morgan	520	.....
Routt	7,680	7,680
Summit	10,050	4,630
Weld	1,880	.....
Durango Land Office		
Archuleta	80,382	.....
Dolores	103,807	96,790
La Plata	104,578	.....
Montezuma	103,269	43,356
Glenwood Springs Land Office		
Eagle	230,751	201,080
Garfield	791,040	143,280
Gunnison	13,353	4,800
Mesa	148,885	15,360
Moffat	1,738,162	311,600
Pitkin	51,344	25,400
Rio Blanco	1,343,242	158,880
Routt	221,559	77,196
Hugo Land Office		
Cheyenne	800	.....
Kit Carson	5,553	.....
Lincoln	1,800	.....
Lamar Land Office		
Baca	58,198	.....
Bent	59,884	.....
Cheyenne	885	.....
Kiowa	4,473	.....
Las Animas	89,095	.....
Lincoln	195	.....
Prowers	17,061	.....
Leadville Land Office		
Chaffee	72,298	.....
Fremont	37,481	.....
Lake	8,444	.....
Park	277,027	10,844
Summit	465	.....
Teller	8,720	2,800
Montrose Land Office		
Delta	250,562	55,560
Dolores	50,880	19,200
Gunnison	567,440	78,880
Hinsdale	115,800	11,200
Mesa	821,689	267,040
Montrose	670,253	157,200
Ouray	29,440	.....
Saguache	130,560	.....
San Miguel	341,802	92,800
Pueblo Land Office		
Bent	2,240	.....
Costilla	8,280	.....
Crowley	9,240	6,840
Custer	38,280	.....
Elbert	560	.....
El Paso	5,130	3,010
Fremont	325,920	.....
Huerfano	72,620	10,040
Kiowa	280	.....
Las Animas	183,708	.....
Lincoln	3,960	.....
Otero	13,780	.....
Pueblo	20,860	.....
Saguache	21,140	.....
Teller	25,280	.....
Sterling Land Office		
Logan	5,253	3,640
Morgan	2,080	.....
Phillips	1,252	.....
Sedgwick	199	.....
Washington	51,322	50,802
Weld	9,394	7,135
Yuma	7,465	1,080
Total	10,416,317	1,936,383

National Forests

THE act of congress under which the national forests of the country were created was passed March 3, 1891. The following provision, Section 24 of the act, shows how and for what purposes the forests were created:

"The President of the United States may from time to time set apart and reserve in any state or territory having public land bearing forests, any part of the public lands wholly or in part covered with timber or undergrowth, whether of commercial value or not, as public reservations, and the President shall, by public proclamation, declare the establishment of such reservations and the limits thereof."

The first national forest was created by President Harrison in 1891, under the name of the Yellowstone Park Timberland Reserve. Originally all forests established under this act were known as forest reserves, but in 1905 congress changed the official designation to "national forests."

There are at present 154 national forests in the United States, of which 17 lie wholly and two partly within the state of Colorado. The total area within these forests and within the borders of the state is 14,878,019 acres. A considerable amount of land within the forest boundaries has passed into private ownership or has been otherwise withdrawn from the forest area under provisions of the various acts of congress relating to the national forests, leaving a total net national forest area for the state of 13,367,598 acres.

The administrative headquarters for Colorado National forests is located at Denver, the national forests of the state, except the very small part of the La Sal forest located in the extreme western part, being in what is known as National Forest District No. 2. The chief executive officer of the district is the district forester, and each forest is in charge of a forest supervisor, whose headquarters is at some central place within or near the forest area. The total number of national forest officers in the state at present is about 310. The accompanying table gives the name of each national forest wholly or partly in the state, together with its net area within this state and the headquarters of the supervisor:

National Forest	Headquarters	Net Area
Arapahoe	Hot Sulphur Springs	634,903
Battlement	Collbran	651,227
Cochetopa	Saguache	905,723
Colorado	Ft. Collins	847,328
Durango	Durango	614,129
Gunnison	Gunnison	908,055
†Hayden	Encampment, Wyoming	65,598
Holy Cross	Glenwood Spgs.	576,905
*La Sal	Moab, Utah	27,444
Leadville	Leadville	934,017
Montezuma	Mancos	700,082
Pike	Denver	1,080,381
Rio Grande	Monte Vista	1,136,884
Routt	Steamboat Spgs.	833,459
San Isabel	Westcliffe	598,912
San Juan	Pagosa Spgs.	617,995
Sopris	Aspen	596,986
Uncompahgre	Delta	789,552
White River	Meeker	848,018
Total		13,367,598

†Lies principally in Wyoming.
*Lies principally in Utah.

These forests lie almost exclusively in the mountainous districts of the central and western parts of the state. Their boundaries are very irregular and most of them lie in two or more counties, while some of them are made up of two or more separated tracts. The location of the various forests wholly or partly in the state, by counties, is as follows:

Arapahoe forest: Grand and Jackson counties.

Battlement forest: Delta, Garfield, Gunnison, Mesa and Pitkin counties.

Cochetopa forest: Chaffee, Gunnison, Hinsdale and Saguache counties.

Colorado forest: Boulder, Gilpin, Jackson, Jefferson and Larimer counties.

Durango forest: Archuleta, Hinsdale, La Plata and San Juan counties.

Gunnison forest: Delta, Gunnison and Montrose counties.

Hayden forest: Jackson county.

Holy Cross forest: Eagle, Garfield and Pitkin counties.

La Sal forest: Mesa and Montrose counties.

Leadville forest: Chaffee, Lake, Park and Summit counties.

Montezuma forest: Dolores, La Plata, Montezuma and San Miguel counties.

Pike forest: Clear Creek, Douglas, El Paso, Teller and Jefferson counties.

Rio Grande forest: Conejos, Hinsdale, La Plata, Mineral, Rio Grande, Saguache and San Juan counties.

Routt forest: Grand, Jackson, Moffat and Routt counties.

San Isabel forest: Alamosa, Chaffee, Custer, Fremont, Huerfano, Las Animas, Pueblo and Saguache counties.

San Juan forest: Archuleta, Hinsdale, Mineral and Rio Grande counties.

Sopris forest: Eagle, Garfield, Gunnison and Pitkin counties.

Uncompahgre forest: Gunnison, Hinsdale, Mesa, Montrose, Ouray, San Juan and San Miguel counties.

White River forest: Eagle, Garfield, Moffat, Rio Blanco and Routt counties.

The national forests are administered by the secretary of the department of agriculture, through an official created by act of congress and known as the national forester. The secretary of agriculture is authorized by act of congress to issue from time to time regulations governing the use and occupancy of national forest lands and the use of timber and other national forest resources. These regulations are published in what is known as the "Use Book," which may be obtained by actual or prospective users of the national forests from the national forester at Washington, or from any district forester or forest supervisor.

USE OF TIMBER REGULATED

Under the regulations set forth in the Use Book, the timber in the national forests is being constantly used, but in such a way as to prevent the depletion of national timber resources by excessive or ill-advised cutting. Free use of timber is granted to bona fide settlers, miners, residents and prospectors, and to schools, road districts, churches and noncommercial organizations of settlers, for improvements of mutual or public benefit. The amount of free material to any one user generally does not exceed $20 annually in value in this state. Such free timber is granted principally for use as firewood, fence posts, for timbering in mines, road building and for construction work on a small scale. Mature, dead or down timber, which may be cut without injury to the forest, is sold in any desired amount to homestead settlers and to farmers at the actual cost of administering such sales. Such timber must be used for domestic and homestead purposes and its sale or exchange is prohibited. Timber sold under these regulations in Colorado brought an average price of about 75 cents per 1,000 feet, board measure, in 1917, and fuel wood was sold at 25 cents a cord.

During the year ending June 30, 1917, about 8,500,000 board feet of timber was granted free to 3,017 users in Colorado, and approximately 2,000,000 board feet was sold to ranchmen and settlers at cost. There were made during the year 935 commercial sales of timber, amounting to 44,696,000 board feet.

The national forest officials estimate that the commercial stand of timber in Colorado national forests at this time is 18,076,432,000 board feet, having a stumpage value of more than $36,000,000.

GRAZING IN NATIONAL FORESTS

There is a large amount of good pasture land in the national forests of this state, and farmers, homesteaders and stockmen are given every encouragement to make use of it during the grazing season. Preference is given to the small farmer, who is permitted to graze 10 head of milch cows and work animals free of charge, and is also considered before all others in the allotment of additional grazing privileges. The grazing fees are based upon a theoretical charge for the entire year, there being but few ranges in the state where year-long grazing is permitted. The year-long fees for the forests of this state are as follows:

Cattle, 68 cents per head.
Horses, 85 cents per head.
Sheep and goats, 17 cents per head.

The grazing season is fixed to fit conditions on each range and fees for shorter periods than one year are determined upon an established basis, but are not directly proportionate to the annual rates. The various schedules of fees are changed from time to time, and may be obtained from forest officials.

In 1917 more than 3,500 permits were issued for grazing stock in the national forests of the state, the total number of cattle, sheep, and horses grazed being approximately 1,266,000 head. Of the total number of permittees 2,987 were ranchmen grazing fewer than 100 head of stock each.

The total receipts from timber sales, grazing fees, special uses, etc., in the national forests of the state for the fiscal year ending June 30, 1917, were $306,379.93, of which amount the government turned back to the various counties in which the forests are located $107,232. Under the law the money so turned back to the counties is placed in the county school and road funds.

A very considerable part of the national forest area in Colorado lies within the recognized mineral belts, and prospecting for minerals is constantly going on in the forests. These lands are open to prospectors the same as other public lands, and may be filed upon and patented under the public land laws after discoveries of minerals have been made and the proper assessment work done.

HOMESTEADS WITHIN FORESTS

There are also occasional tracts of agricultural land within the forest boundaries, which may be filed upon under the homestead laws. Application for such land is made to the forest service. It is then examined and if it

is found to be more valuable for agricultural than for other purposes the applicant may file upon it, such filing being made at the district land office, under the same regulations that govern entry on public land outside the national forests.

A systematic examination of national forest lands has been made to determine what parts of the areas now included in the national forests are more suitable for agricultural than for other purposes. As a result of this examination there was on July 1, 1917, 41,680 acres of land within the Colorado national forests open to entry under the homestead laws. This is made up principally of isolated tracts varying in size from 20 to 160 acres. Information about the homestead land in the various forests may be obtained from the forest supervisors. Since 1906 there has been 248,743 acres of national forest land restored to entry in Colorado in this way.

The forest service up to June 30, 1917, had constructed within the national forests of this state 282 miles of highways and 3,251 miles of trails. The forests include much of the most attractive scenic territory in the state and the service does much to encourage tourists, vacationists and campers to visit and make use of them. The number of visitors in the national forests of the state in 1917 was 853,000 and the number of automobiles 144,270. This was an increase of 35 per cent in the number of visitors over 1916.

METAL OUTPUT OF COLORADO

YEAR	Gold	Silver	Copper	Lead	Zinc	Tungsten	Vanadium, Radium, Uranium, Etc.
Previous to 1870...	$ 27,213,081	$ 330,000	$ 40,000	.....	.....	.....	.....
1870	3,015,000	660,000	20,000	.....	.....	.....	.....
1871	3,633,951	1,029,058	30,000	.....	.....	.....	.....
1872	2,646,463	2,015,001	45,000	$ 5,000	.....	.....	.....
1873	1,835,248	2,185,014	65,000	7,078	.....	.....	.....
1874	2,065,595	3,086,926	90,197	37,502	.....	.....	.....
1875	2,321,055	2,873,591	90,000	95,706	.....	.....	.....
1876	2,726,311	2,950,256	70,000	81,774	.....	.....	.....
1877	3,000,000	4,180,138	93,797	98,491	.....	.....	.....
1878	3,366,404	4,807,001	89,000	481,502	.....	.....	.....
1879	3,225,000	10,162,503	131,000	1,960,207	.....	.....	.....
1880	3,200,000	15,055,302	184,000	3,595,939	.....	.....	.....
1881	3,300,000	15,104,092	161,000	3,900,621	.....	.....	.....
1882	3,360,000	14,436,136	276,390	5,401,000	.....	.....	.....
1883	4,100,000	14,912,756	182,751	6,096,125	.....	.....	.....
1884	4,250,000	13,984,066	278,801	4,724,742	.....	.....	.....
1885	4,200,000	13,014,927	127,435	4,345,000	.....	.....	.....
1886	4,450,000	12,313,404	44,990	5,463,400	.....	.....	.....
1887	4,000,000	11,345,608	226,350	5,670,000	.....	.....	.....
1888	3,758,000	13,813,906	270,059	5,790,200	.....	.....	.....
1889	3,833,859	17,199,486	426,250	5,423,400	.....	.....	.....
1890	4,150,000	19,665,245	945,000	4,883,200	.....	.....	.....
1891	4,600,000	20,906,554	883,400	5,568,000	.....	.....	.....
1892	5,300,000	23,082,600	837,375	5,030,700	.....	.....	.....
1893	7,527,000	20,205,785	765,535	3,147,971	.....	.....	.....
1894	9,549,731	14,638,696	624,097	3,200,000	.....	.....	.....
1895	13,559,954	11,683,232	659,050	2,954,714	.....	.....	.....
1896	15,267,234	14,458,536	820,270	2,321,109	.....	.....	.....
1897	19,579,637	12,692,448	960,917	2,731,032	.....	.....	.....
1898	23,534,531	13,690,265	1,304,504	4,117,043	.....	.....	.....
1899	26,508,676	13,771,731	1,295,611	6,170,766	.....	.....	.....
1900	28,762,036	12,488,775	1,293,012	7,770,196	.....	.....	.....
1901	27,679,445	10,901,366	1,303,297	6,419,132	.....	.....	.....
1902	28,517,117	8,315,192	1,006,108	4,325,484	$ 2,544,993	.....	.....
1903	21,605,359	7,079,711	1,033,643	4,301,123	4,353,264	.....	.....
1904	24,223,008	7,416,157	1,205,607	4,624,515	3,313,788	$ 130,000	.....
1905	25,577,947	7,743,719	1,536,266	5,438,507	4,774,498	255,000	.....
1906	22,588,734	8,499,735	1,844,002	5,666,993	5,298,602	295,000	$ 185,000
1907	20,471,527	7,886,736	2,251,258	4,965,517	5,275,377	560,000	196,000
1908	22,695,576	4,975,428	1,383,733	2,429,671	1,798,603	115,000	157,000
1909	21,946,684	4,587,643	1,220,642	2,765,512	2,295,046	390,000	310,000
1910	20,297,536	4,392,736	1,048,835	3,158,381	3,366,437	725,000	625,000
1911	19,042,732	3,921,415	1,146,135	2,925,397	5,096,188	370,200	945,000
1912	18,691,577	5,023,961	1,445,416	3,280,703	8,591,624	455,000	1,028,000
1913	18,148,711	5,515,107	1,240,901	3,716,251	6,218,607	625,000	1,750,000
1914	19,883,105	4,864,224	883,010	2,894,264	4,935,623	295,000	2,750,000
1915	22,414,944	3,563,182	1,244,694	3,234,098	12,969,779	1,684,250	1,000,000
1916	19,153,821	5,038,006	2,121,524	4,893,072	17,994,252	5,325,000	1,650,000
Totals..	$604,776,589	$452,467,356	$35,245,862	$166,111,038	$89,426,681	$11,224,450	$10,596,000

Irrigation in Colorado

FARMING under irrigation began in Colorado almost as soon as gold mining. Its development was not so rapid in the beginning, but it was steady and persistent, and today the value of the annual output of the state's irrigated farms is more than three times as great as that of its gold mines.

David K. Wall, one of the pioneer agriculturists of the state, farmed a two-acre tract of land at Golden in 1859, which he irrigated by direct flow from one of the small tributaries of Clear Creek. His experiment proved so successful that he increased his irrigated area to eight acres the following year. Again he was very successful and the story of his success spread rapidly.

It was not until about 1870, however, that large community irrigation enterprises began to be undertaken. Up to this time only short ditches had been in operation, carrying water directly from the streams to the low lands lying in the narrow creek and river valleys. Most of these pioneer irrigation systems were individual enterprises, watering from 10 to 100 acres each. With the new era of development large community enterprises were undertaken and ditches were constructed that carried water to the fertile uplands, far back from the narrow valleys. Irrigation on a large scale was first undertaken in the Greeley district, in northern Colorado, the water being taken from the South Platte river and its tributaries. The undertakings were generally successful and other districts immediately followed the example of northern Colorado. In 1889, when the United States census bureau made its first detailed report on irrigation enterprises, Colorado ranked second among the states in irrigation development, with 890,775 acres of land under ditch. California was first at that time, with 1,004,223 acres irrigated.

The two decades following 1889 witnessed Colorado's greatest irrigation development. In 1899 the census bureau found that this state had taken first rank, with 1,611,271 acres of irrigated land, an increase of 80.9 per cent over the acreage irrigated in 1889. California, in the meantime, had shown an increase of but 44 per cent, having a total irrigated area of 1,445,872 acres. In 1909 Colorado still ranked first, with 2,792,032 acres of land under irrigation, and California second, with 2,664,104 acres.

Completed irrigation enterprises in this state at present are capable of watering approximately 3,000,000 acres of land, and the total amount spent on all irrigation enterprises to the beginning of 1918 was in excess of $60,000,000. The accompanying table gives important irrigation statistics as compiled by the United States census bureau for 1909 and 1910:

IRRIGATION IN 1909

Number of farms irrigated in 1909	25,857
Acreage irrigated in 1909	2,792,032
Acreage enterprises were capable of irrigating in 1910	3,990,166
Acreage included in projects	5,917,457
Main ditches—number	8,405
Length—miles	17,564
Laterals—number	5,612
Length—miles	5,006
Reservoirs—number	1,084
Capacity—acre feet	2,646,593
Flowing wells—number	313
Pumped wells—number	121
Pumping plants—number	206
Cost of enterprises up to July 1, 1910	$56,636,443.00
Average cost per acre enterprises were capable of irrigating in 1910	$14.19
Estimated final cost of existing enterprises	$76,443,239.00

In 1909 62.7 per cent of the area cultivated in Colorado was irrigated. Since that time there has been a comparatively small increase in the irrigated acreage, but a very large increase in the cultivated acreage of nonirrigated land. In 1917 the irrigated acreage was somewhat less than one-half of the entire acreage cultivated. In 1909 the value of crops grown on irrigated land was 79.6 per cent of the value of all crops grown in the state, while in 1917 it was perhaps less than 60 per cent.

For the purpose of making it possible to secure comparative statistics of any value concerning the development of irrigation in Colorado, the laws relating to the administration of the public waters of the state are in need of material amendment. Under the law as it now stands the state engineer has no authority by which he can compel the commissioners of the various districts to render accurate reports each year on the various phases of irrigation development which are of vital interest to the country.

By reason of that condition it is impossible to secure from the biennial reports of the state engineer any authoritative comparative data by which the development of irrigation may be traced. The amount of irrigation and storage water used on the irrigable

land of the state varies materially from year to year, being governed largely by precipitation and other climatic conditions. This information, together with the capacity of ditches and reservoirs, the number of acres irrigated and the number of miles of main and lateral ditches, should be prepared each year by the commissioners and submitted to the state engineer for compilation.

For the purpose of administering the waters, the state is divided into five districts, each in charge of a division engineer; the divisions in turn are divided into districts, of which there are 70 in the state, each in charge of a water commissioner. The state engineer is appointed by the governor; the division engineers are appointed by the governor, with the approval of the state senate, and the water commissioners are appointed by the governor upon recommendation of the county commissioners of the counties included in each district. As will readily be seen, the system confers upon the state engineer no authority which he can enforce, consequently the comparative records in the office of the state engineer are comparatively of less value than they would be had he the authority to require accurate information from each commissioner each year.

From the best data available the following figures have been compiled for the years 1915 and 1916, no record for 1917 being available until the end of the current biennial period:

1915

High water area of reservoirs, acres	111,645
Miles of main irrigation ditches	9,336
Miles of lateral ditches	7,672
Reservoir capacity in acre feet	2,081,405
Acre feet of water used for irrigation	7,660,000
Number of acres irrigated	*2,355,097
Ditch capacity in acre feet per 24 hours	118,302

1916

High water area of reservoirs, acres	108,392
Miles of main irrigation ditches	9,891
Miles of lateral ditches	8,047
Reservoir capacity in acre feet	2,171,449
Acre feet of water used for irrigation	7,576,000
Number of acres irrigated	*2,476,224
Ditch capacity in acre feet per 24 hours	126,471

*The total irrigated area shown here is less than the total shown under irrigation elsewhere in this article. The discrepancy is due to the fact that the above table includes only lands for which water was actually furnished in those years, excluding lands classed as irrigated but not actually using water during the period referred to.

CROPS GROWN UNDER IRRIGATION IN COLORADO, 1909

The following table is taken from the census bureau's report for 1909, being the last report available showing the acreage of various crops grown under irrigation in the state:

CROP	Total Acreage	Acres Irrigated	Pct. of Total	VALUE	
				Total For State	For Irrigated Land
CEREALS:					
Corn	326,559	25,705	7.9	$ 2,673,584	$ 370,400
Oats	275,948	192,311	69.7	4,177,267	3,458,308
Wheat	340,729	174,116	51.1	6,463,926	4,352,823
Emmer and spelt	15,523	3,771	24.3	153,068	53,201
Barley	71,411	48,775	68.3	1,100,753	897,849
Rye	15,715	898	5.7	123,530	11,284
OTHER GRAINS AND SEEDS:					
Alfalfa seed	7,752	4,483	57.8	137,212	83,070
Dry edible beans	5,040	2,504	49.7	128,767	90,652
Dry peas	24,230	15,537	64.1	397,540	282,095
HAY AND FORAGE:					
Timothy alone	51,505	45,029	87.4	746,146	602,213
Timothy and clover, mixed	45,001	24,049	53.4	685,164	355,529
Clover alone	1,418	405	28.6	29,106	7,864
Alfalfa	508,892	480,586	94.4	9,709,180	9,522,968
Other tame and cultivated grasses	102,956	52,844	51.3	1,131,996	751,436
Wild, sale or prairie grasses	394,799	299,755	75.9	3,086,956	2,444,558
Grains cut green	75,033	48,171	64.2	845,544	501,204
Coarse forage	101,721	7,767	7.6	848,532	101,784
SUNDRY CROPS:					
Potatoes	85,839	59,221	69.0	3,704,768	2,889,789
Sugar beets	108,082	106,905	98.9	6,061,152	6,055,382
Orchard fruit and grapes	34,763	34,763	....	4,679,818	4,426,286
Small fruits	2,829	2,099	74.2	398,836	379,979
Totals	2,595,745	1,629,694	62.7	$47,282,845	$37,638,674

Colorado Water Power

ONE of the most valuable of Colorado's natural resources is water power. Although the volume of water carried in the streams of the state is generally comparatively small, most of these streams have their sources at high altitudes and a vast amount of power is developed as they descend over precipitous courses from the mountain sides to the plains below. The principal river systems having their origin in the state and developing sufficient water power to be utilized commercially are: The Colorado, on the western slope, the principal tributaries of which are the Yampa, White, Grand, Gunnison, Dolores and San Juan; the Rio Grande, in the south, draining the San Luis valley; the Arkansas, in the southeast, and the Platte, in the northeast These streams have scores of comparatively small tributaries rising in the mountains, which drop from 1,000 to 6,000 feet in their courses. There is considerable variation in the amount of power available in these streams, due to the fact that the volume of water they carry differs widely at different seasons of the year. A maximum development could be obtained only through the storage of water in reservoirs during the flood seasons, so that a uniform flow of water could be obtained through the year. The following figures, taken from reports of the United States geological survey, furnish a good idea of the immense amount of water power available for commercial use in the state:

Minimum horsepower available from direct stream flow.....	828,500
Horsepower available from storage of water.....	2,568,200
Minimum horsepower from direct flow and storage.....	3,396,700
Maximum horsepower available during flood seasons.....	4,241,300

According to the report of the National Conservation commision, made in 1908, the total hydro-electric energy developed in the entire country at that time was 5,356,680 horsepower, and the total development in Colorado was 78,878 horsepower Since that time the development in some parts of the country has been very marked, but the total horsepower now in use is less than three times the maximum amount available in the state of Colorado. Water power development in this state since 1908 has been slow, due largely to the withdrawal from entry of many of the best power sites, which are on government land. Congress has been working for several years on the perfection of a law to regulate the leasing of government power sites, with a view to developing vast water power resources of the west, and the era of real development will perhaps not begin until some satisfactory basis is established by law upon which the government and private enterprises can cooperate in the utilization of this vast national resource.

In 1914, when the latest detailed inquiry of the census bureau into manufacturing development was made, the factories of Colorado were using but 162,828 primary horsepower of energy in their operations. Of this amount only 57,278 horsepower was electric, not all of which was hydro-electric. The total development of hydro-electric energy in the state at present is perhaps not in excess of 125,000 horsepower, most of which is being utilized in lighting, operating street railway and traction lines and furnishing power for the operation of mine machinery and ore-treatment mills. Much of the electric energy for street lighting in Denver is generated nearly 200 miles from the city, at the town of Shoshone, Garfield county, and is carried across the range by high voltage transmission lines. This example is cited to show the possibilities for the distribution of hydro-electric energy, and should be conclusive evidence that the power generated from the streams in the most remote parts of the state can be utilized profitably in the development of manufacturing and other industries in the cities and more thickly populated rural districts.

The need for further development of water power occasioned by the war demand for greatly increased production from the country's factories has emphasized anew the manufacturing possibilities of the Rocky Mountain west, where raw materials of nearly all kinds are abundant, and where hydro-electric energy can be developed in large volume, at comparatively small expense. The people of Colorado are keenly alive to the wonderful possibilities in this direction offered in the Centennial state, and there is every indication that, as soon as financial conditions will permit following the close of the war, large investments will be made in the development of water power in the state, and in the establishment of industries that will make use of such power.

Agriculture

FOR more than a quarter of a century following the discovery of gold in the mountains west of where Denver now stands, Colorado was known to the industrial world almost exclusively through its metal mines. It was a leader among the states in the production of gold and silver, but its agricultural output was almost negligible. The eastern part of the state was still classed as desert land, and the reclamation of the river valleys by means of irrigation had not begun. The natural result is that Colorado is still best known in other parts of the country as a mining state, though the value of the output of its farms today, including livestock, is more than three times that of its mines and quarries.

It is not the purpose of this volume to enter into any extended discussion of the development of agriculture or of any other industry that has grown up in the state. A few figures will be given from census reports, however, for the purpose of illustrating the rapidity with which farming developed in Colorado after it was demonstrated that it could be carried on profitably. The principal crops grown in the state on which acreage reports have been returned to the census bureau each decade beginning with 1879 are corn, oats, wheat, barley, hay, forage and potatoes. The following table shows the acreage devoted to these crops:

Year	Acres
1879	211,936
1889	859,429
1899	1,519,395
1909	2,299,711

From this tabulation it will be seen that the acreage cultivated to these crops was more than 10 times as great in 1909 as in 1879. In 1917 the area devoted to these same crops was approximately 2,900,000, and 1918 will show an increase of approximately 20 per cent in acreage over that of 1917. This means an increase of approximately 1,500 per cent in the acreage devoted to seven of the principal crops grown in the state in 40 years.

The State Board of Immigration has made an effort to determine the acreage devoted to all crops in Colorado in 1917. Reports have been obtained from reliable sources in nearly every county, and estimates have been made for the few counties from which no reports were obtained. The following table, compiled from these reports, shows the total acreage cultivated to all crops except fruits, by counties, with the percentage which the cultivated area was of the total area in 1917:

County	Acreage Cultivated in 1917	Per Cent of Total Acreage
Adams	109,166	13.52
Alamosa	29,675	5.93
Arapahoe	57,712	10.71
Archuleta	15,970	2.04
Baca	51,323	3.14
Bent	43,023	4.41
Boulder	122,965	25.15
Chaffee	20,981	3.03
Cheyenne	88,710	7.80
Clear Creek	1,030	0.41
Conejos	52,625	7.36
Costilla	38,939	4.81
Crowley	41,123	7.33
Custer	25,070	5.24
Delta	47,150	6.13
Denver	.....	...
Dolores	2,985	0.45
Douglas	62,408	11.54
Eagle	21,400	2.06
Elbert	80,187	6.75
El Paso	91,650	6.75
Fremont	14,305	1.43
Garfield	65,330	3.28
Gilpin	1,704	2.02
Grand	26,063	2.18
Gunnison	32,475	1.60
Hinsdale	1,714	0.27
Huerfano	25,189	2.62
Jackson	100,370	9.61
Jefferson	68,773	12.82
Kiowa	45,899	3.99
Kit Carson	238,510	17.26
Lake	6,250	2.63
La Plata	55,401	4.68
Larimer	141,803	8.43
Las Animas	88,150	2.86
Lincoln	166,499	10.12
Logan	247,751	21.25
Mesa	47,969	2.37
Mineral	3,520	0.63
Moffat	25,550	0.84
Montezuma	24,840	1.89
Montrose	50,885	3.51
Morgan	140,604	17.08
Otero	85,446	11.21
Ouray	9,726	2.93
Park	31,050	2.19
Phillips	58,460	13.28
Pitkin	12,535	1.92
Prowers	87,755	8.41
Pueblo	93,600	6.01
Rio Blanco	43,800	2.12
Rio Grande	80,750	14.05
Routt	64,750	4.54
Saguache	85,645	4.27
San Juan	.....	...
San Miguel	12,805	1.55
Sedgwick	61,863	18.20
Summit	6,540	1.57
Teller	14,312	4.09
Washington	112,876	6.99
Weld	434,802	16.89
Yuma	152,889	10.09
State	4,073,250	6.14

Tables published elsewhere in this volume give the acreage and production of the principal crops by counties for 1917. In many of the counties a considerable acreage of corn is cultivated for forage, and there may be some duplication through reporting corn both as forage and as corn. The blank forms called for reports on kafir and other grain sorghums and since these crops are utilized in this state chiefly as forage some duplication might also have resulted here. On the other hand many counties which produce considerable forage and ensilage made no report on these crops, and the acreage and production of both is perhaps considerably lower than it should be. While the Immigration bureau makes no claim to absolute accuracy for these tables, it believes that they show with a fair degree of accuracy the production of the principal crops by counties. It will be impossible for the state of Colorado to present accurate statistics on agricultural acreage and production each year, as other states are doing, until some legislation is enacted providing for the collection of the data.

The following table gives the acreage and production of the principal crops for 1917 as reported by the bureau of crop estimates of the United States department of agriculture:

Crop	Acreage	Yield
Hay, tons	1,300,000	2,836,000
Wheat, bu	600,000	13,536,000
Corn, bu	532,000	10,640,000
Rye, bu	27,000	432,000
Beans, bu	193,000	1,467,000
Oats, bu	293,000	11,134,000
Barley, bu	168,000	5,544,000
Sugar beets, tons	161,476	1,853,200
Kafir, etc., bu	88,000	1,320,000
Potatoes, bu	70,000	9,310,000
Broom corn, tons	30,000	4,650
Flaxseed, bu	2,000	14,000
Apples, bu	.....	2,640,000
Peaches, bu	.....	1,200,000
Pears, bu	.....	320,000

As will be seen, there are some discrepancies between the totals here given and those in the tables before referred to. These discrepancies in all cases are comparatively small, however, and the totals are without doubt nearly correct. Based upon prices prevailing December 1, 1917, the total value of crops grown in the state in 1917, including fruits and truck crops, was approximately $151,000,000. By way of comparison it should be noted that the census bureau found the value of all crops grown in the state in 1899 to be $16,970,588, and in 1909, $50,974,958.

There has been a remarkably rapid increase in the value of farm property in Colorado in the past 30 years, as well as in the number of farms and the acreage of land in farms. The acreage of land cultivated has increased very rapidly in this period, but it is still much less than the available arable area. The following table, compiled from the census reports of 1890, 1900 and 1910 and from the reports made to the State Board of Immigration for 1917, shows how rapid this increase has been:

Number of farms, 1917, 62,300; 1910, 46,170; 1900, 24,700; 1890, 16,389.

Land in farms, acres, 1917, 23,748,719; 1910, 13,532,113; 1900, 9,474,588; 1890, 4,598,941.

Average size of farms, acres, 1917, 381; 1910, 293; 1900, 384; 1890, 281.

Value of farm property, 1917, $625,000,000; 1910, $491,471,806; 1900, $161,045,101; 1890, $110,358,040.

The number of farms for 1917 is compiled from reports made by county assessors, and is not absolutely accurate, since all reports were not available. The land in farms for 1917 includes only patented land. In addition to this there is a considerable acreage of homestead land now in farms that was not patented at the time the 1917 reports of assessors were made, and some state land purchased by farmers but not patented. It is possible that the average size of farms for 1917 is too high, for the number of farms reported is undoubtedly somewhat too low. However, the general tendency since 1910 has been toward larger average farms than existed at that time. Most of the homestead land that has been patented since that time has been in 320-acre tracts, and many established farmers have been purchasing additional acreage and adding it to their farms. The total number of farms in Colorado in 1870 was 1,738, with an area of 320,346 acres. In 1890 there were 4,506 farms, aggregating 1,165,373 acres.

Of course not all the land in Colorado now classed as farm land is arable. Much of it is being used exclusively for grazing purposes and will perhaps never be of value for any other purpose. There is, however, close to 20,000,000 acres of arable land in Colorado, including state land and homestead areas. In view of the fact that the greatest area cultivated in the state, being that now under cultivation, is less than 5,000,000 acres, the possibilities for agricultural development are much greater than most Colorado people realize. Perhaps no state in the Union is in better position to increase crop production as an aid toward winning the war than Colorado.

CROP ACREAGES AND YIELDS, 1917

COUNTY	WHEAT		OATS		RYE		BARLEY	
	Acres	Bushels	Acres	Bushels	Acres	Bushels	Acres	Bushels
Adams	18,500	385,750	7,100	271,500	200	3,350	3,500	115,000
Alamosa	6,750	165,500	7,375	300,850	.....	.....	2,275	79,275
Arapahoe	7,250	165,500	4,100	150,950	400	6,500	1,650	50,150
Archuleta	600	11,800	4,000	150,000	20	415	275	10,200
Baca	6,000	61,000	1,500	31,000	350	5,250	600	15,000
Bent	6,417	198,000	846	37,990	12	260	1,995	81,764
Boulder	39,000	980,000	9,000	360,000	100	5,000	9,500	427,500
Chaffee	2,060	61,800	2,000	76,000	40	450	800	31,000
Cheyenne	2,500	35,000	500	10,100	1,650	85,000	10,000	110,000
Clear Creek	.....	.....	300	6,525	.....	.....	5	130
Conejos	6,150	145,600	12,750	532,500	250	5,200	6,350	272,100
Costilla	4,926	97,050	4,754	168,795	249	4,980	2,098	68,560
Crowley	750	1,600	125	3,700	.....	.....	625	18,000
Custer	150	3,000	5,000	195,000	10	200	500	16,000
Delta	5,000	170,000	1,000	50,000	50	1,000	1,500	50,000
Denver	.....	.....	.....	.....	.....	.....	.....	.....
Dolores	300	4,800	600	22,000	30	450	600	.....
Douglas	14,000	235,000	1,500	45,000	1,000	11,500	2,500	67,000
Eagle	300	12,000	4,500	210,000	.....	.....	400	19,000
Elbert	9,250	161,350	12,150	472,000	2,050	25,250	2,500	77,250
El Paso	5,000	98,250	18,250	668,300	2,250	31,950	4,200	125,000
Fremont	1,600	36,000	300	11,500	.....	.....	300	9,100
Garfield	18,000	385,000	9,000	377,000	500	9,000	2,500	79,000
Gilpin	.....	.....	2	60	.....	.....	2	65
Grand	500	15,000	1,340	67,000	50	1,000	670	31,000
Gunnison	55	1,100	800	25,000	.....	.....	260	6,100
Hinsdale	.....	.....	5	.....	.....	.....	2	60
Huerfano	2,388	33,047	2,490	66,263	100	1,300	1,902	63,911
Jackson	.....	.....	210	6,500	10	300	100	4,500
Jefferson	13,320	295,800	9,770	363,100	900	14,700	5,000	195,000
Kiowa	9,000	105,000	100	3,000	50	650	2,750	80,100
Kit Carson	38,900	561,360	2,210	46,100	1,250	16,250	15,250	451,000
Lake	.....	.....	5	225	.....	.....	.....	.....
La Plata	11,004	242,088	5,450	200,750	132	2,640	1,834	59,518
Larimer	25,720	756,000	9,600	495,750	.....	.....	9,640	294,000
Las Animas	2,080	36,000	6,420	178,760	1,000	14,000	3,140	95,000
Lincoln	9,000	131,000	2,000	62,000	1,200	15,700	5,000	142,000
Logan	80,630	1,681,860	16,800	672,000	4,739	75,824	4,590	156,060
Mesa	6,080	138,500	3,150	141,750	809	13,135	602	18,050
Mineral	.....	.....	30	.....	.....	.....	5	115
Moffat	1,575	31,175	2,300	85,500	100	1,700	2,250	71,250
Montezuma	5,000	147,250	6,150	235,720	50	820	1,150	39,750
Montrose	10,500	285,000	6,500	275,000	50	850	1,500	72,000
Morgan	22,406	336,090	3,802	152,080	2,155	25,550	6,921	276,840
Otero	3,500	94,500	4,000	200,000	50	1,000	2,500	87,000
Ouray	935	19,737	625	24,850	.....	.....	125	3,570
Park	.....	.....	150	5,000	.....	.....	50	1,500
Phillips	16,000	258,000	500	16,000	1,200	20,000	1,500	43,500
Pitkin	531	13,739	2,240	99,299	40	500	203	6,623
Prowers	7,100	190,000	6,050	267,000	60	1,150	1,200	48,100
Pueblo	7,000	120,000	4,000	170,000	400	7,500	800	25,000
Rio Blanco	11,000	230,000	9,000	350,000	500	11,000	700	32,000
Rio Grande	9,750	278,250	22,100	896,200	100	1,925	6,875	282,000
Routt	6,800	185,000	11,000	440,000	600	18,000	3,500	112,000
Saguache	3,200	112,000	13,000	525,000	10	185	5,500	178,000
San Juan	.....	.....	.....	.....	.....	.....	.....	.....
San Miguel	1,000	24,350	1,520	62,150	15	310	2,600	88,100
Sedgwick	13,000	270,000	3,300	105,000	1,850	35,000	500	16,000
Summit	10	315	175	6,500	.....	.....	200	6,300
Teller	10	250	10,395	.....	80	1,050	290	8,500
Washington	31,000	465,600	1,556	47,500	1,556	18,890	7,830	195,200
Weld	96,000	2,150,000	30,000	1,000,000	5,000	100,000	15,000	450,000
Yuma	60,421	1,012,050	4,511	136,819	4,168	87,529	789	19,385
Totals	659,918	13,634,061	309,906	11,578,586	37,385	684,213	167,403	5,380,126

CROP ACREAGES AND YIELDS, 1917

COUNTY	CORN		POTATOES		ALFALFA		OTHER HAY	
	Acres	Bushels	Acres	Bushels	Acres	Tons	Acres	Tons
Adams	15,350	29,865	2,000	175,000	18,000	45,000	8,500	7,750
Alamosa	.....	.....	1,800	281,350	1,250	3,025	3,250	3,100
Arapahoe	11,300	214,200	1,200	67,500	9,250	26,750	5,500	5,350
Archuleta	325	7,000	250	40,800	1,900	3,950	8,500	10,250
Baca	6,000	71,000	250	7,000	3,000	5,700	2,500	2,500
Bent	1,782	49,530	.....	.....	22,206	46,780	55	110
Boulder	8,000	144,000	300	65,000	35,000	122,500	2,000	3,000
Chaffee	.....	.....	340	64,220	6,600	11,550	6,500	9,775
Cheyenne	11,300	120,000	1,820	125,000	600	1,050	6,150	6,150
Clear Creek	.....	.....	75	7,050	.....	.....	650	1,100
Conejos	.....	.....	1,300	190,000	1,275	3,125	6,250	5,975
Costilla	.....	.....	207	48,473	6,091	12,183	3,297	1,651
Crowley	2,850	60,000	50	5,000	25,000	60,000	.....	.....
Custer	200*	.....	300	40,000	800	1,200	16,000	16,000
Delta	500*	.....	2,000	380,000	32,000	88,000	100	300
Denver	.....	.....	.....	.....	350	980	.....	.....
Dolores	700*	.....	100	5,000	500	750	100	100
Douglas	11,000	196,500	500	40,000	1,000	1,750	9,840	9,840
Eagle	.....	.....	1,500	289,500	12,500	50,000	2,200	2,500
Elbert	25,500	392,120	1,650	116,500	5,900	12,250	10,000	11,250
El Paso	21,500	386,750	2,600	178,568	6,000	14,000	12,150	12,200
Fremont	2,800	50,000	400	56,000	6,500	19,000	300	900
Garfield	200*	.....	1,400	260,000	30,000	90,000	1,000	2,000
Gilpin	.....	.....	100	8,500	.....	.....	1,600	1,750
Grand	.....	.....	100	10,000	300	600	23,000	37,325
Gunnison	.....	.....	360	35,500	.....	.....	31,000†	66,465
Hinsdale	.....	.....	45	4,200	.....	.....	1,650	1,800
Huerfano	3,065	46,456	204	149,983	8,000	16,800	4,523	8,780
Jackson	.....	.....	50	112,000	.....	.....	100,000†	150,000
Jefferson	1,300	29,900	1,600	192,000	25,800	60,000	7,400	11,100
Kiowa	17,000	240,000	150	13,500	.....	.....	150	150
Kit Carson	67,080	1,050,500	2,140	148,600	100	100	42,280	44,280
Lake	.....	.....	5	350	.....	.....	5,125	4,875
La Plata	1,728	51,840	1,993	269,045	27,205	80,615	3,712	3,712
Larimer	1,100	33,750	1,525	187,500	45,000	135,000	10,000	15,000
Las Animas	11,720	165,800	300	30,000	24,920	60,000	2,200	2,000
Lincoln	32,000	605,000	1,500	115,000	2,000	4,000	.....	.....
Logan	70,519	1,762,975	1,200	120,000	16,812	52,000	7,500	15,000
Mesa	3,800	101,000	3,856	696,000	25,200	93,350	550	680
Mineral	.....	.....	20	4,100	.....	.....	3,450	3,100
Moffat	600	11,250	850	99,508	2,575	7,200	15,350	14,785
Montezuma	1,250	32,500	1,250	172,500	7,200	18,500	1,350	2,320
Montrose	2,000	100,000	4,700	768,000	20,000	55,000	1,000	2,000
Morgan	32,877	657,540	2,972	148,600	14,316	42,948	5,000	5,000
Otero	2,000	84,000	10	800	24,700	74,100	10	20
Ouray	.....	.....	412	67,413	2,205	4,534	5,363	8,080
Park	.....	.....	600	71,000	.....	.....	30,000†	24,000
Phillips	27,000	525,000	700	70,000	1,000	1,000	2,000	2,000
Pitkin	.....	.....	1,250	232,000	2,650	5,443	5,621	9,281
Prowers	1,850	38,200	25	1,620	39,000	100,000	3,120	3,310
Pueblo	28,000	600,000	200	14,000	30,000	100,000	1,000	1,000
Rio Blanco	.....	.....	100	15,000	7,000	20,000	15,500	28,000
Rio Grande	.....	.....	5,100	776,000	2,150	4,725	12,750	15,100
Routt	.....	.....	2,400	240,000	150	550	40,000	100,000
Saguache	.....	.....	3,000	450,000	.....	.....	40,000	80,000
San Juan	.....	.....	.....	.....	.....	.....	.....	.....
San Miguel	100	4,500	120	30,000	2,350	6,100	1,525	2,100
Sedgwick	14,200	291,000	2,350	198,500	4,100	10,250	5,900	19,000
Summit	.....	.....	75	8,250	55	95	6,000	6,815
Teller	.....	.....	865	81,030	.....	.....	2,172	2,172
Washington	44,000	715,200	778	155,567	2,000	3,000*	10,000	10,000
Weld	25,000	600,000	18,000	3,121,100	75,000	225,000	15,000	15,000
Yuma	55,250	1,275,000	1,250	68,150	1,800	3,725	5,200	5,315
Totals	562,746	10,742,376	82,197	11,327,277	639,310	1,804,178	572,843	833,116

* Cut for forage.
† Includes all hay.

CROP ACREAGES AND YIELDS, 1917

COUNTY	BEANS		SUGAR BEETS		DRY FORAGE		ENSILAGE	
	Acres	Bushels	Acres	Tons	Acres	Tons	Acres	Tons
Adams	19,212	96,060	6,979	62,725	3,200	9,150	2,250	8,125
Alamosa	500	4,200	.....	.....	.....	.....	.....	.....
Arapahoe	10,000	47,500	357	3,250	3,100	9,300	1,750	6,250
Archuleta	100	2,000	.....	.....	.....	.....	.....	.....
Baca	4,000	12,000	.....	.....	12,000	24,000	3,000	5,500
Bent	1,244	17,720	5,419	62,318	1,072	2,658	515	2,912
Boulder	3,000	35,000	8,015	110,000	4,000	12,000	4,000	23,000
Chaffee	.....	.....	.....	.....	.....	.....	.....	.....
Cheyenne	12,200	55,000	.....	.....	35,400	65,000	5,800	8,000
Clear Creek	.....	.....	.....	.....	.....	.....	.....	.....
Conejos	950	8,725	.....	.....	.....	.....	.....	.....
Costilla	813	7,635	.....	.....	.....	.....	310	1,960
Crowley	2,700	16,667	3,800	40,000	2,100	8,500	1,800	6,000
Custer	10	150	.....	.....	2,000	4,000	.....	.....
Delta	2,000	25,000	2,300	27,000	.....	.....	300	2,100
Denver	.....	.....	.....	.....	.....	.....	.....	.....
Dolores	30	250	.....	.....	.....	.....	.....	.....
Douglas	750	1,875	20	175	13,332	40,727	6,666	48,361
Eagle	.....	.....	.....	.....	.....	.....	.....	.....
Elbert	3,000	15,000	12	108	5,125	11,150	2,250	6,800
El Paso	6,000	31,000	.....	.....	10,250	25,375	3,250	12,100
Fremont	1,500	5,500	.....	.....	.....	.....	250	1,150
Garfield	1,000	15,000	1,200	13,200	.....	.....	200	1,000
Gilpin	.....	.....	.....	.....	.....	.....	.....	.....
Grand	.....	.....	.....	.....	.....	.....	.....	.....
Gunnison	.....	.....	.....	.....	.....	.....	.....	.....
Hinsdale	.....	.....	.....	.....	.....	.....	.....	.....
Huerfano	1,547	4,173	.....	.....	300	600	270	750
Jackson	.....	.....	.....	.....	.....	.....	.....	.....
Jefferson	500	6,500	243	1,820	1,500	3,700	320	1,400
Kiowa	500	1,500	5	50	1,000	2,000	100	250
Kit Carson	7,200	28,400	.....	.....	25,000	59,000	21,000	65,000
Lake	.....	.....	.....	.....	1,100	1,800	.....	.....
La Plata	1,293	10,775	.....	.....	1,000	2,600	.....	.....
Larimer	6,000	27,500	20,802	241,000	.....	.....	7,845	85,500
Las Animas	12,800	70,000	.....	.....	12,300	18,000	1,100	4,000
Lincoln	11,822	41,466	.....	.....	101,927	349,854	.....	.....
Logan	25,000	118,000	12,761	129,000	2,400	7,200	3,000	15,000
Mesa	1,562	32,240	800	6,500	.....	.....	3	30
Mineral	.....	.....	.....	.....	.....	.....	.....	.....
Moffat	100	650	.....	.....	.....	.....	.....	.....
Montezuma	500	5,250	.....	.....	500	1,620	.....	.....
Montrose	1,300	19,000	1,000	12,000	1,000	2,000	450	4,500
Morgan	16,832	83,160	17,608	200,000	15,415	30,830	.....	.....
Otero	21,000	430,000	16,375	180,943	2,200	8,800	3,000	20,000
Ouray	.....	.....	11	95	.....	.....	.....	.....
Park	.....	.....	.....	.....	.....	.....	.....	.....
Phillips	1,200	5,000	.....	.....	6,000	11,000	.....	.....
Pitkin	.....	.....	.....	.....	.....	.....	.....	.....
Prowers	9,375	62,500	4,350	50,000	6,250	11,750	2,950	10,250
Pueblo	11,000	60,000	5,000	60,000	500	1,000	2,000	12,000
Rio Blanco	.....	.....	.....	.....	.....	.....	.....	.....
Rio Grande	775	7,210	.....	.....	.....	.....	.....	.....
Routt	.....	.....	.....	.....	.....	.....	.....	.....
Saguache	135	2,700	.....	.....	.....	.....	.....	.....
San Juan	.....	.....	.....	.....	.....	.....	.....	.....
San Miguel	25	150	.....	.....	3,500	6,500	.....	.....
Sedgwick	1,000	4,750	5,113	28,000	1,650	3,750	250	1,000
Summit	.....	.....	.....	.....	.....	.....	.....	.....
Teller	.....	.....	.....	.....	.....	.....	.....	.....
Washington	5,500	22,500	1,300	12,500	4,100	9,500	.....	.....
Weld	50,000	450,000	44,332	560,716	35,000	190,000	10,000	70,000
Yuma	2,000	8,000	15	180	15,000	42,000	2,000	9,200
Totals	257,975	1,897,706	157,817	1,801,580	329,221	975,364	86,629	432,138

Dairying

THERE has been very rapid development in the dairying industry in Colorado during the past decade, but the output of dairy products is still considerably short of consumption and there is excellent opportunity in nearly all agricultural districts for further development. The following tabulation, compiled under the direction of the state dairy commissioner, shows the number of commercial establishments in the various branches of the dairying industry in the state at the beginning of 1918:

Creameries making butter	75
Condenseries	5
Cheese factories	13
Process butter factories	2
Oleomargarine plant	1
Ice cream plants	45
Cream receiving stations	300

The United States department of agriculture estimated the number of dairy cattle in Colorado on January 1, 1918, at 254,000, as compared with 237,000 for 1917, 219,000 for 1916 and 205,000 for 1915. The census bureau found the number of milch cows on farms in the state April 1, 1910, to be 144,734. The number of milch cows not on farms at that time was 11,772, making a total for the state of 156,506.

The latest data available showing the value of dairy products manufactured in the state are those compiled by the state dairy commissioner for the year ending July 1, 1917. The following figures are taken from that report:

	Quantity	Value
Butter, pounds	13,034,868	$4,271,982
Condensed milk, cases	335,091	1,116,886
Ice cream, gallons	878,391	878,391
Cheese, pounds	508,338	99,717
Total		$6,366,976

No record of the amount of whole milk sold is available, and as a considerable amount of the milk so sold does not enter into the manufacture of any of the products mentioned above the total value of the state's dairy business can not be calculated. From the figures given above it is not difficult to see, however, that the amount of dairy products manufactured in the state is not sufficient to supply the demands of a population of 1,000,000 and at the same time to take care of the needs of the large number of tourist visitors that come to Colorado annually.

There is no strictly authentic record available showing the present distribution of dairy cattle by counties. The reports of the various county assessors on livestock assessed, published elsewhere in this volume, show but 124,342 dairy cattle in the state in 1917, as compared with 237,000 reported by the United States department of agriculture. In this report Weld county leads in the number of milch cows, with Kit Carson county second, Elbert county third, Larimer county fourth and El Paso county fifth. In a general way it may be stated that the most rapid development in the dairy industry during the past decade has been in the nonirrigated districts of eastern Colorado. This has been largely the result of a very general change in farming methods in these districts. Forage crops are now being grown extensively and nearly all farmers are keeping a few dairy cattle to consume this forage. Few sections of the country have shown a more rapid increase in the number of silos during the last five years than eastern Colorado, and they are being built rather rapidly in all sections of the state, principally to preserve winter feed for dairy cattle. The state dairy commission estimates the number of silos in the state at 2,500. During the past year the increase has been much less rapid than it would have been normally, because of the high cost of construction and the difficulties in obtaining necessary materials. It is generally conceded that no branch of agriculture offers better opportunities in this state than dairy farming.

The following figures, taken from the reports of county assessors before referred to, are given here, not because they show accurately the number of dairy cattle now on hand in the leading dairying counties, but as an indication of where the industry is most extensively developed:

County	Number of Dairy Cattle	Value.
Weld	11,188	$739,730
Kit Carson	6,011	360,660
Elbert	5,960	357,635
Larimer	5,449	346,720
El Paso	5,357	327,950
Boulder	4,816	315,110
Logan	4,749	287,510
Douglas	4,190	264,120
Morgan	4,173	260,060
Arapahoe	3,980	255,485
Adams	3,979	263,085
Otero	3,912	242,490
Mesa	3,791	234,485
Pueblo	3,741	235,275
Delta	3,136	208,200
Jefferson	2,818	193,520
Prowers	2,690	197,285
Montrose	2,569	173,630
Routt	2,566	191,015

Livestock

STOCKRAISING is, next to mining, Colorado's oldest industry. In the territorial days, when perhaps not one person in one hundred who knew anything about Colorado had any confidence in its agricultural possibilities, the stockmen already were establishing themselves on the free range and were pasturing thousands of cattle and sheep on the rich native meadows of the mountain parks and the more favored lowlands. Almost the entire state was open range then and cattle and sheep were pastured at very small expense during the summer and shipped east to be finished for the packers' markets. At first stockraising was confined largely to the mountain valleys and the lowlands near the foothills, but gradually the herds overran the plains of eastern Colorado, where government land was abundant and there was almost no farming.

In the late 70's and early 80's homesteaders began to take up the free range and to restrict somewhat the activities of the stockmen. There was really plenty of land for all, however, and open range stockraising continued to thrive in all parts of the state until far into the 90's. Since that time the settlement of the farming lands has been very rapid and at the present time open range pasture is confined largely to the national forests and to government land in the northwestern part of the state. Range regulations within the national forest are strict and are carefully enforced, while the remaining homestead land is being filed upon so rapidly under the grazing homestead act that free government range will become obsolete in Colorado within a very few years.

But the passing of the range has proved a blessing to the stockraising industry in this state. While it has greatly diminished the number of stock cattle marketed it has made Colorado one of the leading states in the production of high grade fat cattle, hogs and lambs. The production of feeder stock has given place largely to a more intensive industry, that of producing finished animals of the best grades, ready for selling to the packers at the highest market price. There has also been a very substantial development of the dairying industry in the past two decades. In 1910 74.1 per cent of the farms in the state reported cattle of some kind and 70.7 per cent of them reported dairy cattle. Perhaps 90 per cent of the farms in the state today have some cattle on them, and most of those which have no cattle belong to homesteaders who have not yet found the means to stock them.

A table published elsewhere in this volume gives the number of domestic animals of all kinds in the state, as reported to the county assessors. These figures are somewhat below the actual number of domestic animals in the state, but they are of great value in showing the distribution of these animals by counties. The following tabulation taken from reports published by the United States department of agriculture, shows the number of domestic animals in the state on January 1, 1918, and January 1, 1917:

	1918	1917
Horses	399,000	380,000
Mules	26,000	24,000
Milch cows	254,000	237,000
Other cattle	1,272,000	1,200,000
Sheep	2,086,000	1,950,000
Hogs	356,000	352,000

The census bureau found the value of all domestic animals sold in the state in 1909 to be $22,453,959. The value of those slaughtered on farms was placed at $1,754,216, making a total value of $24,208,175. This figure includes horses and mules sold, as well as food animals. Although no accurate data are available showing the value of domestic animals sold and slaughtered in 1917, estimates have placed it close to $100,000,000, or about 300 per cent greater than for 1909. While this increase is due partly to increased prices for food animals as well as for horses and mules, the greater part of it results from a substantial increase in the number of animals produced and a very pronounced improvement in the quality of the stock marketed.

Detailed information regarding the localities where various branches of the livestock industry are being most extensively followed in Colorado is found in that portion of the volume dealing with the activities and resources of the respective counties. In a general way it may be stated here that very large numbers of feeder cattle still are produced on the excellent grazing lands in the national forests, in the mountain park districts and on the open range in the northeastern part of the state, while stock-feeding is most extensively developed in the irrigated districts of the South Platte watershed, the Arkansas valley, the San Luis valley, the western slope and southwest Colorado. Sheep are

still kept in large numbers for shearing, principally in southern Colorado, while lambs are fattened for market principally in the South Platte valley, the Arkansas valley and the San Luis valley. The total wool clip for 1917 was estimated by the United States department of agriculture at 8,820,000 pounds, Colorado ranking eleventh among the states in wool production. The following table shows the rank of the state in the number of domestic animals on farms January 1, 1918:

	Rank
Horses	20
Mules	20
Milch cows	29
Other cattle	12
Sheep	10
Hogs	29

Colorado undoubtedly ranks considerably higher in the value of livestock and livestock products marketed annually than these figures would indicate. It is impossible, however, to obtain anything like accurate data showing the actual returns from the sale of livestock and livestock products until some sort of legislation is enacted providing for the collection of the proper statistics. The state immigration department made an effort to collect such statistics by counties for 1917, but the results obtained were so meager that no effort was made to tabulate them. The federal government has made numerous calls for information on the distribution of livestock by counties in the state, in connection with its plans for feeding our armies and war workers, but it was found necessary to make partial special surveys in order to supply it.

Poultry Raising

CLIMATIC conditions are especially favorable for poultry-raising in Colorado. Comparatively little rain and an abundance of sunshine make it possible for fowls to spend much of the time out of doors, with the result that disease is less prevalent than in most sections of the country and young fowls make quick and vigorous growth. Since Colorado is a comparatively new state, however, the poultry industry is not yet extensively developed, and offers exceptional opportunities for good profits in nearly all sections of the state except the mountain counties, where the climate is too severe. In 1909, when the latest detailed survey of the poultry industry for the entire country was made by the census bureau, Colorado ranked thirty-third in the number of fowls of all kinds reported, with 2,149,556, valued at $1,106,197. Of the 46,170 farms in the state at that time 34,491 reported fowls of some kind on hand, and by far the largest part of fowls reported were found on farms. At that time the leading poultryraising counties, with the number of fowls reported in each, were as follows:

Weld	181,096
Larimer	91,048
Yuma	82,146
Jefferson	73,026
Boulder	68,242
*Otero	66,267
Mesa	60,673

*Included Crowley county at that time.

The fowls reported at that time were not segregated as to kind, but chickens were raised then and are still raised far more extensively than any other kind. The number of eggs reported in 1909 was 10,652,000 dozen, valued at $2,444,000.

The poultry industry has developed very rapidly in the state since 1909, but authentic data regarding the output by counties are unobtainable. Elsewhere in this volume the reports of the county assessors on the number of poultry assessed in 1917 are published, but it is generally conceded that the figures are much too low. They are of considerable value, however, as showing the comparative importance of the industry in the various counties, but are not entirely reliable in this respect, since all assessors are not equally strict in obtaining reports on this class of property. It is estimated that the total number of fowls of all kinds in the state at the present time is approximately 5,000,000, and the value of poultry and eggs marketed in 1917 was approximately $6,500,000. Well informed poultry raisers and dealers estimate that at least $5,000,000 worth of poultry and eggs still are brought into the state annually to supply the local demand.

As will be seen from the table published above, most of the poultry in Colorado is raised in the important agricultural counties. In all the counties of the nonirrigated section of eastern Colorado the industry is developing very rapidly, in connection with the general agricultural development. There has also been a very considerable development in this direction in northwestern and southwestern Colorado and in the valleys of the Grand river and its tributaries.

LIVESTOCK IN COLORADO FOR 1917, AS REPORTED BY COUNTY ASSESSORS

COUNTY	Horses	Mules	Asses	Range Cattle	Milch Cows	Sheep	Swine	Goats	Poultry, Dozen	Bees, Stands	All Other Animals
Adams	6,802	484	...	14,307	3,979	3,584	7,085	.....	.....	.....	.....
Alamosa	1,890	92	...	15,381	444	4,476	3,299	.....	641	71	43
Arapahoe	3,701	660	...	8,085	3,980	8,599	2,933	.....	2,333	637	.....
Archuleta	1,522	56	...	12,794	402	56,328	719	2,598	.....	.....	.....
Baca	8,717	1,071	...	22,508	1,351	4,371	2,050	.....	879	.....	90
Bent	6,557	610	...	17,202	1,587	24,388	2,232	.....	.....	.....	.....
Boulder	5,546	648	...	10,282	4,816	429	2,617	.....	.....	3,414	1,937
Chaffee	1,522	24	35	8,001	871	7,933	732	13	230	14	59
Cheyenne	3,728	430	...	21,940	2,327	9,430	745	.....	.....	.....	213
Clear Creek	326	6	19	602	190	10	4	.....	57	.....	.....
Conejos	3,431	132	65	13,500	441	84,324	6,445	.....	.....	.....	121
Costilla	1,830	143	14	3,886	259	27,213	3,186	433	368	.....	.....
Crowley	4,083	398	15	8,162	1,434	2,852	.....	.....	1,543	1,942	6
Custer	1,276	20	...	8,104	295	151	196	375	.....	.....	.....
Delta	5,696	392	...	21,648	3,136	24,125	4,472	.....	3,041	4,352	.....
Denver	4,883	164	...	.....	2,098	.....	.....	.....	.....	.....	.....
Dolores	857	49	10	10,021	89	6,805	98	.....	91	30	.....
Douglas	2,495	90	...	15,494	4,190	79	1,256	.....	1,359	190	308
Eagle	2,403	85	11	17,348	685	6,645	819	.....	603	.....	.....
Elbert	6,057	785	15	18,100	5,960	17,676	2,308	.....	764	84	677
El Paso	6,374	1,104	160	21,107	5,357	4,983	3,909	19	3,371	177	212
Fremont	2,840	248	...	15,580	850	100	1,243	.....	2,128	330	.....
Garfield	6,094	213	...	40,054	2,484	21,506	4,153	.....	2,542	2,742	202
Gilpin	271	6	...	382	139	.....	.....	45	.....	.....	.....
Grand	2,889	56	...	14,891	984	257	286	.....	343	.....	.....
Gunnison	3,539	204	31	31,225	112	42,567	400	.....	.....	.....	.....
Hinsdale	283	5	20	1,994	82	38	2	12	.....	.....	1
Huerfano	2,712	541	4	13,416	638	18,276	788	1,324	.....	.....	.....
Jackson	3,642	64	4	34,017	484	539	156	15	199	.....	3
Jefferson	4,634	137	...	10,184	2,818	400	2,217	.....	5,104	2,691	.....
Kiowa	3,627	480	...	21,783	1,008	5,054	521	.....	.....	.....	46
Kit Carson	10,648	1,240	28	21,438	6,011	689	3,526	21	5,235	.....	.....
Lake	836	.....	31	764	479	.....	305	.....	.....	.....	.....
La Plata	4,594	197	178	18,919	2,016	50,998	3,400	2,499	2,016	1,626	.....
Larimer	10,244	822	...	25,850	5,449	13,027	3,510	.....	5,980	1,815	.....

Las Animas	7,880	1,052	...	30,833	1,418	64,502	717	25,624	727	.....	.....
Lincoln	7,599	773	...	39,413	1,670	7,612	1,853	.....	.....	.....	.....
Logan	12,903	1,296	...	28,208	4,749	791	7,442	.....	5,059	1,787	.....
Mesa	7,133	366	...	39,413	3,791	23,570	2,714	3,289	4,423	3,112	.....
Mineral	577	17	...	2,023	93	2,754	2	18	66	.....	.....
Moffat	6,505	85	...	33,984	576	19,789	1,912	.....	603	.....	32
Montezuma	3,829	204	69	14,939	1,535	43,728	4,634	85	1,517	1,066	.....
Montrose	7,121	377	...	24,547	2,569	44,889	6,157	.....	3,959	4,225	.....
Morgan	9,358	657	...	17,377	4,173	.....	7,928	.....	2,692	703	.....
Otero	9,487	1,487	...	13,663	3,912	13,343	7,041	235	5,975	3,643	257
Ouray	1,423	57	...	8,271	370	10,086	205	.....	179	.....	47
Park	2,148	62	41	17,767	358	32,661	132	37	650	.....	.....
Phillips	4,636	373	...	10,004	1,297	.....	1,632	.....	.....	.....	107
Pitkin	1,579	20	20	6,957	587	5,538	365	.....	701	.....	.....
Prowers	10,472	1,591	...	29,189	2,690	21,540	5,049	.....	3,888	2,830	620
Pueblo	7,548	577	...	19,217	3,741	4,514	3,064	427	2,797	540	201
Rio Blanco	4,760	148	...	42,824	845	870	946	.....	664	79	.....
Rio Grande	3,367	474	...	11,120	1,530	85,400	9,382	319	.....	.....	26
Routt	8,010	179	...	42,008	2,566	37,807	1,559	84	2,312	.....	187
Saguache	4,399	215	...	37,523	337	100,831	3,100	.....	855	.....	932
San Juan	116	61	...	.....	80	7,565	.....	.....	.....	.....	.....
San Miguel	2,157	133	28	20,545	1,021	3,483	825	.....	.....	.....	.....
Sedgwick	3,784	254	3	9,211	745	791	2,313	.....	1,872	161	46
Summit	703	10	3	3,498	303	22	58	.....	85	.....	.....
Teller	1,440	42	42	5,433	674	.....	146	140	.....	.....	65
Washington	13,828	1,080	...	29,983	2,249	6,023	5,726	.....	4,679	260	1,263
Weld	31,430	3,163	...	55,220	11,188	16,287	15,630	.....	4,786	2,736	452
Yuma	15,261	1,860	...	35,289	1,830	920	9,185	.....	8,113	.....	323
Totals	326,002	29,269	846	1,147,428	124,342	1,003,168	165,329	37,612	95,429	41,257	8,476

Horticulture

SOIL and climatic conditions in certain sections of Colorado are especially suited for the production of nearly all orchard and small fruits adapted to this latitude. In 1917 the Centennial State ranked twenty-first among the states in the production of apples, eighth in the production of peaches and twelfth in the production of pears. Other fruits grown rather extensively are cherries, plums, apricots, grapes, strawberries, blackberries, raspberries, loganberries, gooseberries and currants.

While Colorado does not yet rank among the leaders in the amount of fruit produced annually, for the reason that the fruitgrowing districts are of restricted area, it is among the first in the producion of high grade fruits, which always command the best market price. High altitude, an abundance of sunshine, cool nights and water for irrigation just when it is needed are the principal conditions that unite to make Colorado fruit of the highest quality in form, color and flavor. The following table shows approximately the amount of fruit produced in the state in 1917 and its market value:

Kind	Quantity	Value
Apples, bu.	2,640,000	$2,250,000
Peaches, bu.	1,200,000	1,400,000
Pears, bu.	320,000	672,000
Cherries, crates.	100,000	210,000
Other fruits.		1,000,000
Total		$5,532,000

The most important fruitgrowing districts are the western slope, in the valleys of the Grand and Gunnison rivers and tributary streams, comprising parts of Garfield, Mesa, Delta and Montrose counties; the Canon City district, comprising a part of Fremont county; the Arkansas valley, comprising parts of Crowley, Otero, Pueblo, Bent and Prowers counties; southwestern Colorado, comprising parts of La Plata and Montezuma counties, and comparatively small areas near the foothills along the eastern side of the mountains. The western slope area ranks first in importance from the standpoint of production, with the Canon City district second. Apples and peaches are the principal fruit crops in the Grand valley and in the valleys of tributary streams, though practically all fruits grown in the state are produced here. This district produces nearly all the commercial peach crop of the state and a very large proportion of the apple crop. Southwest Colorado produces as fine a variety of all kinds of fruit as is grown in any part of the state, but lack of adequate transportation facilities has retarded development of the fruitgrowing industry in this district. In the Canon City district the principal crop is apples, with a considerable production of cherries and small fruits. Some apples, cherries and small fruits are grown in the Arkansas valley, especially in Crowley and Otero counties, and cherries are grown rather extensively in several of the counties just east of the mountains. Apples have been grown to a considerable extent in this same area for a good many years, but the yield is not so dependable as on the western slope and the quality of the fruit is not so high. In the irrigated district immediately north of Denver, including parts of Boulder, Adams, Larimer and Weld counties, berries and other small fruits are grown successfully and always find a good market in Denver. Routt county is especially famous for its strawberries, which come into market late in the summer, after the berries from most other districts are gone, and for that reason command exceptionally high prices.

Accurate statistics showing the fruit production by counties are not available at this time. In 1909, when the census bureau found the total production of apples in the state to be 3,559,094 bushels, Mesa county was the leader, with 980,273 bushels. Other leading counties in their order were: Delta, 727,122 bushels; Fremont, 403,242 bushels; Montrose, 264,769 bushels; Jefferson, 207,796 bushels; Larimer, 196,742 bushels; Otero (including Crowley), 177,595 bushels; Boulder, 148,286 bushels; Garfield, 131,953 bushels, and Pueblo, 51,176 bushels. The production of peaches that year was found to be 692,258 bushels, of which Delta county produced more than one-half, or 351,865 bushels. Other leading peach-producing counties that year were: Mesa, 286,992 bushels; Montrose, 25,065 bushels, and Garfield, 19,497 bushels. There has been comparatively little change in the relative importance of the various counties as fruit producers since 1909, and but little increase in the acreage devoted to orchard and other fruits. The 1909 apple crop was one of the largest ever produced in the state, but the peach crop was considerably short of that grown in 1917.

Some attention has been paid in the past few years to the growing of or-

chards in the nonirrigated districts of eastern Colorado, and a few small trees of hardy varieties are being grown on many of the farms. In the irrigated sections of eastern Colorado apples and some other tree fruits are grown successfully. Late spring frosts frequently damage fruit in all sections of the state, but the organization of community forces in the principal fruit-producing districts to heat orchards with specially devised heaters on nights when the temperature falls below the frost point has in a large measure eliminated the danger of loss from this source.

Bee Keeping

IN 1910 Colorado ranked twenty-third among the states in the number of colonies of bees reported to the census bureau, which was the same rank it held in 1900. Since that time there has been a very substantial increase, both in the number of colonies in the state and in the average amount of honey produced annually per stand, so that Colorado undoubtedly ranks considerably higher as a honey producing state than it did in 1910.

The number of colonies of bees reported to the census bureau in 1910 was 71,434. The aggregate production the previous year, as reported to the same board, was 2,306,492 pounds of honey, or a little less than 36 pounds for each stand of bees reporting honey. Although there was practically the same number of stands of bees in the state in 1909 as in 1910, only 64,358 stands were reported as yielding honey in 1909.

There has been no collection of accurate statistics on the progress of bee keeping and honey production in Colorado since the last decennial census. The county assessors report annually a considerable number of stands of bees assessed, but this number is always very much short of the actual number in the state. Expert authorities who have kept in close touch with the development of the industry in the past decade estimate the number of stands of bees in Colorado at the present time all the way from 125,000 to 150,000, which means an increase of at least 75 per cent since 1910. The bureau of estimates of the United States department of agriculture placed the average production per stand at 46 pounds for 1917, as compared with 40.3 for the country at large. This would account for a production of not less than 5,750,000 pounds of honey in the state last year, which with a small additional production of wax, was worth, at prevailing prices, a little in excess of $1,000,000. Perhaps half this amount was derived by bee keepers from the sale of honey and wax, the remainder of the production being consumed by producers. Those who are keeping in close touch with the development of the industry are convinced that this development will be much more rapid in the coming decade than it has been since the 1910 census. There is also a rapid increase noticeable in the production of honey per stand of bees, due to the fact that the bees are passing more and more each year into the hands of commercial producers, who frequently obtain from 50 to 100 pounds of honey annually from a single bee colony.

The bee keeping industry is confined largely to the principal alfalfa-producing and fruit-growing districts of the state, where the bees find an abundance of honey-bearing blossoms from which to harvest their crop. The statistics furnished by reports of county assessors on the number of colonies of bees in the various counties are published elsewhere in this volume. While they are of comparatively little value as showing the actual number of colonies, they are of much value in showing the distribution. The following figures, taken from the assessors' reports, show the relative importance of the leading honey-producing counties:

County	Stands of Bees
Delta	4,352
Montrose	4,225
Otero	3,643
Boulder	3,414
Mesa	3,112
Prowers	2,830
Garfield	2,742
Weld	2,736
Jefferson	2,691
Crowley	1,942
Larimer	1,815
Logan	1,787
La Plata	1,626

During 1917 nearly 60 carloads of honey was shipped from the state in straight car lots and perhaps half as much was shipped out in smaller lots. The home consumption was very heavy, due partly to shortage of sugar, and it promises to be even higher in 1918.

Mineral Resources

NO state except California has so wide a variety of mineral resources as Colorado. Nearly every useful mineral produced in the United States is found in the Centennial state and most of them have been mined to some extent. About 250 useful metallic and nonmetallic minerals and compounds have been reported in the state and undoubtedly numerous others are yet to be found. The extreme irregularity of the state's surface and the wide range of geological formations exposed for examination present excellent opportunities for the production of valuable minerals.

METALS

Mining is Colorado's oldest industry. Gold was the first metal produced and has surpassed all others in the total value of its output. The first important discovery of gold was made in the summer of 1858, and since that time the value of the state's gold output has been approximately $640,000,000. The production of silver began soon after that of gold and the white metal ranks second, the total value of the state's output to date being approximately $465,000,000. At the present time zinc ranks second in the annual value of its output, only a little way behind gold. The zinc production, on a commercial scale, did not begin, however, until 1902. Copper has been produced steadily since 1870 and lead since 1872. The total value of gold, silver, lead, copper and zinc marketed in Colorado to the beginning of 1918 is approximately $1,380,000,000.

While these are the principal metals being produced in Colorado, almost every useful metal found in the United States exists here. Tungsten has been produced commercially since 1904, and uranium, vanadium and radium have been produced since 1906. Colorado ranks first in the production of these metals. Molybdenum is also being produced in considerable quantities at the present time and promises soon to take an important place in the statistics of the state's metal output.

The following table shows Colorado's rank among the states in the production of the principal metals, in 1917:

Metal	Output	Rank
Tungsten	$ 2,640,000	1
Radium metals	$ 2,225,000	1
Gold	$16,000,000	2
Lead (pounds)	67,500,000	2
Zinc (pounds)	114,000,000	4
Silver (ounces)	7,327,000	5
Copper (pounds)	8,700,000	10

The production of metals in Colorado is confined largely to the mountainous counties in the central and western parts of the state. The metals occur usually in compound ores found in well-defined veins or lodes. Up to the present time approximately thirty metals have been produced. The most important of these, in the order of their annual output at the present time, are gold, zinc, silver, lead and copper.

Free gold is found in numerous widely separated districts and has been mined in the following counties: Chaffee, Clear Creek, Costilla, Eagle, Jefferson, Moffat, Park, Routt, San Miguel and Summit. Free gold is the principal output of the placer mines, and Summit county has led all other counties in the state for fifty years in the output of its placer mines. There is a wide variety in the gold ores found in Colorado. Among the compound ores from which gold is obtained are amalgam, calaverite, petzite and sylvanite.

Zinc is the predominant metal in many of the ores which carry gold. The principal compound ores carrying zinc are auricalcite, calamine, calcophanite, hetaerolite, hydrozincite, nicholsonite, smithsonite and sphalerite.

Silver is found very commonly associated with both zinc and gold as well as with lead. Native silver has been mined in the following counties: Boulder, Clear Creek, Dolores, Gunnison, Hinsdale, Lake, La Plata, Montrose, Pitkin and Teller. The principal compound ores in which silver is found are acanthite, amalgam, calaverite, cerargyrite, embolite, empressite, hessite, krennerite, pearceite, petzite, polybasite, proustite, pyrargyrite, stephanite, stromeyerite and sylvanite.

Lead is perhaps more widely distributed than any other metal found in the state and is often associated with both gold and silver. The principal compound ores from which lead is produced are altaite, anglesite, cerusite, cosalite, galena, massicot, mimetite, minium, plumbojarsite and pyromorphite.

Copper is very widely distributed, but usually occurs in comparatively small quantities. Native copper has been reported in the following counties: Dolores, Jefferson, Mesa, Montrose, Park and Routt. The principal compound ores containing copper are azurite, bornite, brochantite, chalcamthite, chalcocite, chalcopyrite, chrysocolota, coverllite, cuprite, enargite,

malachite, melaconite, stromeyerite, tennantite and tetrahedrite.

The following tabulation gives the principal metals found in Colorado and the counties in which they occur:

Aluminum (alunite, bauxite, cryolite)—Chaffee, Conejos, Custer, El Paso, Fremont, Gunnison, Hinsdale, Lake, Mineral, Ouray, Rio Grande, Saguache.

Antimony (bournonite, polybasite, stibnite)—Boulder, Clear Creek, Dolores, Grand, Gunnison, Ouray, Pitkin, San Juan, San Miguel, Teller.

Arsenic (arsenopyrite)—Gilpin, Gunnison, Pitkin, San Juan, San Miguel.

Barium (barite)—Boulder, Mineral, Pitkin, San Miguel.

Bismuth (beegerite, bismuthinite, bismutite, cosalite, tetradymite)—Boulder, Chaffee, Fremont, Grand, Gunnison, Jefferson, Lake, La Plata, Larimer, Montezuma, Ouray, Park, San Miguel.

Cadmium (greenockite)—Lake.

Cerium (allanite, gadolinite, monazite)—Boulder, Chaffee, Costilla, Douglas, Routt, Washington.

Cobalt (erytherite, smaltite)—Gunnison.

Copper — Archuleta, Baca, Boulder, Chaffee, Clear Creek, Conejos, Custer, Dolores, Eagle, Fremont, Garfield, Gilpin, Grand, Gunnison, Hinsdale, Huerfano, Jackson, Jefferson, Lake, La Plata, Larimer, Mesa, Mineral, Moffat, Montezuma, Montrose, Ouray, Park, Pitkin, Rio Grande, Routt, Saguache, San Juan, San Miguel, Summit, Teller.

Gold — Archuleta, Boulder, Chaffee, Clear Creek, Conejos, Costilla, Custer, Dolores, Douglas, Eagle, Fremont, Garfield, Gilpin, Grand, Gunnison, Hinsdale, Huerfano, Jackson, Jefferson, Lake, La Plata, Mineral, Moffat, Montezuma, Montrose, Ouray, Park, Pitkin, Rio Grande, Routt, Saguache, San Juan, San Miguel, Summit, Teller.

Hellarite—Mesa, Montezuma.

Iron (brown iron ore, hematite, magnetite, marcasite, pyrite, pyrrhotite, siderite)—Chaffee, Costilla, Dolores, Fremont, Gunnison, Hinsdale, Jefferson, Lake, Ouray, Pitkin, Routt, Saguache, San Juan, San Miguel, Summit, Teller. Pyrite is found in nearly every metal producing county in the state.

Lead — Archuleta, Boulder, Chaffee, Clear Creek, Custer, Dolores, Eagle, Fremont, Gilpin, Gunnison, Hinsdale, Lake, La Plata, Mineral, Montezuma, Ouray, Park, Pitkin, Routt, Saguache, San Juan, San Miguel, Summit, Teller.

Lithium (amblygonite)—Fremont.

Manganese (alabandite, chalcophanite, psilomelane, pyrolusite, rhodochrosite)—Boulder, Chaffee, Custer, Dolores, Eagle, Gunnison, Hinsdale, Lake, Park, Saguache, San Juan, Summit.

Mercury (amalgam, cinnabar, quicksilver)—Boulder, La Plata.

Molybdenum (molybdenite)—Boulder, Chaffee, Clear Creek, Grand, Gunnison, San Juan, Summit, Teller.

Nickel (annabergite, niccolite)—Custer, Fremont, Gunnison.

Platinum—Clear Creek, Chaffee, Gunnison, Pitkin, Saguache, San Miguel.

Silver—Archuleta, Baca, Boulder, Chaffee, Clear Creek, Conejos, Costilla, Custer, Dolores, Douglas, Eagle, Fremont, Garfield, Gilpin, Grand, Gunnison, Hinsdale, Jackson, Lake, La Plata, Mineral, Moffat, Montezuma, Montrose, Ouray, Park, Pitkin, Rio Grande, Routt, Saguache, San Juan, San Miguel, Summit, Teller.

Tantalum (columbite)—Fremont, Jefferson, Teller.

Tellurium—Boulder, Teller.

Tin (cassiterite)—Garfield.

Titanium (ilmenite, rutile, perofskite)—El Paso, Gunnison.

Tungsten (ferberite, hubnerite, scheelite)—Boulder, Chaffee, Clear Creek, Gilpin, Gunnison, Lake, Ouray, San Juan, San Miguel, Summit.

Radium, Uranium, Vanadium (carnotite, pitchblende, volborthite) — Clear Creek, Custer, Dolores, Eagle, Garfield, Huerfano, Jefferson, La Plata, Mesa, Moffat, Montrose, Park, Rio Blanco, San Miguel.

Yttrium (allanite, gadolinite)—Boulder, Douglas, Washington.

Zinc—Archuleta, Chaffee, Clear Creek, Conejos, Dolores, Eagle, Fremont, Gilpin, Hinsdale, Lake, Mineral, Ouray, Park, Pitkin, Saguache, San Juan, San Miguel, Summit.

Zircon—El Paso.

NONMETALS

The range of useful nonmetals found in Colorado is almost as wide as that of the metals, but their production has not been so extensive up to the present time. Coal ranks first among the nonmetals in value of output and, perhaps, in the total value of known deposits. Colorado ranks fourth among the states in available coal supply, and eighth in annual output. According to the United States geological survey, the coal fields of the state cover approximately 19,750,000 acres, and the available coal supply is about 317,500,000,000 short tons. The only states surpassing Colorado in total available coal are North Dakota, Wyoming and Montana. The Colorado state geological survey estimates the area of Colorado's coal fields somewhat below the estimates of the United States geological survey, but places estimated tonnage considerably higher. The following tabulation shows the area of the various fields and the estimated tonnage, according to this authority:

	Area (Square Miles)	Estimated Tonnage
Denver region...	4,300	13,590,000,000
Durango field...	1,900	21,428,000,000
North Park.....	500	453,000,000
Trinidad	1,080	24,462,000,000
Uintah region...	6,000	271,810,000,000
Yampa field.....	3,700	39,639,000,000
Scattered fields..	350	388,000,000
	17,830	371,770,000,000

Colorado coal ranges in quality from black lignite and sub-bituminous varieties through various grades of bituminous to true anthracite. The bituminous varieties include high-grade coking coal, found in the Trinidad district, in the Glenwood Springs area and in Gunnison county. High-grade bituminous coal is also found in

Jackson, Routt, Moffat, Rio Blanco, Mesa, Delta, Montezuma, La Plata, Fremont and Huerfano. True anthracite coal is found near Crested Butte, in Gunnison county, and is found in several localities in Routt and Moffat counties. An accompanying table shows the annual output of coal from the state since 1864.

Perhaps no state has a wider variety or greater deposits of high-grade stone than Colorado. Sandstones, granites and basalts are perhaps most abundant, but marbles, lavas, abrasives, limestones, slates and shales are common. Onyx and various gem stones are found in several localities.

Sandstone, granite and marble have been extensively quarried for building purposes and marble and granite have been produced rather extensively for interior decorating and monumental purposes. The most extensive marble deposits are in Gunnison county near the town of Marble. Along the course of Yule creek, in this neighborhood, are said to be the largest deposits of pure white marble in the world.

Brick clay is found in practically every county in the state and has been dug to some extent in perhaps two-thirds of the counties. Fire clay, plastic clay and kaolin are also rather widely distributed.

The accompanying tabulation shows the principal valuable nonmetals found in the state, together with the counties where they have been reported:

Abrasive stones—Gunnison.

Amber—Boulder.

Asbestos—Boulder, Chaffee, Fremont, Rio Grande.

Asphalt—Garfield, Grand, Jefferson, Mesa, Routt, Rio Blanco.

Basalt—Boulder, Delta, Eagle, Garfield, Grand, Huerfano, Jefferson, Las Animas, Mesa, Rio Blanco.

Cement materials—Boulder, Chaffee, Fremont and many others.

Corundum—Chaffee, Clear Creek.

Coal—Adams, Arapahoe, Archuleta, Boulder, Delta, Dolores, Douglas, Elbert, El Paso, Fremont, Garfield, Gunnison, Huerfano, Jackson, Jefferson, La Plata, Las Animas, Larimer, Mesa, Moffat, Montezuma, Montrose, Ouray, Park, Pitkin, Rio Blanco, Routt, Weld.

Feldspar—El Paso.

Fire clay—Bent, Boulder, Custer, Douglas, El Paso, Fremont, Garfield, Gunnison, Huerfano, Jefferson, Larimer, Las Animas, Pueblo.

Fluorspar — Boulder, Chaffee, Clear Creek, Custer, Dolores, Douglas, El Paso, Gilpin, Jefferson, Mineral, Park, San Juan, San Miguel, Teller, Washington.

Fuller's earth—Chaffee, Washington.

Gem stones—Chaffee, Clear Creek, Eagle, El Paso, Fremont, Hinsdale, Jefferson, Lake, Larimer, Moffat, Park, Saguache, Teller.

Glass sand—Bent, Fremont, Prowers, Pueblo.

Granite—Archuleta, Boulder, Chaffee, Clear Creek, Conejos, Costilla, Custer, Delta, Dolores, Douglas, Eagle, El Paso, Fremont, Garfield, Gunnison, Jackson, Jefferson, La Plata, Larimer, Las Animas, Mineral, Moffat, Ouray, Park, Pueblo, Rio Blanco, Rio Grande.

Graphite—Chaffee, Gunnison, Las Animas.

Gypsum—Custer, Delta, Dolores, Eagle, El Paso, Fremont, Garfield, Larimer.

Kaolin—Boulder, El Paso, Fremont, Huerfano, Jefferson, La Plata, Pueblo, Morgan.

Limestone—Boulder, Chaffee, Douglas, Fremont, Gunnison, Jefferson, La Plata, Larimer, Las Animas, Mesa, Mineral, Ouray, Park, Pueblo, Rio Blanco.

Marble—Boulder, Chaffee, Gunnison, Larimer, Pueblo.

Mica—Clear Creek, Fremont, Larimer, Mesa.

Oil shale—Garfield, Gunnison, Mesa, Moffat, Montrose, Rio Blanco.

Onyx—Gunnison.

Petroleum—Boulder, Delta, Fremont, Mesa, Montrose, Pueblo, Rio Blanco.

Potash—Costilla, Delta.

Sandstone—Archuleta, Boulder, Chaffee, Conejos, Costilla, Custer, Delta, Dolores, Douglas, Eagle, Elbert, El Paso, Fremont, Garfield, Gunnison, Jackson, La Plata, Larimer, Las Animas, Mesa, Mineral, Ouray, Park, Pueblo, Rio Blanco, Rio Grande.

Salts of sodium—Alamosa, Saguache.

Slate—Gunnison.

Sulphur—Gunnison, Mineral.

PRODUCTION OF COAL AND PETROLEUM IN COLORADO

Year	Coal Short Tons	Petroleum Barrels
Previous to 1882	2,348,966	.....
1882	1,061,479	.....
1883	1,229,593	.....
1884	1,130,024	.....
1885	1,356,062	.....
1886	1,368,338	.....
1887	1,791,735	76,295
1888	2,185,477	297,612
1889	2,597,181	316,476
1890	3,077,003	368,842
1891	3,512,632	665,482
1892	3,510,830	824,000
1893	4,102,389	594,390
1894	2,831,409	515,746
1895	3,082,982	438,232
1896	3,112,402	361,450
1897	3,361,703	384,934
1898	4,076,347	444,383
1899	4,776,224	390,278
1900	5,244,364	317,385
1901	5,700,015	460,520
1902	7,401,343	396,901
1903	7,423,602	483,925
1904	6,658,355	501,763
1905	8,826,429	376,238
1906	10,111,218	327,582
1907	10,790,236	331,851
1908	9,634,973	379,653
1909	10,716,936	310,861
1910	11,973,736	239,794
1911	10,157,383	226,926
1912	10,977,824	206,052
1913	9,232,510	188,799
1914	8,170,559	222,773
1915	8,624,980	208,475
1916	10,522,185	202,330
1917	12,511,481	204,000
Totals	215,190,905	11,263,948

PRODUCTION OF GOLD, SILVER, COPPER, LEAD AND ZINC AT MINES IN COLORADO IN 1916

COUNTY	Producing Mines	Ore Produced, Short Tons	Gold	Silver, Fine Ounces	Copper, Pounds	Lead, Pounds	Zinc, Pounds	Total Value
Baca	1	5	.....	50	2,772	.....	.....	$ 715
Boulder	81	33,011	$ 119,299	292,824	64,707	864,333	.....	387,534
Chaffee	25	69,358	185,050	100,749	1,001,455	3,016,899	4,744,985	1,341,695
Clear Creek	100	94,220	428,931	462,141	621,732	4,295,725	2,572,575	1,527,096
Custer	14	2,245	6,309	36,971	44,004	123,536	10,970	51,455
Dolores	13	6,398	7,426	77,280	419,500	588,333	182,306	226,497
Eagle	32	105,149	96,036	222,126	112,610	1,517,362	28,438,052	4,185,294
Fremont	11	1,734	786	4,529	101,041	31,710	.....	30,810
Gilpin	87	38,913	453,259	126,553	557,317	521,334	.....	709,603
Grand	2	2	.....	134	760	.....	.....	275
Gunnison	18	10,419	31,553	29,023	84,679	313,217	1,964,873	356,386
Hinsdale	18	377	1,346	10,030	16,248	75,638	12,575	18,847
Jackson	1	61	95	199	6,752	.....	.....	1,887
Lake	96	477,240	1,720,440	2,931,281	2,621,675	21,719,392	76,785,567	16,082,059
La Plata	36	1,602	31,653	29,187	12,024	6,551	.....	54,268
Mineral	9	38,103	31,124	373,956	13,138	2,295,087	240,575	471,017
Moffat	5	25	963	41	9,033	.....	.....	3,212
Montezuma	3	86	1,402	193	3,118	116	.....	2,304
Montrose	2	197	10	1,132	100,008	.....	.....	25,357
Ouray	52	111,192	491,175	803,461	444,081	2,339,029	69,015	1,299,737
Park	15	3,005	234,299	13,231	22,598	330,609	47,560	277,749
Pitkin	12	144,330	.....	577,863	28,931	17,519,275	162,574	1,617,966
Routt	4	517	179	237	32,142	.....	.....	8,242
Saguache	20	3,338	8,024	48,959	92,581	255,449	.....	80,640
San Juan	46	146,128	438,628	502,342	1,615,167	6,285,304	4,014,403	2,207,116
San Miguel	20	428,651	2,072,393	812,041	581,427	6,126,551	1,098,485	3,319,676
Summit	55	65,117	673,891	120,207	14,581	1,688,637	13,940,948	2,741,177
Teller	64	945,820	12,119,550	79,804	.....	.....	.....	12,172,061
Totals, 1916	852	2,727,243	$19,153,821	7,656,544	8,624,081	70,914,087	134,285,463	$49,200,675
Totals, 1915	821	2,737,020	$22,414,944	7,027,972	7,112,537	68,810,597	104,594,994	$43,426,697
Increase or decrease	+ 31	— 39,777	—$ 3,261,123	+ 628,572	+ 1,511,544	+ 2,103,490	+ 29,690,469	+$ 5,773,978

Manufacturing in Colorado

THE manufacturing industry in Colorado has developed with remarkable rapidity in the past 20 years. During that period the number of manufacturing establishments has nearly doubled, the capital invested has increased about 225 per cent, the number of persons engaged in manufacturing has more than doubled and the value of manufactured goods produced annually has increased approximately 110 per cent. The following table compiled by the United States census bureau shows the growth of the industry from 1899 to 1914, when the last manufacturing census was taken:

	1914	1909	1904	1899
Number of establishments	2,126	2,034	1,606	1,323
Persons engaged	33,715	34,115	25,888	*
Proprietors and firm members	1,716	1,722	1,398	*
Salaried employes	4,721	4,326	2,677	1,870
Wage earners (average number)	27,278	28,067	21,813	19,498
Primary horsepower	162,828	154,615	124,907	43,434
Capital	$181,776,339	$162,667,801	$107,663,500	$ 58,172,865
Salaries	6,367,863	5,647,684	3,549,043	2,058,798
Wages	20,199,754	19,912,342	15,100,365	11,707,566
Rent and taxes (inc. internal revenue)	2,195,394	2,003,281	†1,020,434	*
Cost of materials	89,756,302	80,490,904	63,114,397	60,750,784
Value of products	136,839,321	130,044,312	100,143,999	89,067,879
Value added by manufacture (value of products less cost of material)	47,083,019	49,553,408	37,029,602	28,317,095

* Figures not available.
† Exclusive of internal revenue.

Since 1914 there has been a very substantial increase in manufacturing activities due largely to demands created by the war, although no accurate data are available. Careful estimates show that there are now approximately 2,500 manufacturing establishments in the state, producing close to $200,000,000 worth of goods annually. This large increase in the value of the output is due partly to increased production, but principally to higher prices prevailing on account of the war. The 1914 census is based on figures compiled before the war began. Since that time the prices of all manufactured articles have increased steadily.

But Colorado, in spite of its rapid growth as a manufacturing state, still holds only a low rank in manufacturing activity. In 1914 it ranked thirty-second among the states in the value of manufactured products, thirty-sixth in the number of wage earners, and thirty-third in the value added by manufacture. The value of goods manufactured in Colorado in 1914 represented only six-tenths of one per cent of the total value of goods manufactured in the United States. While the increase in the value of goods manufactured here since 1914 has been very substantial, it has not kept pace with the increase in other states where the production of goods needed for the prosecution of the war is carried on more extensively, consequently Colorado ranks perhaps no higher as a manufacturing state now than it did in 1914, and the value of its manufactured goods is smaller in comparison with the total value produced in the United States than it was at that time.

In 1914 the beet sugar industry ranked first in the total value of its product, with $17,635,556, or 12.9 per cent of the value of all goods manufactured in the state. Since that time the wholesale price of sugar has almost doubled and the value of beet sugar manufactured in Colorado in 1917 was in excess of $35,000,000, or about 100 per cent greater than for 1914. A new sugar factory was put in operation at Brighton in 1917, making a total of 14 operating factories in the state. The present indications are that the output will be considerably reduced in 1918, as a result of a sharp falling off in the acreage of sugar beets cultivated.

Slaughtering and meat packing ranked second among the state's manufacturing industries in 1914, the total value of the output being $12,726,127. Since 1914 there has been a considerable increase in the price of packing-house products and a very substantial increase in the output, so that the value of all packinghouse products for the state in 1917 was in the neighborhood of $30,000,000.

Flour and gristmill products ranked third in 1914, with an output valued at $7,535,633. Since that time there has been a slight increase in the out-

put and a very large increase in the market price of the products for 1917. The value of flour and gristmill products was more than 100 per cent greater than for 1914.

Among the other manufacturing industries which have shown large increases in the value of their output since 1914 are iron and steel works, rolling mills, and makers of chemicals and explosives. The Colorado Fuel & Iron company, which is the largest steel manufacturing establishment in the west, is operating at full capacity and turning out a much larger production than at any time in its history. The price of all steel products has increased ever since the beginning of the war, with the result that the total annual value of the state's steel products now is perhaps 200 per cent greater than in 1914. Several factories in the state are engaged in making explosives for the government, chief of which is that located at Louviers, in Douglas county. This industry has been built up largely since 1914. Several new chemical factories have been put in operation and old factories are greatly increasing the output as a result of the demands caused by the war, especially those engaged in the production of acids and dyes.

The census bureau does not segregate manufacturing output by counties and it is impossible under present conditions to supply any accurate data on these industries showing the comparative ranks of the various counties. In 1914 there were seven cities in the state having a population of more than 10,000 each, which reported 40.1 per cent of the value of the state's manufactured products. These cities are Boulder, Colorado Springs, Denver, Fort Collins, Greeley and Pueblo. From these figures it may be seen that the manufacturing industry is being developed very substantially in the smaller cities and rural districts, since they produce a larger percentage of the total manufactured output than is produced in the larger cities. All of the state's 14 sugar factories are located in places having less than 15,000 population and the big steel mills of the Colorado Fuel & Iron company, usually credited to the city of Pueblo, are not located in the city's limits and their output is not assigned by the census bureau to that city.

The butter, cheese and condensed milk industries are growing very rapidly in the rural districts. All of the condenseries and most of the creameries and cheese factories are located in small communities. In 1914 the value of butter, cheese and condensed milk manufactured in the state was $3,596,565. It is probably double that at the present time and is increasing steadily.

Colorado offers exceptional opportunities for the development of manufacturing in a wide variety of lines. It has a great wealth of raw material. Its supply of coal is practically inexhaustible and is so distributed as to be conveniently located to furnish fuel for all of the manufacturing centers of the state.

Some data regarding the manufacturing development in the various counties and the raw materials available for further development is given in that part of this volume devoted to the several counties. The following list contains some of the most important raw materials available here for manufacturing purposes: Apples, apricots, alfalfa, asbestos, asphaltum, asphaltic rock, arsenic, aquamarine, aluminum, agate, alunite, anthracite coal, antimony, amethyst, amber, abrasive stone, basalt, barite, bauxite, building sand, beans, bismuth, barley, bitumen, bitumenous rock, brick and tile clay, broomcorn, beets, berries, cadmium, cattle, celery, cement materials, chalcedony, chalk, copper, cherries, corn, cobalt, coal, coke, clays, corundum, carnotite, cucumbers, diatomaceous earth, dolomite, eggs, elaterite, emmer, earthenware materials, fuller's earth, feldspar, flaxseed, fluorspar, feterita, fire clay, glass sand, graphite, grain sorghum, granite, gold, gypsum, garnet, gilsonite, honey, hogs, horses, hides, hay (many varieties), iron ore, kaolin, kafir corn, lava, lead, limestone, mica, mineral paint, moulding sand, molybdenum, mercury, melons, marble, milo maize, manganese, magnesium, millet, mineral waters, milk, oats, oil shale, opal, onyx, petroleum, potash, plastic clay, producer gas, pyrite, platinum, potatoes, peaches, pears, plums, pumpkins, quartz, radium salts, rutile, rye, road metal, sandstone, salts of sodium, salts of potassium, speltz, shale, slate, silver, sand, sulphur, sheep, sugar beets, tellurium, tantalum, tungsten, timber (pine, cedar, spruce, hemlock, aspen, pinon, cottonwood, etc.), turnips, topaz, tourmaline, trona, turquoise, uranium, vanadium, volcanic ash, vegetables, wheat, wool, wood (see timber), water power (more than 2,000,000 horsepower), wurtzilite, zinc, zircon.

Colorado Highways

THE latest data available, compiled by the state highway commission at the close of 1916, shows a total of 40,067 miles of highways in Colorado, of which 7,083.49 miles have been designated state highways. This does not include streets in incorporated cities and towns, which have a total length of perhaps 3,000 miles for the state. A tabulation published elsewhere in this volume gives the mileage of all highways—exclusive of streets—and of state highways, for each county. From this tabulation it will be seen that Weld county ranks first in total road mileage, with 3,101 miles; Mesa county second, with 2,200 miles, and El Paso county third, with 2,000 miles. Fourteen counties in the state have 1,000 miles or more of public roads.

The tabulations before referred to show that in 1917 the state and the counties spent on state highways $1,270,456.59, and the counties spent on county roads alone $1,042,750.84, making a total expenditure on roads by the counties and the state for the year of $2,313,207.43. Additional expenditures, amounting to approximately $150,000, were made by the federal government under the apportionment to Colorado of funds appropriated by congress for the improvement of rural post roads and by the forest service for the improvement of roads within the national forests.

The following tabulation shows the funds that will be available for road work in the state in 1918:

State Highway Fund		
Balance in state highway fund, November 30, 1917		$ 459,237.00
Estimated receipts for fiscal year:		
Internal Improvement Funds	$ 150,000.00	
Motor Licenses, etc	145,000.00	
Half-mill Tax Levy	652,643.20	
Total receipts		947,643.20
County Funds		
County Tax Levies	2,292,696.66	
Forest Service Funds	50,000.00	
Total receipts		2,342,696.66
Federal Funds		
Forest Service	23,000.00	
Federal Aid Fund	167,380.00	
Total receipts		190,380.00
Grand Total		$3,939,956.86

Colorado has a state highway commission, which exercises general supervision over the construction and maintenance of such roads as have been designated by this commission as state highways. The boards of county commissioners in the several counties have general supervision over the construction and maintenance of county roads and co-operate with the state highway commission in all work on state roads within their respective counties. All work on county roads and bridges is paid for with county funds, derived from special county tax levies and from other less important sources, including 50 per cent of the receipts from motor licenses, and certain funds derived from the administration of the national forests, turned over by the forest service to the counties in which such forests are located. The expense of construction and maintenance of state highways is met jointly by the state and the respective counties in which the roads are located, the counties paying not to exceed one-half the cost. The state highway fund, the expenditure of which is directed by the highway commission, on state highways exclusively, is derived: 1. From a special half-mill tax levy, authorized by the vote of the people at the general election in November, 1914. 2. From such appropriations as may be made by the legislature to the state highway fund. 3. From all money now in or hereafter to be paid into the internal improvement income fund and all money derived from the investment of the internal improvement permanent fund. 4. One-half the proceeds arising from the registration of motor vehicles, from chauffers' licenses and from fines and penalties for violation of the automobile vehicle regulations. 5. From all public donations, including allotments made by the federal government to the state for highway purposes.

The balance in the state highway fund at the end of last November was all appropriated for work laid out during that year, but was unpaid because the work was not completed and ac-

cepted, so that it can not properly be classed as 1918 funds. In addition to this there was $23,311 appropriated in 1917 in excess of the revenues, which must be taken from the total state highway funds available. The receipts from taxes are the maximum amounts that would accrue from a full collection of all road and bridge taxes, and the full amount is never collected. The highway commission estimates that $35,800 will be required for administrative purposes during the year and a considerable amount should be allowed for administrative purposes in the expenditure of other road funds. Allowing a loss of eight per cent in the collection of taxes, and four per cent of the balance for administrative purposes, and making the deductions from the state highway fund referred to above, the net amount available for road work during the year would be approximately $3,040,137.96.

Based on a total of 41,000 miles of road in the state, which is approximately the mileage at present, this means that $74.15 is available for each mile of highway. Based upon the estimated population of 1,022,639 for the state it means a per capita road revenue of $2.97. It amounts to $0.429 on each $100 of assessed valuation for the state, or, in other words, is equal to the revenue from a levy of 4.29 mills. The latest compilation on highways made by the bureau of roads of the United States department of agriculture, for 1914, shows that the average road revenue for each mile of road in the country that year was $98.22. Colorado ranked far down in the list then, with a revenue of $48.70 per mile of road. New Jersey was the leader, with $486.49, Maryland ranked second, with $364.60, Massachusetts third, with $326.08, and California fourth, with $314.09. The per capita expenditure that year based on the 1910 census populations, was $2.62, and Colorado's average was $2.42. California ranked first in per capita expenditures, with $8.06, Oregon second, with $7.89, and Montana third, with $7.68.

Tabulations before referred to show distribution of roads by counties and something of what each county is doing toward maintaining them and opening new routes. The 1916 report of the state highway commissioner showed that 1,009 miles of state highways were surfaced and an additional 3,226 miles graded and otherwise improved, making a total of 4,235 miles of improved state highways. In addition there is a very considerable mileage of highly improved county roads, and a considerable mileage of state highway has been improved since the last report was published.

Although Colorado ranks somewhat low among the states in road expenditures, as shown by the above comparisons, it has made remarkable progress in this direction since 1914. That year the total receipts for highways from all sources was $1,937,546.23. The following table shows the tax levies and maximum revenues to be collected under them by the various counties for 1918:

Roads and Bridges

County	Mill Levy	Revenue
Adams	2.000	52,196.04
Alamosa	2.000	16,582.94
Arapahoe	1.300	24,941.67
Archuleta	2.800	14,035.15
Baca	1.000	6,413.11
Bent	1.750	20,169.49
Boulder	1.950	83,849.30
Chaffee	1.750	19,312.15
Cheyenne	1.500	16,092.81
Clear Creek	5.500	29,403.28
Conejos	2.500	22,275.80
Costilla	3.500	19,169.84
Crowley	1.100	10,115.23
Custer	2.500	6,140.73
Delta	8.000	40,461.55
Denver	....	.....
Dolores	2.000	3,165.09
Douglas	2.000	22,223.36
Eagle	3.000	21,762.92
Elbert	2.300	31,694.03
El Paso	1.600	104,772.34
Fremont	2.800	52,649.36
Garfield	6.690	122,529.30
Gilpin	3.500	11,703.23
Grand	2.530	12,016.34
Gunnison	2.200	34,741.06
Hinsdale	4.000	4,069.82
Huerfano	2.500	32,431.96
Jackson	2.000	10,356.66
Jefferson	2.490	56,673.07
Kiowa	.500	4,536.14
Kit Carson	2.000	28,246.06
Lake	.750	8,631.47
La Plata	2.623	40,062.17
Larimer	2.500	102,451.67
Las Animas	1.500	56,173.18
Lincoln	1.600	21,897.90
Logan	4.210	116,018.22
Mesa	2.200	60,231.99
Mineral	5.000	7,298.95
Moffat	7.000	40,282.83
Montezuma	7.000	40,851.74
Montrose	2.700	41,023.16
Morgan	3.300	71,220.51
Otero	1.980	54,747.56
Ouray	3.500	18,181.76
Park	4.000	34,263.84
Phillips	1.000	8,190.36
Pitkin	3.500	18,851.63
Prowers	2.006	37,835.83
Pueblo	1.300	86,031.70
Rio Blanco	2.750	15,777.02
Rio Grande	2.000	19,817.00
Routt	3.230	46,135.33
Saguache	2.000	23,879.00
San Juan	3.500	14,602.14
San Miguel	3.250	28,815.80
Sedgwick	1.620	11,166.85
Summit	3.000	19,423.01
Teller	2.670	37,101.29
Washington	1.500	26,773.00
Weld	2.700	226,828.76
Yuma	1.500	23,674.16
		$2,292,969.66

HIGHWAY MILEAGE AND EXPENDITURES, 1916 AND 1917

COUNTY	1916		1917		
	State Highways (Mileage)	Total Highways (Mileage)	Amt. Spent by State & Co. for State Highways	Amount Spent by County on Co. Highways	Total Amount Spent
Adams	93.25	673	$ 22,282.13*	$ 27,877.43	$ 50,159.56
Alamosa	64.50	564	7,349.69	8,690.29	16,039.98
Arapahoe	56.09	378	9,841.26	16,462.72	26,303.98
Archuleta	102.00	208	16,820.08	5,769.50	22,589.58
Baca	91.75	117	13,507.55	688.17	14,195.72
Bent	41.65	506	8,784.06	6,688.20	15,472.26
Boulder	92.75	620	51,542.93	59,940.72	111,483.65
Chaffee	99.50	325	16,928.61	7,162.67	24,091.28
Cheyenne	96.00	164	15,687.61	2,788.05	18,475.66
Clear Creek	36.50	110	9,590.39	12,570.16	22,160.55
Conejos	148.25	327	6,124.98*	10,222.88	16,347.86
Costilla	65.25	126	11,253.35	5,638.69	16,892.04
Crowley	33.50	346	6,484.80	5,893.29	12,378.09
Custer	103.50	351	3,312.18*	9,242.50	12,554.68
Delta	122.50	875	15,673.70	18,673.00	34,346.70
Denver†	.....	...	.....	.....	.....
Dolores	42.50	100	9,222.52	2,957.70	12,180.22
Douglas	140.80	516	7,377.88	14,820.97	22,198.85
Eagle	104.25	270	18,146.99	12,728.32	30,875.31
Elbert	64.70	1,700	8,966.04	21,923.51	30,889.55
El Paso	219.30	2,000	59,854.21	48,729.67	108,583.88
Fremont	135.00	460	51,029.64	20,222.54	71,252.18
Garfield	121.25	510	64,093.32	22,898.94	86,992.26
Gilpin	33.25	124	8,919.83	6,496.48	15,416.31
Grand	196.75	386	14,591.85	2,130.99	16,722.84
Gunnison	225.50	573	49,780.66	3,758.28	53,538.94
Hinsdale	60.00	225	6,545.83	3,624.36	10,170.19
Huerfano	126.00	575	39,150.60	1,381.50	40,532.10
Jackson	134.00	305	6,954.94	4,094.30	11,049.24
Jefferson	126.20	634	88,239.23	21,552.04	109,791.27
Kiowa	97.00	460	4,025.06	2,815.39	6,840.45
Kit Carson	137.37	1,076	22,204.43	4,046.09	26,250.52
Lake	54.50	165	5,574.00	5,287.10	10,861.10
La Plata	104.75	1,000	10,154.66	20,565.43	30,720.09
Larimer	207.50	1,500	68,718.24	60,604.63	129,322.87
Las Animas	150.50	1,000	33,664.60	16,060.11	49,724.71
Lincoln	207.75	600	11,886.55	14,111.73	25,998.28
Logan	135.25	1,042	17,168.76	36,395.43	53,564.19
Mesa	135.75	2,200	40,579.36	28,495.13	69,074.49
Mineral	80.00	98	14,736.01	9,647.09	24,383.10
Moffat	184.50	550	21,596.65	2,010.41	23,607.06
Montezuma	102.25	500	10,843.13	20,846.81	31,689.94
Montrose	174.25	1,009	18,196.71	17,460.11	35,656.82
Morgan	110.00	1,000	21,361.24	30,092.97	51,454.21
Otero	80.63	775	18,665.43	33,634.86	52,300.29
Ouray	58.75	202	8,494.53	16,459.16	24,953.69
Park	191.50	376	15,404.17*	10,470.20	25,874.37
Phillips	55.00	314	1,738.16*	3,408.76	5,146.92
Pitkin	59.00	193	17,465.22	10,431.08	27,896.30
Prowers	173.75	805	28,253.64	27,232.48	55,486.12
Pueblo	161.25	1,890	46,822.81*	49,389.71	96,212.52
Rio Blanco	123.00	400	1,442.44	12,967.36	14,409.80
Rio Grande	106.50	350	6,775.19	19,738.47	26,513.66
Routt	169.00	456	28,878.33	39,214.13	68,092.46
Saguache	150.50	1,575	7,378.07*	12,849.83	20,227.90
San Juan	51.00	125	16,985.05	8,991.68	25,976.73
San Miguel	92.25	319	26,218.37	17,432.83	43,651.20
Sedgwick	47.50	216	2,692.60	.....	2,692.60
Summit	59.50	214	14,112.34	5,065.90	19,178.24
Teller	72.50	186	33,508.84	12,170.97	45,679.81
Washington	128.75	1,760	13,065.06	31,451.06	44,516.12
Weld	289.25	3,101	36,325.18	138,522.17	174,847.35
Yuma	156.00	542	8,926.96	.....	8,926.96
Totals	7,083.49	40,067	$1,281,918.65	$1,103,496.95	$2,385,415.60

* 1916 figures for last three columns.

† Denver county, which includes only the incorporated city of Denver, does not share in the apportionment of state highway funds. The amount spent annually on streets and alleys is given elsewhere in this volume.

Colorado Commercial Organizations

ACTIVE commercial organizations in all parts of Colorado are doing efficient work toward building up their respective communities and the state at large. A state organization known as the Colorado Association of Commercial Executives, made up principally of the secretaries of local commercial bodies, looks after matters which affect the entire state and endeavors to bring about full cooperation on all large state-building policies. H. H. Hartman of Fort Collins is president of this organization, and Harry N. Burhans of the Denver Tourist Bureau is its secretary. The Colorado Manufacturers association, with headquarters in Denver, was organized to represent the manufacturing interests of the entire state, and has members in all the important cities and towns. Its principal activities have been in the direction of obtaining government contracts for war material and furnishing government bureaus information regarding the facilities afforded in Colorado for supplying war material. W. J. H. Doran is president and Carl Hinton secretary. The Colorado Development federation, recently organized, has for its purpose the coordination of all interests in the state to obtain for Colorado a maxmum of war contracts which the state is in position to fill. Cass E. Herrington is chairman and Carl Hinton manager. The following list contains the names of all commercial bodies in the state from which the State Board of Immigration has obtained reports. Since new organizations are being formed constantly it is more than possible that a few active organizations have not reported.

ADAMS COUNTY

Bennett—Commercial Club of Bennett; president, F. W. Barr; secretary, Fred P. Murphy; covers city of Bennett and about six miles east and west and fifteen miles north and south.

Aurora—Aurora Improvement Association; president, F. L. Freeman; secretary, L. J. Mehl; covers city of Aurora and vicinity.

Brighton—Farmers' and Merchants' Association; president, C. L. Castleton; secretary, W. C. Hood, Jr.; covers city of Brighton and surrounding farming district.

ALAMOSA COUNTY

Alamosa—Alamosa Auto Association; president, Herman Emperius; secretary, J. A. McDonald; covers Alamosa county.

Hooper — Hooper Commercial Club; president, W. R. Pyke; secretary, Charles C. Donlin.

BACA COUNTY

Springfield — Springfield Commercial Club; president, J. E. Terrall; secretary, W. M. Stewart; covers Springfield and vicinity.

BENT COUNTY

Las Animas—Las Animas Commercial Club; president, J. M. Jackson; secretary, V. A. Hagaman; covers Bent county.

BOULDER COUNTY

Boulder—Boulder Commercial Association; president, Louis Hermon; secretary, Frank E. Eckel; covers city of Boulder and work of interest throughout the county.

Lafayette—Lafayette Commercial Association; president, J. F. Cory; secretary, A. C. Howe; covers city of Lafayette and vicinity.

Longmont—Longmont Commercial Association; president, Will Lugg; secretary, Clarence Emery; covers city of Longmont.

Louisville—Louisville Commercial Association; president, A. B. Duel; secretary, John Stoiber, Jr.; covers Louisville and vicinity.

Lyons—Lyons Commercial Association; president, Rev. F. J. Ensminger; secretary, O. J. Ramey; covers city of Lyons and about six to ten miles around it.

Nederland—Nederland Fish and Game Club; president, H. H. Hoyt; secretary, A. H. Price; covers southwestern part of Boulder county.

CHAFFEE COUNTY

Buena Vista—Buena Vista Board of Trade; president, Ernest Wilber; secretary, Arthur E. Smith; covers Buena Vista and vicinity.

Salida—Salida Commercial Club; president, J. D. Randol; secretary, H. H. Parker; covers city of Salida.

CLEAR CREEK COUNTY

Empire—Empire Commercial Association; president, J. L. Cutting; secretary, H. M. Cain; covers Clear Creek county.

Georgetown — Georgetown Board of Mines and Commerce; president, Charles Brandstetter; secretary, H. E. Crist; covers city of Georgetown.

Idaho Springs—Idaho Springs Commercial Association; president, E. M. Moscript; secretary, James Underhill; covers city of Idaho Springs.

CONEJOS COUNTY

Antonito—Antonito Chamber of Commerce; president, D. E. Newcomb; secretary, Edward A. Green; covers Conejos county.

CROWLEY COUNTY

Olney Springs—Olney Springs Commercial Club; president, S. T. Husson; secretary, F. Montgomery; covers Olney Springs and vicinity.

Sugar City—Sugar City Chamber of Commerce; president, R. A. Hamilton; secretary, H. F. Aldrich; covers Sugar City.

CUSTER COUNTY

Westcliffe—Custer County Chamber of Commerce; president, George Phillips;

secretary, Rev. Edward Berkemeyer; covers Custer county.

DELTA COUNTY

Crawford—Crawford Business Men's Association; president, W. D. Gould; secretary, Wm. Hopkins; covers Crawford and Maher districts.

Delta—Delta County Business Men's Association; president, Carey B. Adams; secretary, Theo. Douglas; covers Delta county.

Hotchkiss—Hotchkiss Business Men's Association; president, H. A. Klingensmith; secretary, Erice S. Robbitt; covers territory surrounding Hotchkiss.

DENVER COUNTY

Denver—Denver Civic and Commercial Association; president, Finlay L. MacFarland; secretary, Arthur J. Dodge; covers city and county of Denver. This organization includes the following bureaus, which formerly were independent organizations: Electrical bureau—John F. Greenawalt, chairman; George W. Bixler, secretary. Manufacturers bureau—W. J. H. Doran, chairman; Harry Zimmerhackel, secretary. Real Estate bureau—John S. Flower, chairman; John McNamara, secretary. Retail Merchants' bureau—John P. Fontius, chairman; Berlin Boyd, secretary. Tourist and Publicity bureau—F. J. Chamberlin, chairman; Harry N. Burhans, secretary. Transportation bureau—W. A. Hoover, chairman; R. Hardesty, secretary. Advertising bureau—Ward C. Mayborn, chairman.

Denver—Denver Motor Club; president, W. J. Barker; secretary, Charles Kittredge, Jr.

DOLORES COUNTY

Rico—Commercial Club of Rico; president, Joseph Meredith; secretary, Lee H. Obendorfer; covers Dolores county.

EAGLE COUNTY

Redcliff—Redcliff Commercial Association; president, F. V. Burbank; secretary, Adrian Reynolds, Jr.; territory covered by organization, Battle Mountain mining district.

ELBERT COUNTY

Simla—Simla Commercial Club; president, C. A. Huff; secretary, E. E. Gray; covers Simla and vicinity.

Elizabeth—Elizabeth Commercial Association; president, C. W. Reed; secretary, W. C. Wortman; territory covered by organization, Elizabeth and surrounding community.

EL PASO COUNTY

Colorado Springs — Colorado Springs Chamber of Commerce; president, W. D. Hemming; secretary, A. W. Henderson; covers Colorado Springs and Pikes Peak region.

Fountain—Fountain Commercial Club; president, W. P. Riddoct; secretary, M. L. Rhinehart; covers south half of El Paso county.

Monument—Monument Farmers' Club; president, John Pubble; secretary, A. J. Eaedron; covers Monument and adjoining thirty square miles.

Peyton—Peyton Community Club; president, J. W. Dickinson; secretary, K. Herzberger; covers Peyton and vicinity.

Calhan — Calhan Commercial Club; president, D. L. Shultz; secretary, T. C. Garrity; covers Calhan and vicinity.

Calhan—Calhan Chamber of Commerce; president, S. R. Chubb; secretary, J. L. Rector.

FREMONT COUNTY

Canon City—Canon City Chamber of Commerce; president, Guy U. Hardy; secretary, E. A. Bradbury; covers Canon City.

Florence—Florence Chamber of Commerce; president, Thomas Cavanaugh; Secretary, Horace C. Mosher; covers eastern Fremont county.

GARFIELD COUNTY

Grand Valley—Grand Valley Commercial Club; president, E. E. Wheatley; secretary, J. J. Cannell; covers Grand Valley and vicinity.

Rifle—Rifle Commercial Club; president, Ed McLearn; secretary, C. H. Durant; covers Rifle and vicinity.

Silt—Silt Community Club; president, Robert Bowles; covers Silt and vicinity.

GILPIN COUNTY

Central City—Central City Metal Miners' Association; president, F. S. Caldwell; secretary, Morris Hazard; covers Gilpin county.

GRAND COUNTY

Kremmling—Kremmling Chamber of Commerce; president, James H. Thompson; secretary, W. H. Harrison; covers Grand county.

GUNNISON COUNTY

Gunnison—Gunnison Chamber of Commerce; president, E. G. Palmer; secretary, H. F. Lake, Jr.; territory covered by organization, Gunnison county.

HUERFANO COUNTY

La Veta—La Veta Commercial Club; president, Dr. J. M. Lamme; secretary, Geo. A. Edmonston; covers La Veta and vicinitv.

Walsenburg—Walsenburg Commercial Club; president, R. L. Snodgrass; secretary, A. P. Azencio; covers Huerfano county.

JACKSON COUNTY

Walden—Jackson County Good Roads and Commercial Association; president, A. J. Monroe; secretary, A. E. Wilkins; covers Jackson County.

JEFFERSON COUNTY

Arvada — Arvada Community Club; president, Walter P. Smith; secretary, A. J. Recht; covers territory north to Semper, south to Griffith and Wheatridge, east to county line, west Ralston valley to near Leyden.

KIOWA COUNTY

Haswell—Haswell Commercial Club; president, O. M. Davenport; secretary, G. A. Newton; covers Haswell and vicinity.

KIT CARSON COUNTY

Burlington — Burlington Commercial Club; president, J. K. Rouse; secretary, Louis Vogt; covers Burlington and vicinity.

Flagler — Flagler Commercial Club; president, J. A. White; secretary, W. A. Borland; covers Flagler and vicinity.

Stratton—Stratton Commercial Club; president, J. E. Holtz; secretary, E. W. Tarrant; covers Stratton and vicinity.

LAKE COUNTY

Leadville—Leadville Chamber of Commerce; president, N. T. Shedin; secretary, A. S. Sharp; covers Lake county.

LA PLATA COUNTY

Durango—Durango Exchange; president, B. W. Ritter; secretary, Charles E. Hall; covers the entire San Juan basin of southwestern Colorado, comprising five counties.

Ignacio—Ignacio Commercial Club; president, A. L. Keen; secretary, B. Y. Morris; covers Pine River valley.

LARIMER COUNTY

Loveland—Loveland Chamber of Commerce; president, John R. Handy; secretary, C. E. Clark; covers Loveland and vicinity.

Berthoud—Berthoud Chamber of Commerce; president, J. H. Coleman; secretary, P. D. Nelson; covers southern Larimer county and part of Weld county.

Fort Collins—Fort Collins Commercial Club; president, Charles McMillan; secretary, O. J. Watrous; covers Fort Collins and vicinity.

Wellington — Wellington Commercial Club; president, C. F. Osborn; secretary, E. T. Puleston.

LAS ANIMAS COUNTY

Trinidad—Trinidad-Las Animas County Chamber of Commerce; president, Sol H. Jaffa; secretary, Franklin P. Wood; covers Las Animas county.

Trinidad—Trinidad Advertising Club; president, John Crowe; secretary, F. P. Wood.

Aguilar—Aguilar Chamber of Commerce.

LINCOLN COUNTY

Hugo—Hugo Chamber of Commerce; president, A. H. Reid; secretary, C. H. Beeler; covers Lincoln county.

Limon—Business Men's Club; president, Wm. H. Bloom; secretary, C. M. Summerville; covers Limon and vicinity.

LOGAN COUNTY

Fleming—Fleming Commercial Club; president, J. A. Jameson; secretary, M. O'Leary; covers Fleming and vicinity.

Merino — Merino Commercial Club; president, C. R. Johnson; secretary, M. M. Thompson; covers town of Merino.

Sterling—Chamber of Commerce; president, Don C. Summers; secretary, Earl B. Gandy; territory covered by organization, Sterling and Logan county.

MESA COUNTY

DeBeque—DeBeque Chamber of Commerce; president, P. W. Palmer; secretary, H. J. Elder; covers DeBeque and vicinity.

Grand Junction — Grand Junction Chamber of Commerce; president, Albert R. Sampliner; secretary, N. P. Ela; covers Mesa county.

Palisade—Palisade Commercial Club; president, W. C. Bell; secretary, E. S. Sherman; covers Palisade and vicinity.

MINERAL COUNTY

Creede — Mineral County Business Men's Association; president, Arthur H. Wasson; secretary, A. H. Major; covers Mineral county.

MOFFAT COUNTY

Craig—Craig Commercial Club; president, J. F. Engle; secretary, H. C. Sather; covers Moffat county.

MONTEZUMA COUNTY

Cortez—Cortez Chamber of Commerce; president, R. R. Smith; secretary, Walter J. Moffitt; covers Montezuma county.

Mancos — Mancos-Mesa Verde Club; president, Albert L. Brown; secretary, C. R. Beers; covers Montezuma county.

Dolores—Commercial Club; president, H. J. Porter; secretary, Harry V. Pyle; territory covered by organization, Dolores and vicinity.

MONTROSE COUNTY

Montrose—Montrose Chamber of Commerce; president, F. J. Hartman, Jr.; secretary, E. E. Schuyler; covers Montrose county.

Nucla—Nucla Chamber of Commerce; president, L. Vestal; secretary, W. A. Hopkins; covers western Montrose county.

Olathe—Olathe Chamber of Commerce; president, A. J. Rawson; secretary, C. C. Wortman; covers Olathe and vicinity.

MORGAN COUNTY

Brush—Brush Commercial Club; president, J. P. Epperson; secretary, Anson Leeds; covers Brush and vicinity.

Orchard—Orchard Grange; president, R. W. Day; secretary, Mrs. J. G. Beaver; covers Orchard and vicinity.

Wiggins—Wiggins Commercial Club; president, George Gilham; secretary, G. L. Cobb; covers Wiggins and vicinity.

OTERO COUNTY

Fowler — Fowler Commercial Club; president, W. M. Berry; secretary, W. L. Williams; territory covered by organization, Fowler.

La Junta—La Junta Industrial Association; president, George W. Milliken; secretary, Carl C. Hearnsberger; covers La Junta and vicinity.

Manzanola — Manzanola Commercial Club; president, E. O. Russell; secretary, G. E. Bicknell; covers Manzanola and surrounding farming district.

Rocky Ford—Rocky Ford Industrial Association; president, L. E. Wise; secretary, J. L. Miller; covers city of Rocky Ford.

Rocky Ford—Rocky Ford Fair Association; president, Lewis Swink; secretary, J. L. Milier.

Rocky Ford—Otero County Agricultural Association; president, C. B. Sherwood; secretary, J. L. Miller.

Swink—Swink Commercial Club; secretary, J. M. Powers; covers Swink and vicinity.

OURAY COUNTY

Ouray—Ouray Commercial Club; president, David S. Boyd; secretary, Wm. Rathmell; covers Ouray county.

Ouray—Ouray "Boosters' Club"; president, Thomas Canavan; secretary, H. A. Christopher.

Ridgway—Ridgway Commercial Association; president, E. W. Roscoe; secretary, T. B. Smith; covers farming section of Ouray county.

PARK COUNTY

Fairplay—Park County Chamber of Commerce; president. Thos. M. James; secretary, A. H. Willmarth; covers Park county.

PHILLIPS COUNTY

Haxtun—Haxtun Commercial Club;

president, C. H. Mitchell; secretary, Gust Westman; covers Haxtun and vicinity.

Holyoke—Holyoke Commercial Club; president, R. L. Johnson; secretary, C. P. Peterson; covers Holyoke and vicinity.

PITKIN COUNTY

Aspen — Associated Club; president, Benj. R. Kobey; secretary, Fred C. Cliff; covers Pitkin county.

PROWERS COUNTY

Granada—Granada Commercial Club; president, E. C. Lee; secretary, J. R. Mayfield; covers Granada and vicinity.

Holly—Holly Commercial Club; president, J. R. Johnson; secretary, T. J. Ponton; covers Holly and vicinity.

Lamar—Young Men's Business association; president, Henry J. Johnson; secretary, C. A. Coker. Covers Lamar and vicinity.

Lamar—Lamar Commercial Club Association; president, R. E. Adams; secretary, C. P. Adams; covers Lamar and vicinity.

Bristol — Bristol Commercial Club; president, J. B. Nickels; secretary, H. L. Moran; covers Bristol and vicinity.

Wiley—Wiley Commercial Club; president, M. C. Steen; secretary, Jacob Funk; territory covered by organization, Wiley and community.

PUEBLO COUNTY

Pueblo—Pueblo Commercial Club; president, J. F. Sprengle; secretary, P. A. Gray; territory covered by organization, Pueblo and southern Colorado.

RIO BLANCO COUNTY

Meeker—Rio Blanco Commercial Club; president, Reuben Oldland; secretary, L. A. Rea; covers Rio Blanco county.

RIO GRANDE COUNTY

Del Norte—Del Norte Commercial Club; president, L. E. Stone; secretary, L. A. Ruark; covers Del Norte and vicinity.

Monte Vista—High Order of Grunts; president, Charles H. Akers; secretary, C. E. Hart; covers San Luis valley.

ROUTT COUNTY

Hayden—Hayden Commercial Association; president, R. E. Norvell; secretary, G. W. Smith; covers Hayden and vicinity.

SAGUACHE COUNTY

Center — Center Commercial Club; secretary, Samuel Feast; covers Center and vicinity.

Crestone—Crestone Commercial Club; president, C. S. Bonham; secretary, Charles McCormac; covers town of Crestone.

Moffat—Business Men's Association; president, Thomas Saffell; secretary, C. G. Hall.

Saguache—Saguache Commercial Club; president, J. C. Freedle; secretary, J. S. Crippen; covers Saguache and vicinity.

SAN JUAN COUNTY

Silverton—Silverton Commercial Club; president, Wm. A. Way; secretary, Wm. A. Way; territory covered by organization, San Juan county.

SAN MIGUEL COUNTY

Norwood—Norwood Commercial Club; president, Charles H. Morgan; secretary, F. E. Rice; territory covered by organization, west San Miguel and west Montrose counties.

Telluride — Telluride Commercial League; secretary, B. Fiewles.

SEDGWICK COUNTY

Julesburg—Julesburg Business Men's Association; president, B. D. Parker; secretary, R. J. Dobell; covers Julesburg and vicinity.

SUMMIT COUNTY

Breckenridge—Summit County Metal Mining Association; president, Louis H. Dart; secretary, James D. Calloway; covers Summit county.

TELLER COUNTY

Cripple Creek—Cripple Creek Club Association; president, James E. Hanley; secretary, G. L. King.

WASHINGTON COUNTY

Akron—Chamber of Commerce; president, H. J. Wagner; secretary, E. E. Earley.

Akron—Burlington Highway Association; president, L. M. Sutton; secretary, J. K. Powelson.

WELD COUNTY

Ault—Ault Commercial and Agricultural Club; president, B. A. Wilkins; secretary, F. R. Girardot; covers Ault and vicinity.

Eaton—Eaton Commercial Club; president, C. W. H. Eaton; secretary, C. R. Gilmore; covers Eaton and vicinity.

Erie—Erie Commercial Association; president, Wm. Nicholson; secretary, C. R. Hunt; covers city of Erie and part of Weld and Boulder counties.

Fort Lupton—Fort Lupton Commercial Club; president, A. G. Johnson; secretary, E. S. St. John; covers Fort Lupton and vicinity.

Gilcrest—Gilcrest Commercial Club; president, W. K Gilcrest; secretary, R. H. P. Keller; covers town of Gilcrest.

Greeley—Greeley Commercial Club; president, C. T. Ahlstrand; secretary, Roy W. Henderson; covers city of Greeley.

Greeley — Weld County Commercial Club; president, H. F. Bedford, Platteville; secretary, J. W. McCrery; territory covered by organization, Weld county.

Kersey — Kersey Kommercial Klub; president, L. F. Zaun; secretary, J. H. Christian; covers Kersey and vicinity.

Nunn—Nunn Commercial Club; president, C. G. Wilson; secretary, R. G. Knox; covers Nunn and vicinity.

Platteville — Platteville Commercial Club; president, G. W. Shane; secretary, H. F. Bedford; covers Platteville and district covering four townships.

Windsor—Windsor Chamber of Commerce; president, R. A. Cable; secretary, Thomas C. Smith; covers Windsor and vicinity.

Hudson — Hudson Commercial Club; president, J. B. Cuykendall; secretary, R. P. Culverwell.

La Salle—La Salle Commercial Club; president, D. J. Horton; secretary, J. A. Behrens.

YUMA COUNTY

Wray—Wray Commercial Club; president, A. H. Borland; secretary, H. A. Cox; covers Yuma county.

Yuma—Yuma Commercial Club; president, Roy Shepherd; secretary, W. W. Williams; covers Yuma and vicinity

Colorado's Educational System

COLORADO'S public school system compares favorably with the best state public school systems in the country. It is being enlarged and expanded rapidly, to meet the demands of a growing population, there being few states where the percentage of increase in the number of school buildings and teachers has been greater in the past decade. At present there are in the state approximately 3,100 public schools of all kinds, including highschools, employing over 7,000 teachers. Tabulations published elsewhere in this volume show a total of 3,022 schools reported by county school superintendents, but a few counties did not report and old figures were used, which were undoubtedly too low. It is also likely that new schools have been opened since some of the reports were made, so that the actual number of schools at the close of the 1917-18 school year is just about as given above.

From the tabulation before referred to it will be seen that the total number of teachers reported is 6,926. This number is evidently considerably too low, for in many of the counties the number of teachers reported is less than the number of schools. The figures quoted are taken from the state educational directory for 1918, no special survey having been made to determine the number of teachers employed. Weld county leads in the number of schools, with 220, and Denver county in the number of teachers, with 1,149. San Juan county, the population of which is confined largely to the town of Silverton and neighboring mining camps, has but three schools, and five other counties report fewer than ten schools each. There are more than 35 consolidated rural schools in the state and the number is increasing rapidly. There are also several centralized schools, and approximately 30 joint schools, in which two counties are interested.

The school population of the state for the school year ending June 30, 1917, was 247,487, as shown in tabulations elsewhere in this book The total school enrollment was 196,576, and the average attendance for the year was 135,219.23. The total school expenditures for the year were $8,614,765.06, or $43.825 per capita based upon enrollment and $63.709 per capita based on average attendance. There is approximately $16,000,000 invested in public school property in the state, and bonds and registered warrants were outstanding against this on June 30, 1917, amounting to $5,552,370.83. The actual amount of bonds may be somewhat in excess of that here reported, for reports were not obtained from a few counties. Assuming that this figure is correct the per capita funded school debt, based on school population, was $22.435 at the close of the school year in 1917, the latest date for which data are available.

The state has a large permanent school fund derived from the sale of state land. On November 30, 1917, according to the report of the state board of land commissioners, there was in this fund $3,777,154.18, of which $2,627,526.37 was invested in four per cent state bonds and warrants. In addition there was $3,498,925.31 outstanding in certificates of purchase on state land sold, making a total of $7,276,079.49, the interest on which, together with the receipts from leases on state land, is apportioned twice a year among the school districts of the state according to population. This apportionment at present amounts to approximately $500,000 annually, or about $2 per capita for the school population. State lands are being sold rapidly now and are bringing high prices, so that the permanent school fund is showing very substantial increases each year. On November 30, 1917, there was still 3,162,374 acres of state land unsold, conservatively valued at $29,757,941.97, and coal and mineral reserves on state land valued at $100,000,000. Coal and mineral rights are reserved on state land when it is sold, and the school fund derives substantial revenue from royalties on the mining of such reserved minerals. About 2,570,000 acres of the unsold school land is leased for various purposes, the school fund deriving considerable revenue from this source. The total amount received from leases for the year ending November 30, 1917, was $182,018.58.

Institutions of higher learning supported by the state are the State Agricultural college at Fort Collins, with a branch school at Fort Lewis, La Plata county; the State Normal school, at Gunnison; the State Teachers' college, at Greeley; the State School of Mines, at Golden, and the University of Colorado, at Boulder. All of these are partially supported by legislative appropriations, and partially by substantial mill levies. Both the agricultural college and the state university receive considerable revenue from spe-

cial grants of land made by the federal government to the state for their benefit. The revenue derived from the sale of these lands forms a permanent fund, only the interest of which can be used, while the receipts from leases are used as income, the same as in the public school fund. The original agricultural college grant was 90,000 acres, of which only 87,528.82 had been taken over by the state on November 30, 1917. Approximately 31,341 acres of this is still the property of the state, the remainder having been sold for the benefit of the college. The original university grant was 46,080 acres, of which 45,183.88 acres had been selected and taken over by the state prior to November 30 last. About 34,753 acres of this has been sold for the benefit of the university fund, leaving 10,430 acres yet belonging to the state. The land remaining in these grants is included in the total of state land remaining on hand November 30 last, as previously given.

Besides the educational institutions previously mentioned there are the state industrial school for boys, located at Golden; the state industrial school for girls, at Morrison; the state school for deaf and blind, at Colorado Springs; the state home and school for dependent and neglected children, at Denver, and the state home and training school for mental defectives, at Ridge, Jefferson county. These institutions are supported by special legislative appropriations.

In addition to the public lands and the institutions of higher education supported by the state there are numerous private and sectarian schools and colleges and many business, trade and professional schools, most of which are mentioned in that part of this volume devoted to the respective counties.

In addition to the funds derived from the state school permanent and income funds a very substantial amount is collected in the state each year for public school purposes from general county school levies and from district levies. While the income to the various districts from state funds is increasing rather rapidly, as a result of increased sales of state land and larger revenues from leased lands, the tendency of the counties and districts is to increase rather than decrease their local levies, so as to meet the demands of a rapidly increasing school population and to keep abreast of the times in providing better school buildings and equipment and higher wages for teachers. From reports available it has been impossible to compile accurate data showing the average salaries paid teachers in the various counties.

The following table shows the average tax levies for school purposes in the various counties and the revenue they produced for use in 1917:

County	Average Levy Mills	Revenue
Adams	3.68	$ 86,283.34
Alamosa	6.45	39,894.54
Arapahoe	4.38	76,802.54
Archuleta	3.35	14,339.86
Baca	8.34	28,050.94
Bent	5.89*	63,604.48*
Boulder	5.86	232,500.98
Chaffee	5.28	59,587.18
Cheyenne	4.90	41,642.47
Clear Creek	6.72	35,526.36
Conejos	6.20	53,032.12
Costilla	3.44	18,202.22
Crowley	5.85	52,856.90
Custer	4.26	10,953.15
Delta	7.77	116,164.43
Denver	3.06	938,382.01
Dolores	4.11	6,631.81
Douglas	1.95	21,173.53
Eagle	5.48	37,371.17
Elbert	5.51*	63,813.09*
El Paso	5.03	331,944.20
Fremont	7.73	138,943.53
Garfield	5.56*	102,432.84*
Gilpin	7.52	24,909.50
Grand	2.68	12,878.60
Gunnison	3.42	49,226.32
Hinsdale	6.33	5,750.83
Huerfano	7.02	87,162.56*
Jackson	1.18	5,885.60
Jefferson	3.16	70,943.40
Kiowa	5.60*	47,664.95*
Kit Carson	5.93	73,043.13
Lake	4.15	49,830.38
La Plata	6.12	91,676.05
Larimer	5.24	193,316.89
Las Animas	5.73	212,618.51
Lincoln	6.26*	72,586.71*
Logan	5.30	123,537.99
Mesa	5.43*	143,927.28*
Mineral	3.57	5,127.18
Moffat	3.76	18,091.80
Montezuma	7.65	43,031.38
Montrose	5.57	80,748.24
Morgan	7.90	144,729.45
Otero	6.03	160,433.27
Ouray	3.17	16,520.46
Park	1.35	11,968.76
Phillips	2.43	17,709.15
Pitkin	4.72	27,351.30
Prowers	5.56	93,467.57
Pueblo	7.32	449,887.42
Rio Blanco	3.23	16,497.10
Rio Grande	4.73	43,478.00
Routt	4.73	64,765.91
Saguache	2.81	32,188.00
San Juan	4.90	19,840.13
San Miguel	6.64	57,594.21
Sedgwick	4.43	26,288.72
Summit	3.58	21,536.74
Teller	9.17	140,654.61
Washington	5.12	64,699.26
Weld	5.51	409,917.82
Yuma	6.73	81,712.36
State		$5,882,331.23

* Includes County Highschool.

This table gives the revenue raised by county and district school tax levies for use in 1917. The tax levy given is the average of all district levies, plus the county levy.

STATISTICS OF COLORADO PUBLIC SCHOOLS FOR YEAR ENDING JUNE 30, 1917

COUNTY	Total Receipts	Total Expenditures	School Population	Enrollment	Average Attendance	Average Annual Cost Per Pupil Based on Enrollment	Average Annual Cost Per Pupil Based on Attendance	Total Funded Debt	Per Capita Debt Based on School Population
Adams	$ 138,070.32	$ 113,484.03	3,159	2,608	1,672.31	$ 43.513	$ 67.860	$ 68,215.58	$ 21.594
Alamosa	62,096.07	49,386.55	1,290	1,101	804.40	44.856	61.395	51,987.72	40.300
Arapahoe	115,992.81	94,517.81	2,749	2,433	1,567.00	38.848	60.317	45,459.34	16.536
Archuleta	35,439.94	27,815.52	1,215	974	604.11	28.558	46.044	15,488.36	12.747
Baca	50,841.61	35,312.75	2,386	2,000	1,450.00	17.656	24.353	7,800.00	3.269
Bent	137,509.31	120,013.18	2,444	1,920	1,120.00	62.506	107.154	81,152.97	33.205
Boulder	376,445.88	341,529.94	9,177	7,504	5,505.00	45.513	62.039	255,900.51	27.884
Chaffee	81,762.87	69,454.61	2,283	1,826	1,356.40	38.036	51.205	46,627.50	20.423
Cheyenne	56,121.65	47,455.72	879	871	560.41	54.484	84.680	13,908.37	15.825
Clear Creek	64,530.80	46,947.24	1,032	766	656.09	61.290	71.557	2,000.00	1.938
Conejos	84,366.00	59,176.72	3,073	2,197	1,418.00	26.935	41.732	102,688.59	33.416
Costilla	32,369.00	27,317.48	1,793	1,047	571.00	26.091	47.841	.....	.....
Crowley	68,393.12	62,416.47	2,057	1,803	1,052.00	34.618	59.331	78,780.02	38.298
Custer	18,508.35	12,749.75	538	343	217.00	37.171	58.754	12,144.64	22.573
Delta	92,265.31	76,370.58	3,753	2,414	1,431.96	31.636	53.332	80,601.56	21.476
Denver	1,770,281.36	1,774,126.37	52,843	41,920	30,758.00	42.321	57.680	.....	.....
Dolores	10,786.87	8,631.55	270	214	147.00	40.334	58.718	5,000.00	18.518
Douglas	50,867.11	34,038.62	945	648	336.03	52.528	101.290	3,650.00	3.862
Eagle	55,043.75	42,315.31	950	773	599.00	54.741	70.643	8,931.30	9.401
Elbert	94,192.68	73,142.46	2,025	1,605	1,283.75	45.571	56.975	32,362.28	15.981
El Paso	598,131.66	522,749.59	11,474	9,342	6,565.56	55.956	79,619	539,878.13	47.052
Fremont	205,366.80	164,311.45	5,103	4,124	2,033.11	39.842	80.817	150,011.17	29.398
Garfield	108,427.78	85,933.59	2,898	2,535	1,578.00	33.898	54.457	66,202.63	22.844
Gilpin	45,997.42	35,568.48	647	372	301.61	95.614	117.930	.....	.....
Grand	28,986.55	14,948.86	500	332	227.60	45.026	65.680	16,117.12	32.234
Gunnison	60,072.35	44,678.76	1,519	1,187	807.00	37.641	55.364	811.53	.534
Hinsdale	8,121.05	6,951.25	140	112	53.86	62.064	129.060	584.00	4.171
Huerfano	113,877.01	85,583.62	5,193	3,503	2,199.00	24.431	38.919	.....	.....
Jackson	14,379.87	8,951.79	257	170	102.13	52.657	87.651	1,500.00	5.836
Jefferson	131,195.81	104,380.54	3,803	2,871	2,171.00	36.356	48.079	.....	.....
Kiowa	60,353.18	47,841.05	1,423	1,245	936.73	38.426	51.072	16,361.03	11.493
Kit Carson	151,793.05	122,731.33	2,544	1,946	1,287.00	63.068	95.362	103,328.44	40.616
Lake	119,917.67	72,544.23	2,448	1,569	1,236.53	46.235	58.667	.....	.....
La Plata	142,358.54	127,069.34	3,690	2,747	1,810.60	46.257	70.181	228,508.58	61.926

STATISTICS OF COLORADO PUBLIC SCHOOLS FOR YEAR ENDING JUNE 30, 1917—Continued

COUNTY	Total Receipts	Total Expenditures	School Population	Enrollment	Average Attendance	Average Annual Cost Per Pupil Based on Enrollment	Average Annual Cost Per Pupil Based on Attendance	Total Funded Debt	Per Capita Debt Based on School Population
Larimer	372,218.14	340,079.68	8,431	7,282	4,957.00	46.701	68.606	273,045.54	32.385
Las Animas	343,409.14	281,711.98	11,803	9,486	6,069.65	29.697	46.413	341,585.94	28.940
Lincoln	87,056.99	73,211.90	2,381	1,980	1,463.00	36.975	50.042	58,001.63	24.360
Logan	239,109.55	185,956.95	4,107	3,657	2,130.33	50.849	87.291	54,302.03	13.221
Mesa	314,941.10	199,647.06	5,632	4,690	3,389.00	42.568	58.910	285,376.37	50.670
Mineral	19,900.88	9,988.88	240	193	159.00	51.755	62.823	.....	.....
Moffat	46,079.24	39,113.38	827	501	417.00	78.070	93.797	.....	.....
Montezuma	66,795.61	57,992.96	1,882	1,698	1,144.00	34.153	50.693	65,157.79	34.621
Montrose	126,172.36	116,420.44	3,451	2,768	1,822.30	42.059	63.886	114,565.35	33.197
Morgan	228,011.47	201,784.32	4,521	3,703	2,344.00	54.492	86.085	257,827.12	57.028
Otero	219,007.12	195,742.52	5,668	5,445	3,820.00	35.949	51.241	181,205.67	31.969
Ouray	30,631.28	24,108.63	785	584	416.00	41.281	57.953	17,060.59	21.733
Park	36,870.90	22,071.97	429	289	199.00	76.373	110.910	936.22	2.182
Phillips	54,266.68	39,864.01	1,344	981	616.00	40.636	64.714	6,189.15	4.605
Pitkin	48,889.93	36,082.99	1,078	806	667.25	44.767	54.077	3,209.53	2.977
Prowers	181,856.90	143,271.14	4,059	3,784	2,403.10	37.862	59.619	81,050.74	19.969
Pueblo	864,188.49	726,975.95	18,027	12,148	8,270.12	59.843	87.905	801,452.87	44.458
Rio Blanco	37,833.56	30,935.95	893	615	418.00	50.302	74.009	10,312.07	11.547
Rio Grande	131,681.65	117,364.08	1,958	1,742	1,108.30	67.373	105.890	87,031.57	44.449
Routt	118,537.30	90,987.31	2,350	2,058	1,303.30	44.211	69.813	87,750.80	37.340
Saguache	58,799.02	42,604.55	1,482	1,211	770.70	35.181	55.281	41,583.52	28.059
San Juan	35,675.13	29,427.15	424	387	289.20	76.042	101.750	70,000.00	165.090
San Miguel	77,527.90	65,981.64	1,262	1,060	692.00	62.246	95.349	14,044.99	11.129
Sedgwick	62,029.31	43,846.05	1,020	838	526.50	52.322	83.278	.....	.....
Summit	27,526.85	23,161.37	438	393	277.95	58.934	83.329	14,500.00	33.105
Teller	178,152.39	169,063.22	3,370	2,470	1,852.50	68.446	91.262	.....	.....
Washington	184,900.90	81,104.47	3,823	3,048	2,025.00	26.603	40.051	16,923.06	4.426
Weld	683,879.80	558,220.93	15,416	12,735	8,135.94	43.833	68,612	579,880.16	37.614
Yuma	134,837.23	107,597.04	3,886	3,345	2,113.90	32.166	50.899	53,606.90	13.794
Totals	$10,195,650.37	$8,614,765.06	247,487	196,576	135,219.23	$ 43.825*	$ 63.709*	$5,552,600.98	$ 22.435*

* Average.

PUBLIC SCHOOLS AND TEACHERS

COUNTY	Schools	High-schools	Teachers	Male	Female
Adams	73	3	120	8	112
Alamosa	18	2	45	7	38
Arapahoe	47	1	84	8	76
Archuleta	23	1	26	1	25
Baca	80	2	75	18	57
Bent	45	1	80	16	64
Boulder	63	4	238	32	206
Chaffee	31	2	65	9	65
Cheyenne	69	1	57	12	45
Clear Creek	10	2	33	5	28
Conejos	28	3	59	14	45
Costilla	13	...	33	8	25
Crowley	9	2	53	11	42
Custer	22	1	22	4	18
Delta	41	8	121	22	99
Denver	67	5	1,149	121	1,028
Dolores	10	...	9	2	7
Douglas	35	2	45	5	40
Eagle	30	3	44	8	36
Elbert	100	2	86	6	80
El Paso	143	4	346	45	301
Fremont	43	5	159	22	137
Garfield	55	5	108	15	93
Gilpin	13	1	29	3	26
Grand	20	1	17	4	13
Gunnison	32	1	53	7	46
Hinsdale	5	1	8	2	6
Huerfano	50	2	101	14	87
Jackson	9	1	10	...	10
Jefferson	62	3	112	10	102
Kiowa	50	2	64	19	45
Kit Carson	97	5	107	13	94
Lake	20	1	59	8	51
La Plata	50	5	96	11	85
Larimer	65	6	216	21	195
Las Animas	136	5	230	39	191
Lincoln	120	5	107	17	90
Logan	106	9	166	27	139
Mesa	50	9	181	19	162
Mineral	4	1	11	3	8
Moffat	30	2	28	5	23
Montezuma	35	3	55	9	46
Montrose	45	4	111	16	95
Morgan	75	3	149	19	130
Otero	49	4	173	29	144
Ouray	13	3	32	6	26
Park	30	2	21	2	19
Phillips	38	2	51	4	47
Pitkin	15	2	37	6	31
Prowers	62	4	133	24	109
Pueblo	94	8	381	38	343
Rio Blanco	26	1	36	3	33
Rio Grande	21	2	62	12	50
Routt	61	4	75	8	67
Saguache	33	3	49	9	40
San Juan	3	1	16	2	14
San Miguel	22	2	43	5	38
Sedgwick	26	2	41	4	37
Summit	9	2	15	2	13
Teller	26	3	101	11	90
Washington	120	1	95	5	90
Weld	220	28	455	53	402
Yuma	125	2	143	20	123
Totals	3,122	205	6,926	908	6,027

A few of the highschools included in the above list do not give a full highschool course. The number of teachers is too low in many cases, being in a few instances less than the number of schools.

Colorado—Brief Land History

THE territory now included in the state of Colorado did not all become the property of the United States at the same time, nor was it all conveyed in the same manner or by the same nation. Parts of it have at times belonged to the territories of Kansas, Nebraska, New Mexico and Utah, and a very considerable section of it was claimed by the Republic of Texas when that enterprising little nation won its freedom from Mexico.

The Louisiana Purchase, a vast tract of land acquired by the United States from France in 1803, extended, in a general way, westward from the Mississippi river to the Rocky mountains. About half of the land now comprising the state of Colorado was included in this purchase, the entire cost of which was about $27,250,000.

The area south of the Arkansas river and west of the Rocky mountains was first claimed by Spain and later by Mexico. When Texas, after winning its independence from Mexico, was admitted to the Union in 1845, it claimed that part of what is now Colorado lying south of the Arkansas river, and in addition a rectangular strip extending north through the mountains into Wyoming, lying between the 106th and the 108th meridians. By reference to the map it will be seen that a considerable part of this territory claimed by Texas was included in the Louisiana Purchase, but the controversy over the northern boundary of Texas was amicably settled before the territory of New Mexico was organized.

The western part of Colorado and the territory in the south lying west and south of the Rio Grande river was included in the immense tract of land ceded to the United States by Mexico in 1848, following the war with that country. The eastern boundary of this ceded land was at about the 108th meridian, except in the south, where its boundary, as before stated, was the Rio Grande river.

The territory of Utah was organized in 1850. It extended east to the main range of the Rocky mountains, including nearly one-half of what is now Colorado. In 1854 the territories of Kansas and Nebraska were created by the famous Kansas-Nebraska bill. Kansas territory then extended west to the territory of Utah, the southern boundary being the territory of New Mexico, which at that time extended north to the Arkansas river, and the northern boundary being at the 40th parallel, which passed near the present site of the city of Brighton. That part of what is now Colorado, extending west to the boundary of Utah territory, was included in Nebraska territory.

In 1855 that part of Colorado then included in Kansas territory was organized into Arapahoe county, and Allen P. Tibbitts, Levi Mitchell and Jonathan Atwood were named as commissioners to locate the countyseat of the new county, which was to be called Mountain City. They were likewise to act as commissioners for the new county, but there is no record available showing that they ever assumed their duties. In 1856 an election was held in Arapahoe county, K. T., and Benjamin F. Simmons was chosen as the first representative from this county in the Kansas territorial legislature.

Even before this time the people in the new towns and mining camps, dissatisfied with a government the seat of which was several hundred miles away, and could be reached only after a week's hard travel, had started a movement for the organization of a new territory, to include that part of Kansas territory known as Arapahoe county. This movement gained strength rapidly, and some of the more ambitious conceived the idea that the creation of a new state was the proper procedure. They spent some months working on the plan, and finally agreed that the new state should be called Jefferson and should extend north far into what is now Wyoming. An election held late in 1859 showed that a majority of the voters were in favor of trying a territorial government before attempting statehood, and Robert W. Steele was elected as the first governor of "Jefferson Territory." The following counties were provided for in the organization of the so-called "Jefferson Territory": Arapahoe, Cheyenne, El Paso, Fountain, Jackson, Jefferson, Mountain, North Park, Saratoga, Steele and St. Vrain.

In the meantime, however, steps were being taken at Washington to bring about the organization of a territory through the regularly constituted legislative channels. In February, 1861, Colorado territory was regularly organized, its boundaries being substantially the same as those of the state today. On June 6, 1861, Mr. Steele

formally abdicated as governor of "Jefferson Territory," and that unique political subdivision passed into history.

The organization of Colorado territory did not settle the numerous controversies regarding land titles that existed where the territory was organized. Within the area formerly claimed by the state of Texas, as well as that ceded by Mexico, there were numerous land grants, made by the Spanish and Mexican governments, all of which were confirmed by the United States when this area became a part of the Union. A special land court was created for the examination and adjudication of these titles, and in all cases where the records showed that the grants were properly made they were formally approved by this court. In addition to these old grants there were large tracts of land which had been set apart for Indian tribes who had long claimed this territory as their own. Those who are familiar with the early history of the state will know that the controversies with these Indians were not settled without many bloody battles, which resulted in heavy loss of life among both the Indians and the pioneer settlers. In 1861 the federal government entered into a treaty with the Cheyenne and Arapahoe Indians, under which the Indians ceded to the government their lands in eastern Colorado. The Indians did not abide by this treaty, however, and they waged vigorous warfare against the white settlers for several years, with a view to driving them from the plains of eastern Colorado. On October 28, 1867, they signed another treaty with the United States, ceding all their lands between the Platte and Arkansas rivers and agreeing to their removal to Indian Territory.

In the western part of the state settlers came in contact with the Ute Indians. In 1868 a treaty had been made between these Indians and the government, by which the government confirmed their title to a large tract of land in the southern and western parts of the state. After the discovery of rich metal values in the San Juan district white settlers began to come in rapidly, and steps were taken to recover the land that had been given to the Utes. They were strongly opposed to giving it up, but in 1873, largely through the influence of Chief Ouray, one of the most illustrious leaders of the red men in Colorado, a treaty was signed by which the Utes ceded to the government the mineral lands in the San Juan district.

They still retained, however, more than 15,500,000 acres of land on the western slope. Numerous encounters occurred between these Indians and the white men during the early settlement of the agricultural lands in this territory, and it was not until 1881 that the Indians in this region, usually known as the Uncompahgre Utes, were removed to the Uintah reservation, in eastern Utah.

AUTOMOBILES IN COLORADO

County	1916	1917
Adams	563	1,055
Alamosa	322	505
Arapahoe	539	874
Archuleta	82	106
Baca	235	558
Bent	421	708
Boulder	2,031	2,929
Chaffee	334	486
Cheyenne	190	334
Clear Creek	77	158
Conejos	214	354
Costilla	111	184
Crowley	288	473
Custer	52	87
Delta	419	719
Denver	12,054	17,082
Dolores	No agent	No agent
Douglas	259	406
Eagle	113	144
Elbert	334	549
El Paso	2,917	3,992
Fremont	713	1,046
Garfield	395	595
Gilpin	42	63
Grand	91	134
Gunnison	200	266
Hinsdale	9	15
Huerfano	367	601
Jackson	100	155
Jefferson	642	1,080
Kiowa	218	379
Kit Carson	489	758
Lake	153	238
La Plata	284	493
Larimer	2,181	3,038
Las Animas	869	1,518
Lincoln	419	680
Logan	1,072	1,648
Mesa	608	999
Mineral	36	57
Moffat	112	211
Montezuma	138	256
Montrose	499	866
Morgan	1,001	1,711
Otero	853	1,659
Ouray	96	120
Park	115	156
Phillips	512	824
Pitkin	56	103
Prowers	855	1,275
Pueblo	2,194	3,324
Rio Blanco	129	175
Rio Grande	463	811
Routt	153	397
Saguache	265	418
San Juan	21	43
San Miguel	81	130
Sedgwick	222	375
Summit	46	64
Teller	370	486
Washington	585	1,006
Weld	3,232	5,494
Yuma	855	1,480
Totals	43,296	66,850

COLORADO COUNTIES AND COUNTYSEATS

COUNTY	COUNTY SEAT	Population of County Seat	
		1910	1918
Adams	Brighton	850	1,800
Alamosa	Alamosa	3,013	4,000
Arapahoe	Littleton	1,373	1,650
Archuleta	Pagosa Springs	669	800
Baca	Springfield	.....	500
Bent	Las Animas	2,008	3,000
Boulder	Boulder	9,539	12,155
Chaffee	Buena Vista	1,041	1,000
Cheyenne	Cheyenne Wells	270	500
Clear Creek	Georgetown	950	1,000
Conejos	Conejos	.....	353
Costilla	San Luis	.....	1,200
Crowley	Ordway	705	1,500
Custer	Silver Cliff	250	275
Delta	Delta	2,388	2,800
Denver	Denver	213,381	268,439
Dolores	Rico	368	400
Douglas	Castle Rock	365	400
Eagle	Redcliff	383	600
Elbert	Kiowa	.....	175
El Paso	Colorado Springs	29,078	36,000
Fremont	Canon City	5,162	6,000
Garfield	Glenwood Springs	2,019	3,000
Gilpin	Central City	1,782	1,000
Grand	Sulphur Springs	182	300
Gunnison	Gunnison	1,026	1,500
Hinsdale	Lake City	405	600
Huerfano	Walsenburg	2,423	2,800
Jackson	Walden	162	300
Jefferson	Golden	2,477	3,000
Kiowa	Eads	.....	400
Kit Carson	Burlington	368	800
Lake	Leadville	7,508	9,000
La Plata	Durango	4,686	5,000
Larimer	Fort Collins	8,210	12,295
Las Animas	Trinidad	10,204	15,000
Lincoln	Hugo	343	500
Logan	Sterling	3,044	7,200
Mesa	Grand Junction	7,754	9,000
Mineral	Creede	741	1,000
Moffat	Craig	392	1,000
Montezuma	Cortez	565	550
Montrose	Montrose	3,254	4,500
Morgan	Fort Morgan	2,800	4,000
Otero	La Junta	4,154	6,000
Ouray	Ouray	1,644	1,875
Park	Fairplay	265	300
Phillips	Holyoke	659	1,000
Pitkin	Aspen	1,834	1,700
Prowers	Lamar	2,977	5,274
Pueblo	Pueblo	44,395	56,000
Rio Blanco	Meeker	807	1,200
Rio Grande	Del Norte	840	1,000
Routt	Steamboat Springs	1,227	1,500
Saguache	Saguache	620	1,000
San Juan	Silverton	2,153	2,400
San Miguel	Telluride	1,756	1,700
Sedgwick	Julesburg	962	1,200
Summit	Breckenridge	834	1,000
Teller	Cripple Creek	6,206	3,500
Washington	Akron	647	1,200
Weld	Greeley	8,179	12,264
Yuma	Wray	1,000	1,400

Colorado Land Classification by Counties

COUNTY	Fruit Land	Irrigated Land	Natural Hay Land	Dry Farming Land	Grazing Land	Productive Coal Land	Non-Productive Coal Land	Timber Land	Metalliferous Mining Claims Non-Productive	Other Mineral Land	Producing Mineral Land	Railroad Rights-of-way	Town and City Lots	Total Patented Land	Unclassified as to Ownership[8]	Government Land Open to Homesteaders	State Land Unappropriated	National Forests	Total Non-Patented Land	Area Acres	COUNTY
Adams	.....	100,970	.....	427,929	139,264	.....	.....	.....	.....	.....	.....	2,798	3,200	744,161	39,698.04	40	23,780.96	.....	23,820.96	807,680	....Adams
Alamosa	.....	26,000	37,000	102,000	146 381	.....	.....	.....	.....	.....	.....	1,287	980	313,648	29,235.85	45,274	45 528.15	31,599	122,396.15	465,280	....Alamosa
Arapahoe	.....	30,680	.....	379,940	83,210	.....	.....	.....	.....	.....	.....	1,577	3,200	498,607	28,175.45	.....	12,097.55	.....	12,097.55	538,880	....Arapahoe
Archuleta	.....	11,395	487	11,022	256,075[4]	.....	.....	11,867	.....	.....	.....	1,583	850	293,279	45,041.27[9]	121,285	18,486 27	392,791	582,562.27	780,800	....Archuleta
Baca	.....	9,000	.....	1,218 770	117 418	.....	.....	.....	.....	.....	.....	.....	440	1,345,628	214,995.35	2,185	60 471.65	.....	62,656.65	1,633,280	....Baca
Bent	.....	46,887	.....	6 035	429,733	.....	.....	.....	.....	.....	.....	1,941	1,625	486,221	360,686.49	1,173	137,279.51	.....	138,452.51	975,360	....Bent
Boulder	.....	83,907	3,129[3]	23,609	144,808	2,830	.....	.....	.....	.....	575	3,840	8,250	270,948	63,472.45	560	8 157.55	145,822[10]	151,539.55	488,960	....Boulder
Chaffee	.....	24,217	.....	.....	57,993	.....	.....	.....	10,890	3,500[5]	395	3,670	2,910	103,575	64,417.96	82,477	18,802.01	423,848	525,127.04	693,120	....Chaffee
Cheyenne	.....	.....	.....	1,060,679	.....	.....	.....	.....	.....	.....	.....	1,579	960	1,063,218	29,218.89	434	44,409.11	.....	44,813.11	1,137,280	....Cheyenne
Clear Creek	.....	.....	.....	.....	34,057	.....	.....	.....	23,363	.....	391	1,040	806	59,657	2 134.04	14,800	3,294.96	169,714	187,808.96	249,600	....Clear Creek
Conejos	.....	87,400	9,300	.....	126,091	.....	.....	.....	.....	.....	15	1,352	1,250	225,411	101 143.00	142,910	56,864.00	274,952	474,726.00	801,280	....Conejos
Costilla	.....	83,200	5,000	10,000	651 868[3]	.....	.....	.....	3,038	.....	12	1,589	675	755,382	2 687.50	.....	330.50	.....	330.50	758,400	....Costilla
Crowley	572	49,372	.....	6,181	292,537	.....	.....	.....	.....	.....	.....	785	785	350,232	107 913.95	595	58,379.05	.....	58,974.05	517,120	....Crowley
Custer	.....	9,994	13,059	1,954	126,404	.....	.....	.....	3,372	.....	50	417	485	155,765	141 935.06	6,300	13,303.94	160,776	180,379.94	478,080	....Custer
Delta	10,506	63,711	.....	31,277	172,066[4]	650	1,989	.....	.....	.....	.....	750	1,100	282,058	117,739.00	178,249	2.00	190,592	368,843.00	768,640	....Delta
Denver	7,398[1]	70	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,750	25,221	35,439	1 026.66	.....	654.34	.....	651.34	37,120	....Denver
Dolores	.....	2,065	.....	16,560	36,035	.....	680	4,402	3,120	185	360	420	160	63,996	215 998.09	66,962	9,088.91	311,475	387,525.91	667,520	....Dolores
Douglas	.....	7,769	5,310	88,118	277,802	.....	.....	.....	.....	.....	.....	2,468	675	380,142	15,344.94	520	8,185.06	136,608	145,313.06	540,800	....Douglas
Eagle	.....	22,927	.....	.....	78,472	.....	.....	.....	4,565	.....	320	2,566	375	109,225	42 595.58	274,169	18,471.42	592,339	884,979.42	1,036,800	....Eagle
Elbert	.....	330	19,939	406,840	618,080[4]	.....	.....	.....	.....	.....	.....	2,810	440	1,048,439	69 739.15	160	70,141.85	.....	70,301.85	1,188,480	....Elbert
El Paso	320	20,500	1,910	214,920	724,016	320	1,080	.....	.....	.....	.....	6,375	15,250	984,691	82 040.31	2,460	185,471.69	102,277	290,708.69	1,357,440	....El Paso
Fremont	2,408	14,320	1,200	20,085	176,692	14,213	4,270	7,695[10]	3,324	7,516	.....	2,931	1,275	255,929	304 919.11	310,055	59,336.89	66,240	435,631.89	996,480	....Fremont
Garfield	1,041	59,382	.....	30 571	172 848	2,100	1,902	.....	.....	.....	.....	4,075	995	272,914	493 336.04	698,015	47.96	524,167	1,222,228.96	1,988,480	....Garfield
Gilpin	.....	.....	.....	12,226	19,265	.....	.....	.....	.....	12,523	295	1,002	495	45,806	7 100.00[9]	3,620	1,719.00	40,435	45,774.00	84 480	....Gilpin
Grand	.....	30,138	.....	.....	141 625	.....	.....	31,754	.....	.....	.....	2,243	425	206,185	202,020.13	106,140	59 985.87	619,809[10]	786,034.87	1,194,240	....Grand
Gunnison	.....	36 782	.....	.....	146,122	14,435	.....	.....	21,151	9,820	256	2,250	1,880	232,690	202 339.00	456,640	19,102.00	1,123,789	1,599,531.00	2,034,560	....Gunnison
Hinsdale	.....	2,304	.....	.....	13,288	.....	.....	.....	5,648	7	195	237	175	21,854	38 114.05[9]	115,210	9,127.05	513,363	637,700.05	621,440	....Hinsdale
Huerfano	38	23,493	.....	29,238	399,159	1,970	3,976	.....	.....	.....	.....	2,945	1,250	462,069	297 980.26	40,042	42 016.74	117,892	199,950.74	960,000	....Huerfano
Jackson	.....	68,036	.....	.....	148,074	30	2,609	5,195	942	.....	.....	1,100	144	226,130	207 426.96	167,460	47,504.04	395,930	610,923.04	1,044,480	....Jackson
Jefferson	.....	48,190	.....	29,064	242,079	2,698[6]	.....	.....	9	.....	.....	2,520	5,750	330,310	73,173.72	1,820	15,355.28	96,461	113,636.28	517,120	....Jefferson
Kiowa	.....	.....	.....	.....	975 525	.....	.....	.....	.....	.....	.....	2,190	220	977,935	101 310.19	195	71,279.81	.....	71 474.81	1,150,720	....Kiowa
Kit Carson	.....	245	2,875	1,062,603	242,141	.....	.....	.....	.....	.....	.....	1,499	975	1,310,338	16 920.28	1,066	53,435.72	.....	54,501.72	1,381,760	....Kit Carson
Lake	.....	.....	.....	.....	26,772	.....	.....	.....	40,135	.....	1,100	2,326	1,250	71,583	3,932.53[9]	7,582	2,750.53	159,457	169,789.53	237,440	....Lake
La Plata	11	54,927	.....	18 728	259 704	1,046	4,894	6,392	.....	.....	375	3,030	1,525	350,632	365 821.41	74,546	15,127.59	378,513	468,186.59	1,184,640	....La Plata
Larimer	.....	107,131	15 400	22 520	517,491	.....	.....	.....	.....	.....	.....	3,020	4,400	669,965	147 778.03	34,640	69,079.97	761,097[12]	864,816.97	1,682,560	....Larimer
Las Animas	.....	27,668	3,131	64,155	1,275 158	4,713	46,702	.....	.....	.....	.....	5 815	7,250	1,434,922	1,417,116.04	47,087	151,236.96	27,398	225,721.96	3,077,760	....Las Animas
Lincoln	.....	.....	3,200	976,633	471,612	.....	.....	.....	.....	.....	.....	1,822	1,350	1,454,707	68,257 88	3,152	118 683.12	.....	121,835.12	1,644,800	....Lincoln
Logan	.....	60 112	13,410	584,482	313,012	.....	.....	.....	.....	.....	.....	3,334	2,010	976,360	58,887.42	440	130,392.58	.....	130,832.58	1,166,080	....Logan
Mesa	7,628	80,095[2]	.....	.....	256 762	3,989	.....	.....	.....	.....	4,000	3,105	4,000	359,579	234 034.25	831,970	90.75	598,616[13]	1,430,706.75	2,024,320	....Mesa
Mineral	.....	390	2,429	.....	23 664[4]	.....	.....	.....	2,785	.....	320	425	425	30,648	6,017.42	.....	598.58	516,976[14]	517,574.58	554,240	....Mineral
Moffat	.....	15,432	7 749	89 513	215,819	.....	6,587	.....	62	4,542	.....	140	675	340,519	1,127,966.81	1,201,774	208,452.19	42,408	1,512 634.19	2,981,120	....Moffat
Montezuma	838	37,910	18,038	12,752	152 224	70	42	8,380	535	.....	15	1,568	730	234,002	538,716.70	236,028	30,394.30	273,499[16]	539,021.30	1,312,640	....Montezuma
Montrose	1,697	74,418	.....	42,823	190 157	.....	.....	.....	510	.....	438	1,310	1,090	312,443	251,934.34	567,914	25.66	313,643	881,582 66	1,448,960	....Montrose
Morgan	.....	77,800	2,200	246,445	360,282	.....	.....	.....	.....	.....	.....	2 271	2,010	691,008	76,587.78	1,280	54,164.22	.....	55,444.22	823,040	....Morgan
Otero	1,163	80,694	.....	21,199	265 285	.....	.....	.....	.....	.....	.....	2,360	2,150	372,851	315,656.00	720	116,533.00	.....	117,253.00	805,760	....Otero
Ouray	.....	10,532	774	5,876	96,457	330	.....	.....	13,783	.....	1,262	1,060	910	130,984	48,241.94	16,445	2,202.06	134,284	152,931 06	332,160	....Ouray
Park	.....	.....	24,026	6 235	210 470	.....	3,269	.....	33,908	.....	325	3,854	785	285,872	345,410.00	82,070	92,283.00	629,239	803,592.00	1,434,880	....Park
Phillips	.....	.....	.....	364,562	35,871	.....	.....	.....	.....	.....	.....	908	805	402,236	22,385 86	39	15,659.14	.....	15,698.14	440,320	....Phillips
Pitkin	.....	15,854	.....	480	42 808	1,826	9,229	.....	13,725	319	375	2 165	450	87,231	26,451.85	48,700	670.15	489.104	538,474.15	652,160	....Pitkin
Prowers	.....	95,882	3,777	569,931	203,424	.....	.....	.....	.....	.....	.....	2,021	1,060	876,095	119,960.63	697	46,447.37	.....	47,144.37	1,043,200	....Prowers
Pueblo	5,824[4]	41,310	.....	75 789	821 516	.....	.....	.....	.....	.....	.....	0,132	17,250	967,651	339,923.80	1,994	212,095.20	35,456	249,545.20	1,557,120	....Pueblo
Rio Blanco	.....	23,494	1,018	18,992	166 237	.....	4,764	10,436[6]	.....	169	.....	195	400	225,705	308,711.37	1,181,530	105.63	346,638	1,528,273.63	2,062,720	....Rio Blanco
Rio Grande	.....	42,830	8,870	30,000[3]	107,400	.....	.....	.....	.....	.....	50	1,313	985	161,448	81,255.70	54,002	13,213.30	234,801	302,016.30	574,720	....Rio Grande
Routt	39	43,095	.....	45,103	283,520	51,585	.....	21,463	.....	2,439	.....	2,437	800	450,481	125,550.97	266,403	68,176.03	587,049	901,628.03	1,477,760	....Routt
Saguache	.....	37,480	48,750	.....	350,932	.....	.....	.....	.....	.....	50	2,680	1,150	441,042	230,372.24	356,177	96,405.76	880,823	1,333,405.76	2,005,120	....Saguache
San Juan	.....	.....	.....	.....	200	.....	.....	195	23,905	.....	673	913	560	26 446	54,571.00	.....	7,460.00	201,443	208,903.00	289,920	....San Juan
San Miguel	.....	9,477	.....	7,399	116,473	.....	80	2,000	8,081	3,417	225	1,193	240	148,585	295,240.06	195,280	15,329.94	169,875	380,494.94	824,320	....San Miguel
Sedgwick	.....	19 966	5,321	178,714	94 509	.....	.....	.....	.....	.....	.....	802	875	300,187	15,424.24	80	24,148 76	.....	24,228.76	339,840	....Sedgwick
Summit	.....	6,418	.....	.....	23,335	.....	.....	.....	.....	520	450	1,718	450	32,891	86,903.92	7,775	321.08	287,469	295,565.08	415,360	....Summit
Teller	.....	.....	2,441	19,180	102,518	.....	.....	.....	33,746	.....	1,250	2,562	1,250	162,947	46,844.53	25,340	11,271.47	103,677	140,288.47	350,080	....Teller
Washington	.....	6,727	.....	1,126,939	278,663	.....	.....	.....	.....	.....	.....	1,090	1,100	1,414,519	111,277.89	600	87,043.11	.....	87,643.11	1,613,440	....Washington
Weld	.....	348,399	9,666	739,236	1,079,487	5,030	3,545	.....	.....	.....	.....	9,830	8,850	2,204,043	207,422.69	4,424	158,190.31	.....	162,614.31	2,574,080	....Weld
Yuma	.....	3,327	3,191	622 430	676 569	.....	.....	.....	.....	.....	.....	1,013	1,250	1,307,711	161,807.87	748	44,553.13	.....	45,301.13	1,514,880	....Yuma
State	39,483	2,284 655	382,283	11,119,537	16,205,483	107,841	95,618	109,779	253,606	44,957	13,766	137,071	151,346	30,867,235	10,766,408.24	8,150,263	2 865,710.76	13,582,503[15]	24,698,476.76	66,341,120	....State

1 Suburban land.
2 Includes non-bearing orchards.
3 Steep land.
4 Includes waste land.
5 Includes clay land.
6 Oil land.
7 Placer land.
8 The land in this column is mostly homestead land that has been filed upon but not yet patented. It includes about 3,000,000 acres of government land withdrawn from entry.
9 As a result of errors in surveys and errors from other sources the combined area of patented and non-patented land in this county exceeds the total area by the amount here given.
10 Includes about 18,000 acres of the Rocky Mountain National Park.
11 Includes about 80,000 acres of the Rocky Mountain National Park.
12 Includes about 125,000 acres of the Rocky Mountain National Park.
13 Includes 13,883 acres in the Colorado National Monument.
14 Includes 300 acres in the Wheeler National Monument.
15 Includes 48,966 acres in the Mesa Verde National Park and 72,631 acres in the Southern Ute Indian Reservation.
16 Net national forest area, 13,290,354 acres.

Colorado by Counties

THE descriptive matter relating to the 63 counties in Colorado, to be found in the succeeding pages, was prepared in the office of the bureau of immigration, and copy and proofs were submitted to well informed persons in the various counties for revision and correction. The general outline followed in the stories of the several counties is practically the same, the object being to give as nearly as possible all useful information about the resources and possibilities of each county. It should be understood, of course, that this publication is not intended for general distribution among those who apply to the state immigration department for information regarding the opportunities offered in Colorado for homeseekers and investors. It is meant rather as a source of information to Colorado people regarding the opportunities for development offered in their own state, and it is the hope of the board of immigration that it will serve as the basis for all conservative literature sent out from the various communities advertising Colorado's advantages to those who contemplate locating in the state. The county stories have been written in the plainest possible style, special care having been taken to avoid all appearance of what is generally referred to as "booster" style. Official information has been used wherever it has been available, and where official reports were lacking on any line of necessary information such information has been obtained from reliable and well informed persons in the various counties.

Ready and intelligent co-operation has been accorded the immigration bureau in practically every county in the state, and whatever merit there may be in these county stories and in other parts of this volume is due largely to this co-operation.

ADAMS COUNTY

General Description—Adams county lies in the north central part of the state, the city of Denver forming a part of the western boundary. It is an irregular rectangle, with an extreme length, east and west, of 72 miles, and a width of 18 miles. Its area is 807,680 acres, or about 125,000 acres more than that of the state of Rhode Island. The surface is generally level prairie with narrow valleys crossing it north and south. The altitude varies from about 4,500 feet in the east, to 5,300 feet in the extreme west.

Early History—Adams county was organized in 1902 from a part of Arapahoe county. Parts of it were annexed to Washington and Yuma counties in 1903, and in 1909 a part of Denver county was added. Long's expedition crossed the northwestern corner of what is now Adams county, in 1820. Numerous other exploring and prospecting expeditions followed this same route along the South Platte river previous to the discovery of gold in 1859. The early gold seekers wasted comparatively little time in Adams county, though some prospecting was done for placer gold in the sands of the Platte river north of the present location of Denver. A few temporary camps were established by gold seekers south of the present site of the city of Brighton in the early 60's, but no permanent settlements were made. The agricultural development of the western part of the county began in the late 80's. The prairie lands in the east were utilized for grazing purposes and agricultural development here was slower than in districts further east, because the rainfall here is somewhat lighter than it is in the extreme eastern part of the state.

Surface and Soil—The Platte river flows across the extreme western end of the county and most of the irrigated land lies in this district. The broad valley of the river here is very fertile, the soil being principally a sandy loam of great depth. In the eastern part the surface is generally level, with numerous creek valleys extending across it north and south. The soil is principally a sandy loam with occasional patches of adobe and gumbo. In a few sections there is too much sand for successful farming operations. The creek valleys, before referred to, are very fertile and in recent years have proved to be wonderfully productive agricultural areas, chief of them being the Kiowa and Bijou valleys. There is no detailed soil survey of this area available.

Population—The population of the county in 1910 was 8,892. The present population is about 12,500. In 1910 the foreign-born population was 22.7 per cent of the total. The principal foreign nationalties were Italian, German, Swedish and Greek. Most of the foreigners live in the western end of the county, being employed in the city of Denver or on irrigated farms and market gardens in this district.

Drainage and Water Supply—The county lies wholly in the South Platte watershed. The South Platte river crosses the western end and its principal tributaries are Box Elder creek, Kiowa creek, Bijou creek, and Badger creek, all of which rise near the Arkansas divide further south, and flow almost due north. Water for domestic purposes is obtained principally from wells and is reached at depths varying from 15 feet to 150 feet, with an average of 75 feet.

Industries—The principal industries are general farming, market gardening, stockraising, dairying, stockfeeding and manufacturing. Dairying is carried on extensively in the western part of the county near Denver and along the line of the Union Pacific railroad as far east as Strasburg. Market gardening is followed principally in the territory immediately surrounding the city of Denver. The irrigated area is confined principally to the western end of the county. Development of farming without irrigation in the eastern part of the county has been rapid in the past decade, especially in the valleys of the various creeks mentioned before. Stockraising is also an important industry in this section of the county. The principal manufacturing enterprise in the county is a beet sugar factory located at Brighton. There are two large canning and pickle factories located here, also a cheese factory and an alfalfa meal mill.

Crops—The principal crops are alfalfa and other hays, sugar beets, wheat, oats, rye, barley, corn, potatoes, pinto beans and garden vegetables; peas, snap beans, cucumbers and like crops grown for canning purposes.

Mineral Resources—The known minerals are clays, rather extensively used for the manufacture of brick; coal, building sand, gravel and building stone.

Land Values—At the beginning of 1918 there was about 673,000 acres of privately owned land in the county, or a little less than 83 per cent of the total area. Of this amount, according to the records of the county assessor, 86,594 acres was being farmed

without irrigation, 428,084 acres was classed as nonirrigated farm land, and 152,036 acres as grazing land. The remainder is principally town and city lots and railroad rights of way. Irrigated land sells at from $75 to $150 an acre, and nonirrigated land at from $10 to $30 an acre. On January 1, 1918, there was 27,343 acres of state land in the county, principally agricultural land, most of which is for sale by the state on favorable terms. On July 1, 1916, there was but 120 acres of government land open to homestead entry, consisting of very small isolated tracts of little value.

Transportation—The Kansas City branch of the Union Pacific railroad runs along the south boundary of the county from Denver east to Strasburg, thence south and east through Arapahoe, Elbert, Lincoln and Cheyenne counties into Kansas. The Union Pacific runs north along the Platte river by way of Brighton, the county-seat, and the Burlington railroad runs northeast only a few miles east of the Union Pacific. A branch of the Union Pacific railroad runs directly north from Denver through the irrigated district in the western part of the county. The Denver, Laramie & Northwestern railroad, recently acquired by the Great Western Sugar company, runs north along the west bank of the Platte river to Brighton. The Colorado & Southern road to Boulder passes through the southwestern part of the county.

Highways—The principal state highways passing through this county to Denver are the Limon road, which connects with the Pikes Peak or Ocean to Ocean highway at Limon, and the Denver - Greeley - Cheyenne road, which follows the Platte river north from Denver through the county. There are numerous other important highways leading into Denver through the western part of the county. In the eastern part of the county the roads are not in good condition at present, owing to the fact that the land is being rapidly fenced to prevent stock from destroying crops and travelers are forced to follow the section lines, abandoning routes that have in the past been used as roads. The county commissioners have laid out many new roads for this district, which will give Adams county one of the best highway systems in the state. Numerous north and south roads will be constructed to connect with the Morgan and Adams county road on the north, the Irondale road in the center and the Limon road in the south, making all parts of the county easily accessible.

Educational—There are 73 public district schools in the county and three highschools, located at Brighton, Aurora, and Adams City. Westminster college is located at Westminster, a few miles north of Denver.

Climatological Data—The climate here is very similar to that of the city of Denver, which is well known throughout the country. It is generally mild and equable and not subject to extreme temperatures either in the winter or summer. The average temperature in the eastern part is somewhat higher than that in the west. The summers are moderately long and the percentage of sunshine is considerably higher than that of the country as a whole. The average annual rainfall varies from 13 to 15 inches, being heaviest in the extreme western part. It is usually heaviest in the spring and early summer and about three-fourths of it comes between April 1 and October 1. In the eastern part, where farming without irrigation is largely followed, the rainfall is generally sufficient for the production of such crops as are best adapted to this locality. The most reliable crops are forage crops, pinto beans and other drought-resistant products.

Tourist Attractions — Thousands of automobile tourists travel annually over the automobile roads leading through this county into Denver. There is comparatively little natural scenery here of interest to the tourist, but the county derives considerable benefit from the heavy automobile travel to the mountainous districts further west.

Cities and Towns—Brighton, the county seat and principal city, is located in the Platte valley, on the Union Pacific railroad, near the northwestern corner of the county. It is a prosperous agricultural center and is growing rapidly. Within the past year a large sugar beet factory and a large canning and pickle factory have been put in operation here. Few cities in Colorado have grown more rapidly in the past five years than Brighton. Other important towns in the irrigated districts are Henderson, Hazeltine, Derby, Celeryvale, Welby, Westminster and Eastlake, located on the various railroads immediately north of Denver. The principal towns in the nonirrigated districts in the eastern part of the county are Bennett, Strasburg and Watkins, on the Union Pa-

cific railroad. There are a number of small inland towns of growing importance in the northern and eastern parts of the county. About one-half of the town of Aurora lies in Adams county.

Special Opportunities — There has been rapid and successful development of nonirrigated farming in the eastern part of the county in the past half dozen years. There is perhaps 300,000 acres of arable land in the county not yet broken, all of which has good soil and offers much the same opportunity for development as the nonirrigated land now in cultivation offered a few years ago. Although the rainfall here is not so heavy as in some of the nonirrigated districts further east, it is generally ample for producing good crops where proper agricultural methods are followed. Those who are best informed regarding the agricultural possibilities of this county are convinced that within 10 years fully 50 per cent of the area of the county will be successfully cultivated and that ultimately 75 per cent of it will be farmed.

ALAMOSA COUNTY

General Description—Alamosa county lies in the south-central part of the state, in the heart of the San Luis valley. In outline it is an irregular pentagon, with an extreme length, east and west, of 30 miles, and an extreme width, north and south, of 27 miles. Its area is approximately 500,000 acres, or about one-fourth less than the area of the state of Rhode Island. The surface is generally level except in the northeast, where it rises into broken hills which culminate in the two massive peaks, Old Baldy and Sierra Blanca, on the boundary line between Alamosa and Costilla counties. The altitude ranges from about 7,300 feet in the south to about 14,000 feet at the summits of the peaks on the northeastern boundary.

Early History—The territory now included in Alamosa county was perhaps visited by the Spanish explorers, who are said to have found gold near the present site of Fort Blanca, Costilla county, in 1600. The early attempts at colonization in Costilla county, however, did not extend into what is now Alamosa county. Early in 1807, after their unsuccessful attempts to scale Pikes peak, Captain Zebulon Pike's expedition crossed the Sangre de Cristo range, skirted the base of Sierra Blanca and camped on the banks of the Rio Grande, near the present site of the city of Alamosa. Captain Pike's diary contains the first authentic record of any American traveler in this territory. Numerous exploring parties at various times, including John C. Fremont, followed the Rio Grande river through this county in their search for gold further west. The town of Alamosa was founded in 1878. The county of Alamosa is the youngest in the state, having been created by the state legislature in 1913 from parts of Conejos and Costilla counties.

Surface and Soil—The surface is very level, except in the extreme northeast. The soil in general is a sandy loam of great depth and wonderful fertility, with occasional patches of coarser gravelly soil. Most of the area was at one time included in the bed of a great lake, and the soil is made up chiefly of silt and other matter deposited from its waters. There is an excess of alkali in the soil in some parts of the county but drainage and other projects are now under way which promise successfully to carry off or neutralize the harmful salts. The only soil survey available is a general survey of the San Luis valley, made by the bureau of soils of the United States department of agriculture, and published in 1904.

Population—Since Alamosa county was not created until 1913 there is no datum available giving the population for 1910. The population at the beginning of 1918 was approximately 6,500, of which about 4,000 is urban, living in the city of Alamosa. The percentage of foreign-born inhabitants is small, probably less than six per cent, though no accurate datum is available. A good many of the early settlers were Mexicans and there are now a considerable number of Spanish-speaking people in the county.

Drainage and Water Supply—The Rio Grande river flows through the southwestern part of the county, and with its tributaries furnishes the drainage and water supply for irrigation. This stream and the various small tributaries in the county carry a good supply of water the year round, sufficient for the watering of all irrigable land. Reservoirs impound considerable water for use during the drier parts of the summer. Water for domestic purposes is obtained chiefly from artesian wells, the flow being reached at depths ranging from 100 to 600 feet.

Industries—The principal industries are farming, stockraising, stockfeeding, dairying and manufacturing. There is about 305,000 acres of privately owned land in the county, or a

little more than 61 per cent of the area. About 20,000 acres, according to the report of the county assessor, was being cultivated under irrigation in 1917, and about 40,000 acres was classed as natural hay land, most of which is irrigated. The amount of nonirrigated farm land is placed at 110,000 acres and of grazing land at 132,700 acres. Much land now included in these two classes will ultimately be cultivated under irrigation. Conditions in this county are especially favorable for stockfeeding, because of the open winters, excellent water supply, abundance of feed crops and good railway facilities, and the number of cattle and sheep fattened annually for market is increasing steadily. The town of Alamosa is an important railroad center and has large shops for the fourth division of the Denver & Rio Grande railroad system, which affords employment for a considerable number of people. This is also an important retail merchandise center and is beginning to handle considerable jobbing business. The dairy industry has been growing steadily for several years, and the city of Alamosa might still afford a market for considerably more milk than is being produced in the county.

Crops—The principal crops are alfalfa, wild hay, other hays, field peas, potatoes, cabbage and other garden crops; barley, oats, wheat, and various root crops used for stock feed.

Mineral Resources—The county has few known mineral resources. Considerable deposits of clay exist, which have been utilized to some extent for brick making. Building sand is found in abundance and there is some stone of comparatively little commercial value at present.

Land Values—Irrigated land with good water right may be obtained at prices ranging from $20 to $75 an acre, the price depending on location, character of soil, improvements and various local conditions. Nonirrigated land, much of which will ultimately be placed under irrigation, can be had at from $5 to $15 an acre. At the beginning of 1918 there was 44,540 acres of state land, much of which is good farming area, which may be purchased from the state on reasonable terms. On July 1, 1917, there was about 26,000 acres of government land left open to homestead entry, most of which is of little value except for grazing purposes.

Transportation—The principle standard gauge railroad line is that entering the county from the east, running from Denver and Pueblo to Alamosa. A standard gauge line, known as the San Luis Valley branch, runs northwest through the valley from Alamosa to its terminus at Creede. Another line, narrow gauge, leads southward from Alamosa to Antonito, Conejos county, where it branches, one line running westward to Durango and the other directly south to Santa Fe, N. M. Another narrow gauge line runs northward from Alamosa through the valley to a connection with the main line at Salida. All these roads belong to the Denver & Rio Grande system, centering at Alamosa, which is the headquarters of what is known as the fourth division of this system. They make Alamosa the principal railroad center in the San Luis valley and one of the most active railroad towns in the state.

Highways—The principal state highway is the Spanish Trail, which follows the standard gauge line of the Denver & Rio Grande, east and west across the county. Another state highway leads southward along the Rio Grande road to Antonito, and another westward from Alamosa to the mining camps in the southwestern part of Rio Grande county. These, with numerous county roads, afford ample routes for the transportation of farm products to market.

Educational—There are 18 public district schools in the county and two highschools, located at Alamosa and Hooper. There are no private schools and no colleges.

Climatological Data—Except in the extreme northeast the average annual rainfall varies from 7 to 10 inches. In the higher land near Sierra Blanca the precipitation is heavier, varying from 10 to 21 inches. The climate is ideal, the summers somewhat shorter than in the lower altitudes in the eastern part of the state and the winters open.

Cities and Towns—Alamosa, the countyseat, is the principal town in the San Luis valley. Its population in 1910 was 3,013 and at present it is about 4,000. Other towns are Hooper and Mosca, north of Alamosa on the Denver & Rio Grande railroad.

Special Opportunities—There is much undeveloped agricultural land in this, as in all San Luis valley counties, so that the principal opportunities are for agricultural development. Since Alamosa is the chief distributing center for the valley, good opportunities will be offered in the various business and professional lines as the agricultural lands of the valley are further developed.

ARAPAHOE COUNTY

General Description — Arapahoe county lies in the north-central part of the state, a portion of its western boundary being formed by the city of Denver. It is an irregular rectangle, 72 miles long and 12 miles wide. Its area is 538,880 acres, or about 140,000 acres less than that of the state of Rhode Island. The surface is principally a level plateau and the altitude varies from 4,600 feet in the northeast to about 5,600 feet in the extreme southwest.

Early History — Early visitors to Colorado frequently crossed the western corner of what is now Arapahoe county along the Platte river valley. The Long expedition traveled this way in 1820. Trappers and hunters frequently crossed this area but no settlements were made until late in the 50's. In 1858 Green Russell, with a party of prospectors, began the search for gold along the various streams in this territory and in July James H. Pierce, a member of this party, panned out $100 worth of gold dust from a sandbar near the mouth of Cherry creek. This was the first important discovery of gold in Colorado. The news of the find spread rapidly and within a year thousands of fortune hunters had crossed "The Great American desert" for the gold fields of what is known as the Pikes Peak region. Arapahoe county has never found a place, however, in the statistics of gold production, for Green Russell and his party evidently collected all there was in the sands of the Platte river and its tributary streams. The prairies of this county were the pasture grounds for large herds of cattle during the 70's and early 80's. Within the past decade farming without irrigation has been developed rapidly in this territory and grazing of large herds of cattle has become a thing of the past. The county was one of the original 17 counties in Colorado territory as organized in 1861. It was originally much larger than it is now, having extended at one time clear to the Kansas line. Parts of it were taken to form Adams and Denver counties in 1902 and Washington and Yuma counties in 1903.

Surface and Soil—The surface is a rolling prairie except in the extreme southwest, where there is a small area of broken, hilly land. It is crossed by the narrow valleys of numerous streams flowing north to the Platte river. The soil is principally a sandy loam with occasional patches of adobe and gumbo. In some sections there is too much sand for successful farming, although such areas are generally very small. The soil is generally very fertile and yields readily to cultivation. No soil survey of this area is available.

Population—The population in 1910 was 10,263. At present it is about 15,800. In 1910 the foreign-born white people made up 16.4 per cent of the total population. The principal foreign nationalities are German, English, Swedish and Canadian.

Drainage and Water Supply—The county lies in the South Platte watershed, the South Platte river crossing the extreme western end. Numerous creeks have their sources near the Arkansas divide to the south and flow north across this county to the Platte river. Chief among these are the Box Elder, Kiowa, Bijou, Badger and Big Beaver creeks. None of these creeks carries any reliable supply of water for irrigation. Water for domestic purposes is obtained principally from wells and is reached at depths ranging from 12 to 40 feet in the eastern end of the county, and from 40 to 800 feet in the western part. Wells 350 feet deep or more usually are artesian.

Industries—The principal industries are farming, dairying, stockraising and manufacturing. There is considerable irrigated land in the western end of the county and farming has long been followed here successfully. In the eastern part the creek valleys have been farmed for a good many years, but it is only recently that the higher lands lying between these creeks have been broken and placed under cultivation. Agricultural operations here have been successful. Dairying has been followed rather extensively in the territory immediately tributary to Denver for a great many years. More recently it has been extended into the western section of the county, especially along the line of the Union Pacific railroad. Manufacturing is confined principally to Englewood, Littleton and points immediately about the city of Denver.

Crops—The principal crops are alfalfa, wheat, oats, rye, barley, corn, potatoes, milo, kafir and other forages, pinto beans and garden vegetables.

Mineral Resources—The known minerals are clays, utilized to a considerable extent for the manufacturing of brick; building sand, gravel and building stone.

Land Values—At the beginning of 1918 there was about 478,000 acres of privately owned land in the county, or

approximately 88 per cent of the total area. The county assessor's records show about 37,000 acres of this was being farmed under irrigation, and 370,000 acres was classed as nonirrigated farming land, not all of which, however, is under cultivation. On January 1, 1918, there was 16,060 acres of state land in the county, including a considerable amount of good agricultural area. This land is for sale by the state on very reasonable terms. On July 1, 1917, there was but 160 acres of government land in the county open to homestead entry, consisting of very small isolated tracts of little value.

Transportation—The Kansas City branch of the Union Pacific railway runs along the northern boundary of the county from Denver to Strasburg, thence southeast across the county into Elbert county. A branch of the Colorado & Southern railway runs southeast from Denver into Douglas and Elbert counties. The main lines of the Denver & Rio Grande, Colorado & Southern and Santa Fe railways between Denver and Pueblo cross the extreme western end of the county.

Highways—The principal state highway is the Limon road, which follows in general the course of the Union Pacific railway through the county. In the western part there are numerous well improved state highways leading into the city of Denver. In the eastern part the county roads are generally well improved and are ample to take care of the present agricultural development.

Educational—There are 47 public schools in the county and three high-schools, at Littleton, Englewood and Deertrail. There are no private schools or colleges.

Climatological Data—The climate here is very similar to that of the county of Denver, which is well known throughout the country. It is comparatively dry, with a high percentage of sunshine, and is extremely healthful. The rainfall varies from 13 inches to 16 inches, being heaviest in the extreme southeast corner. It varies considerably from year to year but is ample for the production of crops best suited for this territory.

Tourist Attractions—There is heavy automobile tourist travel during the summer season, principally bound for the city of Denver and for the mountainous areas further west. There are few points of scenic interest within the county but considerable local benefit is derived from the heavy travel to points beyond.

Cities and Towns—Littleton, the countyseat, is located on the Santa Fe, Colorado & Southern and Denver & Rio Grande railways, in the southwestern part of the county. It is the center of the principal irrigated farming district. Englewood, just south of the city of Denver, is the principal town Other towns are Sullivan and Melvin on the Colorado & Southern railway, Deertrail, Byers, Strasburg and Peoria on the Union Pacific. There is possibly 250,000 acres of arable land in this county that has never been broken. Although it lies close to the city of Denver, agricultural development has been slow here for the reason that the rainfall has been slightly less than in sections further east, and it was formerly thought that crops could not be successfully grown without irrigation. Experience of the past 10 years has shown, however, that the adoption of proper methods of farming and the selection of crops adapted to the soil and climate insure at least moderately profitable returns from the cultivation of the soil. Dairying is usually carried on in connection with general farming and is made the basis of operations for the reason that forage crops suitable for feeding to dairy cattle make the best yields here from one year to another.

Special Opportunities—Less than 11 per cent of the total area of Arapahoe county was under cultivation in 1917, according to the best information available. Though the cultivated acreage has been increased substantially in 1918 there is still a very large amount of arable land in the county that has never been broken. It is only within the past half dozen years that farming has been undertaken on a large scale in the nonirrigated lands of the county, and the success that has attended these operations promises much for further development in this direction. Pinto beans and forage crops give the most reliable returns, but corn and small grain do well. Dairy farming is increasing steadily in importance in the nonirrigated districts and promises to become one of the leading industries of the county.

ARCHULETA COUNTY

General Description—Archuleta county is located in the southwestern part of the state, the southern boundary being formed by the state of New Mexico and the eastern boundary by the main range of the Rocky mountains. It is rectangular in outline with an extreme length, east and west, of about 60 miles, and an extreme

width of about 33 miles. Its area is 780,800 acres, or about 100,000 acres greater than the state of Rhode Island. The surface is mountainous in the north and east and the southwest is broken by numerous narrow valleys, containing a limited amount of arable land. The altitude varies from about 6,000 feet in the extreme southwest to nearly 14,000 feet at the summits of some of the peaks on the eastern boundary.

Early History—The first known white explorers in the territory now included in Archuleta county were Spaniards, who came in 1776. The only evidence remaining from their visit is the large number of Spanish names for mountains, rivers, etc., in this territory. When Colorado territory was organized in 1861, what is now Archuleta county was included in Conejos county. Archuleta county was organized in 1885, and was named in honor of J. M. Archuleta, then a prominent citizen of old Conejos county.

Surface and Soil—There is little arable land in the county, except in the southwest, where the San Juan river and several of its tributaries have cut numerous narrow and comparatively level valleys. The soil of these valleys is a deep fertile loam made up principally from the weathering of rocks in the mountains above. Numerous mountain valleys in the central part of the county produce an abundance of fine natural hay. The northern and eastern parts of the county are extremely rugged and have been but little explored. No detailed soil survey of this territory is available.

Population—In 1910 the population of the county was 3,302. The population at the beginning of 1918 was estimated at 4,600. In 1910, according to the census bureau, 94.6 per cent of the population was native whites, and the percentage is perhaps about the same today. There are a few Spanish speaking people in the settlements near the southern border. The population is entirely rural, there being no town in the county having more than 1,000 people.

Drainage and Water Supply—The headwaters of the San Juan river are in the San Juan mountains in this county and Mineral county, and numerous tributaries to this stream have their sources in the mountains in the northern part of the county. The rainfall here is extremely heavy and these streams carry an abundance of water the year round. Water for domestic purposes is obtained from these streams, from numerous lakes and natural springs, and in some sections from wells. Underground water for domestic purposes is found at depths ranging from 10 to 100 feet. Farming under irrigation is carried on to a limited extent in the valleys and there is plenty of water available for all lands susceptible to cultivation.

Industries—The principal industries are stockraising, farming and lumbering. There has been considerable prospecting for minerals in the county, but no development worthy of note has ever taken place, chiefly because of the remoteness of the mineralized district from lines of transportation. There are extensive coal deposits in the western part which have been but little developed. Lumbering in the past has been the leading industry of the county and is still being followed extensively in the territory along the Rio Grande railroad.

Crops—The principal crops are alfalfa, natural hay, small grains, potatoes and garden vegetables. There is some tree fruit and small fruit is abundant.

Mineral Resources—The known minerals are gold, silver, lead, copper, zinc, clays, granite, sandstone and a wide variety of other stones. There has been no mineral development worthy of note.

Timber—Excellent pine and spruce timber is to be found in nearly all sections of the county. Cedar and pinon are found in the south and west.

Land Values—Irrigated land costs from $25 to $100 per acre. Nonirrigated land, valuable principally for grazing, may be had at prices ranging from $2.50 to $8 per acre. At the beginning of 1918, according to the records of the county assessor, there was about 260,000 acres of privately-owned land in the county, or about 33 per cent of the total area. Of this amount about 11,000 acres was being cultivated under irrigation and 73,510 acres was being farmed without irrigation. The county assessor classes 240,000 acres of the privately-owned area as grazing land, and 22,000 acres as timber land. At the beginning of 1918 there was 21,579 acres of state land in the county, most of which may be purchased from the state on very favorable terms. On July 1, 1917, there was 80,382 acres of government land open to homestead entry, most of which is of little value, except for grazing purposes. The national forest area within the county is 397,282 acres, in which is included considerable fine grazing area.

Transportation—The Durango branch of the Denver & Rio Grande railroad, narrow gauge, crosses the extreme southeast corner of the county, runs south into New Mexico and then re-enters the county near the town of Juanita, in the southwestern part. A branch line leaves this road at Pagosa Junction and runs northward to Pagosa Springs, the countyseat.

Highways—The principal state highway is the Spanish Trail, which enters the county at the north and runs south to Pagosa Springs and west into La Plata county. A secondary state highway runs south from Pagosa Springs to Chama and Santa Fe, New Mexico. There are numerous imperfectly improved county highways in the southwestern part, but in most sections there is comparatively little highway development.

Educational—There are 23 public district schools in the county and one highschool, located at Pagosa Springs. There are no private schools and no colleges.

Climatalogical Data—The rainfall is extremely varied. In the southeast it averages about 14 inches annually but increases rapidly toward the north and east, being about 25 inches along the Continental divide of the eastern boundary. The climate is fairly mild at lower altitudes in the south, but is subject to extremely low temperatures in the high altitudes in the north and east. Snowfall is extremely heavy in the San Juan mountains along the eastern boundary.

Tourist Attractions—The opening of the Spanish Trail has greatly increased automobile tourist travel to this territory. The road passes through a very picturesque mountain territory and touches Pagosa Springs, which has been an important resort for tourists and health seekers for a good many years because of the large mineral springs located here. The water in one of these hot springs is very similar to that of the famous Carlsbad Sprudel springs. A large area of picturesque mountain territory in the east and in the northwest is almost wholly without highways and, therefore, is inaccessible to visitors. Excellent trout fishing is to be had in all of the mountain streams and considerable game is found in the lower regions of the San Juan mountains.

Cities and Towns—Pagosa Springs, the countyseat, is the principal town. It is the center of a good stockraising territory and an important outfitting point for campers, hunters and fishermen. Pagosa Junction is an important shipping point on the Denver & Rio Grande railroad. Other towns are Dyke, a shipping point on the Pagosa Springs branch of the Denver & Rio Grande, and Piedra, a small town on the Spanish Trail.

Special Opportunities — Opportunities are offered here for development along many lines. There is considerable agricultural land not yet under cultivation and range available for pasturing perhaps twice as many head of livestock as are now being fed. The timber resources are perhaps better than those of any other county in the state. Large areas of supposedly mineralized territory in the northern and eastern parts of the county have had but little prospecting and it is not beyond the range of possibility that rich mineral areas may be opened up in this region at some future time.

BACA COUNTY

General Description—Baca county lies in the extreme southeastern corner of the state, being bounded on the east by Kansas, and on the south by Oklahoma and New Mexico. It is a regular rectangle 55 miles long, east and west, and 44 miles wide. Its area is 1,633,280 acres, or about 400,000 acres more than that of the state of Delaware. It is a comparatively level plateau, broken by a low range of hills in the south. The altitude varies from about 3,800 feet in the extreme east, to 5,700 feet in the southwest.

Early History—It is generally believed that Coronado in his explorations of the west and southwest crossed the corner of what is now Baca county, in 1542. Such accounts of his travels as are available indicate that his course lay up the Cimarron river over a portion of what later became the Santa Fe Trail. Early in the last century there was considerable travel through this part of Colorado between the Missouri river and Santa Fe. The old Santa Fe Trail crossed what is now Baca county, along the north side of the Cimarron river. Three granite markers now show the course of this historic trail through Baca county. Although travel here was considerable there were no settlements made until the early 60's. For some twenty years isolated ranchers made their homes in the valleys of streams in this territory. The actual settlement of the county, however, did not begin until 1887, when there was a considerable influx of stockmen and some farmers to this part of Colorado. The county was created in 1889 from a part of Las Animas county.

Surface and Soil—Baca county lies in the great prairie district of eastern Colorado. The surface is generally level, with narrow valleys of numerous streams traversing it east and west. It rises almost imperceptibly from the east toward the southwest. The soil is principally a rich alluvial loam or sandy loam, usually chocolate colored. In the south and southwest it is broken by a range of low sand hills. It is suitable for cultivation in most districts except a few restricted areas where there is too much sand. No soil survey of this county is available.

Population—There has been a greater fluctuation in the population of this county than in that of any other agricultural district in Colorado. Its development began early in the 60's, the first settlers being principally stockmen. In the early 80's the first real homeseekers began to come in and take up free government lands, depriving the stockmen of their wide range. In 1890, one year after the county had been created from a part of Las Animas county, the population was 1,479. Ten years later, after a series of dry seasons had discouraged many of the farmers, the census bureau found but 750 people in the county. A re-settlement began immediately afterward, and in 1910 the population was 2,516. Since that time perhaps no section of Colorado has been developed more rapidly. The state provost marshal, in making his calculations as a basis for the military draft, estimated the population of Baca county, in 1917, at 14,582, an increase of nearly 500 per cent in seven years. In 1910 the foreign-born population was 4.2 per cent of the total. It is somewhat less at the present time.

Drainage and Water Supply—The county is drained by numerous small streams which have their sources either in the western part of this county or in the eastern part of Las Animas county, and flow east into Kansas. The principal streams are the Cimarron river, Sand Arroyo creek, Bear creek, Horse creek and Two Buttes creek. Most of these streams have their sources in comparatively level districts where the rainfall is only moderate, and they carry but little water during the drier parts of the summer. Few of them have a supply sufficiently reliable to justify efforts at irrigation. Water for domestic purposes is obtained principally from wells. There is an artesian belt in the northeastern part of the county, where water is reached at about 350 feet. In the other districts water is obtained from wells by pumping, principally with windmills, and is reached at depths varying from 30 feet to 300 feet.

Industries—The principal industries are farming and stockraising. Dairying has been followed to a limited extent and is growing in importance each year. There has been some mining in the southwestern corner, but the mineral deposits here have had comparatively little development because of remoteness from transportation.

Crops—The principal crops are alfalfa, native hay, wheat, oats, barley, rye, corn, beans, broomcorn, potatoes and garden vegetables.

Mineral Resources—The known minerals are clays, gravel, silver, copper, sand and building stone.

Timber—There is some small timber in the southwestern and northwestern parts, principally cedar.

Land Values—On January 1, 1918, there was about 715,000 acres of privately-owned land in this county, about 43 per cent of the total area. The county assessor classes 704,420 acres of this as nonirrigated farm land, and about 9,000 acres as grazing land. Not nearly all of the land classed by the assessor as farm land is being cultivated, but perhaps all of it is suitable for cultivation. There is approximately 15,000 acres of irrigated land in the vicinity of Two Buttes which has been watered under a Carey act project. There are small areas of land in various parts of the county watered partly by a direct flow from streams and partly by water pumped from wells. Irrigated land in this county sells at from $45 to $100 an acre, and nonirrigated land, most of which is suitable for cultivation, costs from $5 to $15 an acre. On January 1, 1918, there was 78,526 acres of state land in the county, principally agricultural land, for sale by the state on very favorable terms. On July 1, 1917, there was in the county 58,190 acres of government land open to homestead entry, some of which is suitable for cultivation and most of which is good grazing area.

Transportation—This is the only county in Colorado in which there is no railroad. A branch of the Santa Fe railroad extends west to Elkhart, Kansas, about six miles from the Baca county line. This road was originally surveyed to extend west through Baca and Las Animas counties to Trinidad. More recent surveys have been made

for a branch of the Santa Fe further north through the central part of the county, by way of Springfield and west to Trinidad. Most of the products of the county are moved by wagon to Lamar and other points on the main line of the Santa Fe.

Highways—The Dallas-Canadian-Denver highway, joining the Santa Fe Trail at Lamar, runs north and south through Baca county. This is the most direct route connecting Denver with the Cotton Belt road. Another state highway runs south from Holly through the eastern part of Baca county to the town of Lamport. Numerous county roads are more or less imperfectly developed, but usually in good condition for transportation of supplies to and from the farms.

Educational—There are 80 public district schools in the county, and two highschools, located at Springfield and Two Buttes. There are no private schools or colleges.

Climatological Data—The climate is perhaps the mildest of any county in Colorado. The rainfall in the southwestern part varies from 13 to 15 inches. In the remainder of the county, including about three-fourths of the total area in the north and west, the rainfall varies from 15 to 19 inches. Most of it comes during the growing season, between the months of April and October. The summers here are longer than in most other sections of Colorado and the climate is suitable for growing many crops that are not produced in counties further north. The winters are open and very favorable for the feeding of livestock.

Tourist Attractions—There is considerable tourist travel through the county on the D-C-D highway. Although the Santa Fe Trail at one time passed through a corner of the county, the road known now as the Santa Fe Trail runs further north, along the valley of the Arkansas river. There is some attractive scenery in the southwestern part of the county and the construction of good automobile roads through this territory would bring hundreds of thousands of tourists annually. There is good trout fishing in the Two Buttes reservoir.

Cities and Towns—Two Buttes, assessed valuation $77,000, is in the heart of the only large body of irrigated land in the county and is the principal trading station for the entire northwestern section. Springfield, the countyseat and largest town, assessed valuation $110,000, is located near the central part of the county. Among other towns are Richards, Campo and Carrizo, in the southern part; Stonington, Blaine and Monon, in the east; and Maxey, in the northwest.

Special Opportunities—The principal opportunities offered here are along the line of agricultural development. This county would perhaps support fully twice as large an agricultural population as it has at the present time. Development in this direction, however, will be retarded until better transportation facilities are offered.

BENT COUNTY

General Description—Bent county lies in the southeastern part of the state, including a portion of the Arkansas valley. But one county, Prowers, lies between it and the Kansas line. It is nearly a perfect rectangle, 42 miles long, north and south, and 36 miles wide. Its area is 975,360 acres, or about three-fourths that of the state of Delaware. The surface is generally level and rolling and the altitude varies from 3,600 feet, at the point where the Arkansas river crosses the eastern boundary, to about 5,000 feet in the southwest.

Early History—Captain Zebulon Pike followed the Arkansas river on his expedition to the Rocky mountains in 1806, and it was from a point in what is now Bent county that he had his first view of the peak which now bears his name. It was on November 15 that he and Dr. Robinson caught their first glimpse of the peak and the notation on Pike's map gives the location of the point from which the mountain was seen. There were numerous trappers and fur traders in this section of Colorado in the early part of the last century, among them being Charles and William Bent, agents of the American Fur company. About 1828 they began the erection of a fort near the eastern boundary of what is now Bent county. It was an adobe structure and was finished in 1832. It was first called Fort Williams and afterwards came to be generally known as Bent's Fort, and was the earliest trading post established in southern Colorado. For a great many years it was a stopping point and rendezvous for trappers and fur traders between the Missouri river and Santa Fe. Colonel William Bent, for whom the county was named, destroyed the fort in 1852. The following year he built another fort near the present site of Las Animas. In 1859 this fort was leased to the United

States government and was occupied by the government troops. The walls of this structure were undermined in the flood of 1866 and another fort was erected on higher ground a mile or two north, called Fort Lyon. This is the location of a hospital for United States sailors afflicted with tuberculosis. Bent county was organized in 1874 from a part of Greenwood county and named in honor of Colonel William Bent.

Surface and Soil—The Arkansas river crosses the north central part of the county and most of the irrigated land lies in the valley of this stream and its tributaries, chief of which is the Purgatoire river. The surface of the valley is level and rises to broken prairies in the north and south. Most of the land is suitable for cultivation except some of the broken areas in the southwest. The soil is principally an alluvial loam in the Arkansas valley and a sandy loam, with a considerable variety of color and texture, in the south. It is very deep and fertile, easily worked and produces excellent crops under irrigation. In recent years farming without irrigation has been followed to a considerable extent and is proving successful. The soils of the Arkansas valley and of most of the tributary streams are sediments of the Dakota formation. In the extreme southwestern corner there are beds of Purgatoire and Morrison stone, and in the southeastern corner Niobrara and Tertiary rocks are exposed. A detailed soil survey of the irrigated district in this county has been made by the bureau of soils of the United States department of agriculture.

Population—The population of this county has grown steadily for the past 30 years. In 1890 it was 1,313; in 1900 it had increased to 3,046, and it was 5,043 in 1910. The present population is about 8,500. In 1910 the foreign-born population was 9.9 per cent of the total. The principal foreign nationality represented is Mexican. The population is nearly all rural, Las Animas being the only town in the county with as many as 2,500 inhabitants.

Drainage and Water Supply—The Arkansas valley and its tributaries drain the county and furnish water for irrigation. The principal tributaries are the Purgatoire river and Rule creek, from the south, and Adobe and Horse creeks from the north. Among the irrigation canals in this county are Fort Lyon, Las Animas Consolidated, Las Animas Town, Highland and Keesee. All are among the first canals constructed in the valley and enjoy early rights to the use of water. Domestic water in most sections is obtained from wells and is reached at from 20 to 50 feet in the bottom lands along the streams, and at from 100 to 250 feet on the uplands.

Industries—The principal industries are agriculture, stockraising, stockfeeding and manufacturing. The irrigated portions of this county are equal to the best in Colorado for general farming and the nonirrigated districts are becoming more and more productive each year as improved methods of farming are introduced. Large numbers of cattle and sheep are shipped into this county annually and fed along the Arkansas valley during the fall and winter months. The principal manufacturing industry is the making of beet sugar, at Las Animas, where a 1,000-ton factory of the American Beet Sugar company is located.

Crops—The principal crops are alfalfa and other cultivated hay, native hay, wheat, oats, barley, corn, beans, sugar beets, broomcorn, garden vegetables and a variety of seed crops.

Mineral Resources—The known minerals are clays of many varieties suitable for brick, earthenware, drain tile; gravel, building and glass sand, and building stone.

Land Values—Irrigated land here sells at from $35 to $200 an acre, depending on a variety of local conditions. Nonirrigated land sells at from $5 to $35 an acre. On January 1, 1918, there was about 223,000 acres of privately owned land in the county, or approximately 22 per cent of the total area. Of this amount, according to the records of the county assessor, 46,559 acres is being cultivated under irrigation, though the actual amount is greater, and 6,857 acres without irrigation. The assessor classes 166,020 acres as grazing land, and the remainder is principally railroad rights of way and town and city lots. On January 1, 1918, there was 78,526 acres of state land in the county, including a considerable amount of good agricultural land for sale by the state on reasonable terms. On July 1, 1917, there was 58,198 acres of government land open to homestead entry, valuable principally for grazing purposes.

Transportation—The main line of the Santa Fe railroad runs east and west through the county along the south side of the Arkansas river. The Arkansas valley branch of this road traverses the irrigated sections north of the river. It is connected with the

main line by a branch road from Las Animas to Waveland Junction.

Highways—The principal state highway is the Santa Fe Trail, which follows the north side of the Arkansas river as far west as Waveland Junction, then runs south to Las Animas and follows the south side of the river to the county line. Numerous county roads are comparatively well developed and are in a general way ample for the transportation of crops to market.

Educational—There are 45 public district schools in the county, and one highschool, located at Las Animas. There are no private schools or colleges.

Climatological Data—The climate is mild and unusually healthful. The United States government, after a careful survey of climatic conditions in all parts of the United States, selected Fort Lyon, in this county, as a location for the United States Naval sanitarium. The selection was made principally because of the favorable climatic conditions there. The rainfall in the northern part of the county, including the Arkansas valley, varies from 12 to 15 inches annually, and in the southern part from 15 to 18 inches.

Tourist Attractions—The improvement of the Santa Fe Trail through this county has opened up one of the principal automobile tourist routes from the east to the mountainous sections of Colorado. This county contains many points of interest to tourists, especially the ruins of Bent's Fort, and the naval sanitarium at Fort Lyon. There is some attractive scenery in the southwestern part of the county. On the cliffs along the Purgatoire river, about 20 miles from its mouth, is found a life size representation of a cinnamon bear delineated in the rocks. Whether this is a natural formation or was carved by some prehistoric tribe is not known. The Indians who were in this region when the white men first came testified that they knew nothing of its origin.

Cities and Towns—Las Animas, the countyseat and principal city, is located on the south bank of the Arkansas river, on the main line of the Santa Fe railroad. It is the principal shipping point for a large agricultural district. Other towns are Caddoa and Prowers, on the main line of the Santa Fe, and McClave and Hasty, on the Arkansas valley branch.

Special Opportunities—The principal opportunities offered here are in the line of agricultural development. There is water available for perhaps 50 per cent more land than is being irrigated. The more elevated lands beyond the reach of irrigation water are fertile and their agricultural development has been rapid in the past three or four years. The county is perhaps capable of supporting an agricultural population twice as large as it has at present. The clays, sands and building stones are of considerable economic value and their development offers good opportunities for investment.

BOULDER COUNTY

General Description—Boulder county lies in the north central part of the state, the Continental divide forming the western boundary. It is of a somewhat irregular rectangular outline, 33 miles long, east and west, and 24 miles wide. Its area is 488,960 acres, or about 194,000 acres less than that of the state of Rhode Island. The surface is extremely varied, being a rolling or broken valley in the east and rising to the summit of the Continental divide on the western boundary. The altitude ranges from about 4,950 feet, in the eastern part, to more than 14,000 feet at the summits of some of the peaks in the western part and along the western boundary.

Early History—Boulder county was one of the original 17 counties included in Colorado territory when it was organized in 1861. Its boundaries have never been changed. It was visited by numerous early explorers and settlers previous to the advent of the early gold seekers. Longs peak, named in honor of the leader of the Long expedition, which visited Colorado in 1820, is in the northwestern corner of the county. Although the first descriptions of this mountain were made by members of Long's party, these explorers never approached the mountain itself. Green Russell and his party of gold seekers prospected Boulder creek in 1858, but found nothing to pay them for their trouble. Late in the same year a small party of gold hunters from Nebraska arrived at the mouth of Boulder canon and pitched their tents near the present site of the city of Boulder. They had faith in the territory in spite of the failure of Russell to find gold there. Game was abundant and they decided to remain over winter and begin prospecting in the spring. They built some log cabins for shelter, thus laying the foundation of the city of Boulder. The winter was mild and they began prospecting in January. On the 15th day of the

month they discovered pay sand in the gulch about 12 miles from the entrance of the canon, this being the first important discovery of gold in Boulder county. Prospectors came to the new territory in great numbers and Boulder City, as it was then called, grew very rapidly. The city and county both were named because of the large numbers of immense boulders found in the vicinity of the mouth of Boulder canon. The first public school in Colorado was opened in Boulder in the fall of 1860, and the same year a movement was started which resulted later in the establishment of the state university there.

Surface and Soil—No county in the state has so wide a range in altitude within so small an area as Boulder county. The eastern part lies in the Platte valley and contains extensions of the valleys of numerous tributary streams. It is generally level and rolling and contains some of the best agricultural land in the state. The soil is principally a sandy loam with a wide variety of color and texture. There are occasional patches of adobe and gumbo and in some small areas there is too much shale and slate for profitable cultivation. Westward the surface rises rapidly to a series of mountain peaks and high plateaus containing good nonirrigated farm land and excellent pasture land. In the extreme western part the surface is very rugged, containing little good farming land, but a considerable amount of excellent pasture. No soil survey of this county is available.

Population—The population of Boulder county has grown steadily and rapidly. In 1880 it was 9,723; in 1890 it was 14,082; in 1900 it was 21,544, and in 1910 it was 30,330. The present population is about 36,500. In 1910 foreign-born white people made up 15.2 per cent of the total population, the principal foreign nationalities being English, Italian, Swedish and German. The urban population in 1910 was 45.5 per cent of the total.

Drainage and Water Supply—This county lies in the South Platte watershed and is crossed by numerous small streams, tributaries of the Platte river which have their sources in the mountainous areas in the western part. The principal streams are St. Vrain creek, Boulder creek and Left Hand creek. These streams carry most of the water used for the irrigation of land in the eastern part of this county, and some of the water supply for land in southern Weld county. Water for domestic purposes in the eastern part of the county is obtained largely from wells and is reached at depths varying from 12 to 40 feet.

Industries—The principal industries are farming, stockraising, stockfeeding, dairying, market gardening, bee keeping, coal mining, metal mining and manufacturing. Farming, dairying and stockfeeding are carried on principally in the eastern part of the county. There is an immense production of feed crops in this section and thousands of cattle and sheep are shipped in annually to be fattened for market. Coal mining is confined largely to a comparatively small area near the eastern boundary. The largest manufacturing enterprise is a beet sugar factory, belonging to the Great Western Sugar company, located at Longmont, and this city is one of the most important grain milling centers in the state. There is also a large canning factory located here. Numerous small manufacturing enterprises are located at Longmont, Louisville and Boulder. Metal mining is carried on most extensively in the southeastern part of the county. Boulder county has been producing gold steadily since 1860. It is the principal tungsten producing county in the state and perhaps the most important tungsten area in the United States.

Crops—The principal crops are alfalfa and other hays, including native hay; sugar beets, wheat, oats, corn, rye, barley, potatoes, beans, forages, garden vegetables, including peas, snap beans and other vegetables raised for canning purposes; raspberries, blackberries, loganberries and other small fruits. Apples and other tree fruits are produced on a limited scale.

Mineral Resources—Few counties in the state have a wider variety of mineral resources than Boulder. The known minerals are amber, antimony, asbestos, barium, bismuth, cement material, cerium and yttrium (allanite), clays of many varieties, including kaolin, and fire clay; coal, copper, fluorspar, natural gas, gold, gravel, lead, marble, mercury, molybdenum, petroleum, pyrite, several varieties of shale; silver, titanium, tungsten, granite, sandstone, limestone and other valuable building stone.

Timber—There is considerable good timber in the western part of the county, principally pine, spruce and aspen.

Land Values—At the beginning of 1918 there was about 264,000 acres of privately owned land in the county, or a little more than 54 per cent of the total area. The records of the county

assessor show that in 1917, 87,931 acres was being farmed under irrigation; 24,214 acres was being farmed without irrigation; and 133,029 acres was grazing land; the remainder was principally coal and mineral land, town and city lots and railroad rights of way. There is a small amount of seep land in the irrigated districts in this county that has been damaged by over-irrigation, plans for the reclamation of which are now being worked out. On January 1, 1918, there was 9,010 acres of state land in the county, including some good argricultural area, for sale by the state on favorable terms. On July 1, 1917, there was but 720 acres of government land open to homestead entry, consisting of small isolated tracts of little economic value. The national forest area in this county is 126,970 acres. A portion of the Rocky Mountain national park lies in the northwestern corner of the county.

Transportation—The eastern and southern parts of this county are well supplied with railroad facilities. The railroads serving the county are the Burlington, Colorado & Southern, Union Pacific, Great Western, Denver & Salt Lake and Denver, Boulder & Western.

Highways—The principal primary state highway is the North and South road which passes through the extreme eastern part of the county from Denver by way of Lafayette and Longmont to Fort Collins and Cheyenne. There are numerous well improved secondary state roads, state highways and county roads, generally well improved and maintained, including two of the principal roads leading to the main entrance of the Rocky Mountain national park. Few counties in Colorado have better road systems than Boulder.

Educational—There are 63 public district schools in the county and four highschools, located at Boulder, Lafayette, Longmont and Louisville. The Colorado State university is located at Boulder, having been established here in 1879.

Climatological Data—The climate in this county shows a wide variation as a result of the variations in altitude. In the eastern part it is mild and very healthful, with comparatively light rainfall, moderate variations in temperature and a high percentage of sunshine. The city of Boulder and other towns in the eastern part of the county are famous for their healthful climate. The Boulder-Colorado sanitarium, a branch of the sanitarium at Battle Creek, Mich., is located at Boulder, the site having been chosen because of the favorable climate. In the western part, in the high altitudes, the climate is more severe, subject to low winter temperatures and extremely heavy snowfall. The average annual precipitation in the extreme eastern part is about 15 inches. Further west it increases rapidly, ranging from 15 to 20 inches, over a narrow strip including the city of Boulder, and west of there from 20 inches to as high as 30 inches along the slopes of the Continental divide.

Tourist Attractions—Tourist travel to the city of Boulder and the picturesque foothills and mountain districts directly west has been very heavy for a great many years. This territory has always been one of the most popular sections of the state with tourists and vacationists. In recent years tourist travel to the northern part of the county has been greatly increased through the establishment of the Rocky Mountain national park, which is reached by excellent automobile highways passing through this county. Eldorado Springs, on a branch of the Colorado & Southern railroad, in the southern part of the county, is famous for its mineral springs and its large open air bathing pool, as well as for the beauty of its surrounding foothill territory. It is visited by thousands of vacationists and sightseers annually. Railroad tourist travel to Eldorado, Ward and other points on the Denver, Boulder & Western railroad has been heavy ever since the construction of this road. The main route from Denver to the Rocky Mountain national park passes through the agricultural districts of eastern Boulder county and during the summer months is perhaps as heavily traveled as any automobile tourist highway in the state.

Cities and Towns—Boulder, the countyseat, is located near the mouth of Boulder canon in the southeastern part of the county. It is one of the most beautiful foothill cities in the state and is the principal supply point for an extensive agricultural and mining territory. It is a delightful residence city and is the home of the Colorado state university. The famous summer Chautauqua is held here on a picturesque site overlooking the city and the agricultural valley below. Longmont, in the northeastern part of the county, is the center of a very prosperous agricultural district, and is one of the most thriving cities in northern Colorado. In addition to the sugar factory and canning factory mentioned above, it has two flour mills, one

planing mill, two brick yards, two silo manufacturing plants, building tile factory, iron foundry and bottling works. Lafayette and Louisville, in the southeastern part of the county, are important coal mining centers and are surrounded by good agricultural land. Lafayette has a cheese factory and Louisville a meat packing plant. Lyons, in the northern part of the county, is the center of a prosperous agricultural and stock raising district and is an important tourist station, being the point where many railroad tourists transfer to automobiles for the trip to the Rocky Mountain national park. Among the other towns are Nederland, Ward and Eldora, mining communities in the western part of the county, and Niwot, a prosperous farming community on the railroad between Boulder and Longmont.

Special Opportunities—A wide variety of opportunities for investment in the development of natural resources is offered in this county. There is still a limited amount of uncultivated agricultural land. Especially favorable opportunities are offered for the development of the dairying industry in nearly all parts of the agricultural district. There are extensive deposits of good clay and kaolin in the neighborhood of Boulder, for the development of which capital is needed. Opportunities are offered at Longmont and other towns for the erection of factories to utilize agricultural products. There is much mineral land in the western part of the county, where a very wide variety of mineral deposits is found. Although mining has been carried on extensively here for more than 50 years there are still good opportunities offered for development in this direction.

CHAFFEE COUNTY

General Description—Chaffee county lies near the central part of the state, the western boundary being formed by the Saguache mountains, which here constitute the Continental divide; and the eastern boundary by the Park range. It has an extremely irregular outline, about 45 miles long, north and south, and about 25 miles wide near the central part. Its area is 693,120 acres, or about 10,000 acres more than that of the state of Rhode Island. The surface is principally mountainous and the altitude ranges from about 7,000 feet, at the point where the Arkansas river crosses the southern boundary, to more than 14,000 feet at the summits of some of the peaks in the Saguache range.

Early History—Captain Zebulon Pike visited this part of Colorado in December, 1806. Soon after his historic attempt to scale Pikes peak, Captain Pike and his party spent Christmas day near the present site of the town of Salida. Numerous hunters and prospectors entered the territory in the year following, but no attempt at settlement was made until the advent of the gold hunters of 1859 and 1860. Early in 1860 the prospectors crossed the Park range and found placer gold in the northeastern part of what is now Chaffee county. Several mining camps sprang up and for a good many years placer gold in large quantities was panned from the mountain streams in this section. During the early boom days of Leadville, what is now Chaffee county was a part of Lake county and the town of Granite was its countyseat. In 1879 Chaffee county was organized from a portion of Lake county and was named in honor of Jerome B. Chaffee, one of Colorado's first United States senators.

Surface and Soil—The county contains the upper valley of the Arkansas river, in which there is a considerable amount of good agricultural land. Though the seasons are short because of the high altitude, the soil is extremely fertile and stockraising and general farming have been carried on for a good many years. The western half of the county is extremely mountainous, culminating in the Saguache range. Among the principal peaks are three well known mountains of the Collegiate range: Mt. Harvard, 14,375 feet; Mt. Yale, 14,187 feet; and Mt. Princeton, 14,196 feet. Other prominent peaks are La Plata mountain, near the northern boundary, 14,342 feet; Mt. Shavano, 14,249 feet; and Mt. Antero, 14,245 feet. The extreme eastern part is also highly mountainous, but the peaks are not nearly so elevated. No soil survey of this area is available.

Population—The population in 1910 was 7,622, compared with 7,085 in 1900. The present population is about 12,000. In 1910 foreign-born white people made up 15.7 per cent of the total population. The principal foreign-born nationalities previous to the beginning of the war were Italian, Austrian, Irish and German.

Drainage and Water Supply—The Arkansas river has its source in Lake county and flows southeast through Chaffee county. This stream, with its tributaries, carries an abundant water supply and furnishes much of the water for irrigation of lands in this county and in the lower Arkansas valley

further east. The watershed here is in a region of high precipitation and is one of the most reliable sources of irrigation water in the state. Water for domestic use in some sections is obtained from wells and reached at depths varying from 5 feet to 40 feet.

Industries—The principal industries are metal mining, farming, stockraising, quarrying and lumbering. Stockraising is confined principally to the Arkansas valley. Metal mining is carried on extensively in the western and northeastern parts of the county. Important granite quarries are being operated in the neighborhood of Salida.

Crops—The principal crops are alfalfa, native hay, small grain, potatoes and garden vegetables.

Mineral Resources—The known minerals are asbestos, bauxite, bismuth, cerium (monazite), corundum, copper, fluorspar, fuller's earth, gold, graphite, iron, lead, marble, mimetite, molybdenum, platinum, silver, zinc, granite, sandstone, and other valuable building stones; aquamarine, beryl, garnet, sapphire and other gem stones; limestone and other cement materials.

Timber—There is an abundance of good heavy timber on the mountain slopes, principally pine, spruce and cedar.

Land Values—At the beginning of 1918 there was about 108,000 acres of privately owned land in the county, or a little more than 15 per cent of the total area. Of this amount, 21,445 acres was being farmed under irrigation and the rest was principally mineral land. On January 1, 1918, there was 19,352 acres of state land in the county, including considerable agricultural and grazing area, for sale by the state upon favorable terms. On July 1, 1917, there was 74,567 acres of government land open to homestead entry, most of which is of little value except for grazing purposes. The national forest area is 428,937 acres.

Transportation—The main line of the Denver & Rio Grande railroad follows the course of the Arkansas river through the county. The Colorado Midland railroad crosses the Park range near the town of Bath, on the eastern boundary, runs southwest to Buena Vista and north along the Arkansas valley to Lake county. A branch of the Colorado & Southern railroad follows the same general course. The main narrow gauge line of the Denver & Rio Grande railroad leaves the main standard gauge line at Salida and runs southwest across the corner of the county. A branch line leaves this road at Poncha Junction and runs west to Maysville, Garfield and other mining camps near the western border. A branch road of the Colorado & Southern railroad leaves Buena Vista and runs west to St. Elmo, Romley and other mining camps near the Continental divide.

Highways—The principal state highway is the Midland Trail, which follows in a general way the course of the Denver & Rio Grande railroad through the county. It is joined at Buena Vista by the Pikes Peak or Ocean to Ocean highway, which runs west from Colorado Springs. The Rainbow Route runs west from the Midland Trail at Salida through the southern part of the county. A branch of this road runs south into Saguache county. Numerous county roads and trails traverse all sections of the county and are in a general way sufficient for moving the products of the mines and farms to market.

Educational—There are 31 public district schools in the county and two district highschools, located at Salida and Buena Vista. There are no private schools and no colleges.

Climatological Data—The precipitation here is widely varied. A small area near the central part of the county, including the city of Buena Vista, has an average annual rainfall of about 10 inches. A belt immediately surrounding this, including most of the Arkansas valley, has an average rainfall of from 10 to 15 inches. Immediately east and west of this is a larger belt having an average annual rainfall varying from 15 to 20 inches. A narrow belt along the Saguache range has an annual rainfall varying from 20 to 25 inches. The climate of the Arkansas valley section of the county is comparatively mild, with short, warm summers and long, open winters. In the higher altitudes the climate is more severe with extremely heavy snowfall.

Tourist Attractions—This county contains some of the most rugged and picturesque mountain scenery in the state. The principal mountain peaks which have been named above are all well known to automobile and railway tourists. Cottonwood Hot Springs, six miles west, and Hortense Hot Springs, nine miles south of the town of Buena Vista, are famous for the curative properties of their waters, said to be of special value in cases of catarrh, rheumatism and lead poisoning. Poncha Springs, near the town of Salida, is also a health resort of considerable importance. There are 99

springs in this group, whose waters contain minerals of recognized curative values. A sanitarium is located here. The completion of the various state highways named above has greatly increased automobile travel through this county and there are few counties in the state that are visited by a larger number of automobile travelers annually. There are large areas of splendid mountain scenery that are still inaccessible because of lack of transportation facilities. The streams here are well stocked with trout and are much frequented by fishermen.

Cities and Towns—Salida, the principal city, is situate in the southwestern corner of the county on the main line of the Denver & Rio Grande railroad. The main narrow gauge line of this road also leaves the standard gauge line here, one branch running west to Montrose and Grand Junction and another south to Alamosa. Salida has large railroad shops, which give employment to a considerable number of its inhabitants. Buena Vista, the countyseat, is situate near the central part of the county in the heart of the principal agricultural district. It is one of the most picturesque mountain towns in the state. Among the other towns are Nathrop and Granite, on the main line of the Denver & Rio Grande railroad; and Romley, Monarch, Garfield, St. Elmo, and Sherrod, mining camps in the western part.

Special Opportunities—The principal opportunities offered here are in the line of mineral development. There are large areas of mineralized land that have been only imperfectly prospected. Rich deposits of granite and other monumental and building stone have been worked only to a limited extent and offer exceptional opportunities for further development. There is considerable good grazing land in the county that is not being pastured to its full capacity.

CHEYENNE COUNTY

General Description — Cheyenne county lies in the eastern part of the state, bounded on the east by the state of Kansas. It is a part of the great plains section of eastern Colorado and western Kansas. It is rectangular in outline, 60 miles long, east and west, and 30 miles wide. Its area is 1,137,280 acres, or about 120,000 acres less than that of the state of Delaware. Its surface is level or rolling, broken by low hills in the northeast. The altitude varies from 3,875 feet, on the eastern boundary, to about 4,600 feet in the southeast.

Early History—Hundreds of Colorado's earlier gold seekers traveled through what is now Cheyenne county on their journey to the Pikes Peak region, following what is known as the Smoky Hill route. This territory was at that time looked upon as a desert almost wholly unfit for habitation. The Great American Desert, as it was then called, was the most formidable obstacle to be overcome in the journey to the gold fields of the Rocky mountains. In the late 60's stockmen began to establish ranches in this area, and the subsequent history of Cheyenne county is much the same as that of the rest of eastern Colorado. For nearly twenty years stockraising was followed almost exclusively, and the ranchers led a precarious life, unfavorable seasons making it difficult for them to feed their stock and the hostile Indians who inhabited this region being always on the lookout for an opportunity to steal their cattle and horses and occasionally to scalp a few of the defenseless ranchmen. Following an Indian uprising in 1879 peace was established between the settlers and the Indians here and a new era of agricultural development began. The stockmen began to cultivate the soil to a limited extent and hundreds of homesteaders located here and divided the range with the cattle raisers. The county was organized in 1889 from parts of Bent and Elbert counties and was named for a band of plains Indians that frequented this region.

Surface and Soil—The surface is principally a rolling prairie with some extremely level valley lands along the creeks and a broken hilly region in the northeast, known as the Smoky Hills. The soil is principally a sandy loam, with restricted areas of adobe, gumbo and other hard soils. In some sections there is slightly more sand than is favorable for successful cultivation. Possibly 90 per cent of the area of the county is suitable for farming. The soil is deep and fertile, very retentive of moisture and yields readily to cultivation. No soil survey of this county is available.

Population—The population of this county has grown steadily since 1900. That year it was 510, and in 1910 the population was 3,687, an increase of 635.9 per cent in ten years. This is the largest increase in population shown by any county in Colorado during this period. The present population is about 4,500. In 1910 the foreign population was 9.5 per cent of the total. The principal foreign-born nationalties

at that time were German, Norwegian and Swedish.

Drainage and Water Supply—This county lies entirely in the Arkansas river watershed and is drained by numerous small streams flowing south and east. The principal streams are Rush creek and Big Sandy creek. Smoky Hill river has its source in the Smoky Hill region in the northeastern part of the county and flows east. These streams have their sources in regions of comparatively light rainfall and during the drier parts of the summer most of them carry very little or no water. They do not furnish a reliable source of supply for irrigation purposes. There is little irrigated land in the county. Water for domestic purposes is obtained principally from wells. A shallow water belt covers the western part of the county, where water is reached at depths ranging from 10 to 40 feet. In the eastern part, water is found at depths ranging from 30 to 150 feet. In 1883 an attempt was made to utilize underground water for irrigation purposes, and an artesian well was sunk at Cheyenne Wells, where an abundant supply of water was found at a depth of 1,700 feet. There has been no further attempt to utilize this water supply. Water for the shallower wells is pumped by means of windmills and engines and in some cases it is used for irrigating small areas.

Industries—The principal industries are farming, dairying and stockraising. Dairying has been developed rapidly in the past half dozen years and the success of the dairy farmers along the Union Pacific railroad indicates that this is to become the leading industry of the county. Forage crops make good yields almost every year and where farmers are properly equipped with silos for saving their forage for winter feeding they have been uniformly successful. Stockraising was formerly followed on a large scale, the stock being grazed on the open range. This range is now being cut up into small farms and grazing activities are considerably restricted. Large quantities of feed crops have been raised, however, and livestock are being fattened for market here instead of being sold as feeders.

Crops—The principal crops are milo, kafir corn and similar forage products; small grains, corn, beans, alfalfa and garden vegetables. The production of alfalfa in this section of Colorado is steadily increasing, the crop usually being planted in rows and cultivated until a good stand is obtained.

Mineral Resources—The known minerals are clays, building sand and building stone.

Land Values—At the beginning of 1918 there was about 955,000 acres of privately owned land in the county, or approximately 84 per cent of the total. This is nearly all classed by the county assessor as nonirrigated farm land, although a very small percentage of it is now in cultivation. There is a small amount of land being farmed under irrigation. The census bureau reported 200 acres of irrigated land in 1910. There is considerably more at the present time. Agricultural land here sells at from $7 to $30 an acre. On January 1, 1918, there was 54,066 acres of state land in the county, most of which is suitable for farming. This is for sale by the state on very favorable terms. On July 1, 1917, there was 1,685 acres of government land open to homestead entry, principally small isolated tracts of no value except for grazing purposes.

Transportation—The Kansas City-Denver line of the Union Pacific railroad runs through the central part of the county.

Highways—The principal state highway is that following in general the course of the Union Pacific railroad, known as the Union Pacific highway. This is a direct road between Kansas City and Colorado. It is now one of the best improved of the state highways entering Colorado from the east and is enjoying heavy automobile travel. A state highway extends north from Cheyenne Wells to Burlington and another north from Kit Carson to Vona, in Kit Carson county. A secondary state highway runs directly south from Kit Carson to Eads, in Kiowa county, and another south from Kit Carson to Sheridan Lake, in the same county. The county roads and secondary state roads are in good condition, the county having made remarkably rapid progress in road development in the last few years.

Educational—There are 83 public district schools in the county, and one highschool, located at Cheyenne Wells. There are no private schools or colleges.

Climatological Data—The climate is comparatively mild. Although there is considerable wind at some seasons of the year, the hot winds which cause so much damage to crops in western Kansas are practically unknown here. The summers are comparatively long and warm and the winters are mild. The rainfall in the northern and eastern parts varies from 15 to 18 inches,

and in the south and west it varies from 12 to 15 inches. Most of it comes during the growing season, between the months of April and October.

Tourist Attractions—There are few points of scenic interest in the county, but the improvement of the state highways leading in from the east has greatly increased automobile tourist travel by this route to the mountainous districts further west. As a result the county enjoys considerable benefit from automobile tourist travel.

Cities and Towns—Cheyenne Wells, the countyseat and principal city, is on the Union Pacific railroad, in the eastern part of the county. It is the center of a rapidly developing farming and dairying section. Other towns are Kit Carson and Wild Horse, on the Union Pacific railroad, in the western part of the county.

Special Opportunities—The principal opportunities offered here are along the line of general agricultural development. Not to exceed 10 per cent of the arable land in the county is now being cultivated. Farming without irrigation has proved very successful in the past 10 years, especially where dairying and stockraising have been made the basis of farming operations. There is probably 750,000 acres of unbroken land in the county which will be placed in cultivation in the near future.

CLEAR CREEK COUNTY

General Description—Clear Creek county lies in the north-central part of the state, the western boundary being formed by the Continental divide. It is of an irregular outline, with an extreme length, east and west, of about 25 miles, near the central part, and an extreme width of about 20 miles. Its area is 249,600 acres, or a little more than one-third that of the state of Rhode Island. The surface is principally mountainous and the altitude varies from 6,880 feet, at the northeastern corner, to more than 14,000 feet at the summits of some of the peaks in the western part.

Early History—This county has played a very important part in the history of Colorado. In January, 1859, the first important discovery of placer gold in Colorado was made by George A. Jackson, in the sands of Chicago creek, near the present site of Idaho Springs. Green Russell and others had found traces of gold, a few months before, in the sands of the Platte river, but their discoveries were of little importance, as the deposits there were far from their source and were very small. In one week Jackson and his associates washed out $1,900 of gold dust from the bar where his first discovery was made. The news of this find spread rapidly and experienced miners at once began their search for the veins from which this float gold originated. The result was the discoveries made by John Gregory and Green Russell in Gilpin county. From these discoveries dates the beginning of mining in Colorado. In 1860 the first discovery of silver in Colorado was made by a party of prospectors near the present site of Georgetown, in Clear Creek county. Discoveries of both gold and silver followed rapidly and the population of this district grew rapidly. The county was organized in 1861, soon after Colorado territory had been formed. It was named for the stream, along the course of which most of the early prospecting was done. The Georgetown district developed rapidly, being principally a silver producing area. In the vicinity of Idaho Springs the principal value in the compound ores found in the fissure veins was gold. The total mineral output of the county to date has been in excess of $100,000,000, most of which has been gold and silver.

Surface and Soil—There is very little level land except in the narrow valleys of the numerous streams which flow through the eastern part of the county. The soil is fertile, but the altitude is so high that farming can be carried on only on a very limited scale. In the western part are some of the most majestic mountain peaks in the state, most of which are visible from the city of Denver; among them are Mount Evans and Lincoln peak, and on the western boundary Mount McClellan, Grays peak and Torrys peak. There is no soil survey of the county available.

Population—There has been considerable fluctuation in the population of this county. In 1880 it was 7,823, that being almost the crest of mining activities; in 1890 it was 7,184; in 1900 it was 7,080; and in 1910 it had fallen to 5,001, the decrease being principally due to a decline in mining activity. The present population is about 6,000. In 1910 the foreign-born population was 25.1 per cent of the total, the principal foreign nationalities being Swedish, English and Canadian.

Drainage and Water Supply—The county lies in the South Platte watershed and numerous small streams have

their sources here, flowing east to the Platte. The principal stream is Clear creek. The precipitation in the western part of the county, where these streams have their sources, is extremely heavy and they carry a substantial supply of water the year round. A considerable part of the water used for the irrigation of lands in the vicinity of Denver has its origin in Clear Creek county.

Industries—The principal industry is metal mining. Farming is carried on to a limited extent in the lower valleys. Stockraising is also followed here, the stock being grazed on the fine grass lands within the national forest. There has been some lumbering, principally to supply local demands. Excellent building stone is found in the county and much of it has been quarried for local and general uses, Silver Plume granite having a wide reputation.

Crops—The principal crop is natural hay. Small amounts of potatoes and other root crops and hardy garden vegetables are grown.

Mineral Resources—The known minerals are antimony, bluestone, clays, copper, corundum, fluorspar, gold, lead, mica, pitchblende, platinum, silver, tungsten, zinc, and a wide variety of building stone. A molybdenum deposit of great importance occurs at Camp Urad, west of Empire, where large production is being made.

Timber—There is considerable timber in all parts of the county, principally pine, cedar, spruce and aspen.

Land Classifications—At the beginning of 1918 there was about 57,000 acres of privately owned land in the county, or approximately 23 per cent of the total area. The county assessor classes 32,576 acres of this as grazing land. The remainder is principally producing and nonproducing mineral land. On January 1, 1918, there was 5,414 acres of state land in the county, valuable principally for its possible mineral deposits, most of which is for sale by the state on favorable terms. On July 1, 1917, there was 20,180 acres of government land open to homestead entry, valuable principally because of the possible mineral contained. This land is open to prospecting under the public land laws and may be patented after ore bodies have been properly located. The national forest area is 147,791 acres. This land is also open to prospecting on the same conditions as other government land.

Transportation—A branch of the Colorado & Southern railroad extends from Denver up Clear Creek canon to Georgetown and Silver Plume. Another road, popularly known as the Grays Peak route, runs from Silver Plume to the mining camp of Waldorf and westward to the summit of Mount McClellan.

Highways—The principal state highway is that which runs west from Denver by way of Golden and Idaho Springs, Dumont, Lawson and Empire and crosses the Continental divide at Berthoud pass. This is the famous Lookout mountain route, passing through Denver's mountain parks, and one of the most heavily traveled automobile roads out of Denver. Branch automobile highways from this are well improved, and furnish many delightful scenic and fishing trips. They are, from Lawson to Georgetown, thence to Silver Plume and Greymont, the one time terminus of the Colorado & Southern railway, from which point the proposed Loveland pass route will climb the Continental divide, making a short cut from Denver to Leadville, 110 miles shorter than any present road; from Georgetown to Green and Clear lakes, is an excellent automobile road, unsurpassed in its scenic beauties. The coming season will see this branch improved to Naylor lake, a fishing resort of the first class, located at the edge of timber line, at an altitude of 11,500 feet, where comfortable cabins and excellent service invite the sportsman who likes his fish large and gamy. Chicago lakes, Lake Edith and Echo lakes, all charming, are reached by good wagon roads from Idaho Springs. Central City, of fame as an enormous gold producer, is reached by automobile road from Idaho Springs. There are numerous other county roads and trails, generally poorly improved, constructed principally for the service of metal mines, lumber and timber hauling.

Educational—There are 10 public district schools in the county, and two highschools, located at Georgetown and Idaho Springs. There are no private schools or colleges.

Climatological Data—The climate here is somewhat severe. The winters are long, with heavy snowfall and extremely low temperatures at the higher altitudes. The rainfall in the southern part varies from 13 to 15 inches, and in the north and west it increases very rapidly, being about 20 inches along the Continental divide.

Tourist Attractions—Tourist travel to Idaho Springs, Georgetown and Sil-

ver Plume has always been heavy. Before automobile highways were constructed into this section of the state, there was much summer tourist travel over the Colorado & Southern railroad. This route contains the famous "Georgetown Loop," which has been a great attraction for tourists during the past 20 years. The road to the summit of Mount McClellan is also a popular tourist route. In the past few years automobile tourist travel to this section has grown rapidly and travel by rail still continues heavy. Idaho Springs, which takes its name from a group of mineral springs located here, is one of the most popular health and tourist resorts in the state, both summer and winter. These waters contain mild solutions of carbonate and sulphate of sodium and are said to be impregnated with radium salts. Their temperature ranges from 75 degrees to 120 degrees Fahrenheit.

Cities and Towns—Georgetown, the countyseat, is located near the central part of the county on the Colorado & Southern railroad. It is the center of one of the most active mining districts in the state. Idaho Springs, the principal city, is located on the Colorado & Southern railroad, in the northern part of the county. Among the other towns are Silver Plume, Dumont, Lawson, Freeland, Alice, Lamartine, Waldorf, Empire and Daily, mining camps.

Special Opportunities—There are large areas of government land in this county, which presumably contain mineral deposits. Though mining has been followed extensively here for nearly 60 years, the ore values have not nearly played out and new discoveries are being made very frequently. Deep mining here is profitable and rich deposits are opened up at great depths, from which there are no surface outcroppings. It is generally conceded that the future success of mining operations in this county depends upon the extent of deep mining enterprises.

CONEJOS COUNTY

General Description—Conejos county lies in the south central part of the state, and contains a portion of the southern end of the San Luis valley. The Rio Grande river forms the eastern boundary and the main range of the Rockies forms the western. It is of rectangular outline, with an extreme length, east and west, of 45 miles, and an extreme width, north and south, of 30 miles. The area is approximately 714,960 acres, or about 32,000 acres greater than the area of Rhode Island. The surface is a level valley in the east, rising rather abruptly in the west to the Continental divide. The altitude ranges from about 7,000 feet in the extreme southeast to more than 13,000 feet at the summit of some of the mountain peaks near the western border.

Early History—The territory now included in this county was visited by Spanish explorers perhaps as early as 1600. The first authentic records of the visit of American explorers is contained in the writings of Captain Zebulon Pike, who entered this region in the spring of 1807, shortly after his historic attempt to climb Pikes peak. On the banks of the Conejos river, about five miles above its mouth, Captain Pike and his party built a stockade, which was the first structure erected by Americans in this region. It was then Spanish territory, and Pike was captured by the Spaniards and taken to Santa Fe soon after the erection of the stockade. The territory now included in Conejos, Costilla and Alamosa counties was ceded by Mexico to the United States in 1848. The first settlement in what is now Conejos county, and one of the first settlements in Colorado, was made in 1854 by Major Lafayette Head and a party of about 50 Mexicans, near the present site of the town of Conejos. Conejos was one of the original 17 counties in Colorado territory, and was originally much larger than it is today.

Surface and Soil—In the eastern part the surface is level and the soil is a very fertile sandy loam of great depth. This section was at one time a part of an immense lake, and the soil is made up largely of mineral and vegetable matter laid down by its waters. Further west the surface becomes broken and rises rapidly to the San Juan range, which here forms the Continental divide. The soil here is coarser, being formed almost wholly by the weathering of the rocks of these mountains. There is an excess of alkali in the soil in some sections, but projects are now under way which promise by drainage to remove much of the harmful substances, or to neutralize their effect by the use of gypsum or other similar substances. The only soil survey available is a general survey of the valley made by the bureau of soils of the United States department of agriculture and published in 1904.

Population—The boundaries of Conejos county have been changed since 1910 and no comparison can be made between the present population and

that returned by the last census. The present population is approximately 5,000. The population of the county as it was constituted in 1910 was 5,494. This included the city of Alamosa, with a population at that time of 3,013, which is now in Alamosa county. The entire population of Conejos county as it is now constituted is classed as rural, there being no town having a population in excess of 2,500. The percentage of foreign-born population in 1910 was 3.4 and it is perhaps about the same at this time. A good many of the earlier settlers were Spaniards or Mexicans, and there is now a considerable number of Spanish speaking people, though, perhaps, most of them are native born. Development in the agricultural districts has been comparatively rapid since 1910 and the population in these districts has increased materially.

Drainage and Water Supply—The Rio Grande river and its tributaries afford drainage and water supply for irrigation. The principal tributaries are the Conejos, La Jara and Alamosa rivers, all of which have their origin near the eternal snows of the San Juans and carry good supplies of water the year round. Artesian wells supply most of the water for domestic purposes and for livestock in the agricultural districts, the flow of water being reached at depths ranging from 100 to 600 feet.

Industries—The principal industries are agriculture, stockraising and dairy farming. There is some mining in the extreme northwestern part and lumbering and tie-making are followed to some extent in the mountain districts. At the beginning of 1918 there was approximately 220,000 acres of privately owned land, of which approximately 85,000 acres was being cultivated under irrigation, and about 9,500 acres was classed as natural hay land, mostly irrigated. There is over 270,000 acres of national forest land in the western part of the county, much of which is good grazing area. There is considerable undeveloped agricultural land and the county would support a much larger agricultural population than it has at present.

Land Values—Irrigated land here, with good water right, may be purchased at prices ranging from $50 to $100. Nonirrigated land, some of which will ultimately be placed under irrigation, but much of which is useful only for grazing, costs from $25 to $35. At the beginning of 1918 there was in the county 61,338 acres of state land, much of it suitable for cultivation, which may be purchased from the state on reasonable terms. On July 1, 1917, there was in the county 144,640 acres of government land open to homestead entry, most of which is of little value except for grazing purposes.

Mineral Resources—The principal minerals found in the county are gold, silver, copper, zinc, granite, sandstone and other building stone, clays, sand and gravel. There has been some production of gold and silver, but the deposits that have been worked are remote from a railroad and the development has been but slight.

Timber—There is considerable timber in the mountains in the western part of the county, principally pine, spruce and cedar.

Transportation—A narrow gauge line of the Denver & Rio Grande railroad system coming from Alamosa runs south through the county to Antonito, where it branches, one line running west to Durango and on to a connection with the main line of the system at Montrose and the other running south to Santa Fe, N. M.

Highways—A state highway runs south along the route of the Denver & Rio Grande railroad to Conejos and Antonito. From the latter place this road swings west and makes a passage across the mountains at Cumbres pass, one branch going south to Santa Fe, N. M., and another west to Durango. A part of this highway is in New Mexico and it is not in good condition for automobile travel across the mountains at present. From Antonito a road runs south into New Mexico along the railroad line and another east to San Luis, Costilla county. A road from the Alamosa-Antonito line runs west near the north boundary of the county to the mining camps in and near Stunner. There are numerous county roads in the eastern end of the county, sufficient for the present needs of the farmers and stockmen.

Educational—There are 28 public schools in the county, and three high-schools, located at La Jara, Antonito and Sanford. There are no private schools and no institutions of higher education.

Climatological Data—The average annual rainfall in the eastern part of the county varies from 6.5 to 10 inches, being too light for profitable farming without irrigation. Westward it increases rapidly as the elevation increases, being above 25 inches near the summit of the main range on the western boundary. These regions of

high rainfall contain the headwaters of the streams that irrigate the valley lands of the county. The climate in the valley section of the county is equable, the winters being open and especially favorable for stockfeeding. Further west, in the higher altitudes, the climate is more irregular, with extreme cold in winter.

Tourist Attractions—There is a wealth of beautiful mountain scenery in the western part of the county, most of which at present is very difficult of access because of lack of transportation facilities. The tributaries of the Rio Grande afford excellent trout fishing, especially in their upper courses.

Cities and Towns—Antonito, the principal railroad center, situated in the southern part, has a population of about 700. Manassa, the largest town, is the center of a prosperous agricultural and stockraising section in the eastern part. Sanford is a prosperous agricultural town in the same district. La Jara and Romeo are important railroad towns. Conejos, the countyseat, is one of the oldest settlements in the county and is about one mile from Antonito. Other towns are Oritz, Ephriam, Richfield and Guadalupe.

Special Opportunities—The principal opportunities offered here are along the line of agricultural development. There is perhaps 150,000 acres of arable land in the county not under cultivation and the county would support perhaps 50 per cent more farmers than it has at present. There are also good opportunities for stockraising and dairy farming. The opportunities in the various towns depend to a considerable extent upon further agricultural growth. Mineral resources in the western part of the county are largely undeveloped, but further development will depend largely upon extension of transportation facilities.

COSTILLA COUNTY

General Description—Costilla County is located in the south-central part of the state, and includes a portion of the southern end of the San Luis valley. The Rio Grande Del Norte river forms a part of the western boundary, the Sangre de Cristo mountain range the northern and eastern part, and the state of New Mexico the southern part. The area is approximately 810,000 acres, or about 100,000 acres more than the combined areas of the state of Rhode Island and the District of Columbia. The county is of an irregular rectangular shape, with an extreme length, north and south, of about 54 miles and an extreme width, east and west, of about 32 miles. The surface in the southwest is a level valley, which rises rather rapidly toward the east and northeast, culminating in the high peaks of the Sangre de Cristo range. The altitude ranges from about 7,500 feet in the southwest to more than 14,000 feet at the summits of Old Baldy and other peaks of the Sangre de Cristo range.

Early History—The territory now included in Costilla county was visited by Spanish Explorers as early as 1600, and some gold is said to have been found at that time near the present site of Fort Garland. Attempts at colonization were first made about 1849, and later settlements were attempted on a large tract of land known as the Sangre de Cristo Grant, a part of which lay in New Mexico, but some in the southern part of what is now Costilla county. The first attempts at settlement were made in the southern part of the county, and later colonies were established on the Trinchera river. In 1852 the United States government established Fort Massachusetts in the sheltered valley near the Sierra Blanca, on the west bank of Ute creek. Six years later the fort was moved a short distance and renamed Fort Garland. It was dismantled and abandoned in 1883, but the town of Fort Garland now occupies the same site. Costilla county was organized as one of the original 17 counties of Colorado territory in 1861, being at that time considerably larger than now. A large part of the area was included in old Spanish land grants.

Surface and Soil—The surface is level in the southwest, but becomes more broken as it rises toward the summits of the Sangre de Cristo range. The valleys of several small streams extend across it from the mountain slopes toward the southwest. The soil is principally a sandy loam, of a coarse, gravelly mixture, easily worked and usually very fertile. In the southwest this soil is formed principally by detritus laid down on the bed of an ancient lake, which formerly occupied this area. Further north and east it is formed chiefly from the weathering of the rocks of the Sangre de Cristo range. It is well adapted for general agriculture, and under irrigation raises excellent crops. The only soil survey of the district ever made was that of the bureau of soils of the United States department of agriculture, published in 1904.

Population—Though Costilla county was one of the first sections of Colo-

rado to be settled, its development has been slow, chiefly because its area is made up largely of immense land grants, whose owners showed little inclination to break them up into smaller agricultural units and populate them. Its first settlers were Spaniards and Mexicans, and the population today includes a great many Mexicans, especially in the older towns in the southern part. In 1910 the population was 5,498. Since that time a part of the county has been taken away to form a portion of the new county of Alamosa, and the present population of what is left is about 5,000. There are no large cities, practically all of the population being classed by the census bureau as rural. The percentage of foreign-born white people is very small, native whites forming about 96 per cent of the total population in 1910 and perhaps a larger percentage today.

Drainage and Water Supply—The Rio Grande river and its tributaries afford the principal drainage and the tributaries supply water for the irrigation of practically all irrigable land. The chief tributaries are the Trinchera, Culebra and Costilla rivers, which have their sources in the snows of the Sangre de Cristo range and flow south and west across the county. Irrigation reservoirs in the county have an aggregate capacity of about 130,000 acre-feet, and water from them supplements the direct flow from the streams during the drier periods of the summer, affording thus an ample supply for crops at all times during the growing season. Water for domestic purposes is obtained from these streams and from wells.

Industries—Farming and stockraising are the principal industries. At the beginning of 1918 there was approximately 770,000 acres of privately-owned land in the county, or about 95 per cent of the total area. This is the highest percentage of privately-owned land shown in any county in the state with the exception of Denver. A little more than 80,000 acres of this area was being cultivated under irrigation in 1917, and the county assessor at that time classed 675,650 acres as grazing land, of which a large part is suitable for cultivation. There is considerable irrigated natural hay land and some irrigated pasture. This is an excellent stockraising district, especially for cattle and sheep. The higher lands in the eastern and northern parts afford excellent summer pasture, and hay in abundance, while field peas, barley, oats and like grain crops supply an abundance of winter feed. Dairying is being followed more extensively each year and conditions are favorable for the further development of the industry. There has been some mining in the county for many years, but the annual mineral output is comparatively small.

Land Values—Privately-owned irrigated land sells at from $30 to $100 an acre. In the northern part, in the vicinity of Fort Garland and Blanca, where land was sold several years ago in five and ten-acre tracts, it is being offered at as low as $30 an acre to persons desiring to cultivate larger acreages. Further south under another irrigation system, where the water right passes with the land, prices range from $65 an acre for raw land to $100 an acre for improved farms. There is a large amount of nonirrigated land, valuable chiefly for grazing purposes, which may be had at prices ranging from $3 to $20 an acre.

Mineral Resources—The known minerals are gold, silver, magnetic iron ore, granite and other varieties of stone, potash, brick clay and building sand.

Timber—There is considerable timber in the mountains in the east and north, principally pine, spruce and some cedar. Lumbering and tie-making are important industries in these sections.

Transportation—The Denver & Rio Grande standard gauge railroad passes east and west across the northern end of the county. The San Luis Southern railroad leaves this line at Blanca and extends south through the heart of the principal agricultural section to Jaroso, near the New Mexico line. Pueblo is the nearest large market reached over these lines.

Highways—The principal state highway is the Spanish Trail, crossing the north end of the county, north of the Denver & Rio Grande railroad. A secondary state highway leaves this line at Fort Garland and runs south through San Luis, the countyseat, to Taos, N. M. Another extends westward from San Luis to a connection at Antonito, Conejos county, with the road across Cumbres pass to Durango. There are numerous county roads, ample in a general way for moving the products of the farms to railway points.

Educational—There are twelve public schools in the county. At present there are no schools offering a com-

plete highschool course and no institutions of higher education.

Climatological Data—In the principal farming district, in the southwest part of the county, the average annual rainfall varies from 7 to 10 inches, being too low for profitable farming without irrigation. It increases rapidly toward the mountains, being above 20 inches at the summits and along the slopes of the Sangre de Cristo range. This area furnishes the water supply for irrigation, which is ample for all purposes. Because of the high altitude the growing season in the county is shorter than in the agricultural districts of the eastern part of the state, but with an abundance of sunshine and plenty of water for irrigation crops mature very rapidly. The winters are open and not excessively cold, and in the agricultural districts are very favorable for feeding stock in the open.

Tourist Attractions—Some of the finest mountain scenery in Colorado is to be found in and about the Sierra Blancas, on the northern boundary, and in the Culebra range, along the eastern boundary. The streams all afford good fishing. Recently several of the private lakes and reservoirs have been stocked with trout, and now are fine fishing waters, though special permits must be obtained to use them.

Principal Towns—There are no towns of more than 500 population in the county. San Luis, the countyseat, is the center of a prosperous agricultural district in the southern part. Other agricultural towns in this section are San Acacio and Chama. Jarosa is the terminus of the San Luis Southern railroad and the point from which three stage lines radiate into nearby New Mexico towns. Blanca and Fort Garland, on the Denver & Rio Grande railroad, are the principal shipping points.

Special Opportunities—The principal opportunities here are for agricultural development. The county can support fully twice as large an agricultural population as it has today. There is no state land and only about 8,000 acres of government land open to homestead entry, most of which is of little value for agricultural purposes. Stockraising is usually carried on in this county in connection with cultivation of the soil, and there is considerable room for the development of this industry as well as dairy farming. There are two successful dairies in this county. Considerable mineralized territory, almost wholly undeveloped and but little prospected, is to be found in the north and east.

CROWLEY COUNTY

General Description—Crowley county lies in the southeastern part of the state, including a portion of the Arkansas valley. It is an irregular square, 30 miles long by 30 miles wide. Its area is 560,800 acres, about 120,000 acres less than that of the state of Rhode Island. The surface is generally level or rolling. The altitude varies from 4,100 feet, in the southwest, to about 4,500 feet in the north.

Early History—Hunters and trappers visited this section of Colorado frequently in the early part of the last century, but no permanent settlements were made. The agricultural development of this portion of the Arkansas valley began in the 70's and was comparatively rapid. The county is one of the younger group of Colorado counties, having been created in 1911 from the northern part of Otero county. It was named in honor of the Hon. John H. Crowley, who was state senator from Otero county at the time the division was made.

Surface and Soil—The southern part lies in the Arkansas valley and is a broad, level stretch of excellent agricultural land. It rises in the north into a level or broken prairie, where agriculture has been followed to a limited extent in the past half dozen years. The soil in the southern part is principally an alluvial or sandy loam with small adobe areas. In the north it is principally sandy, with occasional stretches of shale or adobe soil. It is very fertile and generally easy to work. A detailed soil survey of most of the irrigated area in this county has been made by the bureau of soils of the United States department of agriculture.

Population—Since the county was organized in 1911, there is no data available showing its growth in population. The agricultural sections of the southern part have been developed for a great many years and the population has increased steadily and at present is about 7,000. The percentage of foreign-born inhabitants is very small, perhaps less than five per cent.

Drainage and Water Supply—The Arkansas river flows along the southern boundary and, with its tributaries, supplies water for irrigation. The principal tributary is Horse creek, which has its source in the Arkansas divide and flows south across this county into the Arkansas. There is

water available for considerable more land than is now being cultivated under irrigation. Water for domestic purposes is obtained principally from wells and is reached at depths ranging from 50 to 75 feet. Artesian water is reached in some sections at from 1,200 to 1,500 feet. At various points in the county springs furnish abundance of water for domestic purposes. The shallower wells are pumped by means of wind mills and in some sections furnish a limited supply of water for irrigation.

Industries—The principal industries are farming, stockraising, stockfeeding and manufacturing. Farming is carried on principally in the southern part of the county in the irrigated districts. In recent years there has been considerable development of the nonirrigated districts in the north, which have proved to be fairly profitable agricultural areas. Stockfeeding is followed extensively in the southern part. Thousands of cattle and sheep are shipped in here annually for fattening during the fall and winter months. The principal manufacturing industry is the making of beet sugar. At Sugar City the National Sugar company has a factory; at Ordway, Crowley and Olney there are alfalfa meal mills, and at Olney there is a canning factory.

Crops—The principal crops are alfalfa and other cultivated hays, native hay, sugar beets, wheat, oats, barley, rye, corn, beans, garden vegetables, apples and other fruits, and a variety of seed crops.

Mineral Resources—The known minerals are clays, road surfacing materials, building sand and building stone.

Land Values—Irrigated land in this county sells at from $100 to $300 an acre. Nonirrigated land, including both farming and grazing land, sells at from $10 to $30 an acre. On January 1, 1918, there was about 168,000 acres of privately owned land in the county, or approximately 30 per cent of the total area; of this amount, according to the records of the county assessor, 45,399 acres was being cultivated under irrigation, 6,378 acres was being farmed without irrigation and 114,412 acres classed as grazing land. The remainder is principally town and city lots and railroad rights of way. At the beginning of 1918 there was 62,904 acres of state land in the county, including a considerable amount of good farming land, for sale by the state upon reasonable terms. On July 1, 1917, there was 9,240 acres of government land open to homestead entry, of little value except for grazing purposes.

Transportation—The Missouri Pacific railroad runs across the southern part of the county by way of Sugar City and Ordway. The main line of the Santa Fe runs along the southern boundary and furnishes transportation for some of the farm products in the extreme southern part.

Highways—The principal state highway is the Central Kansas Boulevard, which follows the line of the Missouri Pacific railroad across the county and joins the Santa Fe Trail near the southwestern corner. Numerous county roads have been fairly well improved and are in a general way sufficient for the transportation of farm crops to market.

Educational—There are 14 public district schools in the county and two highschools, located at Ordway and Sugar City. There are no private schools or colleges.

Climatological Data—The climate here, as in other parts of the Arkansas valley, is mild and very healthful. The summers are long and warm and the winters are comparatively short, with moderate temperatures. The rainfall varies from 12 to 15 inches annually.

Tourist Attractions—The improvement of the Central Kansas Boulevard across this county has greatly increased the automobile travel, this being one of the principal highways leading into Colorado from the east. The county is generally level and destitute of natural scenic attractions, but is of keen interest, however, to visitors from the east, because of the extensive development of farming and irrigation. Olney Springs derives its name from large natural springs located near here. Water from these springs is pumped to the towns of Olney Springs and Ordway for domestic use. The distance from the springs to Ordway is 18 miles, and farmers along the route have tapped the watermain to obtain their domestic water supply.

Cities and Towns—Ordway, the countyseat, is located on the Missouri Pacific railroad, near the central part of the county in the heart of the prosperous agricultural district. Sugar City is the site of the second sugar factory built in eastern Colorado, which was first operated in 1900. Other towns are Crowley and Olney Springs, on the Missouri Pacific railroad.

Special Opportunities—The principal opportunities offered here are in the line of agricultural development of the land in the northern part of the county

which is suitable for cultivation. Improved methods of farming without irrigation have been introduced in the past few years, proving that this area can be farmed at a profit. There is perhaps sufficient undeveloped agricultural land in the county to support as large an agricultural population as is now being supported by the land under cultivation.

CUSTER COUNTY

General Description—Custer county lies in the south-central part of the state, the Sangre de Cristo mountain range forming the western boundary. It is of an irregular triangular shape, with an extreme length at the base, which is the north boundary, of 38 miles, and a width of 25 miles. Its area is 478,080 acres, or about 200,000 less than that of the state of Rhode Island. It is a high plateau, rising into a rugged range of hills near the eastern boundary and culminating in the Sangre de Cristo range on the west. The altitude varies from about 6,700 feet, at the northern boundary, to more than 14,000 feet at the summit of some of the peaks in the Sangre de Cristo range.

Early History—Early Spanish explorers and fortune hunters who visited southern Colorado are believed to have reached as far north as Custer county, but no authentic records of their travels here are extant and no evidences of their activities are to be found. Captain Pike left the camp which he established at the mouth of the Royal Gorge early in 1807 and wandered south along the course of Grape creek into the Wet Mountain valley near the present site of Silver Cliff. He was in search of the headwaters of Red river. About January 15 he led his men to the base of the Sangre de Cristo range, near the southwestern corner of what is now Custer county. The party was overtaken here by a blizzard and nine men were frozen in the extremely cold winter that followed. Immediately after the rush of gold hunters to the Pikes Peak region, prospectors found their way into the Wet Mountain valley and discovered small traces of gold and silver along Hardscrabble creek. No important discoveries were made, however. The first permanent settlement in the valley was in 1869. A German colony, led by Carl Wulsten, located in the south half of the valley and their descendants are among the leading farmers in that locality today. Rich strikes of gold were made in the early 70's and the towns of Silver Cliff and Rosita were established. In 1879 and 1880 there was a rush of miners to this district, and in 1880 Silver Cliff was the third largest town in the state, with a population of over 5,000. The county was organized in 1877 from a part of Fremont county.

Surface and Soil—The Wet Mountain valley, one of the most prosperous agricultural districts in the state, occupies the central part of the county and extends into Fremont county. The surface here is level and the soil is extremely fertile. Surrounding this valley is a large area of more elevated plateau land which for many years has been a prosperous stockgrowing district. The surface rises very abruptly in the west to the Sangre de Cristo mountains. A range of low hills extends across the southern boundary and through the eastern part. No detailed soil survey of this area is available.

Population—The population of this county has shown wide variations. It was largest in 1880, being at that time 8,080. In 1890 it was 2,970; 1900, 2,937; and in 1910 it was 1,947. The present population is about 2,200. The decline after 1880 was due to a sharp falling off in mining activities. In 1910 the foreign-born white people made up 16.5 per cent of the total population. The principal foreign-born nationalities previous to the war were German and English.

Drainage and Water Supply—The principal streams in the county are Grape creek and Texas creek, which flow north into the Arkansas river. Hundreds of small streams have their sources in the Sangre de Cristo range and flow across the valley below, forming a natural irrigation system the equal of which can scarcely be found anywhere else in the west. There is water available for considerably more land than is now being cultivated under irrigation. Water for domestic purposes in the agricultural districts is obtained principally from wells and is reached at depths ranging from 10 feet to 40 feet.

Industries—The principal industries are farming, stockraising and metal mining. Farming is carried on principally in Wet Mountain valley. Good grazing land surrounds this valley on all sides and recently a considerable amount of the hay lands has been put in cultivation without irrigation. The rainfall here is sufficient for the production of almost any crops grown in Colorado.

Crops—The principal crops are al-

falfa, native hay, small grain, potatoes and garden vegetables.

Mineral Resources—The known minerals are alunite, copper, fluorspar, gold, gypsum, lead, nickel, silver, granite, sandstone and a variety of other stones.

Timber—There is good timber on the high lands in the east and west, principally pine, spruce and cedar.

Land Values—At the beginning of 1918 there was about 128,000 acres of privately owned land in the county, or a little more than 26 per cent of the total area. Of this amount about 18,000 acres was being cultivated under irrigation and about 103,000 acres was classed as grazing land. Irrigated land in this county costs from $30 to $80 an acre, and nonirrigated land, including some farming land, from $8 to $25 an acre. On January 1, 1918, there was 13,145 acres of state land in the county, most of which is valuable principally for grazing purposes. On July 1, 1917, there was 38,280 acres of government land open to homestead entry, some of which is suitable for farming. The national forest area is 160,776 acres.

Transportation—A branch of the Denver & Rio Grande railroad leaves the main line at Texas creek, in Fremont county, and runs south to Westcliffe. This is the only railroad in the county.

Highways—The state highway runs west from Pueblo to Silver Cliff, the countyseat. It branches here and one line runs northeast to Canon City and another runs northwest to Cotopaxi. Another state road runs south and east from Silver Cliff to a connection with the main north and south road north of Walsenburg, in Huerfano county. There are numerous county roads, sufficient in a general way for the movement of crops to market.

Educational—There are 22 public district schools and one private school in the county, but no colleges.

Climatological Data—The climate in the Wet Mountain valley is comparatively mild and very favorable for general agriculture. In the high surrounding lands it is more severe and subject to extremely heavy winter snowfall in the south and west. The average annual rainfall in the northern part of the county is from 17 to 20 inches. South and west of this territory is a larger belt having an average precipitation of from 20 to 25 inches. A small area in the southern part of the county has a precipitation of over 25 inches annually.

Tourist Attractions—This valley is comparatively little known even to Colorado people, although it contains much beautiful mountain scenery. It is little visited by tourists because of lack of good highways and favorable railway facilities. The mountain streams are all well stocked with trout and promise to become among the most popular fishing waters in Colorado when they are better known.

Cities and Towns—Westcliffe, the principal city, is the terminus of a branch of the Denver & Rio Grande railroad. Silver Cliff, the countyseat, is located about two miles east of Westcliffe. Among the other towns are Rosita, Queriba, Wetmore and Greenwood.

Special Opportunities—Opportunities are offered here for both agriculture and mining development. State and government lands suitable for cultivation are to be found in considerable quantity and privately owned land may be obtained at reasonable prices. The county would support perhaps a 50 per cent larger agricultural population than it now has. Mining has been followed here for more than 35 years and important ore discoveries have been made within the last two or three years. There is a large area of mineralized land in the county that has enjoyed but comparatively little development.

DELTA COUNTY

General Description—Delta county lies in the western part of the state and includes a considerable part of the agricultural area known as the Uncompahgre valley. It is of an irregular triangular outline, with an extreme length east and west across the base of 48 miles and an extreme width north and south of 40 miles. Its area is 768,640 acres, or about 85,000 acres more than that of the state of Rhode Island. The surface is irregular, being a high plateau rising into mountain peaks in the northeast and extending into level or broken valleys in the south and southeast. The altitude varies from about 4,750 feet, at the point where the Gunnison river crosses the western boundary, to more than 9,000 feet on the Grand mesa in the northern part.

Early History—This territory lies in the large tract of land that was occupied by the Ute Indians during the early period of the settlement of Colorado. By treaty made between those Indians and the United States the Indians were removed to the Uintah reservation in Utah in 1881 and settlers soon began to flock into the valley lands throughout this district.

The first known white settler was a Frenchman, Antoine Roubideau, who built a trading post near the present site of the town of Delta about 1840. Gunnison's expedition traveled down the Uncompahgre river in 1853. No settlements of importance were made, however, until after the removal of the Ute Indians above referred to. Delta county was organized in 1883 from a part of Gunnison county.

Surface and Soil—The valleys of the Gunnison and Uncompahgre rivers are from 3 to 12 miles wide, with extensive sloping table lands lying further back both north and south. The North Fork and Surface Creek valleys both contain much excellent agricultural land. The soil in all of these valleys is extremely fertile, but shows a very wide range of composition and texture. The soil on the table lands is principally a sandy loam, fertile, but readily susceptible to irrigation. A detailed survey of the Uncompahgre valley area, made by the bureau of soils of the department of agriculture in 1910 and published in 1912, describes the soils of a considerable part of the agricultural lands in this county.

Population—The population was 13,688 in 1910, compared with 5,487 in 1900. The increase was due largely to agricultural development which followed the completion of the government reclamation project, by which water was diverted from the Gunnison river for the irrigation of lands in the Uncompahgre valley, and to the wonderful opportunities for farming, fruitgrowing and stockraising in nearly all parts of the county. The present population is about 15,000. In 1910 the foreign population was 7.7 per cent of the total, the principal foreign nationalities being Russian, German and Canadian.

Drainage and Water Supply—The Gunnison river flows through the southern part of the county and with its tributaries furnishes the drainage and water supply. The principal tributaries here are the Uncompahgre, North Fork and Tongue creek. Water for irrigation is obtained principally from the North Fork and its tributaries for the lands along this stream; from Tongue creek and its tributaries for lands directly north and east of Delta, and from the Gunnison river by way of the tunnel and diversion canal for the irrigation of the Uncompahgre valley lands. Water for domestic purposes in the agricultural districts is obtained largely from wells and is found at depths ranging from 8 to 25 feet.

Industries—The principal industries are general farming, including stockraising, dairying and fruitgrowing. Coal mining is followed to a considerable extent. There has been some drilling for oil and gas, though development in this direction has not yet reached any considerable proportions.

Crops—The principal crops are alfalfa and other hays, both cultivated and wild, wheat, oats, rye, barley, corn, potatoes, onions, apples, pears, peaches and other tree fruits and some small fruits.

Mineral Resources—The known minerals are clays, coal, oil shale, petroleum, gypsum, natural gas, sand, sandstone, granite and other building stone.

Timber—There is considerable timber within the national forest areas, on the Grand mesa and elsewhere, principally yellow pine and spruce.

Land Values—There is a wide variety here in the selling price of irrigated land. Unimproved land with good water rights may be purchased at from $50 to $75 an acre, while improved irrigated farms and growing orchards bring from $100 to $300 an acre. Nonirrigated land, valuable principally for grazing purposes, costs from $5 to $25 an acre. At the beginning of 1918 there was about 204,000 acres of privately-owned land in this county, or approximately 26 per cent of the total area. Of this amount, a little over 68,000 acres, including improved fruit land, is being farmed under irrigation, and 37,371 acres is classed by the county assessor as nonirrigated farm land. This county has no state land. On July 1, 1917, there was 250,562 acres of government land open to homestead entry, most of which is of little value except for grazing purposes.

Transportation—A standard gauge line of the Denver & Rio Grande railroad passes through the southwestern corner of the county, by way of the town of Delta, following in a general way the valley of the Uncompahgre and Gunnison rivers. A branch of this road runs northeast from Delta up the North fork of the Gunnison river by way of Hotchkiss and Paonia to the coal mining towns of Bowie, in Delta, and Somerset, in Gunnison county.

Highways—The principal state highway is the Rainbow Route, which passes through the southwestern corner of the county from Montrose to Grand Junction by way of Delta. A branch of this road, or, more properly, a co-ordinate route with the one previously mentioned, is that which ex-

tends east from Delta to Hotchkiss and thence southeast through Crawford to a connection with the other route at Sapinero. This is known as the Black Mesa road. A new highway has recently been completed through Cedaredge to the top of the Grand mesa, affording an automobile route to the many lakes and reservoirs in this territory.

Educational—There are 22 public district schools in the county, and five highschools, located at Cedaredge, Delta, Eckert, Hotchkiss and Paonia. There are no private schools or colleges.

Climatological Data—The rainfall in this county is comparatively light except in the high altitudes on the Grand mesa. In the Uncompahgre valley it averages less than 10 inches annually; in Surface Creek and North Fork valleys it averages perhaps 12 inches. On the Grand mesa, which contains the headwaters of some of the streams supplying water for irrigation in this county, the average annual rainfall is as high as 30 inches. The climate ranks with the best in Colorado. The summers are comparatively long and warm and the winters are short and open.

Tourist Attractions—The completion of the Rainbow Route has greatly increased automobile tourist travel to this district. The Grand mesa is a popular section for tourists. It has more than 100 lakes and reservoirs, most of which may be reached by good automobile roads, and afford some of the finest fishing to be found in the west. Most of the smaller streams in the county also are well supplied with trout.

Cities and Towns—Delta, the county-seat, located at the mouth of the Uncompahgre river, is the principal town and the main distributing point for one of the finest agricultural and fruit-growing districts in the west. Other towns are Paonia, Hotchkiss, Lazear, and Austin, on the North Fork branch of the Denver & Rio Grande railroad; Eckert, Coalby and Cedaredge, in the Surface Creek valley; and Escalante and Roubideau, on the main line of the Denver & Rio Grande railroad, and Crawford in the southeastern part of the county.

Special Opportunities—The principal opportunities offered here are for agricultural development and such commercial development in the various towns as will follow the growth of the rural agricultural population. There are valuable coal deposits that are yet only partially developed. The oil shale deposits in the northern part of the county are attracting considerable attention. There has also been intermittent prospecting for oil and some drilling for a great many years.

DENVER COUNTY

General Description—Denver county is identical as to boundaries with the city of Denver. It lies near the foothills on the eastern side of the Rockies, in the north-central part of the state. It is the smallest county in Colorado, having an area of 37,120 acres. The South Platte river flows north through the central part of the county, and Cherry creek, coming in from the southeast, enters the Platte near the business center of the city. The valleys of these streams contain the lowest altitudes in the county and the surface rises gradually to the east and west of these streams, being generally level or gently sloping. The altitude varies from 5,180 to 5,300 feet.

Early History—There is a tradition that a wandering trader washed out some gold from the sands of Cherry creek near where that stream enters the South Platte river, more than 70 years ago, and that the story of his discovery is what brought Green Russell and other gold hunters to this particular section of Colorado. At any rate Russell and his party did find gold in the sands of Cherry creek, near the present site of the city of Denver, in the summer of 1858, and Denver had its birth in a rough village built by gold seekers on both banks of the stream in the latter part of that year. At first the settlement was in reality two villages. That on the west bank of the stream was called Auraria, and that on the east bank received the name "Denver," in honor of James W. Denver, then governor of Kansas territory, which at that time extended west to the Rocky mountains. For a few years these villages remained separated and a certain amount of rivalry existed between them. These jealousies were soon forgotten, however, and the two settlements united into one town, which was proudly called Denver City. It was originally in Arapahoe county, as Denver county was not organized until 1902. The county was then considerably larger than at present. In 1909 part of its territory was annexed to Adams county, leaving the boundaries of Denver county as they are at present.

Population—No better idea of the rapid growth of Denver can be obtained than is shown by the follow-

ing statistics of its population from 1860 to the present time:

Year	Population
1860	2,500
1870	4,759
1880	35,629
1890	106,713
1900	113,859
1910	213,859
1918	268,439

The census report of 1910 was compiled after the boundaries of Denver county had been reduced to their present limits. Previous to that time the figures were only for the city of Denver, which was included in Arapahoe county. The boundaries of the city were extended between 1900 and 1910, so that the increase in the decade ending with 1910 is partly accounted for by additions of suburbs to the city. In 1900 the population of all the territory now included in the city of Denver was 140,472, making the increase for the decade ending with 1910 approximately 62 per cent, as compared with an increase of 48 per cent for the entire state. In 1910 the foreign-born white population in the city was 18.2 per cent of the total, the principal foreign nationalities, in the order named, being German, Russian, Swedish, English, Irish, Canadian, Italian, Austrian and Scotch.

Government—Under an amendment to the state constitution the Denver county and city governments have been consolidated, the functions assigned by the constitution to county officials being in nearly all cases performed by city officials whose duties under the city charter are similar. The official style of the joint political corporation is the City and County of Denver. The city of Denver has had several forms of government. Until the adoption of the amendment to the state constitution before referred to its government was separated from that of the county. Litigation for several years after this amendment was adopted preventing the actual consolidation of the functions of the like city and county officials, and both city and county governments were independently maintained in some departments. At the present time the consolidation is practically complete so far as is possible under existing constitutional regulations and statutes. The so-called "mayor form" of government, with bi-cameral legislative council, was abolished in 1913 and a type of commission government was adopted. This proved unpopular, and in 1916 a modified "mayor form" of government, non-partisan and having some features of the so-called "manager form," was adopted.

Public Utilities—Denver's water system is privately owned, but negotiations have been under way for a good many years looking toward the municipality's taking it over from the Denver Union Water company, which now owns and operates it. There are few cities in the country having a better water supply than Denver's, which is drawn from mountain streams many miles west and south of the city. Electric light also is furnished by a private corporation, much of the current being developed by water power on the western slope of the Rocky mountains and brought across the range over high voltage transmission lines. Gas for heating and light is supplied by the same company. The street railway system is privately owned, operated by a single company, which also operates many traction lines to nearby cities and towns. The telephone company serving Denver operates throughout Colorado and several other western states. It has about 47,000 subscribers in the city of Denver.

Railway Transportation—Eight railroads enter the city and furnish excellent facilities for bringing the products of the state here for market and distributing the manufactured articles produced here to other parts of the country. These roads are the Chicago, Burlington & Quincy, Colorado & Southern, Denver & Rio Grande, Denver & Salt Lake, Chicago, Rock Island & Pacific, Great Western, Atchison, Topeka & Santa Fe, and Union Pacific. Several of the roads named have more than one line entering the city, some of them having as many as four.

Financial—Denver has 41 banking institutions, including five national banks. On December 31, 1917, their combined assets were $140,151,998.88 and their total deposits were $123,154,164.07. Bank clearings for 1917 were $870,998,188.54, as compared with $682,799,556.00 for 1916. Denver is the financial center of the Rocky Mountain west and most of the big mining, manufacturing, irrigation and other concerns operating in Colorado and neighboring states do some or all of their business through the banks of this city.

Public Improvements—The following tabulation, taken from the records of the office of the manager of improvements and parks, gives some idea of the character and extent of street and drainage improvements:

All streets	1,000 miles
Surfaced	224 miles
Paved streets	57 miles
Parked boulevards	18 miles
Double parkways	10 miles
Curbing	751 miles
Paved alleys	49 miles
Sidewalks	775 miles
Sanitary sewers	495 miles
Storm and combination sewers	141 miles

The city boulevard system comprises 125 miles of improved driveways, connecting the principal parks and other points of interest in the city. There are 30 city parks, with an aggregate area of 1,300 acres, and 15 public playgrounds, comprising about 20 acres. The Civic Center, adjoining the state capitol grounds, contains nine acres. Its improvement is not complete, but a comprehensive plan has been worked out under which it is to be made one of the most attractive city centers in the world. The municipal auditorium is one of the finest in the country, having a seating capacity of about 12,000. A municipal pipe organ has recently been installed here and frequent free public organ recitals are given. There is one central city library, located on the Civic Center, and seven branch libraries, with two yet to be constructed. The value of all public properties of the city, exclusive of streets, alleys and sewer system, was approximately $16,500,000 on May 1, 1918.

City Finances—On May 1, 1918, there was outstanding $5,398,100 in park and local improvement bonds. At the same time there was $526,506.39 of cash on hand in the sinking fund for the payment of these bonds, leaving a net bond debt for parks and local improvements amounting to $4,871,593.61. These obligations are assessed against the property in specified districts, for the purchase and improvement of parks and the construction of street, sewer and other like improvements in those districts. They represent obligations that are met by special tax levies, and not by the revenue from general taxation. On April 1, 1918, there was outstanding $1,373,400 in general city bonds, which are to be met by the revenues from general taxation. At that time the city had cash on hand and investments against these bonds amounting to $962,072.69, leaving a net general bond debt of $411,327.31. As stated above, the value of all public properties, exclusive of streets, sewers, etc., on May 1, 1918, was $16,500,000. The report of the city auditor shows the value of all property of the city, including roads, sewers, etc., was $26,736,869.87 at the close of 1917.

Manufacturing—The city has grown very rapidly as a manufacturing center in recent years, and at present is turning out a considerable volume of goods in different lines for the use of the government in the prosecution of the war. No accurate data on its manufacturing output for 1917 can be secured, but the following tabulation, taken from census reports, shows something of its activity in this line from 1909 up to the beginning of the war:

1914—Number of establishments, 885; number of wage earners, 11,062; wages and salaries, $11,326,000; value of output, $46,982,000; capital invested, $44,679,000.

1909—Number of establishments, 765; number of wage earners, 11,065; wages and salaries, $11,424,000; value of output, $46,925,000; capital invested, $47,534,000.

1904—Number of establishments, 722; number of wage earners, 9,672; wages and salaries, $8,529,000; value of output, $36,660,000; capital invested, $27,434,000.

1899—Number of establishments, 574; number of wage earners, 8,500; wages and salaries, $6,417,000; value of output, $37,906,000; capital invested, $31,271,000.

The number of wage earners shown in the table is the average through the year. In 1909 there were engaged in the manufacturing industry in Denver, in addition to those classed as wage earners, the following: Proprietors and firm members, 668; salaried officers, superintendents and managers, 713; clerks and other office employes, 1,969. The figures for 1909 are somewhat different from those published with the 1910 census report, since that report contained statistics for a few manufacturing establishments not within the city limits. They have since been revised to include only factories in the city, and the statistics here given are taken from the revised sheets. Since 1914 there has been a very material increase in the value of goods manufactured, resulting partly from increased output and partly from the very substantial increase in the value of manufactured goods. More than 100 different lines of goods are produced. Meat-packing takes first rank in the value of output. In 1914 bread and bakery products ranked second, with foundry and machine-shop products third. At present foundry and machine products probably rank second and flour-mill and grist-mill products third. The Denver Manufacturers' association, a bureau of the Denver Civic and Commercial association, has done active and effective work in encouraging the manufacturing industry of the city, largely by stimulating the use here of Colorado-made goods and by bringing large war contracts to the city.

General Business—Denver is the principal wholesale and jobbing center of the Rocky Mountain west and its trade territory is steadily expanding. It is also distributing headquarters for many large manufacturing industries located in other parts of the country.

Educational Facilities—The city has 68 public schools. They include 59 elementary schools, five highschools, two manual training highschools, one trade school and one combined opportunity school. In addition there are the Denver university, Colorado Woman's college, and numerous private and sectarian schools, academies and colleges and many business, trade and professional schools. The city is recognized as one of the best educational centers in the west.

Churches—There are in the city approximately 260 churches, including nearly all established denominations. Twenty-one of these are Catholic and 14 Jewish. Methodists lead the protestant denominations, with 51 churches. There are three Christian Science churches, one Unitarian, one Universalist and one United Brethren.

Building Regulations—Denver's building regulations are rigid, particularly with regard to provisions affecting fire protection, and uniformity of building lines and structures. The building code at present requires fireproof construction of some type in all parts of the business sections and forbids the erection of frame structures except in the most remote residence districts. As a result Denver's residences are almost exclusively of brick, stone, cement or some type of fireproof material. Few cities of the size of Denver have so large a number of beautiful small homes. Twelve stories is the limit for the height of buildings in the business district and but few buildings are that high. Usually they occupy more extensive ground space than do office buildings in cities that permit the erection of structures of greater height. The strict enforcement of fireproofing regulations in building construction, together with an efficient fire department, has kept the fire loss in the city at a low figure. In 1917 it was $270,313.

State and Other Public Buildings—Denver is the capital of Colorado, and the capitol building, situated on very attractive grounds adjoining the Civic Center on the east, is one of the most impressive buildings in the west. It is constructed of Colorado granite. Just across Fourteenth avenue to the south is the state museum, and across Colfax avenue, opposite the capitol, is the state military headquarters, the office of the adjutant general, which has become one of the busiest departments in the state government as a result of the heavy duties added by the participation of the United States in the World War. The postoffice, in the downtown business district, is built of Colorado white marble, cost more than $2,500,000, and is one of the handsomest structures in the city. The Denver branch of the United States mint is on Colfax avenue just west of the Civic Center. The Denver Civic and Commercial association and the various bureaus connected with it are housed in the association's building on Champa street, half a block from the postoffice.

Federal Department—About 40 federal offices and bureaus, exclusive of special war bureaus, have their headquarters in Denver, among them being the following: Reclamation service, forest service, bureau of animal industry, general land office, geological survey, Indian service, bureau of mines, immigration department, grain standards inspection service, public roads and rural engineering, secret service, postoffice inspection, and various bureaus of the interstate commerce commission, department of labor, department of the treasury and department of commerce. Most of these bureaus are headquarters from which the work in a considerable part of the Rocky Mountain west is directed.

Tourist Attractions—It is beyond the scope of this volume to catalogue in detail the many attractions for tourists to be found in and about Denver. The city's mountain parks, however, are unique and deserve special mention. Under an amendment to the state constitution Denver is authorized to condemn and acquire land for park purposes within a radius of 30 miles from the city limits, and the people of the city have voted a special tax levy to provide for the maintenance of the parks. On May 1, 1918, there was approximately 2,700 acres in these mountain parks, located in the scenic foothills region directly west of the city. Through these parks the city has built more than 50 miles of highway and has aided in the construction of roads leading to the parks from Denver to Golden and from Denver to Morrison. The circle drive through the parks covers 63 miles and is one of the most popular short automobile drives in the state. There are within the parks numerous shelter houses,

open-air ovens, camp sites and other accommodations for visitors.

Climatological Data—The general characteristics of the climate of Denver are fairly well known throughout the country and are becoming better known each year, as the number of tourist visitors increases. Its special advantages can not be adequately stated in figures, for few people are able to appreciate the effects of high altitude, low humidity, moderate air movements and like climatic conditions without actually experiencing them. General figures published elsewhere in this volume show the important climatic conditions peculiar to Denver and other cities and towns in the state. A few comparisons are given here, however, as a guide by which those who have enjoyed the climate of Denver and vicinity may explain why Colorado climate is perhaps the best in the United States. The average annual precipitation in Denver is 14.02 inches, as compared with 44.6 inches in New York, 33.3 inches in Chicago, 37.2 inches in St. Louis, 37.3 inches in Kansas City, Missouri; 43.5 inches in Washington, D. C.; 28.7 inches in St. Paul, 49.4 inches in Atlanta, 57.4 inches in New Orleans, 47.1 inches in Galveston, 22.3 inches in San Francisco, and 45.1 inches in Portland, Oregon. The mean annual humidity in Denver is 52 per cent, against 72 per cent in New York, 74 per cent in Chicago, 70 per cent in St. Louis, 70 per cent in Kansas City, Missouri; 72 per cent in Washington, D. C.; 72 per cent in St. Paul, 72 per cent in Atlanta, 78 per cent in New Orleans, 81 per cent in Galveston, 80 per cent in San Francisco, and 74 per cent in Portland, Oregon. The altitude of Denver is one mile above sea level, which accounts in a large measure for many of the advantages of its climate. It should be stated here that other cities in Colorado show even more favorable comparisons with the cities named above than does Denver and that in all parts of the state the special climatic advantages peculiar to Denver are present.

DOLORES COUNTY

General Description—Dolores county is in the southwestern part of the state, bounded on the south by Montezuma county and on the west by Utah. It is of rectangular outline with an extreme length, east and west, of 65 miles, and an extreme width of 24 miles. The area is 667,520 acres or slightly less than the area of the state of Rhode Island. It is broken table land in the west which rises to the summits of the La Plata, Rico and San Miguel mountains, on the eastern border. The altitude varies from about 5,900 feet in the extreme southwest to about 13,000 feet at the summits of some of the peaks on the eastern boundary.

Early History—That this territory was visited by Spanish explorers and fortune hunters in the 18th century is proven by traces of ancient mining operations in the vicinity of Rico similar to those known to have been carried on by other Spanish explorers in southwestern Colorado. There is no indication of any important discoveries made there. A party of trappers employed by the St. Louis Fur company made a temporary settlement on the Dolores river about 1833. The Baker expedition which set out from California Gulch, in what is now Lake county, in 1860, reached this territory in the spring of 1861. There were numerous other stray prospectors and fur hunters in the territory previous to 1874, but no settlements of importance were made until after the treaty with the Southern Ute Indians in 1873. The Rico mining district was first worked systematically in 1878. The territory now included in Dolores county was first a part of La Plata county. It was organized as a part of Ouray county in 1877 and Dolores county as it now exists was created in 1881.

Surface and Soil—In the western part the surface is a succession of high mesas cut by numerous canons and narrow valleys. Some of the mesa land is suitable for cultivation but most of the valleys are too narrow for farming. The surface is rugged and broken in the central part and rises rapidly toward the east to the summit of the mountains on the eastern and northeastern boundaries. The soil in the valleys and on the mesas is a sandy loam, very fertile in some districts but in others coarse and unsuitable for cultivation. There is no soil survey of this territory available.

Population—Dolores county is the least developed and most thinly populated county in Colorado. Its population in 1910 was 642, about one person for every 1,040 acres of land. The density of population of the entire state in 1910 as calculated by the United States census bureau, was 7.7 per square mile and for Dolores county it was 0.6 per square mile. The population at the beginning of 1918 was approximately 1,000. In 1910 the native white population was 71.8 of the total. The percentage of foreign-

born people is considerably lower than it was in 1910. Previous to the war the foreign-born population was made up chiefly of Austrians, Italians and Germans.

Drainage and Water Supply—The Dolores river and its tributaries furnish the principal drainage. The river has its source in the San Miguel mountains in the eastern part of the county, flows south into Montezuma county and turning north again, crosses the west end of Dolores county. A few small tributaries of the San Juan river have their sources in the southwest corner of the county. There is water available for the irrigation of considerable land but irrigation development at the present time is very limited. Water for domestic purposes in some sections is obtained from wells at depths ranging from 25 to 125 feet.

Industries—Mining is the principal industry. The Rico mining district has been producing steadily for nearly 40 years. There has been some agricultural development in the river valleys and stockraising is carried on rather extensively. Lumbering and tie-making have also been important industries at various times in the past.

Crops—The principal crops are alfalfa, natural hay, wheat, oats, barley, corn, potatoes, garden vegetables and some fruits.

Mineral Resources—The known minerals are alunite, antimony, carnotite, clays, coal, copper, fluorspar, gold, gypsum, lead, silver, zinc, granite and other building stone. Gold, silver, copper, lead and zinc have been mined in large quantities and are still being produced. The Rico district was formerly one of the biggest silver producing sections of the state. There are extensive deposits of stone and clay but they are almost wholly undeveloped because of remoteness from market.

Timber—There is considerable heavy timber in the mountainous districts in the eastern part of the county, principally pine and spruce. Some cedar and pinon is found on the higher lands in the western part.

Land Values—Irrigated land in this county sells at from $75 to $150 an acre. Nonirrigated land, valuable chiefly for grazing purposes, may be had at prices ranging from $5 to $25. In the beginning of 1918 there was, according to a report of the county assessor only about 25,500 acres of privately-owned land in the county, or less than 4 per cent of the area. Of this, 1,517 acres was being farmed under irrigation and 4,350 acres was being cultivated without irrigation. At the beginning of 1918 there was 11,000 acres of state land in the county, some of which is suitable for farming and is for sale by the state government upon reasonable terms. On July 1, 1917, there was 154,687 acres of government land left open to entry, some of which is suitable for cultivation but most of which is valuable only for grazing purposes. The national forest area within the county is 303,846 acres.

Transportation—The Rio Grande Southern railroad passes through the eastern part of the county.

Highways—Road building has been slow in this county, but remarkable progress is being made at present. A state highway from Cortez by way of Rico to Ridgeway is now being improved and soon will be one of the principal north and south thoroughfares in the western part of the state. Another state road is under construction from Cortez through the central part of Dolores county to a connection with the Paradox valley road near Norwood. It is expected that these roads will be so far completed in 1919 as to afford good automobile routes into the San Juan basin from the Rainbow Route and other highways passing east and west across the state.

Educational—There are 10 public district schools in the county. There are no highschools, private schools or colleges.

Climatological Data—The rainfall varies from about 13 inches in the west to about 25 inches in the mountain districts in the eastern part. There is plenty of water for farming without irrigation in most of the dry farming districts but little progress in this direction has been made. The climate in the western part is mild and equable while in the eastern part the winters are severe with extremely heavy snowfall.

Tourist Attractions—There is a wealth of picturesque mountain scenery in the eastern part of the county which is comparatively little known even to Colorado people, because of lack of transportation facilities. The completion of the state highway previously referred to will greatly increase tourist travel to this section. Good trout fishing is to be had in most of the mountain streams and in a few of the mountain lakes.

Cities and Towns—Rico, the county-seat, is the only important town. Other smaller settlements are Dunton, a mining town, with important hot springs, and Dove Creek, center of a prosperous non-irrigated district. These

towns are principally postoffices and supply stations.

Special Opportunities—Opportunities are offered here for both agricultural and mining development. It has been previously pointed out that there is a large amount of land in the western part of the county which, under favorable conditions, might be cultivated successfully, but which has been allowed to lie idle because of remoteness from railroads. While the Rico mining district has been producing extensively for a great many years, there is still a large area of mining territory which has been only imperfectly prospected and which may reveal rich metal deposits. The Rio Grande Southern railroad passes through the eastern part of the county so that the agricultural lands in the western part are at least 50 miles from any railroad. There are deposits of carnotite ore of uncertain richness in the western part of the county which have never been developed because of lack of transportation facilities.

DOUGLAS COUNTY

General Description—Douglas county lies in the north-central part of the state, the western boundary being formed by the Platte river and the South Fork of the Platte. In outline it is a truncated triangle with the southern boundary forming the base. It is 30 miles long and its width is 30 miles at the southern boundary, and about 20 miles at the northern boundary. Its area is 540,800 acres, or about 142,000 acres less than that of the state of Rhode Island. The surface varies from level or gently rolling plains, in the west and north, to a rugged foothill district in the southwest. The altitude varies from 5,400 feet in the northwest, to about 7,600 feet in the extreme southwest.

Early History—The Long expedition explored a considerable part of what is now Douglas county in 1820. Dr. Edwin James, the historian of this expedition, explored the colossal rock ruins in the vicinity of the present countyseat and gave them the name of Castle Rock because of their resemblance to an ancient castle. They bear that name today and the town established at their base nearly 60 years later is called Castle Rock. Fremont's party traveled through the eastern part of the county in 1843 on the way to Pueblo. In the middle of the last century military expeditions frequently passed back and forth over a well beaten path along Cherry creek, in the eastern part of the county. Green Russell and his historic band of gold seekers passed this way down Cherry creek to its mouth near the present site of the city of Denver in 1858. A few settlements were made in 1859 and 1860. The county was one of the original 17 counties of Colorado territory, as it was organized by the act of the first Colorado territorial legislature in 1861. It was named for Stephen A. Douglas. At that time the county extended eastward to the Kansas line. A part of it was taken to form Elbert county in 1874.

Surface and Soil—The principal agricultural areas are located in the valleys of the various streams in the northern and central parts of the county. The Platte river forms the western boundary and the principal tributaries flowing through this area are Cherry creek and Plum creek. The soil in the valleys of these streams is principally a rich alluvial loam of great depth. There are numerous small mountain parks, suitable for cultivation, having principally a black or chocolate loam soil of exceptional fertility. In the eastern part of the county there is a considerable area of broken land suitable only for grazing purposes, and the rugged foothill district in the southwest lies in the Pikes Peak national forest. No soil survey of this area is available.

Population—The population of this county has grown steadily, though not very rapidly. In 1880 it was 2,486; in 1890 it had increased to 3,006; in 1900 it was 3,120; and in 1910 it was 3,192. The present population is in the neighborhood of 5,000. In 1910 the foreign-born population was 16.4 per cent of the total, the principal foreign nationalities being German, British, Irish, Mexican and Swedish.

Drainage and Water Supply—The county lies wholly within the South Platte watershed, the divide between this and the Arkansas river watershed passing just south of the county line. The Platte and South Fork rivers both carry a substantial water supply here and the small streams usually carry a considerable amount of water the year round. Irrigation is confined largely to the valleys of these streams, the water rights being principally old filings on direct flow from the various streams. Water for domestic purposes and livestock is obtained largely from wells and springs, and is reached at depths varying from 20 feet, or less, to 75 feet.

Industries—The principal industries are farming, dairying, stockraising, quarrying, lumbering and manufactur-

ing. There is a large amount of good grazing area in the county and stock-raising has always been carried on extensively. Dairying is very general, but is confined principally to the territory tributary to the branch line of the Colorado & Southern railroad in the northeastern corner, and to the valleys of Cherry creek, and its tributaries, and Plum creek, east and west, and its numerous affluents. The first sawmill in Colorado was set up in the Plum creek valley, in this county, in 1859, and lumbering has been carried on to a limited extent ever since. There is an abundance of good building stone in the county and several quarries have been put in operation, principally in the vicinity of Castle Rock.

Crops—The principal crops are alfalfa and other hay, including considerable natural hay; corn, wheat, oats, rye, barley, potatoes, forage crops, pinto beans and garden vegetables.

Mineral Resources—The known minerals are clays, suitable for pressed brick, earthenware, drain tile and similar products; coal, fluorspar, gold, silver and a wide variety of building stone. There was much prospecting in this territory during the early settlement of Colorado and some production of gold and silver resulted. The coal deposits are considerable, but have not been developed.

Timber—There is considerable timber in the southeastern and southwestern parts of the county, principally pine, cedar and spruce.

Land Values—At the beginning of 1918 there was about 375,000 acres of privately-owned land in the county, or a little less than 70 per cent of the total area. The county assessor classes 7,394 acres of this as irrigated farm land, 4,340 acres as natural hay land, and 62,599 acres as nonirrigated farm land. Most of the remainder is classed as grazing land. Irrigated land here sells at from $25 to $100 an acre, and nonirrigated land at from $5 to $25 an acre. On January 1, 1918, there was 10,721 acres of state land, including considerable agricultural area, for sale by the state on favorable terms. On July 1, 1917, there was but 2,620 acres of government land open to homestead entry, consisting of small isolated tracts of little economic value.

Transportation—The Elbert county branch of the Colorado & Southern railroad passes through the northeastern corner of the county. The main lines of the Denver & Rio Grande, Colorado & Southern, and Santa Fe railroads between Denver and Pueblo run through the central part of the county. The Platte canon branch of the Colorado & Southern railroad follows the Platte canon along the western boundary of the county to the town of South Platte.

Highways—The principal state highway is the North and South road, which runs through the central part of the county. This is perhaps the most heavily traveled automobile road in the state, being the principal route between Denver, Colorado Springs and Pueblo. There are numerous secondary state highways and county roads in all parts of the county, usually well improved. Good second and third state highways are those along Cherry and West Plum creeks, passing through Parker. Few counties in the state have better road systems.

Educational—There are 35 public district schools in the county, and two highschools, located at Castle Rock and Parker. There are no private schools or colleges.

Climatological Data—The climate here is much the same as that in other counties lying along the eastern foothills of the Rocky mountains. The rainfall in the northeastern corner is about 15 inches annually, but increases gradually toward the southwest, being perhaps 20 inches in the more elevated areas in the southwestern corner. The summers are not unpleasantly hot and the winters are usually comparatively mild. The same dry, healthful atmosphere, with a high percentage of sunshine and low percentage of moisture, that characterizes most sections of Colorado is to be found here.

Tourist Attractions—This county is being visited by increasing numbers of automobile tourists each year. There is heavy tourist travel over the highways between Denver and Colorado Springs as well as over the main railroads passing through this county. The South Platte canon branch of the Colorado & Southern railroad has been one of the most popular tourist roads in the state for a good many years. There is much attractive mountain scenery in the western and southwestern parts of the county. Decker's Springs is a tourist resort of great popularity, which may be reached over good automobile highways from Denver. The mineral springs located here are noted for their curative waters. Lake Cheesman, one of the principal sources of water supply for the city of Denver, is on the western border of the county, in a picturesque foothill region. Perry Park, in the south-

central part of the county, about four miles west from Larkspur, is an attractive resort, now reached over a direct highway between Denver and Colorado Springs. It is much admired for its fantastic rock formation.

Cities and Towns—Castle Rock, the countyseat, is situated on the Santa Fe, Colorado & Southern and Denver & Rio Grande railroads, near the central part of the county. It was incorporated in 1881, but its growth has been only moderate. It is the center of a prosperous farming, stockraising and dairying district. Louviers, on the Santa Fe railroad, near the northern part of the county, is the location of one of the largest munitions manufacturing plants in the Rocky Mountain region. It belongs to E. I. Du Pont de Nemours and company. Among the other principal towns are Greenland, Larkspur, Sedalia and Douglas, located on the various railroads running through the central part of the county; Parker, on the Colorado & Southern railroad, in the northeastern part; and Franktown, an inland town east of Castle Rock.

Special Opportunities—There is considerable agricultural land in this county not yet under cultivation, though not nearly so much as in the prairie counties further east. Extensive stone deposits have been only partially developed and offer encouraging opportunities for investment of capital in conservative quarrying operations. There is considerable area here that shows indications of being mineralized and the possibilities of developing ore bodies in this county are moderately encouraging.

EAGLE COUNTY

General Description—Eagle county lies in the west-central part of the state and includes a large part of the mineralized area known as the sulphide belt. The surface is principally mountainous and the eastern boundary is formed by the Gore range of mountains. Its area is 1,036,800 acres, or about 200,000 acres less than that of the state of Delaware. It is of a rectangular outline with an extreme length east and west of 48 miles and an extreme width of 38 miles. The altitude ranges from about 6,150 feet, where the Grand river crosses the western boundary, to over 13,000 feet at the summit of mountain peaks in the east and southeast.

Early History—The territory now included in Eagle county was first visited by explorers and prospectors in the early 50's, but no permanent settlement was made until 1879. At that time prospectors from Lake county entered the valley of the upper Eagle river and made discoveries of gold and silver near the present site of the town of Redcliff. The county was organized in 1883 from a part of Summit county.

Surface and Soil—There is considerable agricultural land in the northwestern part of the county, in the valleys of the Grand and Eagle rivers and on the bench lands lying just above these valleys. The soil here is formed principally by the weathering of neighborhood rocks and is very fertile, being especially rich in the mineral foods necessary for the production of crops. These valleys are very narrow, but the bench lands above them are usually broad and contain thousands of acres of good pasture land. The eastern and southeastern parts are mountainous, with considerable good grazing land in the small mountain valleys and along the upper courses of some of the streams. There is no soil survey of this area available.

Population—The population in 1910 was 2,985, as compared with 3,008 in 1900. The present population is about 3,500. In 1910 the foreign-born white population was 19.3 per cent of the total. Previous to the war the principal foreign-born nationalities were Swedish, Canadian, English and Greek.

Drainage and Water Supply—The Grand river flows through the northwestern corner of the county. The Eagle river has its source in the southeastern corner and flows north and west to a junction with the Grand river near the western boundary. These streams, with their numerous small tributaries, furnish the drainage and supply an abundance of water for all necessary purposes. There is some irrigated land along these streams, especially along the Eagle river, and there is water available for much more land than is now being irrigated in the western part. Water for domestic purposes is, in some cases, obtained from wells and is found at depths varying from 10 feet to 75 feet.

Industries—Mining is the principal industry. General farming, including dairying and stockraising, is followed to a considerable extent along the valley of the lower Eagle river. Lumbering and tie-making have been followed to a limited extent in the eastern part. There has been some quarrying of stone, principally for local uses.

Mineral Resources—The known minerals are carnotite, copper, gold, gypsum, lead, manganese, iron, silver, zinc,

turquois, granite and various other building stones.

Timber—There is considerable heavy timber in the eastern and southern parts, principally pine and spruce.

Land Values—At the beginning of 1916 there was, according to the records of the county assessor, about 98,000 acres of privately-owned land in the county, or approximately 9 per cent of the total area; of this amount about 20,000 acres was being cultivated under irrigation and about 70,000 acres was classed as grazing land. Most of the remainder is mineral land. Irrigated land in this county may be purchased at from $25 to $200 an acre. Nonirrigated land, valuable for grazing purposes, costs from $1.25 to $10 an acre. At the beginning of 1918 there was 18,647 acres of state land in the county for sale by the state upon favorable terms. On July 1, 1917, there was 250,991 acres of government land open to homestead, a considerable amount of which is suitable for farming purposes. The national forest area is 593,826 acres.

Transportation—The main line of the Denver & Rio Grande railroad passes through the county, following in a general way the course of the Eagle river. The Colorado Midland railway passes through the southwestern corner, as does the Aspen branch of the Denver & Rio Grande railroad. The Denver & Salt Lake railroad enters the county for a few miles in the north.

Highways—The principal state road is the Pikes Peak or Ocean to Ocean highway, which follows in general the valley of the Eagle river through the county. A state highway runs north from the Ocean to Ocean road at Wolcott to Kremmling, in Grand county, where it connects with another primary state highway running by way of Berthoud pass to Denver and west over Rabbit Ear pass into Routt and Moffat counties. There are numerous other county roads and trails, developed principally for the mining camps.

Educational—There are 30 public district schools in the county, and four highschools, located at Basalt, Eagle, Gypsum and Redcliff. There are no private schools and no colleges.

Climatological Data—The rainfall in the northwest is comparatively light, ranging from 13 to 15 inches annually. It increases rapidly toward the east and southeast, being above 25 inches annually in the extreme southeastern corner. The climate is comparatively mild in the lower Eagle valley, but it is much more severe in the high altitudes in the east and southeast. The snowfall is extremely heavy in the southeastern corner.

Tourist Attractions—Some of the most magnificent mountain scenery in Colorado is found in Eagle county. The Mount of the Holy Cross, one of the most impressive mountain peaks in Colorado, with an altitude of 14,170 feet, is in the southwestern part. A cluster of sandstone cliffs near the town of Basalt, known as the Seven Castles, is admired annually by thousands of tourists. There is a large bed of black lava of considerable interest to tourists near the town of Dotsero. There is excellent trout fishing in most of the mountain streams and in the numerous mountain lakes.

Towns—Redcliff, the countyseat, is the principal town and the most important mining camp. It is located on the Denver & Rio Grande railroad in the upper valley of the Eagle river. Other towns are Wolcott, Eagle, Gypsum and Dotsero, on the Denver & Rio Grande railroad; Orestod and State Bridge, on the Denver & Salt Lake railroad; and Basalt and Ruedi, on the Colorado Midland railroad.

Special Opportunities—The principal opportunities offered here are along the line of mineral development. Although mining has been followed extensively for more than 35 years, there is still considerable mineralized territory that has enjoyed but little development. There is considerable grazing land here that is not being pastured to its full capacity, and opportunity is offered for further development of the livestock industry. There is also some good farming land that has never been placed in cultivation.

ELBERT COUNTY

General Description—Elbert county lies east and north of the central part of the state and includes a part of the territory known as the Arkansas divide, an elevated area extending from the mountains north of Colorado Springs eastward to the county line and forming the divide between the watersheds of the South Platte and Arkansas rivers. The county is a double rectangle about 51 miles long, east and west, across the northern boundary, and 50 miles wide in the central part. The main portion of the county is 30 miles wide, with an extension 18 by 18 miles square at the southeastern corner, popularly known as the "L" of the county. Its area

is 1,188,480 acres, or about 62,000 acres less than that of the state of Delaware. The surface is generally level or rolling except in the extreme southeast, where there is some broken and hilly territory. The altitude varies from 4,700 feet, in the northeast, to about 6,600 feet in the southwest.

Early History—This county was organized in 1874 from parts of Douglas and Greenwood counties. In 1889 parts of Elbert county were taken to form Kit Carson and parts of Cheyenne and Lincoln counties. It was a favored grazing territory during the early history of Colorado when most of the eastern part of the state was regarded as of no value except for grazing purposes. The valleys of the streams here have excellent natural grass and most of them carry somewhat more water during the drier parts of the summer than is found in other sections of eastern Colorado. These were the principal features which led the stockmen to select the "divide region" as a favorable pasture district. The cultivation of the soil did not begin until late in the 80's and even at the present time large areas of land in the county are being pastured.

Surface and Soil—The surface in the southwestern part is slightly hilly or broken. From here it spreads out northward into a prairie country, broken by low ranges of hills and occasional ravines cut by the numerous streams which have their sources in the Arkansas divide. The soil of the numerous valleys is very fertile, being principally a sandy loam with clay subsoil. In some districts there are restricted areas where the soil contains more sand than is favorable for agriculture. No detailed soil survey of the county is available.

Population—The population of this county has grown steadily. In 1890 it was 1,856; in 1900 it had increased to 3,101; and to 5,331 in 1910. The present population is about 8,500. In 1910 the foreign-born population was 11.9 per cent of the total, the principal foreign nationalities at that time being German, Austrian and Swedish.

Drainage and Water Supply—The divide between the South Platte and the Arkansas river watersheds extends across the southern part of the county. Numerous tributaries of the Platte river rise in this divide and flow northward, chief of which are Box Elder, Kiowa, Bijou, Comanche and Big Sandy creeks. A few tributaries of the Arkansas river also rise in this portion of the divide and flow across the "L" of the county, chief of which are Rush and Horse creeks. Most of the streams carry considerable water the year round, though not enough to afford any reliable supply for irrigation. Water for domestic purposes and for livestock is obtained largely from wells. In the southern part of the county, on the divide and just south of it, water is reached at depths varying from 10 feet to 100 feet. In the north and northeastern sections it is reached at from 10 feet to 75 feet.

Industries—The principal industries are farming, dairying and stockraising. The southwestern part of the county, adjacent to the Colorado & Southern railroad, is one of the best dairying districts in the state. Stockraising is the principal industry in the large territory lying between the Union Pacific and the Colorado & Southern railroads in the northern part of the county. Farming without irrigation has been developed very rapidly in the southeastern corner of the "L" of the county in the past decade as well as in other districts. The rainfall is usually somewhat heavier than in other counties immediately adjoining, and farming operations, where they have been properly conducted, have been uniformly successful.

Crops—The principal crops are corn, wheat, oats, barley, rye, pinto beans, forage crops, alfalfa, native hay, potatoes and garden vegetables.

Mineral Resources—The known minerals are clays, coal, gravel, sand, road building material and building stone.

Timber—There is some timber on the higher lands, especially in the south and southwestern part of the county, principally pine and cedar.

Land Values—At the beginning of 1918 there was about 993,000 acres of privately-owned land in the county, or a little less than 84 per cent of the total area. The county assessor reports 530 acres of irrigated land, and 6,925 acres of natural hay land, most of which has some irrigation. The same authority places the area of nonirrigated farm land at 368,396 acres, and the grazing land at 614,325 acres. Not all of the land classed as nonirrigated farming area is being cultivated at this time. On January 1, 1918, there was 86,595 acres of state land in the county, most of which is suitable for cultivation, and is for sale by the state on favorable terms. On July 1, 1917, there was but 1,280 acres of government land open to homestead entry in the county, consisting of small isolated tracts of no economic value.

Transportation—The Kansas City branch of the Union Pacific railroad runs across the northeastern corner of the county, and the main line of the Rock Island road crosses the southeastern corner. A branch of the Colorado & Southern railroad, formerly the main route between Denver and Colorado Springs, passes through the western end.

Highways—The principal state highway is the Pikes Peak or Ocean to Ocean route, which follows in a general way the course of the Rock Island road through the southeastern part of the county. The Limon road leaves this at Limon and runs across the northeastern corner of the county along the Union Pacific railroad and state highway No. 3 runs from Denver to Lamar via Elizabeth and Kiowa. Numerous other secondary state highways and county roads are moderately well improved and generally are ample to care for the present agricultural development.

Educational—There are 43 public district schools in the county, and two highschools, located at Elizabeth and Simla. There are no private schools or colleges.

Climatological Data—The climate here is little different from that of other sections of eastern Colorado except that the rainfall is somewhat heavier than in counties immediately adjoining. A belt of higher rainfall extends east from the mountains north of Colorado Springs, following in a general way the elevated area known as the Arkansas divide. This strip of land passes across the south end of Elbert county and the rainfall here varies from 15 to 18 inches annually. North of this the average annual rainfall is about 14 or 15 inches. The precipitation is heaviest in the spring and early summer and perhaps three-fourths of it comes between April 1 and October 1.

Tourist Attractions—There is little natural scenery of interest to tourists in the county, but automobile tourist travel over the highways mentioned above is very heavy and is growing steadily from year to year.

Cities and Towns—Kiowa, the county-seat, is situate in the west-central part of the county, about 7½ miles east of the Colorado & Southern railroad. Among other important towns are Elizabeth and Elbert, on the Colorado & Southern railroad; Simla and Matheson, on the Rock Island railroad; Agate, Godfrey and River Bend, on the Union Pacific railroad; and Kuhns Crossing, Fondis, Keysor and Kutch, inland towns.

Special Opportunities—There is perhaps 300,000 acres of arable land in this county that has never been broken. Much of it has been used exclusively for grazing purposes and in that way is producing perhaps not to exceed one-tenth of what it would produce under proper cultivation. The fact that there is an abundance of natural grass in this area has been perhaps the principal reason why many of the creek valleys have never been placed in cultivation. The agricultural development that has taken place in the past ten years is the best proof of what may be expected from the increase of the cultivated areas to include practically all of the arable land in the county.

EL PASO COUNTY

General Description—El Paso county lies in the east-central part of the state and is, as its name implies, a sort of open door or "pass" between the great plains region of eastern Colorado and the picturesque gold bearing mountain region beyond. It is almost a perfect rectangle, with some slight irregularities on the western boundary. Its extreme length, east and west, is 55 miles, and its width is 42 miles. Its area is 1,357,440 acres, or a little more than one-third that of the state of New Jersey. The surface is principally a level or somewhat broken plain, rising abruptly in the extreme west to the summit of Pikes peak and other elevated mountains in the district immediately west of Colorado Springs. The altitude ranges from about 5,000, in the southeast, to 14,110 feet at the summit of Pikes peak, near the western boundary.

Early History—The area now included in El Paso county played a very important part in the early history of Colorado. In November, 1806, Captain Zebulon Pike obtained his first view of the mountain which now bears his name, from a point in Bent county along the Arkansas river. On the afternoon of November 24, Pike and three of his companions started on their historic attempt to scale Pikes peak. They succeeded in reaching the summit of one of the intervening mountains, possibly Mt. Rosa, but their experience in getting this far convinced Pike that the summit of the "grand peak" could not be reached by man. An entry made in his journal on November 27, the day after he had reached the top of one of the lower peaks, contains this statement: "I believe no human being could have ascended to its pinnacle."

Dr. Edwin James, a member of the Long expedition, accomplished, in the summer, what Captain Pike and his associates found impossible in the winter. They ascended to the summit of Pikes peak on July 13 and 14, 1820. For a time the mountain was called James peak and on some earlier maps it is called Longs peak. The name Pikes peak was not permanently assigned to it until about the time of the early gold rush to Colorado, when the entire mountainous territory in the central part of what is now Colorado came to be known throughout the country as the Pikes Peak region. The gold seekers of 1859 started westward with the shibboleth "Pikes Peak or Bust." Although they were all bound for the Pikes Peak region, no gold discoveries of importance were made in the vicinity of this peak until much later, when the Cripple Creek district was opened. In 1873 the government established a meteorological station at the summit of Pikes peak. In October, 1890, the Manitou and Pikes Peak railroad was finished and the first passenger train made a trip to the top of the peak in 1891. The first important settlement in the limits of El Paso county was on the site of Colorado City in 1859. This settlement was maintained more or less permanently from that time on. It was the first capital of Colorado territory and the territorial legislature met here for four days in 1862. El Paso county was one of the original 17 counties included in Colorado territory. A part of it was taken in 1899 to form Teller county.

Surface and Soil—The surface is principally a rolling prairie, crossed in the northern part by the Arkansas divide and traversed by several narrow creek valleys, extending southward from the divide region. The extreme western part is rugged and mountainous. The principal soils are heavy clay, clay loam and sandy loam on the prairie lands, and alluvial soils in the valleys and mountain parks. Sandy loam is the prevailing soil in the eastern part of the county. It is of great depth, very fertile, easily worked and retentive of moisture. No detailed soil survey of this county is available.

Population—The population of this county has grown steadily and very rapidly; in 1880 it was 7,949; in 1890 it was 21,239; in 1900 it was 31,602; in 1910 it was 43,321. The present population is approximately 50,000. In 1910 the foreign-born population was 10 per cent of the total. The principal foreign nationalities then were English, German, Hungarian, Swedish and Canadian. The urban population at that time was 77.1 per cent of the total. It is perhaps somewhat less at the present time, as the agricultural communities have been growing very rapidly in the past few years.

Drainage and Water Supply—The divide between the Arkansas and the South Platte rivers crosses the northern part of the county and a few small tributaries of the Platte river have their sources in the extreme north. By far the greater part of the county lies in the Arkansas river watershed. The principal tributaries of the Arkansas river are Haynes creek, Black Squirrel creek, Fountain creek and Turkey creek. These streams have their sources in regions of comparatively light rainfall and do not carry any considerable amount of water that is available for irrigation. Water for domestic purposes in the agricultural districts is obtained principally from wells and is reached at depths varying from 15 to 150 feet.

Industries—The principal industries are farming, stockraising, dairying, manufacturing, coal mining and the reduction of ores for the recovery of metals. Farming under irrigation is confined principally to the western and southern parts of the county. Farming without irrigation has developed very rapidly in the eastern part of the county in the past decade and has usually been fairly successful. Dairy farming is carried on extensively along the principal railway lines leading into Colorado Springs from the east, north and south. Coal mining is confined principally to a small area in the vicinity of Colorado Springs. There are about 150 manufacturing and industrial establishments of various sizes in the county which employ approximately 4,000 men and have an average pay roll of perhaps $3,500,000 annually. This includes large gold reduction plants and smelters at Colorado Springs. One of the best known pottery manufacturing establishments in the west is located at Colorado Springs.

Crops—The principal crops are alfalfa and other hays, including some native hay; wheat, oats, rye, barley, corn, potatoes, pinto beans, garden vegetables, forage crops and some small fruits.

Mineral Resources—The known minerals are aluminum, clays of several varieties, including good brick clay

and fire clay; coal, fluorspar, granite, gypsum, smoky quartz and other gem stones; sandstone, granite and other building stone.

Timber—There is some timber in the western and northern parts, principally pine, cedar and spruce.

Land Values—At the beginning of 1918 there was approximately 898,000 acres of privately owned land in the county, or about 66 per cent of the total area. The records of the county assessor show that 21,170 acres was being farmed under irrigation in 1917, 350 acres was improved fruit land, 198,250 acres was being farmed without irrigation, 3,780 acres was natural hay land, and 657,243 acres was classed as grazing land. The remainder is principally coal and mineral land. Irrigated land here sells at from $75 to $150 an acre, and non-irrigated land at from $7 to $30 an acre. On January 1, 1918, there was 190,215 acres of state land in the county, including a large amount of grazing area and some good farming land, most of which is for sale by the state on favorable terms. On July 1, 1917, there was 5,130 acres of government land open to homestead entry, principally very small isolated tracts of comparatively little economic value.

Transportation—The main line of the Rock Island railroad enters the northeastern part of the county and runs southwest to Colorado Springs, this being the principal railway line from the east. The Denver & Rio Grande, Santa Fe and Colorado & Southern railroads all run north and south through the western part of the county by way of Colorado Springs. The Colorado Midland railroad runs westward from Colorado Springs over Ute pass into Teller county, South park and west to Grand Junction. The Cripple Creek & Colorado Springs railroad runs southwest from Colorado Springs to Cripple Creek and other mining towns in that district.

Highways—The North and South highway, one of the most important state highways in Colorado, runs north and south through the county by way of Colorado Springs. The Pikes Peak or Ocean to Ocean highway follows in general the course of the Rock Island railroad to Colorado Springs, being one of the most important automobile highways entering Colorado from the east. It runs west from Colorado Springs over Ute pass to South park, and on to Salt Lake City and the Pacific coast by way of Leadville, Tennessee pass, Meeker and the Uintah basin of Utah. There are numerous well improved secondary state highways and county roads. This county has one of the best highway systems in the state.

Educational—There are 55 public district schools in the county and four highschools, located at Colorado Springs, West Colorado Springs, Fountain and Manitou. Colorado College, one of the leading educational institutions of the state, is located at Colorado Springs. There is also a good business college at Colorado Springs as well as a number of private schools. The Colorado State School for the deaf is also located here.

Climatological Data—The climate is mild and healthful. The percentage of sunshine, especially in the vicinity of Colorado Springs and other cities of the Pikes Peak region, is very high, there being an average of more than 310 sunshiny days annually. The climate of Colorado Springs is famous throughout the country because of its dry air, high percentage of sunshine and general healthfulness. There are a number of sanatoriums located here because of the peculiar climatic advantages, among them being the Union Printers home, Modern Woodmen's National sanatorium, and the Cragmor sanatorium. The rainfall in the southeastern part varies from 13 to 15 inches. In the north and west, including the Arkansas divide, it ranges from 15 to 20 inches annually. A small area in the Pikes Peak region, west of Colorado Springs, has an average annual precipitation of above 20 inches. In the agricultural regions close to three-fourths of the precipitation comes between April 1 and October 1.

Tourist Attractions—Colorado Springs is one of the best known and most popular tourist resorts in Colorado. The Pikes Peak district, including Colorado Springs and a number of tourist resorts at the west, is visited by perhaps a greater number of tourists and health seekers annually than any other region of equal area in Colorado. The points of interest to tourists in this district are too numerous to be catalogued in detail. They include Pikes peak, the best known mountain in Colorado, the summit of which is reached by a railway popularly known as the "Cog Road," and by an excellent automobile highway recently completed. Manitou, at the foot of Pikes peak, is a popular tourist resort and is much visited by health seekers. It is famous for its mineral springs, and Manitou water, bottled at these springs, is sold throughout the world. Among the points best known

to tourists are the Garden of the Gods, Stratton park, North Cheyenne canon, South Cheyenne canon, Williams canon, Cliff Dwellers canon, Cave of the Winds and Ute pass.

Cities and Towns—Colorado Springs, the countyseat and the third city in Colorado in size, lies in the central-western part of the county, at the entrance to the Pikes Peak region. It is a tourist resort of great popularity and importance and is also the principal market and supply point for a large and prosperous agricultural district and for one of the richest mining areas in the world. Colorado City, west of Colorado Springs, is one of the oldest towns in the state, and was the seat of the Colorado state government for a short time in 1862. It is an important smelter town and contains the Colorado Midland railroad shops. It is now a part of Colorado Springs, having been taken into the larger city in June, 1917. Manitou, at the base of Pikes peak, is one of the best known tourist resorts in the state. The name means "Great Spirit" and was the title given by the Indians to the deity that was supposed to reside on Pikes peak and control the destinies of the inhabitants of the surrounding territory. Perhaps no place of its size in Colorado has a larger number of tourist visitors annually than Manitou. Calhan, located on the Rock Island railroad in the northeastern part of the county, is the center of a rich and prosperous agricultural community, in what is known as the divide region. Fountain, on the Denver & Rio Grande, Colorado & Southern, and Santa Fe railroads, south of Colorado Springs, is also the center of a prosperous agricultural community. Other good agricultural towns are Peyton, Monument, Eastonville, Falcon and Ramah. Palmer Lake, in the extreme northern part of the county, on the Denver & Rio Grande, Colorado & Southern, and Santa Fe railroad. is a popular summer resort and the supply point for an agricultural area of considerable importance.

Special Opportunities—There is perhaps 300,000 acres of unbroken arable land in this county. The nonirrigated areas in the eastern part of the state have been used almost exclusively for grazing purposes until within the past decade. They are now being broken up rapidly and placed in cultivation, usually with very favorable results. The coal deposits in the county are considerable and are only partially developed. There is a considerable mineralized area in the western part of the county which offers some possibilities for development. The clay and stone resources are extensive and are being gradually opened. Good opportunities for manufacturing are offered because of the abundance of coal and raw material and the ready availability of abundant hydro-electric power.

FREMONT COUNTY

General Description—Fremont county lies in the south-central part of the state, on the eastern boundary of the mineralized belt. A part of the western boundary is formed by the Sangre de Cristo mountain range. It is of a rectangular outline, about 60 miles long, east and west, and about 30 miles wide. Its area is 996,480 acres, or a little less than two-thirds that of the state of Connecticut. The surface is principally rolling or mountainous. The altitude varies from about 5,000 feet, at the point where the Arkansas river crosses the eastern boundary, to more than 12,000 feet at the summit of some of the peaks in the southwestern part.

Early History—The first known white visitors in this area were the members of Captain Zebulon Pike's party, who made their camp near the eastern end of the Grand Canon of the Arkansas river on December 13, 1806. A month later, after visiting the upper Arkansas river, they returned to the neighborhood where Canon City is now located. The site of Captain Pike's camp is an object of considerable interest to tourists and is located near the mineral springs in the vicinity of Canon City. In 1820, Dr. Edwin James and Captain Bell, members of the famous Long expedition, left the encampment at Pueblo and rode on horseback up the Arkansas river to the mouth of the Royal Gorge. A group of mineral springs located here has been named Bell Springs, in honor of Captain Bell, who first described them. Trappers and hunters frequently visited the territory in the vicinity of the Royal Gorge during the next 10 years. The first actual settlement was made in 1830 by a Frenchman named Morris, near the present site of the town of Florence. In 1860 numerous gold seekers from the Pikes Peak region wandered into this area and a settlement was soon begun near the mouth of the canon and called Canon City. Petroleum was discovered in 1862 by A. M. Cassedy, north of Canon City on what is known as Four Mile creek or Oil creek, where it seeped from crevices in the rocks.

The first drilling was done by James A. McCandless and another man, with a hand drill, in July, 1864. This oil was refined by Mr. Cassedy in a small portable refinery. The old stills are now at Florence, owned by A. H. Denforth. This oil was sold for $6 per gallon. The next oil discovery of any consequence was made by Mr. Cassedy, who had a contract with the coal company at Coal creek to drill for water for domestic use, and struck a small streak of oil. Mr. Cassedy often told James A. McCandless, who owned the farm where Florence stands and afterward platted the town of Florence, that there was a large pool of oil somewhere between the oil spring north of Canon City and Mace's Hole, which lies about 20 miles southeast of Florence. The first well that produced any great quantity of oil was drilled by A. M. Cassedy about two miles south of Florence, and wells in that vicinity have since been drilled that have produced over 500 barrels daily. In 1868 the territorial penitentiary was located at Canon City. Fremont is one of the original 17 counties in Colorado territory, organized in 1861, and was named in honor of John C. Fremont, who crossed this territory several times in his efforts to discover a feasible railway route across the Rocky mountains.

Surface and Soil—The surface is a broken plateau, containing a portion of the Arkansas valley near the eastern boundary, and rising into a rugged, mountainous area in the southwest. The Arkansas river has cut a deep canon through this plateau in the central part of the county and several of the tributary streams enter this canon by smaller canons from the north and south. There is some good grazing and agricultural land on the heights north and south of the river and considerable area of excellent agricultural land in the valley of the Arkansas river just east of its exit from the canon. The soil here is a deep sandy loam of exceptional fertility. On the high lands the soil is a rich, deep sandy loam, which produces a variety of farm crops. No detailed soil survey of this area is available.

Population—The population in 1910 was 18,181; in 1900 it was 15,636, and the present population is about 21,000. In 1910 the foreign-born white population made up 18.8 per cent of the total population. Previous to the war the principal foreign nationalities were Italian, Austrian, English, Welsh and German.

Drainage and Water Supply—The Arkansas river flows eastward through the central part of the county and is fed by numerous small tributaries which have their sources in the high lands north and south of the main stream. It carries plenty of water for irrigation, but only the land lying in the valley east of Canon City is now irrigated. The land in the remaining parts of the county is too high to be reached by water except at considerable expense. The Arkansas river has a sharp fall in this county and is utilized for the generation of hydroelectric power. Water for domestic purposes in the eastern part of the county is obtained from wells and is reached at depths varying from 20 feet to 35 feet. Good domestic water is abundant in all parts of the county.

Industries—The principal industries are general farming, which includes stockraising, fruitgrowing and dairying; coal mining, metal mining, quarrying, manufacturing, oil refining and lumbering. Agriculture is confined largely to the Arkansas valley about Canon City and Florence. Coal mining is carried on principally in the southeastern part of the county. The principal manufacturing industry is cement making. The cement factories at Portland and Concrete are the largest in the state. The oil fields in the vicinity of Florence are the largest in Colorado and have been producing since 1864. The Standard and United Oil companies have expended, in the past two years, over three quarters of a million dollars in improvements and up to date equipment, which make the plant one of the best equipped in the west. The various plants cover an area of about 100 acres, and will employ about 250 men. The capacity of the plant will be 2,000 barrels of crude oil per day, manufacturing all the by-products derived from crude oil, comprising illuminating and lubricating oils, gasoline, wax, etc. The River Smelting and Refining company has made very extensive improvements at its plant the past year, and has a pay roll of about 125 men. Six miles east of Florence is located the Colorado Portland Cement company, with a capacity of 1,000,000 barrels per year. A mile further east is the United States Portland Cement company, with a large production.

Crops—The principal crops are alfalfa and other hays; potatoes, small grains, garden vegetables, apples and other tree fruits; raspberries, strawberries and other small fruits.

Mineral Resources—The known minerals are asbestos, clays, kaolin, coal,

copper, gold, gypsum, lava, lead, cement material, lithium, aluminum, mica, nickel, petroleum, natural gas, silver, tantalum, titanium, zinc, granite, sandstone, and other building stone; agate, amethyst, beryl, rose quartz, tourmaline, and other gem stones. The bituminous coal mined in Fremont county, and known generally as "Canon City coal," has been famous all over the west since the days of pioneer settlement of Colorado. The first coal claim in the Canon City field was staked out in April, 1860, at the site of the old Coal creek slope. A few years later the first coal in the district was mined at that property. The first operator was "Uncle" Jesse Frazer, of Florence, who disposed of his output to settlers along the Arkansas river. In the later 60's the property was acquired by the Colorado Coal and Iron company, one of the predecessors of the Colorado Fuel and Iron company.

Timber—There is good timber in all parts of the county except the agricultural district in the vicinity of Canon City, principally pine, spruce and cedar.

Land Values—At the beginning of 1918 there was about 242,000 acres of privately owned land in the county, or a little more than 24 per cent of the total area. Of this amount about 17,000 acres was being cultivated under irrigation, including fruit land, and 15,000 acres without irrigation. The county assessor classed 162,000 acres as grazing land. The remainder is classed principally as coal and mineral land. Irrigated land in this county sells at from $75 to $150 an acre, and orchards bring from $150 to $500 an acre. Nonirrigated land, including grazing land, sells at from $5 to $10 an acre. On January 1, 1918, there was 59,216 acres of state land in the county, including some agricultural land, considerable coal land and a large amount of grazing land. In July, 1917, there was 364,909 acres of government land open to homestead entry, valuable principally for grazing purposes.

Transportation—The main line of the Denver & Rio Grande railroad runs east and west, following in general the course of the Arkansas river. A branch line leaves this road at Texas creek and runs south to Westcliffe, in Custer county. A branch of the Santa Fe railroad runs west from Pueblo to Canon City. Branch roads from the Santa Fe and Denver & Rio Grande railroads extend to numerous coal camps and cement factories in the vicinity of Canon City and Florence.

Highways—The principal state highway is the Rainbow Route, which follows in general the course of the Denver & Rio Grande railroad through the county. There are numerous well improved county roads and secondary state roads. Fremont county has perhaps as fine a system of roads as any other area of similar size in Colorado. A new road worthy of special mention is the Phantom Canon highway, now nearing completion, which will be the tourists' ideal route from Canon City and Florence to the Cripple Creek district, completing the circuit to Colorado Springs, Pueblo, Florence and Canon City. This highway follows the old Florence & Cripple Creek railroad grade and is being put in fine condition for travel. The road bed is being resurfaced, regraded, and substantial floors and railings placed on all bridges, making it thoroughly safe for automobile travel.

Educational—There are 43 public district schools in the county, and three highschools, located at Canon City, South Canon City and Florence. There is one private school, or academy, Mt. St. Scholastica's academy, at Canon City.

Climatological Data—The rainfall here varies from 12 inches, in the eastern part, to more than 25 inches along the summits of the Sangre de Cristo range, in the southwest. The agricultural district in the eastern part of the county has a rainfall of from 12 to 15 inches. The higher plateau regions have from 15 to 20 inches of rainfall annually. The Canon City and Florence districts enjoy exceptional climatic advantages. The summers are comparatively long and not unpleasantly warm, and the winters are comparatively short and open. In the high altitudes the climate is more severe, with comparatively heavy snowfall in the southeast.

Tourist Attractions—Canon City and the territory immediately surrounding it is one of the most popular tourist districts in the state. The Royal Gorge of the Arkansas river, sometimes called the Grand Canon of the Arkansas, is one of the scenic wonders of the world. It begins one mile west of Canon City and extends west for about 20 miles. The vast walls of granite tower above the river here to a height, in some places, of more than 2,500 feet. The Rainbow Route follows this canon for a considerable distance and a road has been built

from Canon City to the upper rim of the canon, where the traveler may look down 2,500 feet to the waters of the Arkansas river below. There are numerous other scenic highways from Canon City, one of the most popular of which is the Sky Line drive, from which an excellent view of Canon City and the orchard territory surrounding it may be had. Bell's mineral springs, near the mouth of the Royal Gorge, are noted for the curative properties of their waters. South of Florence is South Hardscrabble creek, in the San Isabel forest reserve, noted for its beautiful scenery, where the citizens of Florence have secured a municipal camping ground, fitted for the convenience and comfort of the camper. Here one may camp for a day, a week, or as long as desired. The road to the Hardscrabble has also been made a state highway, which renders the grounds easy of access.

Cities and Towns—Canon City, the countyseat and principal town, is one of the most beautiful cities in Colorado. It is located on the Arkansas river near the eastern end of the Royal Gorge, in a region of delightful scenic beauty. It is widely known as a health resort on account of its delightful climate and the mineral springs in its vicinity. It has one of the largest light and power plants in the state, which supplies power for the operation of various coal mines in the county, as well as power and light for the city and for the town of Florence. The state penitentiary is located here. Florence, a few miles east of Canon City, on the Denver & Rio Grande and Santa Fe railroads, is the center of the oldest and most productive petroleum field in Colorado. It is a manufacturing town of considerable importance, having a pay roll of nearly $200,000 per month. Among the other important towns of the county are Portland and Concrete, noted for their cement factories; Chandler, Rockvale and Coal Creek, important coal camps; and Penrose, six miles northeast of Florence, a growing agricultural town with many square miles of fruit farms adjoining.

Special Opportunities—The principal opportunities offered here are in the line of mineral development. A large area of the county is presumably mineralized and offers opportunities for prospecting and development. There is an immense amount of building stone which is certain to be developed as the demands of the west require. The coal deposits of this county are of excellent quality and are being worked to a considerable extent at the present time. There is, however, much room for further development in this direction. There are excellent deposits of glass sand, clay and similar materials awaiting development and general farming, fruitgrowing and gardening are all expanding industries.

GARFIELD COUNTY

General Description—Garfield county lies in the western part of Colorado and includes a part of Grand valley, which is one of the best known agricultural and fruitraising districts in the state. It is of an extremely irregular rectangular outline, 110 miles long, east and west, and about 50 miles wide at the eastern end. Its width at the extreme west end, where it touches the state of Utah, is about 20 miles. Its area is 1,988,480 acres, or a little more than the combined areas of the states of Delaware and Rhode Island. The surface is extremely irregular, varying in altitude from about 4,700 feet at the western boundary to over 13,000 feet at the summit of some of the peaks in the northeastern part.

Early History—The territory now included in Garfield county was originally occupied by the Ute Indians. There was no development worthy of note until after 1881, when the Indians were, by treaty, removed from this part of Colorado to western Utah. Small prospecting parties explored the mountainous areas, both north and south of the Grand river, about 1879 and built a fort not far from the present site of Glenwood Springs, which they called Fort Defiance. Glenwood Springs was first settled in 1882. The county was organized in 1883 from a part of Summit county and was named in honor of President James A. Garfield, whose assassination occurred a short time before it was created. A part of it was taken to form Rio Blanco county in 1889.

Surface and Soil—The principal agricultural territory in the county is in the valleys of the Grand river and the Roaring Fork river, one of its tributaries. There is some good agricultural land on the high plateaus both north and south of the Grand, and a large amount of good grazing land. The soil of the valleys is extremely fertile and under irrigation produces some of the best crop yields in Colorado. There is no detailed soil survey available. The surface rises abruptly north of the Grand river, in the eastern part of the county, into the rugged mountain area included in the White river national forest.

Population—The population in 1910 was 10,144, as compared with 5,835 in 1900. The present population is approximately 13,500. In 1910 the foreign-born white population was 16.6 per cent of the total. Previous to the war the principal foreign nationalities were Italian, German, Austrian, Irish and Canadian.

Drainage and Water Supply—The Grand river flows through the center of the eastern half of the county and turns south near the town of Grand Valley, into Mesa county. This stream, with its tributaries, affords the drainage and furnishes the water supply for irrigation and other purposes. The principal tributary is the Roaring Fork. The Grand river is the largest stream in Colorado. It carries an abundance of water for irrigating all land in this county that is capable of being irrigated, and furnishes water for a large amount of land in Mesa county. One of the largest hydro-electric power plants in the state, located on this stream at a station called Shoshone, furnishes light and power for many of the towns on the Western slope, for numerous mines and mining towns in the central part of the state and a considerable portion of the electric current used in the city of Denver. Water for domestic purposes in many sections is obtained from wells and is found at depths of from 10 feet to 25 feet.

Industries—The principal industries are general farming, including fruit-raising, dairying and stockraising, coal mining, lumbering and some metal mining. The valley lands in the neighborhood of Carbondale are especially famous for their potatoes. Fine orchards occupy the valley land from New Castle west and large stock ranches are found in all parts of the county. The coal deposits are among the largest and best in Colorado.

Crops—The principal crops are alfalfa and other hays, both cultivated and wild; potatoes, small grain, corn, sugar beets, strawberries, peaches, apples and other tree fruits.

Mineral Resources—The known minerals are asphaltic rock, carnotite, cassiterite, clays, coal, copper, gold, silver, oil shale, sandstone, granite and other building stone.

Timber—There is considerable timber, especially in the northeastern part, principally pine and spruce.

Land Values—Irrigated land in this county ranges in value from $25 to $350, the latter price being the maximum for good bearing orchards and diversified farm lands. Nonirrigated farming land costs from $6 to $25 an acre, and grazing land from $2 to $15 an acre. There is no state land in this county. At the beginning of 1918 there was, according to the records of the county assessor, approximately 231,000 acres of privately-owned land in the county, of which about 55,500 acres was classed as irrigated farm land, and 1,147 acres as improved fruit land. On July 1, 1917, there was 791,040 acres of government land open to homestead entry, some of which is capable of being cultivated, but most of which is of little value except for grazing purposes.

Transportation—The main line of the Denver & Rio Grande railroad follows the Grand river through the county. The Colorado Midland railroad follows the valley of the Roaring Fork river to Glenwood Springs and the Grand valley westward to Grand Junction. A branch of the Denver & Rio Grande railroad runs southeast along the Roaring Fork river to the town of Aspen, in Pitkin county. The Crystal River railroad leaves the Denver & Rio Grande railroad at Carbondale and runs south through Pitkin county to Marble, in Gunnison county.

Highways—The principal state highway is the Midland Trail, which follows in general the course of the Grand river through the county. Another state highway leaves this line at Rifle and runs north to Meeker, in Rio Blanco county, and thence west to Salt Lake City and the Pacific coast. This is known as the Ocean to Ocean highway. A secondary state highway follows the Roaring Fork valley southeast from Glenwood Springs to Aspen and east to a connection with the Midland Trail in southern Lake county. The county is spending over $100,000 on roads this year.

Educational—There are 43 public district schools in the county, and five highschools, located at Carbondale, Glenwood Springs, Grand Valley, Rifle and Silt. There are no private schools or colleges.

Climatological Data—The rainfall in the Grand valley and the western part of the county varies from 12 to 15 inches. A narrow belt along the south edge of the eastern end of the county has an average rainfall of about 16 inches. The precipitation increases rapidly in the northeastern corner to about 30 inches. The climate is mild and very favorable to agriculture except in the extreme

northeast, where the winters are long and severe, subject to very heavy snowfall. The west end of the county is arid and devoted principally to stockraising.

Tourist Attractions—Glenwood Springs is one of the best known and most popular tourist resorts in Colorado. There are numerous mineral springs here, having a wide variety of mineral waters of recognized medicinal value. One of these, the Yampah, is said to have a flow of about 2,000 gallons per minute, being one of the largest mineral springs in the world. The open-air bathing pool located here is fed from these mineral springs, the temperature of the water being about 90 degrees Fahrenheit. It is visited by thousands of tourists annually and is one of the most popular open-air bathing pools in the United States. There is a wealth of magnificent mountain scenery in the territory north and south of Glenwood Springs and automobile roads are being rapidly extended to make this territory easily accessible to tourists.

Cities and Towns—Glenwood Springs, the countyseat and principal city, is located on the Denver & Rio Grande and Colorado Midland railroads at the junction of the Roaring Fork with the Grand river. It is best known to Colorado people as a tourist resort, but it is also an important distributing center and supply station for the agricultural territory in the Grand and Roaring Fork valleys. Other towns are Carbondale, in the Roaring Fork valley; New Castle, Rifle, Grand Valley and Silt, in the Grand valley.

Special Opportunities—The principal opportunities for development here are perhaps in stockraising and farming. There is an immense amount of good grazing land not being pastured to its full capacity. Coal deposits afford unlimited opportunity for development, but they will perhaps not be worked much more extensively until larger markets for coal are opened up near to this territory. Much of the mountainous area in this county is mineralized and it is not beyond the bounds of possibility that various metals may be found in paying quantities. The stone deposits are very extensive and valuable, but their development will wait upon market and transportation conditions. There are extensive deposits of rich oil shale in the northwestern part of the county belonging to the well known Green river shale deposits of western Colorado. The federal government has set aside 45,000 acres of shale land in Garfield county as a naval oil reserve. This shale is very easily mined and runs from 15 to 90 gallons of oil per ton in addition to a considerable amount of ammonium sulphate and other valuable by-products.

GILPIN COUNTY

General Description—Gilpin county lies in the north-central part of the state, a portion of the western boundary being formed by the Continental divide. It is an irregular triangle with an extreme length of about 16 miles near the center, and an extreme width on the eastern boundary of 13 miles. It is the smallest county in Colorado save Denver, which includes only the city of Denver. Its area is 84,480 acres, or about one-eighth that of the state of Rhode Island. The surface is almost all mountainous and the altitude varies from 6,880 feet, at the southeastern corner, to approximately 14,000 feet at the summits of some of the peaks on the western boundary.

Early History—Gilpin county is often referred to as the birthplace of Colorado. It was here that the first discovery of gold "in place" was made by John Gregory on May 6, 1859. Previous to this Green Russell and others had found placer gold in the sands of the Platte river, Cherry creek, Clear creek and other streams, but these discoveries amounted to little and the gold was all panned out within a few months. Gregory lode is producing ore today. Only a few weeks after Gregory's discovery Green Russell, who first found placer gold in the sands of the Platte river, discovered fissure gold veins in the southwestern part of Gilpin county. These veins, in what is popularly known as Russell Gulch, are being worked at the present time. It was in Gilpin county that the first real metal mining in Colorado was done. Central City, the countyseat, was founded in the summer of 1859, and in the early 60's was the rival of Denver as the leading city in Colorado. The first smelter in Colorado was opened at Black Hawk in 1868. During the 20 years following the discovery of gold in this county more than $28,000,000 in the precious metals, principally gold, was taken from its mines. The total production has been in excess of $100,000,000. The Colorado Central railway was extended to Black Hawk in 1872 and to Central City in 1878. This small mountainous area was one of the most populous districts in Colorado when the state was

admitted to the union in 1876. The county was one of the original 17 counties included in Colorado territory as organized in 1861. It was named in honor of William Gilpin, the first governor of the territory.

Surface and Soil—The surface is extremely rugged, with a very limited amount of level land in the creek valleys. The soil is fertile, but the seasons are short. Agriculture is carried on to a very limited extent. No soil survey of the territory is available.

Population—There has been a wide variation in the population of this county. In 1870, when the first United States census was taken, it was 5,490; in 1880 it was 6,489, though hardly as large at that time as it had been five years previous; in 1890 it was 5,875; in 1900 it was 6,690, and in 1910 4,131. The present population is about 4,500. In 1910 the foreign-born population was 29.5 per cent of the total. The principal foreign nationalities were English, Austrian and German.

Drainage and Water Supply—Clear creek and other small tributaries of the Platte river furnish the principal drainage and supply water for domestic purposes and for use in the mines. The streams all have their sources in regions of heavy precipitation and carry plenty of water throughout the year. A considerable amount of water used in irrigation of lands north of Denver has its origin in Gilpin county.

Industries—The principal industry is metal mining, which has been carried on extensively here for 58 years. Stockraising is followed to a limited extent and there is some farming in the lower creek valleys. Lumbering has been followed to a limited extent to supply material for local consumption. Small amounts of building stone have been quarried.

Crops—Native hay is about the only crop grown here. Potatoes and some garden vegetables are grown to a limited extent in the lower creek valleys.

Mineral Resources—The known minerals are arsenopyrite, clays, copper, fluorspar, gold, lead, molybdenum, pitchblende, pyrite, silver, tungsten, zinc and a wide variety of building stone.

Timber—There is considerable timber in all parts of the county, principally pine, spruce, cedar and aspen.

Land Classifications—On January 1, 1918, there was about 31,000 acres of privately owned land, or a little more than 36 per cent of the total area. Of this, 16,239 acres is classed by the county assessor as grazing land, 13,131 acres as non-producing mining claims, and the remainder as producing mining claims, town and city lots and railroad rights of way. At the beginning of 1918 there was 2,720 acres of state land in the county, principally valuable for possible mineral deposits. On July 1, 1917, there were 11,690 acres of government land open to homestead entry, including some promising mineral land which is open for prospecting and for patent after ore deposits have been properly located. The national forest area in this county is 40,394 acres, which includes a considerable amount of promising mineral land open to prospectors on the same terms as other government land.

Transportation—A branch of the Colorado & Southern railroad extends from Denver to Central City, the countyseat. The Denver & Salt Lake railroad runs through the north edge of the county.

Highways—The state highway, which crosses the Continental divide at Berthoud pass, runs along the southern boundary of the county. A secondary state highway runs north from this road at Idaho Springs, through Central City into Boulder county. There are numerous county roads and trails, most of which are imperfectly improved, of use principally in carrying supplies to the various mining camps.

Educational—There are 13 public district schools in the county, and one highschool, located at Central City. There are no private schools or colleges.

Climatological Data—The climate here is somewhat severe. The altitude is high and as a result the summers are short, with frost in some sections every month in the year. The principal mining districts are at an altitude of above 8,000 feet. The rainfall in the extreme southern part of the county varies from 16 to 20 inches and in the northern part from 20 to 25 inches.

Tourist Attractions—For a great many years there has been considerable tourist travel to this territory. The mountain scenery here is equal to the finest found in other sections of Colorado, and the fact that this county is the birthplace of gold mining in Colorado adds interest for the traveler. There are numerous active mining claims and a good many abandoned workings, all of which are important tourist attractions. The highways leading through the county at present are not in a high state of improvement, but are being extended and made better each year. Automo-

bile travel through this part of Colorado is increasing rapidly.

Cities and Towns—Central City, the countyseat, is the center of one of the most productive mining districts. It is also one of the oldest cities in Colorado. Black Hawk is still an important mining and smelting point. Among the other towns are Rollinsville and Tolland, on the Denver & Salt Lake railroad, and Nevadaville, Baltimore, Russell Gulch and Apex, mining camps.

Special Opportunities—Although mining has been followed here for nearly 60 years, there is still a large amount of unoccupied land, principally government domain, on which rich ore deposits may yet be found. The ores here are found principally in fissure veins and do not always show on the surface. Deep mining has proved very profitable in this county and the future production will depend largely on further extension of the deep workings.

GRAND COUNTY

General Description—Grand county lies in the north-central part of the state, the eastern boundary being formed by the Continental divide, the northern boundary by the Rabbit Ear range, and part of the southern boundary by the Williams Fork mountains. It is made up principally of a mountain park known as Middle park, surrounded by mountain ranges. Its outline is irregular. The greatest length, north and south, is about 55 miles, and the greatest width is about 52 miles. Its area is 1,194,240 acres, or about 50,000 acres less than that of the state of Delaware. The altitude varies from about 7,800 feet in the extreme southwest to more than 13,000 feet at the summit of some of the peaks on the eastern boundary.

Early History—The county takes its name from the largest river in Colorado, which has its headwaters here. It was originally a part of the domain claimed by the Northern Ute Indians and was one of their most popular hunting grounds. It was visited frequently by prospectors in the early 60's, but no gold discoveries of importance were made. The early settlers were principally stockmen. The county was organized in 1874 from a part of Summit county.

Surface and Soil—The central part of the county is a beautiful mountain park with a rolling surface and alluvial soil of wonderful richness. It is largely covered by natural grass and is one of the best grazing sections of Colorado. On the north, east and south the surface rises rather abruptly to the mountain ranges which form the boundary of the county on these sides. On the southeast the Grand river cuts its way through the rim rocks surrounding this park and forms the famous Gore canon. No detailed soil survey of this area is available.

Population—The population in 1910 was 1,862. In 1900 it was 741 and the present population is about 3,500. In 1910 the foreign-born whites made up 15.2 per cent of the total. Previous to the breaking out of the war the principal foreign nationalities were German, Swedish and Swiss. The population is entirely rural, there being no towns of more than 500 inhabitants in the county.

Drainage and Water Supply—The Grand river has its headwaters in this county and with its tributaries furnishes the principal water supply for irrigation and other purposes. These streams all have their sources in the mountains which surround Middle park and carry a good supply of water the year round. A considerable amount of land is now being irrigated in Middle park, but there is water available for perhaps twice as much land as is now being farmed under irrigation. Water for domestic uses in some sections is obtained from wells.

Industries—The principal industry is general farming, including stockraising and dairying. Mining has been followed to a limited extent and lumbering to supply local needs.

Crops—The principal crops are natural hay, timothy, alsike, potatoes, small grain raised principally for forage, and root crops for stockfeed.

Mineral Resources—The known minerals are antimony, asphaltic rock, bituminous rock, gold, molybdenum, silver and building stone.

Timber—There is good timber in considerable amounts on the mountain slopes surrounding the valley, principally white pine and spruce.

Land Values—At the beginning of 1918 there was about 194,000 acres of privately-owned land in the county, or approximately 16 per cent of the total area; of this amount 27,170 acres was being farmed under irrigation, and 416 acres without irrigation. The county assessor classed 117,000 acres of the privately-owned land as grazing area, and the remainder is principally timber land and mining claims. Irrigated land in this county costs from $50 to $75 an acre, and nonirrigated land,

valuable principally for grazing purposes, from $5 to $15 an acre. On January 1, 1918, there was 63,127 acres of state land in the county, including a considerable amount of good agricultural land, most of which is for sale by the state upon favorable terms. On July 1, 1917, there was 123,960 acres of government land open to homestead entry, including some good farming land. The national forest area in this county is 534,407 acres.

Transportation—The Denver & Salt Lake railroad enters this county in the southeastern part, crossing the divide at the town of Corona. It runs north and west through Middle park by way of Sulphur Springs and Kremmling, and southwest from Kremmling into Eagle county by way of Gore canon.

Highways—The principal state highway is the Vernal road or Midland Trail, which enters the county by way of Berthoud pass from Clear Creek county and runs north and west through Middle park, passing out of Grand county near the northwestern corner. A road leaves this highway at Kremmling and runs southwest to a connection with the Midland Trail at Wolcott. A road from Sulphur Springs runs north and east to Grand Lake, the western entry to the Rocky Mountain national park. Another road from Sulphur Springs runs north across the Rabbit Ear range to Walden, the countyseat of Jackson county. There are numerous county roads, sufficient in a general way for moving the products of the farms to market.

Educational—There are 15 public district schools in the county, and one highschool, located at Kremmling. There are no private schools or colleges.

Climatological Data—The rainfall in this county varies widely. A narrow strip along the Grand river in the western part has an average annual rainfall of from 13 to 15 inches. Immediately north and east and south of this is an area comprising the principal parts of Middle park, where the rainfall varies from 15 to 20 inches. Directly east of this the precipitation increases more rapidly, being above 25 inches annually near the summit of the Continental divide. The climate is much more mild than might be expected at the prevailing altitudes in this county. The park is shielded from winds by mountain ranges which surround it on nearly all sides, and though very low temperatures prevail during the winter, the cold is not felt so keenly as in other sections more subject to wind and to greater extremes of moisture in the atmosphere. The snowfall is heavy, especially in the eastern part of the county.

Tourist Attractions—The Rocky Mountain national park extends into the northeastern part of this county. This is the most popular national park in the United States and one of the most popular tourist centers in Colorado. Just west of the border of the park is Grand lake, the largest lake in Colorado, lying at an altitude of 8,369 feet. It is a popular summer resort and is noted as the home of the only yacht club in Colorado. Hot Sulphur Springs is a health resort of some importance, the waters of the hot springs located here having recognized medicinal qualities. A sanitarium is located here. The territory known as Middle park is one of the most attractive mountain park districts in Colorado and is being visited by increasing numbers of automobile tourists every year. The streams here are all well stocked with trout and are very popular with local as well as visiting fishermen.

Cities and Towns—Hot Sulphur Springs, the countyseat, is located on the Denver & Salt Lake railroad, near the central part of the county. Kremmling, the principal town, is located on the same road about 18 miles further west. Other towns are Granby, Troublesome, Fraser and Grand Lake.

Special Opportunities—The special opportunities here are along the line of agricultural development. This county is especially suitable for stock-raising and dairying. There is water available for at least twice as much as is now being irrigated and the agricultural land is capable of supporting perhaps twice as large a rural population as it now maintains. The mountainous areas surrounding the valley on all sides are presumably mineralized and offer encouraging opportunities for prospectors.

GUNNISON COUNTY

General Description—Gunnison lies in the north-central part of the state, the eastern boundary being formed principally by the Continental divide. It is of a very irregular triangular outline with an extreme length, north and south, of about 90 miles and an extreme width of 65 miles. Its area is 2,340,560 acres, or a little more than the combined areas of the states of Delaware and Rhode Island. The surface is extremely irregular and in most parts mountainous. The altitude varies from about 6,875 feet

where the Gunnison crosses the western boundary, to about 14,000 feet at the summits of some of the peaks in the north and east.

Early History—The first white visitors in this region, so far as is known, were the members of the party led by Captain John W. Gunnison, who made an expedition to the Rocky mountains in 1853 in search of a feasible railroad route from the Mississippi river to the Pacific ocean. In the early 60's the territory now included in Gunnison county was visited by numerous prospectors and some signs of gold were found. In 1872, a party of prospectors, of which Dr. Sylvester Richardson was geologist, entered this area. Two years later Dr. Richardson led another party into the Gunnison valley and established a colony near the present site of the city of Gunnison. The county was organized in 1877 from a part of Lake county. One of the first important discoveries of silver in the state was that of the Forest Queen lode near the present site of Crested Butte, in this county. In the early days of mining activity Gunnison county was one of the biggest mineral producers in the state.

Surface and Soil—The Gunnison river has its source near the eastern boundary of the county and with Tomichi creek, a tributary, divides the county into two sections. The central part, known as the Gunnison valley, is a comparatively level mountain park of considerable area, of fertile soil and some agricultural development. The northern part is mountainous and contains comparatively little level land. The southeastern corner rises rather rapidly to the San Juan mountains and is also extremely rugged except for some level land along the Lake Fork of the Gunnison river. There is no soil survey of this territory available.

Population—The population in 1910 was 5,897; the present population is slightly in excess of 6,000. The census bureau found the foreign-born white population in 1910 to be 27.7 of the total. It is perhaps somewhat less at the present time. Previous to the war the principal foreign nationalities were Italian, Austrian, German and Hungarian. These were mostly metal and coal miners.

Drainage and Water Supply—The Gunnison river and its tributaries furnish the principal drainage. These streams all have their sources in regions of high precipitation, and carry an abundant supply of water the year round. There is some irrigation in the Gunnison valley and the Gunnison river carries water for the irrigation of large areas further west. A small section of the northwestern part of the county is drained by tributaries of the Grand river.

Industries—The principal industries are mining, stockraising, lumbering, quarrying and farming. Mining is carried on in nearly all sections of the county. Farming is followed principally in the Gunnison valley and most of the stockmen have their home ranches in this area. There is a large amount of good grazing land in the national forest areas, especially in the northern part of the county. This range is used principally by Gunnison county stockmen. The marble deposits on Yule creek, in the northwestern part of the county, are perhaps the finest in America. Quarries have been opened near the town of Marble and white marble from these immense beds of stone has been used for building and monumental purposes in all parts of the country. The postoffice at Denver, Colorado, Cuyhoga county courthouse at Cleveland, Ohio, and the Lincoln Memorial at Washington, D. C., are among the principal public buildings built of Colorado Yule marble.

Crops—The principal crops are natural hay, potatoes, and grain crops cultivated for hay.

Mineral Resources—Few counties have a finer variety of minerals than Gunnison county. The known minerals are aluminum, antimony, bismuth, clay, including fire clays; coal, cobalt, copper, gold, granite, graphite, grindstone and other abrasive stones; iron, lead, limestone, manganese, marble, mineral paint, molybdenum, nickel, oil shale, platinum, sandstone, slate, silver, sulphur, titanium and tungsten. Most of these have been produced in considerable quantities.

Timber—There is much heavy timber in the mountain sections of the county, principally pine and spruce. Lumbering and tie-making have been followed to a considerable extent in the past.

Land Values—There is comparatively little agricultural land in the county. The records of the county assessor showed about 183,000 acres of privately owned land in the beginning of 1918, or about 9 per cent of the total area of the county. Of this amount 33,000 acres is under irrigation and 101,000 acres is classed as grazing land. Irrigated land may be purchased at prices ranging from

$20 to $75. Nonirrigated land costs from $1.25 to $25. At the beginning of 1918 there was 20,190 acres of state land in the county, some of which is agricultural and some mineralized land. This is for sale by the state upon reasonable terms. On July 1, 1917, there was 580,792 acres of homestead land in the county, most of which is of little value except for grazing purposes. The national forest area is 1,133,924 acres. There is much mineralized area in this, as well as in the government land open to homestead entry, all of which is subject to entry under the public land laws.

Transportation—The main narrow gauge line of the Denver & Rio Grande railroad runs east and west across the county by way of the town of Gunnison. A branch road extends from this line to the mining camps at Ohio City, Pitkin and Quartz and to the coal camps in the vicinity of Crested Butte and the mining towns of Baldwin and Kubler. The Lake City branch of the Denver & Rio Grande railroad leaves the main line at Lake Junction and follows the course of the Lake Fork branch of the Gunnison river to Lake City, the countyseat of Hinsdale county.

Highways—The principal state highway is the Rainbow Route, which runs east and west through the county. A secondary state highway runs north from Gunnison to Crested Butte. Another secondary state highway runs south from Lake Junction to Lake City. Numerous county roads and trails have been developed, principally for service of the mines in the different parts of the county.

Educational—There are 32 public district schools in the county and one highschool, located at Gunnison. A state normal school is also located at Gunnison. There are no private schools in the county.

Climatological Data—The rainfall in this county is extremely varied. A small area in the Gunnison valley has an average annual rainfall of about 10 inches and the territory just surrounding this has an average annual rainfall of 14 inches. In the north the rainfall increases very rapidly, being about 25 inches in the mountainous areas along the northern boundary. The climate in the Gunnison valley is comparatively mild, with short summers and long open winters. In the northern part the snowfall is extremely heavy and very low temperatures are common.

Tourist Attractions—This is one of the most picturesque mountainous regions of Colorado. The Black canon of the Gunnison river in the western part of the county has long been greatly admired by railroad tourists. The Rio Grande railroad follows this canon for several miles. The mountainous regions in the northern part of the county are almost wholly inaccessible. There are mineral springs at Cebolla and Waunita whose waters are famous for their curative properties.

Cities and Towns—Gunnison, the countyseat, is located on the Denver & Rio Grande railroad in the heart of the Gunnison valley. Other towns are the mining camps of Crested Butte, Pitkin, Kubler, Tincup and Tomichi, the resorts of the Waunita and Cebolla Hot Springs and the shipping points of Lake Junction, Sapinero and Doyle.

Special Opportunities—The principal opportunities offered here are in the line of mining development. There is an immense area of mineralized land in this county which has never been adequately prospected. Extensive coal deposits are found in the northern part of the county and are being worked at Crested Butte, Summerset and various points. The only anthracite coal produced in Colorado comes from the northern part of Gunnison county, in the vicinity of Crested Butte.

HINSDALE COUNTY

General Description—Hinsdale county lies in the southwestern part of the state in what is known as the San Juan mining district. It is of an irregular rectangular outline, considerably broadened at the north end. Its extreme length north and south is about 52 miles and extreme width east and west is 26 miles. Its area is 621,440 acres; slightly less than the area of the state of Rhode Island. The surface is nearly all mountainous, the altitude varying from about 8,500 feet where the Lake Fork branch of the Gunnison river crosses the north boundary, to more than 14,000 feet at the summits of some of the peaks in the San Juan range near the central part.

Early History—So far as is known, the first white people to enter this territory were the members of John C. Fremont's fourth expedition, which started out with the object of proving the feasibility of the railway route across the Rocky mountains at this point. This expedition passed up the Rio Grande river late in 1848 and es-

tablished a camp some time in December near the present boundary between Hinsdale and Mineral counties. This was the famous "Camp Starvation," the exact location of which has never been determined. The weather became so severe that more than half of the members of the party perished from cold and starvation. Those who remained with Fremont retraced their steps down the San Luis valley early in 1849 and finally made their way to Taos, New Mexico. Hinsdale county was included in the tract bought from the Southern Ute Indians in 1873. Prospectors flocked into this region immediately following the purchase and important discoveries of gold and silver were made. Among the early prospectors here were Otto Mears and Enos Hotchkiss, who supervised the construction of the famous Slumgullion wagon road as the principal outlet from the new mining camp of Lake City to the towns in the San Luis valley. The county was organized in 1874 from parts of Conejos, Costilla and Lake counties. Hinsdale county was the pioneer mineral-producing district of the San Juan region, Ouray, Silverton, Telluride and Rico all having followed Lake City in mineral development. During the silver excitement of the early 70's Lake City, via Del Norte, was the mecca toward which the adventurous steps of thousands of fortune hunters were turned, and for many years Hinsdale county poured out millions into the channels of the world's trade. Hidden Treasure, Golden Fleece and other pioneer mines of that district are among the best known in Colorado. While the continued decline in the price of silver during the 80's and 90's reduced this district to a state of drowsiness it is not dead by any means, but only awaits the magic touch of real development, encouraged by higher prices for the white metal, to awaken the old-time activity, for it is conceded that some of the richest values in the fabulously rich San Juan district lie yet untouched in Hinsdale county.

Surface and Soil—The San Juan mountains cross the southern part and the Continental divide forms a part of the eastern boundary. There is little level land except in the valleys of a few of the numerous streams having their sources in this region. The soil in these valleys is very fertile, but the seasons are extremely short and natural hay is the only important crop grown. Potatoes, unsurpassed in quality, and other vegetables, such as cabbage, carrots, onions, radishes, beets, etc., are grown to a limited extent.

Population—The population in 1910 was 646 as compared with 1,609 in 1900. The decrease was due largely to the decline in the mining industry. The population at the beginning of 1918 was about 700, mostly confined to Lake City and the narrow valley of Lake Fork. In 1910 the foreign-born white population was 18.7 per cent of the whole. The percentage is considerably lower at present; the foreigners being principally metal miners.

Drainage and Water Supply—Numerous small streams have their sources in this county, flowing in three directions. The Rio Grande river flows across the central part just north of the San Juan mountains. A number of small streams tributary to the San Juan river have their sources just south of these mountains. Lake Fork and Cebolla creek, tributaries of the Gunnison, rise in the northern part and flow north. These streams have their sources in regions of high precipitation and carry plenty of water the year round. Irrigation is practiced to a limited extent in some of the valleys and there is plenty of water available.

Industries—Mining is the principal industry. Lumbering is carried on to a limited extent, principally to supply local demands. Agriculture and stock-raising are followed in some of the lower mountain valleys, principally in the valley of the Lake Fork of the Gunnison river.

Mineral Resources—The known minerals are alunite, clays, copper, gold, iron, lead, oxide of manganese, silver, sand, a wide variety of stone, and zinc. There has been little development except in the production of gold, silver, copper, lead and zinc.

Land Classification—At the beginning of 1918 there was only about 14,000 acres of privately-owned land in the county, or about two per cent of the area. Most of this is grazing land and mineral claims. A little over 2,000 acres, according to the report of the county assessor, is being farmed under irrigation. At the beginning of 1918 there was 9,784 acres of state land in the county, principally mineral or grazing land. On July 1, 1917, there was 115,800 acres of government land open to homestead entry, most of which is of little value except for grazing purposes. The national forest area is 512,279 acres. This contains some good grazing land and much valuable mineral area.

Transportation—A branch of the Denver & Rio Grande railroad runs south from the main narrow gauge line at Sapinero to Lake City, the countyseat, this being the only railroad in the county.

Highways—The principal state highway extends from the Rainbow Route, in Gunnison county, south to Lake City, and this road has been partially improved to Creede and plans are being considered for opening it up as one of the principal state automobile routes. Another road has been planned across the county from Creede, in Mineral county, to Silverton, in San Juan county. This road is practically impassable at the present time.

Educational—There are four public district schools in the county and one highschool, located at Lake City. There are no private schools and no colleges.

Climatological Data—The rainfall is heavy in practically all parts of the county. A belt of high precipitation crosses the central part, the average annual rainfall being above 25 inches. It is somewhat lower north and south of this belt. The climate is severe, with short summers and long winters, marked by heavy snowfall and extremely low temperature in the mountain areas.

Tourist Attractions—Like other mountainous districts in Colorado, this area contains much beautiful scenery. It is noted for its picturesque lakes, one of the best known of which is Lake San Christobal, four miles from Lake City. There is good trout fishing in all the streams and in the lakes. Big game is also found in the mountains. The county has comparatively few tourist visitors, however, because of poor transportation facilities and lack of improved highways.

Towns—The principal town is Lake City, the countyseat, and terminus of the Lake Fork branch of the Denver & Rio Grande railroad. It was, at one time, one of the most active mining camps in the state. Other towns are principally mining camps in the mountains south of Lake City, among them being Henson, Capitol City, Sherman and Whitecross.

Special Opportunities—The principal opportunities here are in the direction of mining development. All the forest area and government homestead land is open to prospecting and may be patented under the federal land laws after mineral deposits have been properly located. There is a large area here which has never been adequately prospected and which undoubtedly contains rich mineral deposits. There is considerable timber on the mountain slopes, principally pine and spruce, and an extension of railway into this territory might make its development profitable.

HUERFANO COUNTY

General Description—Huerfano county lies in the south-central part of the state, the western boundary being formed by the Sangre de Cristo and Culebra mountain ranges, this being but one range, but having different names in different places. It has a more irregular outline than any other county in the state. Its extreme length, east and west, is about 48 miles, and its width, north and south, near the central part, is about 40 miles. Its area is 960,000 acres, or 300,000 acres more than that of the state of Rhode Island. The surface is an irregular plateau, broken by numerous narrow valleys in the east and rising into a rugged mountainous area in the west. The altitude varies from about 5,690 feet, at the north boundary, to more than 13,000 at the summits of some of the mountain peaks in the south and west.

Early History—This territory was visited by numerous early Spanish explorers, principally in search of gold. The only relic of Spanish occupation of what is now Huerfano county is the crumbling ruin of an old fort. Captain Pike and his party traversed the northwestern corner of this county early in 1807 and crossed the Sangre de Cristo range, over what is now called Medino pass. Fremont crossed this territory on two or three of his expeditions to the Rocky mountains. The first settlers were principally farmers and stockmen. The county was organized in 1861 as one of the original 17 counties in Colorado territory, being much larger at that time than it is at present.

Surface and Soil—The surface is extremely varied. Most of the eastern part is a plateau, broken by narrow valleys through which flow Huerfano river, Cuchara river and other small streams, all tributaries of the Arkansas river. The soil in most of this area is fertile and raises excellent crops under irrigation. The rainfall is also sufficient to grow good crops without irrigation. In some sections the soil contains considerable slate and shale and is not suitable for cultivation. The higher lands in the western part contain large areas of good grazing territory and the irri-

gated valleys provide excellent farm land for hay and small grain crops. There is no soil survey of this section available.

Population—The population in 1910 was 13,320; in 1900 it was 8,325. The present population is about 17,300. In 1910 the foreign-born white population made up 20 per cent of the total. Previous to the war the principal foreign nationalities were Austrian, Italian and Scotch, being found largely in the coal camps.

Drainage and Water Supply—This county is crossed by numerous streams having their sources in the mountainous areas in the west and flowing north and east to the Arkansas river, the principal ones being the Huerfano and Cuchara rivers, which carry sufficient water to irrigate perhaps twice as much land as is now being cultivated under irrigation. Water for domestic purposes is obtained principally from wells and is reached at depths varying from 10 feet to 300 feet.

Industries—The principal industries are coal mining, farming and stock-raising. Huerfano county ranks second in coal output, being surpassed in this respect only by its neighbor, Las Animas county. Coal deposits cover about one-third of the county, in the southern part, but mining is confined largely to the area along the Denver & Rio Grande and Colorado & Southern railroads. Farming is carried on in nearly all sections of the county and agricultural operations are being rapidly extended. Lumbering is carried on to a limited extent, principally to supply local demands.

Crops—The principal crops are alfalfa, native hay, small grains, potatoes, forage crops, pinto beans, corn and vegetables.

Mineral Resources—The known minerals are clays, coal, gold, building and moulding sand and building stone, including much basalt.

Timber—The timber is found principally in the north and west and is mostly pine and spruce.

Land Values—Irrigated land in this county sells at from $50 to $100 an acre, and nonirrigated land, principally valuable for grazing purposes, costs from $2 to $10 an acre. Nonirrigated land having a possibility of water supply for irrigation, sells slightly higher. At the beginning of 1918 there were about 365,000 acres of privately owned land in the county, or nearly 40 per cent of the total area. Of this amount 21,633 acres was being farmed under irrigation, and 4,000 acres without irrigation. The county assessor classes 332,000 acres as grazing land and the remainder is principally coal land. On January 1, 1918, there was 45,771 acres of state land in the county, including a large amount of coal land, some of which is under lease to operating coal companies, and a considerable amount of good grazing land. On July 1, 1917, there was 82,389 acres of government land open to homestead entry, some of which is suitable for farming, but most of which is valuable only for grazing purposes.

Transportation—The Denver & Rio Grande and Colorado & Southern railroads both run through the eastern part of the county, serving the principal coal mining districts. The Alamosa branch of the Denver & Rio Grande runs west from Walsenburg and crosses into Costilla county by way of La Veta pass. Numerous branch lines from both of these roads serve coal mines lying near the main lines.

Highways—The principal highway is the North and South road, which runs north and south through the eastern part of the county. This is the highway which connects all of the principal cities lying on the eastern slope of the main range, and is surfaced to Walsenburg from Pueblo. The Spanish Trail leaves this road at Walsenburg and runs west to Alamosa, Del Norte and Durango. There are numerous other county roads and secondary state highways, sufficient in a general way for the marketing of crops from the agricultural districts.

Educational—There are 50 public district schools in the county, and two highschools, located at La Veta and Walsenburg. There is a parochial school at Walsenburg.

Climatological Data—The climate in the eastern part of the county is comparatively mild, but subject to rather low temperatures and somewhat heavy snowfall in the winter. In the western and northern parts the climate is much more severe and the snowfall in the winter is extremely heavy. The rainfall varies from about 14 inches, in the extreme east, to more than 25 inches in the northwest. By far the greater part of the county, including nearly all the agricultural area, has a rainfall varying from 20 to 25 inches.

Tourist Attractions—This county has much beautiful scenery, especially in the mountainous areas in the west. The completion of the North and

South road and the Spanish Trail has greatly increased automobile tourist travel in the last two years. The large coal mines located along these roads offer an added attraction to visitors. Huerfano butte, from which the county derives its name, is located in the valley of the Huerfano river, and is a point of considerable interest to travelers. The Spanish peaks, located on the southern boundary, are twin peaks that serve as landmarks for many miles in all directions. The streams in this county are all well stocked with fish where their waters have not been muddied by mining operations.

Cities and Towns—The principal town is Walsenburg, the countyseat, located in the eastern part of the county, on the Colorado & Southern and Denver & Rio Grande railroads. Among the principal mining towns are Rouse, Walsen, Ravenwood, Farr, Prior, Maitland, Pictou and Oakdale. La Veta, in the western part, is surrounded by a good agricultural and stockraising district and derives much benefit from coal mining in the neighboring fields.

Special Opportunities—The principal opportunities here are in the direction of agricultural and mineral development. Although this county ranks second in coal output, there is a large area of coal land not yet developed. There is some mineralized area in the west which has never been worked. The agricultural territory is capable of supporting perhaps 50 per cent greater population than it now has.

JACKSON COUNTY

General Description—Jackson county lies in the north-central part of the state and includes nearly all of the mountain valley known as North park. The state of Wyoming forms the northern boundary. Mountain ranges bound it on all other sides—the Medicine Bow range on the east, the Rabbit Ear range on the south, and the Park range on the west. It is very irregular in outline, with an extreme length, north and south, of about 45 miles, and an extreme width of 42 miles. Its area is 1,044,480 acres, or about 200,000 acres less than that of the state of Delaware. The surface is principally rolling or level mountain valley, rising gradually to mountain ranges on all sides except the north. The altitude ranges from about 7,800 feet, at the point where the North Platte crosses the north boundary, to more than 12,000 feet at the summit of the peaks in the bordering ranges.

Early History—The area now included in Jackson county was visited by John C. Fremont and described by him in 1844. It was visited by numerous early hunters and trappers, and gold hunters did considerable prospecting in the surrounding mountain ranges in the 60's and 70's. The first permanent white settler was J. O. Pinkham, who erected a log house on Pinkham creek toward the north boundary of the county in 1874. The town of Pinkhampton, named in honor of this pioneer settler, is located near the site of the first log cabin. The county was organized in 1909 from a part of Larimer county and named in honor of President Andrew Jackson.

Surface and Soil—The surface of North park, which comprises more than half the area of the county, is level or slightly rolling, traversed by numerous streams, tributaries of the North Platte, which have their sources in the surrounding mountains. The soil is principally a sandy loam or an alluvial loam of wonderful richness. Although the seasons are comparatively short because of the high altitude, this mountain valley is wonderfully productive and is one of the best natural hay sections of Colorado. There is no detailed soil survey available.

Population—The population in 1910 was 1,013, the county at that time being the most sparsely settled district in Colorado, with the single exception of Dolores county. At the present time the population is about 1,400. In 1910 the foreign-born white population was 12.6 per cent of the total. The principal foreign nationalities are Swedish, English and Canadian. The population is entirely rural, there being no town of more than 500 inhabitants in the county.

Drainage and Water Supply—The North Platte river has its source in this county, and is fed by a large number of small streams, rising near the snow-capped peaks of the surrounding mountain ranges and flowing into the North Platte river from the south, east and west. These streams all carry a good supply of water the year round, there being perhaps no county in Colorado where the water supply for all necessary purposes is more abundant. Water for domestic purposes in some sections is obtained from wells and is reached at depths varying from 10 feet to 60 feet.

Industries—Stockraising, with some

general farming, including dairying, is the principal industry. North park, because of its abundant supply of natural grasses, is one of the best stock-raising districts in the state. Coal mining is followed to a limited extent. There has been some metal mining in the county, but most of the mines have been abandoned because of their remoteness from railroads. Lumbering has been followed rather extensively in the past.

Crops—The principal crops are natural hay, timothy, alsike, alfalfa, small grains, potatoes, garden vegetables and root crops, grown principally for stock feed.

Mineral Resources—The known minerals are clays, copper, coal, gold, silver and building stone.

Timber—Heavy timber is abundant in the mountains surrounding the valley, being principally yellow pine and white and yellow spruce.

Land Values—At the beginning of 1918 there was about 209,000 acres of privately owned land, or approximately 20 per cent of the total area. Of this amount a little more than 65,000 acres was being farmed under irrigation, and 133,534 acres was classed by the county assessor as grazing land. The remainder is principally coal, timber and mineral land. Irrigated land in this county sells at from $20 to $40 an acre, and nonirrigated land, valuable principally for grazing, from $3.50 to $7.50 an acre. On January 1, 1918, there was 52,421 acres of state land in the county, including some excellent farming land, most of which is for sale by the state of Colorado upon reasonable terms. On July 1, 1917, there was 226,440 acres of government land open to homestead entry, including a considerable amount of good agricultural land. The national forest area in this county is 396,627 acres.

Transportation—The Colorado, Wyoming & Eastern railroad runs south and west from the Union Pacific railroad at Laramie, Wyoming, into this county by way of Walden to its southern terminus at the coal camp of Coalmont. This is the only railroad in the county.

Highways—The principal state highway is that leaving the Vernal road at Sulphur Springs, in Grand county, running north through North park by way of Walden to Laramie, Wyoming, with a branch to Rawlins, Wyoming. Another road runs east from this road at Walden to a junction with the Vernal highway at Steamboat Springs. Numerous county roads in the park are in general ample to care for the marketing of crops and livestock.

Educational—There are nine district schools in the county, and one high-school, located at Walden. There are no private schools or colleges.

Climatological Data—The climate here is very similar to that of Middle park and South park. The summers are short and warm and the winters, although long, are not nearly so severe as might be expected at this altitude. The valley here is protected from cold winds by high mountain ranges on three sides. The rainfall is extremely varied. In the central part of the park, about the town of Walden, is a narrow belt having an average annual rainfall of about 10 inches, or less. Surrounding this is a larger belt having a rainfall varying from 10 to 15 inches. The mountainous districts in the eastern and western parts have a rainfall varying from 15 to 25 inches. The snowfall in the mountainous sections is extremely heavy and furnishes the water supply for a considerable amount of land, both in Colorado and Wyoming.

Tourist Attractions—There are no better fishing and hunting districts in Colorado than those of North park. The numerous streams here are well stocked with trout and are not fished out early in the season as they are in many other sections of the state. Hunters from all parts of the country have visited the park in search of big game. During the early history of Colorado this park was known as the "Buffalo Pasture" because of the large herds of bison that formerly grazed here. Surrounded as it is by snow-capped mountain peaks on three sides, there is no more picturesque mountain valley in the west than North park. It has not been visited by nearly so many tourists as its scenic attractions would justify because of lack of adequate transportation facilities. The further improvement of automobile highways leading into this county should make it one of the most popular resorts of the state.

Cities and Towns—Walden, the countyseat and principal town, is located near the center of North park, on the Colorado, Wyoming & Eastern railroad. It is the principal trading center for a large agricultural and stockgrowing district. Other towns are Coalmont, Rand, Cowdrey, Pinkhampton, Northgate and Hebron.

Special Opportunities—The principal opportunities offered here are perhaps along the line of agricultural development. This county, perhaps,

would support three times as large an agricultural population as it has at present. Its lack of development has been due largely to inadequate transportation facilities. The only railway outlet is into Wyoming. It can be reached by automobile from Denver by crossing one mountain range, over roads not yet well improved, though they are usually in excellent condition. There are extensive deposits of coal in the county, but their development has been retarded by lack of transportation. The same is true of the mineral deposits which are found in the surrounding mountain ranges.

JEFFERSON COUNTY

General Description—Jefferson county lies in the north-central part of the state, the city of Denver forming a part of the eastern boundary. It is an irregular triangle, with an extreme length of 72 miles, north and south, the width being about 20 miles at the north boundary and decreasing to a little more than one mile in the extreme south. Its area is 536,320 acres, or about 146,000 acres less than that of the state of Rhode Island. Its surface is principally mountainous, with some level or rolling valley land along the courses of the various streams. The altitude varies from about 5,300 feet, in the east, to nearly 10,000 feet in the extreme west.

Early History—The early history of this county is closely linked with that of the city of Denver. The first settlements within the present limits of the county were made by gold seekers about the time the foundations of the city of Denver were being laid, in 1859. Green Russell and his party of gold seekers prospected the sands of Clear creek through this county for placer gold, in 1858, and made a few discoveries. The city of Golden was founded in 1859 and was first called Golden City. For a number of years it rivaled Denver for the honor of being the first city in the state. It was made the capital of Colorado territory in 1862 and retained the honor until 1867, when the seat of government was transferred to Denver. The Colorado School of Mines was opened here in 1874. Jefferson county was one of the original 17 counties in Colorado and was named in honor of Thomas Jefferson. The territory itself was first called Jefferson, but the name was afterwards changed to Colorado in honor of the great river of that name whose headwaters are in the Rocky mountains. A part of the county was taken to form Park county in 1908.

Surface and Soil—The agricultural land is found principally in the valley of the Platte river and tributary streams in the eastern part of the county near the city of Denver, and some of the most productive irrigated farming land in Colorado is included in this area. The soil is principally an alluvial or sandy loam, usually dark or black in color, very fertile and easily cultivated. There are numerous small mountain park areas suitable for cultivation that are being farmed with marked success. The western and southern parts of the county are principally mountainous, with little agricultural land. No soil survey of the county is available.

Population—The population of Jefferson county has increased steadily and rapidly. In 1880 it was 6,004; ten years later it had increased to 8,450, and in 1900 was 9,306; in 1910 it was 14,231. The present population is in the neighborhood of 19,000. In 1910 the foreign-born population was 17.4 per cent of the total, the principal foreign nationalities then being German, English and Swedish.

Drainage and Water Supply—The county lies wholly in the South Platte watershed. The South Platte river flows across the south end and for several miles along the eastern boundary. The principal tributaries in the county are Clear creek, Bear creek, Turkey creek and Dry creek. Most of these streams carry a good supply of water the year round and water for irrigation of land in the county is obtained from them principally by direct flow. In some parts of the eastern section of the county domestic water is obtained from wells and is reached at depths varying from 15 feet to 100 feet.

Industries—The principal industries are farming, stockraising, dairying, market gardening, bee keeping, coal mining and manufacturing. There has been some metal mining in the county, but comparatively little metal is being produced here at the present time. The principal manufacturing industries are located at Golden and in the towns near the city limits of Denver. The most important pottery works in the Rocky Mountain west are located at Golden, manufacturing a wide variety of earthenware articles, fire clay retorts, baking utensils, table china, laboratory utensils and similar goods. These are made principally from clays obtained in and about the city of Golden, where some of the best

clay deposits in the Rocky Mountain west are to be found. There is also a large malted milk plant located here. Farming and market gardening are carried on principally in the Clear creek valley, west of Denver. There is a large amount of good grazing land in the national forest in this county and immediately west, and stockraisers here keep large numbers of cattle which are grazed during the summer months in the national forest pastures and fattened for market on the feed crops raised on the lower valley land.

Crops—The principal crops are alfalfa and other hays, including much native hay; wheat, oats, rye, barley, corn, potatoes, sugar beets, pinto beans, some forage crops, garden vegetables, apples, cherries, and other hardy tree fruits, and some small fruits are raised.

Timber—There is considerable good timber in the western and southern parts of the county, principally pine, cedar and spruce.

Land Classifications—At the beginning of 1918 there was about 310,000 acres of privately owned land in the county, or approximately 58 per cent of the total area. The county assessor's records show that a little over 40,000 acres is being cultivated under irrigation, and 34,000 acres without irrigation. The same authority classes 223,000 acres as grazing land and the remainder principally as coal and mineral land. Irrigated land here sells at from $50 to $800 an acre, and nonirrigated land at from $20 to $50 an acre. The higher prices are for highly productive market-garden lands near the Denver city limits. On January 1, 1918, there was 17,274 acres of state land, including some irrigated land and much grazing area, for sale by the state on favorable terms. On July 1, 1917, there was 10,060 acres of government land open to homestead entry, principally small isolated tracts of little value. The national forest area in the county is 75,813 acres.

Transportation—The Clear creek branch of the Colorado & Southern railroad passes across the county by way of Golden. The Platte canon branch of the same road follows the course of the Platte river along the western boundary of the county to the town of South Platte, whence it runs west across the county into Park county. Another branch of this road runs through the extreme northeastern corner of the county from Denver to Boulder. The Denver & Salt Lake railroad also runs through the northeastern corner. A branch of the Denver & Rio Grande railroad runs west from the main line at Englewood to Morrison.

Highways—The state highway leading from Denver through South park to a connection with the Midland Trail at Buena Vista, runs southwest through this county by way of Morrison. The state highway which crosses the Continental divide at Berthoud pass and runs through Middle park to Steamboat Springs and Craig passes west through this county by way of Golden. This is the famous Lookout Mountain road, which traverses Denver mountain parks, and is perhaps the most heavily traveled tourist road in Colorado. It was built by the city of Denver, the state of Colorado and Jefferson county, and is one of the best constructed and most picturesque mountain highways in the United States. There are numerous other secondary state highways and county roads in all parts of the county, usually well improved and maintained. Few counties in the state have better road systems than Jefferson county.

Educational—There are 62 public district schools in the county, and three highschools, located at Arvada, Golden and Wheatridge. The Colorado School of Mines, located at Golden, has played an important part in equipping young men to direct the development of mining industry in the west. The state industrial school for boys is likewise located here. The state industrial school for girls is at Morrison and the state home and training school for mental defectives is at Ridge.

Climatological Data—Jefferson county has the same delightful climate peculiar to the entire foothill district of eastern Colorado. Extremes of heat and cold are rare. In the summers the temperature in the day time is seldom above 90 degrees and the nights are always cool. In the winter, periods of zero weather or colder occur frequently, but they seldom last more than a few days. The rainfall varies from 15 to 20 inches, being heaviest in the extreme northeastern part.

Tourist Attractions—Perhaps the most popular tourist attraction in this county is Denver's mountain parks, which are located in picturesque foothill districts west of Golden and Morrison and are reached by highly improved automobile roads. These parks have been acquired by the city of Denver under special constitutional authority and are improved and main-

tained by the city, though the most remote of them is nearly 30 miles from the city limits. The highways leading to and through these parks have been constructed with funds furnished by the city of Denver, the state of Colorado and Jefferson county and are maintained principally by Jefferson county and the city of Denver. During the summer season the automobile travel over these highways is perhaps heavier than over any similar length of highway routes in Colorado.

Cities and Towns — Golden, the countyseat, is situate on the Colorado & Southern railroad, in the north-central part of the county. It is one of the most picturesque foothill cities in the state and is especially famous for its delightful climate. Morrison, a few miles south of Golden, is the gateway to a picturesque foothill territory, especially famous for its fantastic rock formations, one of the best known of which is the Park of the Red Rocks. Arvada, near the city limits of Denver, is an important residence and manufacturing town. Other towns are Edgewater, Wheatridge, Mountainview and Ralston, all near the city of Denver; Leyden, a principal coal mining camp, in the northern part; and Buffalo, Pine Grove and South Platte, tourist resorts on the South Platte river.

Special Opportunities — There is comparatively little agricultural land in this county that is not being well utilized. The forest range is also being pastured almost to its full capacity. There are extensive beds of valuable building stone that offer encouraging opportunities for development. The clay deposits are very extensive and are equal to the best to be found in Colorado. The mineral deposits so far discovered are not extensive, but there is considerable mountainous territory in which valuable minerals may yet be found.

KIOWA COUNTY

General Description—Kiowa county is a portion of the great prairie section of eastern Colorado, lying in the southeastern part of the state, just north of the Arkansas river. The eastern boundary is formed by the state of Kansas. It is an irregular rectangle, 78 miles long, east and west, and 24 miles wide. The area is 1,150,720 acres, 100,000 acres less than that of the state of Delaware. The surface is principally level or rolling and the altitude varies from 3,500 feet in the east to about 4,200 feet in the northwest.

Early History—Kiowa county lies north of the main route of early travel to the Rocky Mountain district. Groups of hunters and trappers found their way into this territory in the early part of the last century, but hostile Indians were numerous here and visitors were always unwelcome. Some stockmen established ranches on the open range in the early 60's, where they had repeated encounters with Indians. On November 29, 1864, Colonel John M. Chivington led a force of about 1,000 mounted men against a Cheyenne village under the command of Black Kettle, on Big Sandy creek, in the northern part of the county. A desperate battle followed in which nearly 300 Indians were slain. This fight led to a series of Indian wars which made residence in this section of Colorado even more unpleasant than it had been before. The town of Chivington, named in honor of Colonel Chivington, is located about 10 miles south of the battlefield. The settlement of this section did not begin until late in the 80's, and in 1900, one year after the county had been created from a part of Bent county, the population was 1,243. The Missouri Pacific railroad was constructed through this county in 1887.

Surface and Soil—The surface is principally a rolling prairie, with numerous small streams flowing south across the county to the Arkansas river. The soil varies widely in different sections. It is principally a sandy loam with considerable areas of adobe and other harder soils in some sections. Along the Missouri Pacific railroad and further north farming has been carried on to a considerable extent and has proved generally successful, the soil in this section being principally sandy loam, but yielding readily to cultivation. In the southern part the surface is somewhat broken and agricultural development has been much slower. There is comparatively little area here, however, that is not suitable for cultivation. No detailed soil survey of the county is available.

Population—The population of this county has increased steadily since 1900. Earlier than that it showed considerable fluctuation as a result of the variety of experiences on the part of the early inhabitants. In 1890 it was 1,243. Unfavorable seasons during the early 90's discouraged many of the new settlers, and in 1900 it dropped to 701. A new tide of immigration set in during the first years of the present cen-

tury, and in 1910 the population had grown to 2,899, an increase of 213.6 per cent in 10 years. The present population is about 6,200, an increase of about 114 per cent in the past seven years. In 1910, the foreign-born population was 5.4 per cent of the total. It is perhaps somewhat less today. Previous to the war the principal foreign nationality was German.

Drainage and Water Supply—This county lies in the Arkansas river watershed and is drained by a number of small streams flowing south from their sources in the counties further north. The principal streams are Rush, Adobe and Big Sandy creeks, which have their sources where the rainfall is comparatively light and where there is no permanent supply of snow to keep up the flow during the summer. In the south-central part of the county is perhaps the largest group of irrigation reservoirs in Colorado, furnishing the water supply for irrigating a large amount of land in northern Prowers and Bent counties, and small areas in southern Kiowa county. Water for domestic purposes is obtained principally from wells and is reached at depths varying from 10 feet to 200 feet. The flow of underground water here is comparatively strong and wells pumped by windmills or engines, in some cases, furnish water for irrigating small areas.

Industries—The principal industry is general farming, which here includes dairy farming and stockraising. Dairy farming has been developed rapidly in the past half dozen years and promises an equally rapid development for the next decade.

Crops—The principal crops are alfalfa, natural hay, milo, feterita, kafir and other forage crops, broomcorn, potatoes, small grain and garden vegetables.

Mineral Resources—The known minerals are clays, building sand and building stone. Drilling for oil has been begun in this county and some showings of petroleum have been reported.

Land Values—At the beginning of 1918 there was 794,708 acres of privately owned land in the county, or a little more than 69 per cent of the total area. Of this amount, according to the records of the county assessor, 792,298 acres is classed as grazing land, though much of it is under cultivation. There are a few small areas of irrigated land in the county. Farming land here sells at from $3 to $30 an acre. On January 1, 1918, there was 77,263 acres of state land in the county, nearly all of which is suitable for farming and which is for sale by the state on reasonable terms. On July 1, 1917, there was 4,753 acres of government land open to homestead entry, principally small isolated tracts of little value except for grazing purposes.

Transportation — The Missouri Pacific railroad runs east and west through the entire length of the county.

Highways—The principal state highway is the Central Kansas Boulevard, which follows in general the course of the Missouri Pacific railroad through the county. A state highway runs north from Eads to Kit Carson, on the Union Pacific railroad, and another runs north from Arlington to Hugo, Lincoln county. Still another runs south from Chivington to Lamar, on the Santa Fe. There are numerous county roads fairly well improved and in a general way ample for the movement of crops to market.

Educational—There are 50 public district schools in the county, and two highschools, located at Eads and Haswell. There are no private schools or colleges.

Climatological Data—The climate here is comparatively mild and generally favorable for farming and stockraising. The summers are long and warm and the winters are comparatively short and not subject to extremely low temperatures. There is considerable wind during some seasons of the year, but the hot winds which cause so much damage to crops further east, in Kansas, do not reach this far west. The average annual rainfall varies from 12 to 15 inches.

Tourist Attractions—Although this county offers comparatively little in the way of natural scenery, it lies on one of the principal tourist routes from the east to the mountains of Colorado. The improvement of the Central Kansas Boulevard through this county has increased tourist travel several hundred per cent in the past five years.

Cities and Towns—The principal cities are Eads, the countyseat, located near the central part of the county on the Missouri Pacific railroad; Brandon, in the eastern part, and Haswell, in the west.

Special Opportunities—The principal opportunities offered here are in the direction of agricultural development. Perhaps 95 per cent of the area of this county is suitable for cultivation, while the report of the county assessor shows that only about three

per cent of it is being cultivated. Forage crops, suitable for feeding dairy cattle and other livestock, do well here almost every season, and farmers who have constructed silos for saving such crops have been uniformly successful. Although agricultural development has been surprisingly rapid here in the past 10 years, indications point to a much more rapid development in the coming decade.

KIT CARSON COUNTY

General Description — Kit Carson county lies in the great plains section of eastern Colorado, the eastern boundary being formed by the state of Kansas. It is of rectangular outline 60 miles long, east and west, and 36 miles wide. Its area is 1,381,760 acres, or about 130,000 acres more than that of the state of Delaware. It is generally a level prairie, with an altitude varying from 4,100 feet in the east to 4,700 feet in the west.

Early History—This county was organized in 1889 from a part of Elbert county and named in honor of Christopher Carson, a pioneer frontiersman popularly known as "Kit Carson." Its early history is very similar to that of other sections of eastern Colorado; many of the gold seekers of 1859-60 crossing the territory now included in this county in their rush for the gold fields of the Pikes Peak region. They considered this territory a worthless desert, however, and made all haste in getting over it to the mountains beyond. Its settlement did not begin until the late 60's, when stockmen began to establish ranches along the sources of the numerous small streams. For 20 years cattle raising was the principal industry here and thousands of Texas long-horns were raised on the free government range. In the early 80's homesteaders began to come in in increased numbers and farming was followed on a limited scale. In the early 90's, after a series of failures, many of these homesteaders gave up their claims and returned east. A new period of development set in early in the present century and since that time the population of the county has grown steadily and agricultural development has been rapid.

Surface and Soil—The divide between the Republican and Arkansas rivers crosses the extreme southern part of the county. Most of the streams are tributaries of the Republican river. The south fork of the Republican river has its source in Lincoln county and flows northeast across this county. There are numerous small creeks tributary to this stream, rising in Kit Carson county and flowing northeast. The surface is generally level prairie with some valley lands along these streams. The soil is principally a chocolate sandy loam with clay subsoil. There is very little adobe or gumbo. It is extremely fertile, easy to work, retentive of moisture and, under proper farming methods, produces excellent yield. There is no detailed soil survey of this county available.

Population—The population of this county has increased very rapidly since 1900. At that time there were 1,580 people in the county; in 1910 there were 7,483; the present population is approximately 10,000. In 1910, the foreign-born population was 7.4 per cent of the total, the principal foreign nationalities being Russian, German and English. The foreign population is somewhat less today than it was in 1910.

Drainage and Water Supply—The small streams here, tributaries of the Republican river, carry a limited supply of water during the drier parts of the summer and furnish no reliable supplies for irrigation. Water for domestic purposes is obtained from wells and is reached at depths varying from 40 to 180 feet. There is a strong underflow of so-called "sheet water" and wells sunk to this are pumped by windmills and engines, furnishing a considerable part of the water for livestock and in some cases a limited amount for irrigation.

Industries—The principal industries are farming, dairying and stockraising. General farming has been developed very rapidly in the past 10 years and dairy farming is steadily supplanting stockraising as a secondary industry.

Crops—The principal crops are small grains, corn, milo, kafir, sudan grass and similar forage, pinto beans, alfalfa and garden vegetables. Alfalfa here, as in other sections of Colorado, is generally planted in rows and cultivated until a good stand is obtained. This crop is growing steadily in importance.

Mineral Resources—The known minerals are clays, building sand, and building stone.

Land Values—At the beginning of 1918 there was about 1,205,000 acres of privately owned land in the county, or approximately 87 per cent of the total area; of this amount 450 acres was classed by the county assessor

as irrigated farm land; 77,807 acres as nonirrigated farming land and 1,880 acres as natural hay land. Most of the remainder is classed as grazing land. Irrigated land in this county, of which the supply is very limited, brings from $50 to $100 an acre; nonirrigated land sells at from $10 to $50 an acre. On January 1, 1918, there was 67,195 acres of state land in the county, most of which is suitable for farming and is for sale by the state government on reasonable terms. On July 1, 1917, there was 5,553 acres of government land open to homestead entry, principally small isolated tracts of no value except for grazing purposes.

Transportation — The Rock Island railroad runs across the central part of the county by way of Burlington, Bethune, Stratton, Vona, Seibert and Flagler.

Highways—The principal state highway is the Pikes Peak or Ocean to Ocean route, which follows in general the course of the Rock Island railroad across the county. This is one of the principal automobile routes from the east into Colorado. Numerous secondary state highways and county roads are generally well improved and sufficient for the transportation of crops to market.

Educational—There are 97 public district schools in the county and five highschools, located at Burlington, Flagler, Seibert, Stratton and Vona. There are no private schools or colleges but the county has one of the best local school systems in the state.

Climatological Data—The climate is very similar to that of other sections of eastern Colorado. The summers are long and favorable for general farming and stockraising; the winters are comparatively short and mild. The county lies in what is known as the rain belt of eastern Colorado, the average annual rainfall varying from 15 to 20 inches. The average at Burlington, in the eastern part of the county, has been 18.71 inches for a period of 20 years. It is somewhat higher in the east than in the west. Most of it comes between April 1 and October 1.

Tourist Attractions—A large percentage of the automobile tourists from the east to Colorado pass through this county over the Pikes Peak highway, this being one of the best automobile roads into Colorado. Although there is comparatively little natural scenery here of interest to tourists, the county derives considerable benefit from automobile travel this way.

Cities and Towns—Burlington, the countyseat, is located on the Rock Island railroad in the eastern part of the county. It is the center of a prosperous agricultural, stockraising and dairying section and is growing rapidly. Other important towns are Stratton, Vona, Seibert and Flagler, all located on the Rock Island railroad.

Special Opportunities—There is more than a half million acres of good agricultural land in this county that has never been broken. Perhaps 95 per cent of the area of the county could be cultivated profitably. The uniform success that has attended agricultural operations properly conducted here in the past half dozen years is the best evidence of the success that will follow the development of the unbroken areas. The towns are all growing steadily and as the agricultural territory is broken and developed there will be excellent business, professional and small manufacturing openings throughout the county.

LAKE COUNTY

General Description—Lake county is an extremely rugged, mountainous area situate near the center of the state at the very crest of the main range of the Rocky mountains. It is comparatively insignificant in size, but is famous the world over as one of the richest known mineral producing districts. It is of an irregular rectangular shape, 24 miles long, north and south, and about 22 miles wide at its southern boundary. It is bounded on the east by the Park range and on the west by the Saguache range, which here forms the Continental divide. Its area is 237,440 acres, or a little more than one-third that of the state of Rhode Island. The surface is nearly all mountainous. The altitude ranges from about 8,935 feet, at the point where the Arkansas river crosses the south boundary, to 14,402 at the summits of Mt. Elbert and Mt. Massive, the highest points in Colorado.

Early History—Lake county is one of the pioneer mining districts in the state. In the latter part of 1859 gold hunters found their way across the Park range and discovered placer gold in California gulch, at the foot of Mt. Massive. The severe winter drove them away before they had recovered much of the yellow metal, but early the next spring another party of prospectors entered the same region and soon began to pan out rich gold sand.

A new mining district was organized and a camp was built and christened Oro City. Within a year it was the most popular spot in Colorado, the gulch then having a population of about 5,000. In a few years more than $5,000,000 in placer gold was taken from the narrow ravine about seven miles in length. Lake county was organized that year as one of the original 17 counties of Colorado, being at that time much larger than it is at present. The placer gold deposits in California gulch soon began to play out and the fortune hunters drifted away into other fields, leaving Oro City almost completely deserted. In 1874 William H. Stevens went into that district and began operating sluices to recover gold that had been passed by as a result of the crude methods employed by the early gold hunters. He obtained some gold for his pains, but his investigations led to the discovery of large masses of carbonate of lead, carrying rich silver values. Further exploration revealed vast ore deposits on the slopes of the Mosquito range. In 1876 he was joined by other prospectors and the period of real lode mining in Lake county began. Oro City was abandoned and a new camp was established further north, popularly known as the Cloud City, its altitude being 10,190 feet above sea level. In 1877 it was only a cluster of shanties and rude cabins. The big rush began in the spring of 1878, and the town soon had a population of 15,000. It was named Leadville, from the large deposits of silver-lead ores which were being worked at this time. The Denver & Rio Grande railroad was completed to Leadville in 1880. In the years following the Leadville district was the most important silver producing area in the world.

Surface and Soil—The Arkansas river has its source in this county and the only agricultural land is that found in the upper valley of this stream. It lies, however, at an altitude of above 8,000 feet and agriculture is, of course, carried on to a very limited degree. The soil is very fertile and good crops of mountain hay, potatoes and various garden vegetables are produced in a very restricted area. The remainder of the county is extremely rugged and mountainous, containing the two highest peaks in Colorado, the summits of Mt. Elbert and Mt. Massive. No soil survey of this area is available.

Population—The population of Lake county has shown great variations. In 1880 it was 23,563, the county at that time including a much larger area than it does at the present. In 1890 it was 14,663, and in 1900 it was 18,054. In 1910 the county had been reduced to its present limits and the population was 10,600. There had been a considerable decrease in population in the Leadville district at this time, due to a sharp falling off in mining activities. The present population is about 14,000. In 1910 the foreign-born white population was 35.2 per cent of the total, this being the largest percentage of foreign-born population shown in any county in the state except San Juan. The foreigners were principally metal miners. Previous to the war the principal foreign nationalities were Austrian, Irish, Swedish, English, Canadian and German. This population is largely confined to the city of Leadville, which had a population of 7,508 in 1910, and at the present time has about 9,000.

Drainage and Water Supply—The headwaters of the Arkansas river are in this county, and this stream, with numerous small tributaries, supplies the drainage and abundant water for all necessary purposes. These streams have their sources in regions of high precipitation and much of the water for irrigation of the lands in the Arkansas valley further south and east have their origin here.

Industries—Metal mining is the principal industry. It has been followed here for nearly 60 years and the Leadville district is today the principal metal producing district in Colorado. There is some farming and stockraising in the upper Arkansas valley. Lumbering is carried on to a limited extent, principally to supply local demands.

Mineral Resources—The known minerals are alunite, bismuth, clays, copper, cadmium (greenockite), gold, iron, lead, manganese, silver, zinc, topaz, granite, sandstone and other building stone.

Timber—Heavy timber is rather abundant along the slopes, principally pine, spruce and aspen.

Land Classifications—At the beginning of 1918 there was about 69,000 acres of privately owned land in the county, or a little more than 29 per cent of the total area. Of this amount 25,450 acres is classed by the county assessor as grazing land, and the remainder is principally metal mining claims, town and city lots and railroad rights of way. On January 1, 1918, there was 2,496 acres of state land in the county, principally graz-

ing land. On July 1, 1917, there was 8,444 acres of government land open to homestead entry, valuable principally for its possible mineral deposits. The national forest area within the county is 159,928 acres.

Transportation—The main line of the Denver & Rio Grande railroad runs north and south through the central part of the county by way of Leadville, crossing the main range at Tennessee pass, near the northern boundary. The Colorado Midland railroad runs north along the Arkansas river to Leadville and west to Hagerman's pass, on the western boundary, where it crosses the Continental divide. A branch of the Colorado & Southern railroad also enters Leadville and extends north and east to Breckenridge, in Summit county.

Highways—The principal state highway is the Midland Trail, which follows in general the course of the Denver & Rio Grande railroad through the county. Numerous other state and county highways and mountain trails extend into the various mountain districts.

Educational—There are 20 public district schools in the county, and one highschool, located at Leadville. There are no private schools or colleges.

Climatological Data—The rainfall here is extremely varied. In the upper Arkansas valley, from Leadville south to the county line, it ranges from 13 to 15 inches annually. A narrow belt surrounding this area has an average annual rainfall of from 15 to 20 inches. The mountainous areas in the north and west have an annual precipitation varying from 20 to 35 inches. The climate is somewhat severe. The summers are short and warm and the winters are long, with extremely heavy snowfall in the high altitudes.

Tourist Attractions—Many features have combined to make Leadville a famous stopping point for tourists from all parts of the world. Its location is extremely picturesque, being near the foot of Mt. Massive, one of the two highest points in Colorado. It is also one of the highest cities in the world, lying at an altitude of above 10,000 feet. The fact that some of the richest metal mines in the world are located here also makes it a point of keen interest to travelers. The surrounding territory is exceptionally rich in rugged mountain scenery, and the completion of the Midland Trail through this territory has greatly increased tourist travel. Another state highway, running west from the Midland Trail across the south end of the county to Aspen, in Pitkin county, also opens up a very attractive mountain region.

Cities and Towns—Leadville, the countyseat and principal city, is located near the central part of the county, on the Denver & Rio Grande railroad, the Colorado Midland railroad and the Colorado & Southern railroad. It has large smelters which give employment to a considerable number of the inhabitants. The richest metal mines of the county are located within the city limits or immediately surrounding them. Other towns are Arkansas Junction, Waco and Snowden, on the Denver & Rio Grande railroad, and Twin Lakes, a mining camp in the southwestern part.

Special Opportunities—The principal opportunities offered here are in the line of mining development. Although mining has been carried on here for nearly 60 years, rich metal values are still being opened up at great depth, and considerable areas, presumably carrying good metal values, have not yet been worked. All of the homestead land and national forest area within the county is open to prospecting and patent under the mineral land laws, and most of it is highly mineralized.

LA PLATA COUNTY

General Description—La Plata county is in the southwestern part of the state and includes a considerable portion of the agricultural territory popularly known as the San Juan basin. Its southern boundary is formed by the state of New Mexico. It has a truncated triangular shape, with an extreme length of about 40 miles, north and south, and an extreme width of 38 miles near the southern end. Its area is 1,184,640 acres, or about 73,000 acres less than that of the state of Delaware. In the south the surface is divided into level tablelands, interspersed with small timbered hills, rising very rapidly into a rugged, mountainous region in the north. The altitude ranges from about 5,900 feet at the southern boundary to more than 14,000 feet at the summits of some of the peaks in the north.

Early History—Early Spanish explorers probably followed the course of the San Juan and tributary streams into this territory, but no authentic account of such explorations is available. In 1860 a party of gold hunters under the leadership of a man named Baker entered what is now La Plata

county. They discovered no gold and made no settlement, hostile Indians and hunger being the influences which forced them to cut their visit short. Another party of prospectors entered this region in 1870 and returned the following year, finding placer and lode gold deposits in the La Plata mountains. A treaty was made with the Indians in 1873 and the following year hundreds of settlers entered the Animas valley and the surrounding mountains. The county was organized in 1874, then comprising a territory nearly four times as large as the present county.

Surface and Soil—The surface is extremely irregular. In the south it is crossed by numerous narrow valleys of streams flowing to the San Juan river, most of which contain considerable good agricultural land. Between these valleys there are numerous broad mesas, most of which also have considerable splendid farming area. Further north the surface becomes mountainous, with the La Platas on the west and spurs of the San Juans on the north. The soil in the southern part is a deep sandy loam, usually, with a wide variety of color and texture, well adapted for the growing of any general crops raised in this latitude, as well as for most tree fruits grown in Colorado. No detailed soil survey is available.

Population—The population in 1910 was 10,812 and at the beginning of 1918 was estimated at 14,900. Durango is the only city having a population in excess of 2,500, its population being 4,686 in 1910, and estimated at this time at 5,500. This left the rural population at 65.7 per cent of the total in 1910, and the percentage is perhaps somewhat greater at present. In 1910 the native white population was 83.4 per cent of the total. The foreign-born population at that time was chiefly Indian, German and Austrian. The percentage of foreign population is perhaps considerably lower now than it was then.

Drainage and Water Supply—This region is drained by the San Juan river, which flows through northern New Mexico. The principal tributaries in La Plata county are the Pine, Animas and La Plata rivers. These streams have their headwaters in the San Juan and La Plata mountains, where the precipitation is very heavy, and carry an abundant supply of water for all irrigable land and for all other necessary purposes. Hydro-electric power is developed on the Animas river, above Durango, to furnish power and light for most of the cities and towns. In the agricultural districts domestic water is obtained from wells where it is not available from other sources. Water is found at depths ranging from 10 to 600 feet.

Industries—The principal industries are farming, stockraising, dairying, manufacturing, mining and lumbering. Farming, stockraising and dairying are carried on chiefly in the southern part, though stock is grazed extensively in the forest areas in the northern part during the summer. Metal mining is carried on principally in the La Plata mountains, in the northwest. There are extensive coal deposits in the county, most of which remain undeveloped. Coal is being mined in a number of localities along the Denver & Rio Grande railroad west of Durango. A large smelter belonging to the American Smelting & Refining company is located at Durango, handling much of the ore produced in this district and giving employment to a large number of people. Durango is also the principal retail market for this territory and its jobbing business is increasing rapidly. It has a flour mill, an ice plant, a packing plant, a creamery, a brick plant and a planing mill.

Crops—The principal crops are alfalfa and other hays, wheat, oats, barley, corn, potatoes, garden vegetables, apples and smaller fruits. Experiments made in various parts of La Plata and adjoining counties by the Durango Exchange prove that sugar beets yield a profitable tonnage with very high sugar content.

Mineral Resources—The principle known minerals in this county are bismuth, coal, clay, copper, cinnabar, gold, silver, lead, sand, granite, limestone and a wide variety of other building stone. Gold, silver, copper and lead have been produced in considerable quantities and are still being mined. The coal mines have been only slightly developed, principally to supply local demand, though considerable highgrade blacksmith coal is shipped out. Clays have been mined near Durango for making brick. Building stone has been quarried to a limited extent, only for local use, and building sand has been developed in the same way.

Timber—There is considerable timber in nearly all parts of the county. Pine and spruce are heavy in the more mountainous parts in the north. Pinon, cedar and pine are found on the higher ground further south.

Land Values—Irrigated land here,

with good water right, may be had at prices ranging from $25 to $100 an acre, depending largely upon location. Good nonirrigated farm land costs from $5 to $25 an acre and grazing land may be bought at from $3 to $30 an acre. At the beginning of 1918 there was approximately 290,000 acres of privately owned land in the county, or 24 per cent of the total area. Of this, 48,110 acres was being farmed under irrigation, 8,823 acres was being farmed without irrigation and 210,884 acres was classed by the county assessor as grazing land. At the beginning of 1918 there was in the county 11,110 acres of state land, much of which is suitable for cultivation, and which is for sale by the state upon reasonable terms. On July 1, 1917, there was 104,578 acres of government land open to homestead entry, a considerable part of which is farming land, but most of which is valuable chiefly for grazing purposes. Most of the mountainous land in the northern part of the county is in the national forest, the total forest area being 370,913. This area includes much good grazing land, which is available for pasture upon very reasonable terms.

Transportation—A narrow gauge line of the Denver & Rio Grande railroad system enters the county from the east, coming from Alamosa, and has its terminus at Durango. The Rio Grande Southern, belonging to the same system, runs west from Durango into Montezuma county and north to Ridgway and Montrose. A branch of the Rio Grande runs north from Durango to Silverton and another, standard gauge, runs south to Farmington, N. M.

Highways—The principal state highway is the Spanish Trail, which enters the county from the east and extends to Durango. From here a branch runs west to Mancos and Cortez in Montezuma county, and the Mesa Verde national park. Another branch runs south to Farmington and on to California by way of the Grand Canon. There are many excellent roads radiating from Durango in all directions. A state highway is now under construction from Durango to Silverton, where it will connect with the road to Ouray and north to the Rainbow Route at Montrose.

Educational—There are 50 public district schools in the county, and an excellent highschool, located at Durango. Ignacio, Bayfield, Tiffany and Allison also have some highschool work. The Fort Lewis school of agriculture, mechanical and household arts, connected with the state agricultural college, is located at Hesperus. There are no private schools and no colleges in the county.

Climatological Data—The rainfall in the southern part varies from 14 inches to 16 inches. In the western part it runs as high as 18 inches and in the north it reaches nearly 30 inches. The climate is subject to extreme low temperatures in the north but is equable in the south, especially well adapted to stockraising and general farming.

Tourist Attractions—This is a district of unsurpassed scenic beauty, and the number of visitors has been greatly increased by the opening of the Spanish Trail, which permits automobile travelers to make the trip from the cities in the eastern part of the state to Durango and the Mesa Verde national park. The road to Silverton will open a wide range of beautiful mountain scenery which now is wholly inaccessible to the automobilist. La Plata county is one of the leaders in the construction of good roads. There is excellent trout fishing in many of the mountain streams and exceptionally fine fishing is afforded in some of the mountain lakes. The Ute Indian reservation and school at Ignacio is a point of considerable interest to tourists.

Cities and Towns—Durango, the countyseat, is the principal city and distributing center for the San Juan region. It is an important industrial center and a market of growing importance. The Durango Exchange is the center of organized commercial activity for La Plata and the surrounding counties. Ignacio, on the Denver & Rio Grande railroad in the Pine River valley, is an important agricultural town. Hesperus, west of Durango, is a prosperous coal mining town. Other towns are Rockwood, Tiffany, Red Mesa, Marvel, Griffith, La Boca, La Plata, Oxford, Perins, Allison, Elco, La Posta, Bayfield, and May Day.

Special Opportunities—Opportunities are offered here both for agricultural development and for prospecting and mining development. The homestead land includes some area suitable for farming, and a considerable amount of grazing land. Privately owned land may be obtained at prices lower than prevail in most sections of the state. There is an extensive mineralized area within the county, much of which has been inadequately pros-

pected. Extensive coal deposits are found, but development has been slow on account of remoteness from large markets. Cheap water power and cheap coal make this area a favorable place for manufacturing development, though it is at present remote from extensive markets. There are immense supplies of building stone and clays, which must wait for development until the surrounding country is settled, so as to provide a better outlet for the products. Cement rock is abundant with a good local market.

LARIMER COUNTY

General Description—Larimer county lies in the north central part of the state, the north boundary being formed by the state of Wyoming and the western boundary by the Medicine Bow mountain range. It is of an irregular rectangular outline except for the western boundary. Its extreme length, east and west, along the north boundary, is 64 miles, and its width is about 50 miles. Its area is 1,682,560 acres, or a little less than one-third that of the state of Massachusetts. The surface ranges from level plains in the eastern part to an extremely rugged mountainous area in the west. The altitude varies from about 4,800 feet in the east to more than 14,000 feet at the summits of some of the peaks near the western boundary.

Early History—Early Spanish prospectors are said to have visited a part of this territory during the early part of the eighteenth century. They were searching for gold, but there is no record of their having made any important discoveries and no traces of their visit are to be found at this time. Fur traders and trappers frequently visited this part of the state during the early part of the last century, but made no permanent settlements. Kit Carson and his band of trappers at one time spent a season in the neighborhood of what is now Estes Park. Fremont passed this way on his first and second expeditions in 1842 and 1843. On the second expedition he followed the Poudre river to its source and his is the first authentic description of the territory now included in Larimer county. So far as is known the first white settler was Antoine Janis, who in 1844 established a trading post near the present site of the town of La Porte. He remained in this region until the influx of miners and gold seekers in 1878. Tradition tells of a party of French trappers who, on their way to the mountains, buried a supply of powder in a sand bank near one of the streams. This stream is now called Cache la Poudre, thus in its name perpetuating tradition. A granite monument near the town of Bellvue, about seven miles northwest of Fort Collins, marks the spot where this powder is supposed to have been buried. Estes Park, one of the most beautiful natural parks in Colorado, was named for Joel Estes, who visited it in 1859 and settled there the following year. In the early 70's the Earl of Dunraven, infatuated with the beauty of the Estes Park region, acquired a large portion of it and for years used it as a cattle ranch and game preserve. A military post was established on the present site of Fort Collins in 1864 and was named in honor of Colonel William O. Collins, who commanded the 11th Ohio Volunteer Cavalry. The town itself was laid out in 1871. Larimer county, one of the original counties of Colorado territory, was named in honor of General William Larimer, a well-known Colorado pioneer and one of the founders of the city of Denver. A part of its original territory was taken to form Jackson county in 1909.

Surface and Soil—Most of the agricultural land lies in the eastern part of the county in the valleys of numerous small streams, tributaries of the South Platte river. The soil here is principally a sandy loam, with small areas of gravelly soil and a very limited amount of adobe. It is generally light, very fertile and possesses marked moisture-retaining properties. Under irrigation it produces excellent yields of all the principal crops grown in Colorado, the eastern part of the county being one of the best irrigated agricultural districts in the state. Further west there are numerous mountain valleys and plateaus with some agricultural land and a large amount of good grazing land. A detailed soil survey of the irrigated land in the eastern part of the county was made by the bureau of soils of the department of agriculture in 1904 and published in 1905.

Population—The population of this county has grown very rapidly. In 1880 it was 4,892; in 1890 is was 9,712, and in 1900 it was 12,168. In 1910, one year after a portion of the county had been taken to form Jackson county, the population of the remainder was 25,270. The present population is about 35,000. In 1910 the foreign-born population was 14.9 per cent of the total, the principal foreign nationalities being Russian, German, Swedish and English. At that time the

urban population was 46.9 per cent of the total.

Drainage and Water Supply—The county lies in the South Platte watershed except a small area in the northwestern corner which is drained by the Big Laramie river, a tributary of the North Platte. The principal streams flowing into the South Platte are the Cache la Poudre, Big Thompson and Little Thompson, all of which have numerous small tributaries. These streams carry an abundance of water the year around and furnish the supply for irrigating most of the land in eastern Larimer county and a considerable amount of land farther east in the Platte river valley. Water for domestic purposes in the eastern part of the county is obtained, in some cases, from wells and is reached at depths varying from 20 to 200 feet.

Industries—The principal industries are farming, stockraising, stockfeeding, dairying, bee keeping and manufacturing. Farming is confined principally to the irrigated areas in the eastern part of the state, though recently considerable amounts of nonirrigated land have been placed under cultivation with marked success. Large amounts of feed crops are produced here and thousands of cattle and sheep are shipped in here annually to be fattened for market. Larimer county feeds more lambs, perhaps, than any other county in the state. There is a vast amount of good grazing land in the central and western parts of the county, lying largely in the national forest areas, on which large herds of cattle are pastured during the summer months. The principal manufacturing industry is the making of beet sugar, factories being located at Loveland and Fort Collins. At Fort Collins there are two flour mills, one creamery, one concrete culvert factory, one head-gate factory, three cigar factories, one brick plant, and other small manufacturing establishments. Loveland has, in addition to the sugar factory, a large canning factory, milk condensery, flour mill, brick plant, plaster mill and a number of small factories. Berthoud has a flour mill, alfalfa meal mill, canning factory, two planing mills and a brick plant.

Crops—The principal crops are alfalfa and other hays, including native hay; sugar beets, potatoes, wheat, oats, rye, barley, corn, pinto beans, garden vegetables, including peas, snap beans, tomatoes and other vegetables grown for canning purposes; blackberries, raspberries, loganberries and other small fruits. Apples and other hardy tree fruits are grown to a considerable extent in the sheltered regions of the foothills.

Mineral Resources—The known minerals are bismuth, clays, copper, granite, gypsum, marble, limestone and other building stones. There is a large mineralized area in the western part, believed to contain gold, silver, copper and other metals, but deposits are found at great depths and their development has not been undertaken because of the immense expense involved.

Timber—There is plenty of good timber in the western part of the county, principally pine, cedar, spruce and aspen. Lumbering has been followed to a limited extent for a good many years.

Land Values—At the beginning of 1918 there was approximately 634,000 acres of privately owned land in the county, or about 37 per cent of the total area. The report of the county assessor classes 110,767 acres of this as irrigated farm land, 500 acres as improved fruit land, 25,412 acres as nonirrigated farm land, 15,400 acres as natural hay land, and 475,000 acres as grazing land. The remainder is principally town and city lots and railroad rights of way. Irrigated land in this county sells at from $100 to $300 an acre, and nonirrigated land at from $1.25 to $40 an acre, the lower priced land being suitable only for grazing purposes. On January 1, 1918, there was 73,982 acres of state land in the county, including a considerable amount of good farming area, for sale by the state on favorable terms. On July 1, 1917, there was 52,720 acres of government land open to homestead entry, principally small isolated tracts and barren or mountainous areas of comparatively little economic value. The national forest area of this county is 630,797 acres. About three-fourths of the Rocky Mountain national park lies in the southwestern part of the county. Estes park, near the entrance of the Rocky Mountain national park, is one of the most beautiful of the smaller mountain parks in the state and contains much fine native hay and pasture land.

Transportation—The eastern part of the county is well served with railways, but the western part is wholly without railroad transportation. The Colorado & Southern railroad between Denver and Cheyenne passes through the eastern part of the county by way of Fort Collins. A branch of the same road runs from Fort Collins to Greeley.

A branch of the Union Pacific railroad runs north from Denver to Fort Collins. The Great Western railway, a subsidiary of the Great Western Sugar company, serves a considerable area of the beetgrowing districts in the southeastern part of the county.

Highways—The principal state highway is the North and South road, which passes through the eastern part of the county by way of Fort Collins. The main line of this road runs north from Fort Collins to Cheyenne, and a branch runs northwest to a junction with the Lincoln Highway at Tie Siding, Wyoming. The principal entrances to the Rocky Mountain national park are up the Big Thompson from Loveland and Fort Collins, and another leads from Boulder to the picturesque foothills region between the Big Thompson river and the upper St. Vrain creek. There are numerous secondary state highways and county roads, generally well improved and maintained. No section of the state has better highways than eastern Larimer county, and the roads extending westward into the mountainous districts are being extended and improved very rapidly.

Educational—There are 65 public district schools in the county and six highschools, located at Berthoud, Estes Park, Fort Collins, La Porte, Loveland and Wellington. The Colorado State Agricultural college is located at Fort Collins, having been opened in 1879. This is the headquarters of agricultural extension work for Colorado and free public short courses in agriculture are given here each winter for the benefit of the farmers of the state. This is also the headquarters of the United States agricultural experiment station work for the state of Colorado.

Climatological Data—The climate in the eastern part of the county is mild, very healthful and well adapted to general farming and stockraising. The rainfall in this area is comparatively light; the air is dry and bracing and the percentage of sunshine very high. In the western part, where the altitude is much higher, the winters are severe and the snowfall extremely heavy. The average annual precipitation in the agricultural districts in the eastern part of the state ranges from 14 to 17 inches. In the western part it increases rather rapidly, being above 20 inches along the mountain range which forms the western boundary.

Tourist Attractions—Estes park has for a great many years been one of the most popular tourist centers in Colorado. The Rocky Mountain national park, created by act of congress in 1913, includes the picturesque mountain area lying directly west of Estes park. Since its creation this park has become the most popular national playground in the West. Estes park now lies at the eastern entrance of this national playground and an excellent system of highways is being laid out through the magnificent scenic area now included in the national park. Cherokee park, in the northern part of the county on the North Fork of the Cache la Poudre river, is a popular tourist resort and fishing place. Most of the streams in the county are well stocked with trout and are very popular fishing waters. The routes to the mountain resorts in the western part of the county traverse one of the most highly irrigated agricultural districts in Colorado, which fact adds greatly to their popularity.

Cities and Towns—Fort Collins, the principal city, lies in the heart of the agricultural district in the east central part of the county. It is an ideal residence city and has grown very rapidly in the past ten years. Loveland and Berthoud, in the southeastern part of the county, are the centers of prosperous agricultural communities and in recent years have developed important manufacturing industries. Other important towns are Timnath and Wellington, in the eastern part, and Estes Park, at the entrance of the Rocky Mountain national park.

Special Opportunities—The agricultural area of this county is being as completely utilized as that of any county in the state. There is still, however, considerable nonirrigated land that might be farmed to advantage. The pasture land is also being well utilized. There are good opportunities for the establishment of factories, principally for the utilization of food crops grown here and for the development of various natural mineral resources, principally clays and stone. In the western part of the county, along the base of the Medicine Bow range, there is a vast area of land, probably containing valuable metal deposits, which offers special opportunity to the prospector and investor.

LAS ANIMAS COUNTY

General Description—Las Animas county lies in the southeastern part of the state, the southern boundary being formed by the state of New Mexico, and part of the eastern boundary

by the Culebra mountains. It is of an irregular rectangular outline with an extreme length, east and west, of 116 miles, and an extreme width, near the central part, of about 55 miles. It is the largest county in Colorado. Its area is 3,077,760 acres, or about 7,000 acres less than that of the state of Connecticut. The surface is a broken prairie in the east and in the west a plateau rising into a mountainous district west of Trinidad. The altitude varies from about 5,300 feet, in the northeastern part, to more than 14,000 at the summits of the highest peaks in the Culebra range.

Early History—This county, during the early part of the last century, was frequently visited by Mexican and Spanish prospectors and fortune hunters, being located in the territory formerly claimed by Mexico. The first white settler to erect a dwelling and occupy it in the territory now known as Las Animas county was John Hatcher, a Virginian. He was in the employ of Vigil and St. Vrain, who claimed a large grant of land, extending north to the Arkansas river. From Taos, N. M., they sent Hatcher, with teams, implements and all needed supplies, to occupy the land and hold it. He built a cabin, dug an irrigating ditch and grew the first crop ever produced in the county. When his corn was in the roasting ear the Indians notified him that they would not permit the white man to farm there. Hatcher refused to move. The Indians drove him out and destroyed his crop. No further attempt was made at settlement until some time afterwards. Hatcher's attempt was made prior to 1850. Eugene Archibald erected the first house on the present site of Trinidad in 1860, being assisted by his brother, A. W. Archibald, and a man named Frazier. Felipe Baca filed on a quarter section of government land where Trinidad now stands and improved it rather extensively. In the spring of 1861 several more settlers arrived and began farming operations in the valley of the Purgatoire river. Prospectors made frequent excursions into the mountainous territory west of Trinidad, but no important discoveries of metals were made. Stockraising was carried on somewhat extensively in the valley of the Purgatoire and other streams in this vicinity, during the 10 years following. The county was organized in 1866 from a part of Huerfano county.

Surface and Soil—The eastern part of the county lies in the great prairie district of eastern Colorado. It is crossed by numerous small streams, most of them having their sources in districts of comparatively light rainfall and being dry a good part of the summer. These streams, as a usual thing, cut narrow valleys or canons, making the country a sort of broken table land. The surface rises gradually toward the west and the territory east and north of Trinidad is crossed by the valleys of the Apishapa and Purgatoire rivers, Timpas creek and a few other streams. West of Trinidad the country becomes much more broken, culminating in the Spanish peaks on the north, and the Culebra range on the west. Most of the eastern part of the county is suitable for cultivation and where irrigation is possible excellent crops are raised. The soil is principally a sandy loam and is very fertile. The rainfall in most of the eastern part of the county is sufficient to produce fair crops without irrigation. No soil survey of this county is available.

Population—The population of this county has grown very rapidly. In 1910 it was 33,643, while in 1900 it was 21,842. At present the population is about 41,000. In 1910 the census bureau found the foreign-born population to be 23.9 per cent of the total. Previous to the war the principal foreign nationalities were Italian, Austrian and English, most of whom were coal miners.

Drainage and Water Supply—The surface slopes gradually from the mountainous districts in the southwest toward the Arkansas river in the northeast. It lies almost wholly in the Arkansas river watershed. The principal streams are the Apishapa and Purgatoire rivers, which have their sources in the southwest, where the rainfall is comparatively heavy. Carrizo creek and other small tributaries of the Cimmaron river have their sources in the southeastern part. Apishapa and Purgatoire rivers and Timpas creek carry a considerable supply of water and are the principal sources of irrigation. The other streams, as a general thing, do not carry a reliable supply of water. Water for domestic purposes is obtained from wells and is reached at a depth varying from 10 to 500 feet. The underground water supply in the eastern part of the county is uncertain and irregular, some districts having no known underground supply at reasonable depths.

Industries—The principal industries are coal mining, agriculture, stockraising, dairying, manufacturing and lum-

bering. Las Animas county produces more coal than any other county in the state. The coal mines are located along the railroads, principally north and west of Trinidad. The coal deposits underlie the entire western third of the county. The coal is bituminous, of good quality, containing much good coking coal. Manufacturing is carried on principally in the city of Trinidad. The county is one of the leading stock-raising districts in the state, cattle and sheep being the principal livestock. Excellent pasture is available, both in the mountain valleys, in the western part of the county, and on the wide prairie land in the east. Agriculture is carried on largely in the valleys in the north central and central parts, though in the past three or four years there has been considerable extension of farming without irrigation in the eastern part of the county.

Crops—The principal crops are alfalfa and other cultivated hays, native hay, potatoes, small grains, beans and garden vegetables.

Mineral Resources—The known minerals are clays, coal, graphite, sand, granite, sandstone, limestone, basalt and other valuable stone.

Lumber—Considerable heavy timber is found in the western part of the county. It is principally pine, spruce and cedar.

Land Values—At the beginning of 1918 there was about 853,000 acres of privately owned land in the county, or a little less than 28 per cent of the total area. Of this amount about 35,000 acres was farmed under irrigation in 1917, including natural hay land, and 11,500 acres without irrigation. The county assessor classes about 740,000 acres of the rest of the patented area as grazing land, 35,000 acres as timber land, and the remainder as coal land. Irrigated land in this county sells at from $80 to $140 an acre. Nonirrigated land, including some farming land, sells at from $2 to $12 an acre. On January 1, 1918, there was 140,852 acres of state land in the county, including some coal land, and a large amount of farming and grazing land. Some of the best state coal land in the county is under lease to operating coal companies. Most of the agricultural land is for sale by the state upon favorable terms. On July 1, 1917, there were 302,233 acres of government land open to homestead entry, including a considerable amount of grazing land and some good farming land in the eastern part of the county.

Transportation—The western and central parts of this county are well supplied with railroads, but the eastern part is entirely without railroad transportation. The Colorado & Southern and the Denver & Rio Grande railroads run south from Pueblo through this county to Trinidad. The Colorado & Southern railroad extends southeast from Trinidad into New Mexico and Texas. The main line of the Santa Fe runs southwest from La Junta to Trinidad and south into New Mexico. The Colorado & Wyoming railroad extends west from Trinidad, serving the principal coal mining camps in this section of the county. Numerous branch lines from the Santa Fe, Colorado & Southern and Denver & Rio Grande serve the mining camps near to the main lines of these roads.

Highways—The principal state highway is the Santa Fe Trail, which leaves the Arkansas valley at La Junta, follows the Santa Fe railroad to Trinidad and runs south through New Mexico to Texas and on to the Pacific coast. The main North and South road which connects the principal cities on the eastern side of the main range joins the Santa Fe Trail at Trinidad. Numerous other secondary state highways and county roads are in a general way sufficient for the necessary transportation in the western part of the county, but highway development in the eastern part is inadequate.

Educational—There are 136 public district schools in this county, and five highschools, located at Trinidad, Primero, Aguilar, Morley and Sopris. There are an academy and a business college at Trinidad.

Climatological Data—The rainfall in the agricultural districts, north and east of Trinidad, varies from 12 to 15 inches. In the eastern part of the county the rainfall varies from 15 to 17 inches, and in the western part the precipitation increases rather rapidly, varying from 15 to 25 inches. The climate in the north and east is comparatively mild, with long, warm summers and open winters. In the western part the climate is more severe. The snowfall in the higher altitudes in the extreme west is very heavy.

Tourist Attractions—Trinidad and surrounding territory has been a popular stopping place for tourists for a great many years. Recently the completion of several good highways in this section has greatly increased automobile tourist travel. The city of Trinidad has recently acquired a

scenic mountain park located in what is known as the Stonewall gap, west of the city, in the heart of one of the most attractive scenic regions in the west. This park can be reached by a delightful automobile drive of 35 miles through beautiful canons, following the course of picturesque mountain streams the entire distance. The fact that this is the most active coal mining district in the west offers added inducement to sightseers. The vast mountainous area west of Trinidad contains much beautiful mountain scenery, which becomes more and more popular as highways are constructed, making it accessible to automobile travelers. The mountain streams are well stocked with trout.

Cities and Towns—Trinidad, the countyseat and the principal town, ranks fourth among Colorado cities in population. It was originally settled largely by Mexicans and still has a considerable Mexican population. The census bureau gave it a population of 10,204 in 1910. At the present time it has about 14,000 people. It is the center of the most productive coal fields in Colorado, and one of the most important coke producing districts. It is also the supply point and market for a rich agricultural territory along the valley of the Purgatoire river. It is the principal distributing point for the numerous coal mines located to the northwest and south. It has excellent railroad facilities and an abundance of cheap coal and coke and water power. These conditions all make it an especially favorable location for factories. It has a wool-scouring plant, a brick factory, cement block factory, two ice plants, cold storage plant, bottling works, creamery, candy factory, planing mills, and extensive retail and wholesale trading facilities. Other important towns are principally coal camps, among which are Aguilar, Delagua and Hastings, north of Trinidad; Gray creek, a few miles south of Trinidad; Morley, south of Trinidad on the Santa Fe railroad; Sopris, Primero, Segundo and Tercio, west of Trinidad, on the Colorado & Wyoming railroad.

Special Opportunities—The principal opportunities offered here are in the line of agriculture, manufacturing and mining development. There is agricultural land sufficient to support a farming population twice as large as the county now has. Although Las Animas is the principal coal mining county in the state, there are still vast deposits of good coal that have not yet been touched. The further development of the farming and mining industries will increase the market for manufactured products and Trinidad promises to become one of the most important manufacturing centers in the Rocky Mountain region.

LINCOLN COUNTY

General Description—Lincoln county lies in the great plains section of eastern Colorado, including a part of the area known as the Arkansas divide. It is a double rectangle, 72 miles long, north and south, and 48 miles wide in the southern part and 30 miles wide in the northern part. Its area is 1,644,800 acres, or a little more than one-fourth that of the state of Maryland. It is principally a rolling prairie, the altitude varying from 4,500 feet, in the southeast, to about 5,400 feet in the northwest.

Early History—The early history of the territory now included in Lincoln county is very similar to that of other sections of eastern Colorado. It was on the direct route of travel to the Pikes Peak region in the early gold rush, and hunters and gold seekers passed through here in 1858, 1859 and 1860, bound for that district. The cattlemen began establishing their ranches here in the late 60's and for twenty years this was the heart of the great range territory. As late as 1900, over 100,000 sheep were grazed in the county and this industry is still profitable. Thousands of Texas longhorn cattle grazed on the unbroken prairie. In the late 80's homesteaders began coming in considerable numbers and from that time on the Texas longhorn has been gradually replaced by pure bred stock, until today it would be almost impossible to find in the county a steer of the type that once made eastern Colorado famous. The county was organized in April, 1889, from parts of Bent and Elbert counties, and was named in honor of Abraham Lincoln.

Surface and Soil—The Arkansas divide, a strip of elevated land forming the divide between the tributaries of the Arkansas and South Platte rivers, passes across the northern part of the county. The surface here is higher than it is to the north and south. It is principally a level prairie with numerous narrow valleys and some broken or sandy areas unsuitable for cultivation. The soil is principally a sandy loam, with occasional patches of adobe and gumbo. It is fertile and very easily cultivated, usually containing sufficient sand to make it plow easily and retain

moisture for a considerable period. No soil survey of this area is available.

Population—The population of this territory has grown very rapidly. In 1890 it was 689; in 1900 it was 926, and had increased to 5,917 in 1910. The present population is about 9,000. In 1910 the foreign-born population was 7.6 per cent of the total, the principal foreign nationalities at that time being German, Norwegian and Swedish.

Drainage and Water Supply—A few streams in the north flow into the South Platte river. The Arickaree river, a tributary of the Republican river, has its source in the northern part, as does the North Fork of the Republican river. Numerous small tributaries of the Arkansas river have their sources in the high parts of the divide further west and flow into the Arkansas river, chief among these being Rush creek, Big Sandy creek and Horse creek. These streams do not carry a reliable supply of water for irrigation. Water for domestic purposes is obtained principally from wells and is reached at depths varying from 10 to 80 feet. Wells drilled to the underflow here are pumped principally by windmills and furnish most of the water for livestock. In some sections these wells are pumped by engines and furnish a limited supply of water for irrigation.

Industries—The principal industries are farming, dairying and stockraising. The entire area included in this county was once a great stock pasture. In recent years, however, the range has been broken up into comparatively small farms and dairy farming on an intensive scale is taking the place of stockraising as the principal industry.

Crops—The principal crops are small grains, kafir corn, milo, sudan grass and similar forage crops; corn, beans, potatoes, alfalfa and garden vegetables. Forage crops are being raised more extensively every year and farmers who have constructed silos to preserve their forage for winter use are growing more numerous annually.

Mineral Resources—The known minerals are building sand, gravel and building stone. Drilling for oil was begun early in 1918, and favorable indications have been encountered.

Land Values—At the beginning of 1918 there was 1,185,000 acres of privately owned land in the county, or a little more than 72 per cent of the total area. Most of this is classed by the county assessor as nonirrigated farm land, though a comparatively limited amount of it is now being farmed. The census bureau found 160 acres of irrigated land in this county in 1910, and there is a somewhat larger amount at the present time. Farming land here sells at from $10 to $25 an acre. Irrigated land, of which there is but little, brings from $50 to $75 an acre. On January 1, 1918, there was 132,482 acres of state land in the county, most of which is suitable for cultivation, and is for sale by the state on very favorable terms. On July 1, 1917, there was 5,955 acres of government land open to homestead entry, principally small, isolated tracts of little value.

Transportation—The Rock Island railroad runs east and west across the northern part of the county. The main line of this road runs southwest from Limon to Colorado Springs, and Rock Island trains run northwest from Limon over the Union Pacific railroad to Denver. The Kansas-Denver branch of the Union Pacific railroad enters the county near the town of Boyero and runs northwest by way of Limon to Denver.

Highways—The principal highway is the Ocean to Ocean, or Golden Belt, route, one of the principal automobile roads from the east through Colorado. It branches at Limon, the main Pikes Peak road running southwest to Colorado Springs, and a branch called the Limon road running northwest to Denver. Another state highway, known as the Union Pacific highway, runs southeast from Limon along the Union Pacific railroad into Cheyenne county. Numerous county roads are moderately well improved and are in a general way sufficient for taking care of such agricultural development as the county now enjoys.

Educational—There are 71 public district schools in the county, and two highschools, located at Hugo and Limon. There are no private schools or colleges.

Climatological Data—The climate is much the same as that of other sections of eastern Colorado. The summers are comparatively long and are generally favorable for farming operations. There is considerable wind during certain seasons of the year, but no hot winds, such as cause much damage to crops in states further east. The rainfall varies from 12 to 18 inches. It is heaviest in the divide section, running across the north-central part of the county, varying here from 15 to 18 inches. Most of the rain comes during the summer season and is usually sufficient for producing good crops without irrigation. Al-

though there are occasional seasons when the growing of grain crops is not profitable, there is seldom a summer so dry that hardy forage crops do not make fairly good yields.

Tourist Attractions—Tourist travel across this county to the mountainous sections is very heavy and growing steadily each year. The Pikes Peak highway is one of the most popular automobile routes to Colorado, and in recent years has been kept in excellent repair. There is comparatively little natural scenery of interest to the tourist here, but the county derives considerable benefit from the general tourist travel.

Cities and Towns—Limon is located on the Rock Island and Union Pacific railroads, in the northeastern part. It is a railway division point and the principal shipping point in the county. Hugo, the countyseat, is a division point on the Union Pacific railroad near the center of the county. Other towns are Genoa, Bovina and Arriba, on the Rock Island, and Boyero, on the Union Pacific.

Special Opportunities—The principal opportunities offered here are in the direction of general agricultural development. There is close to 1,000,000 acres of arable land in this county that has never been broken. The success that has attended farming operations here in the past half dozen years, where proved agricultural methods have been followed, is the best evidence of what may be accomplished in the development of this unbroken area. Hograising and poultryraising are steadily increasing, and are proving very profitable, as both hogs and chickens are exceptionally free from disease in Lincoln county's ideal climate.

LOGAN COUNTY

General Description—Logan county lies in the northeastern part of the state, the northern boundary being formed by the state of Nebraska. The valley of the South Platte river crosses the county diagonally from southwest to northeast. In outline it is an irregular rectangle, 48 miles long, east and west, and 38 miles wide. Its area is 1,166,080 acres, or a little less than one-fourth that of the state of New Jersey. The surface is generally level or rolling except a few hilly areas in the northern part. The altitude varies from 3,600 feet, in the northeast, to about 4,100 feet in the northwest.

Early History—Long's expedition to the Rocky mountains traveled up the South Platte river through what is now Logan county, in the summer of 1820. Fremont followed this route on at least two of his expeditions. The valley of the South Platte river was one of the principal routes of travel to the mining camps during the early history of Colorado, and a stage line was regularly maintained for a good many years. A station on this stage route, near the present location of the town of Merino, was called by the Indians "Fort Wicked" because of the vigorous tactics adopted by its keeper, Hollen Godfrey, in defending himself and his associates against Indian attacks. Although travel through this territory was considerable between 1860 and 1870 there were no permanent settlements made, principally because of the hostile attitude of the Indians. The cattlemen began establishing ranches in the 70's, and early in the 80's agricultural development began. Logan county was created in 1887 from a part of Weld county, extending eastward at that time to the state line. In 1889 Phillips and Sedgwick counties were formed from the eastern part of the county. The county was named in honor of General John A. Logan.

Surface and Soil—The valley of the South Platte river, which crosses the county, averages five miles in width and contains most of the irrigated land. It is comparatively level, skirted on both sides by ranges of low hills. North and south of the valley the country is a comparatively level prairie, with sandy loam soil, well adapted to cultivation without irrigation. The soil in the valley proper is principally an alluvial or sandy loam of great fertility. There is no soil survey of this area available.

Population—The population of this county has grown steadily since its organization. In 1890 it was 3,070; in 1900 it was 3,292, and had increased to 9,549 in 1910. The present population is about 15,300. In 1910 the foreign-born population was 9.3 per cent of the total, the principal foreign nationalities being Russian and German.

Drainage and Water Supply—The South Platte river flows northeast across the county and affords the principal drainage and water supply for irrigation. Frenchman creek, a tributary of the Republican river, drains a small area in the southeastern part. Water for domestic purposes is obtained principally from wells. The underflow is reached, in the valley of the Platte river, at depths ranging from 10 to 40 feet, and on the high land at from 50 to 200 feet.

Industries—The principal industries are farming, stockraising, stockfeeding, dairying and manufacturing. Farming under irrigation has been followed successfully in the valley of the Platte river for more than 30 years. On the prairie lands north and south of the river there has been rapid development of agricultural activities without irrigation in the past decade. On account of the large amount of feed crops raised here thousands of cattle and some sheep are shipped in annually to be fattened for market. Dairy farming has been increasing steadily in importance for the past half dozen years. The principal manufacturing enterprise is a beet sugar factory belonging to the Great Western Sugar company, located at Sterling.

Crops—The principal crops are alfalfa and other hays, sugar beets, potatoes, wheat, oats, rye, barley, corn, pinto beans, forages and garden vegetables. Fruit crops are grown on a limited scale. Forage crops and pinto beans are grown rather extensively on nonirrigated lands north and south of the Platte river.

Mineral Resources—The known minerals are clays, utilized to a limited extent for the manufacture of brick; gravel, building stone and potash.

Land Values—On January 1, 1918, there was about 799,000 acres of privately owned land in the county, or a little more than 68 per cent of the total area. This includes 50,930 acres being cultivated under irrigation, 9,934 acres of natural hay land and 402,022 acres of nonirrigated farm land, as shown by the county assessor's records. The remainder is principally grazing land, much of which will ultimately be placed in cultivation. The acreage of irrigated land shown in the assessor's report includes only that actually being cultivated under irrigation. At present there is approximately 150,000 acres of land in the county under ditch. Irrigated land in this county sells at from $75 to $150 an acre, and nonirrigated land at from $15 to $55 an acre. There is a very small amount of seep land, containing an excess of alkali. This is principally a result of overirrigation with improper drainage. Recent investigations have shown the existence of potash salts in considerable quantities on this seep land, and efforts probably will be made to utilize these salts for various economic purposes and to reclaim the lands. At the beginning of 1918 there was 142,292 acres of state land in the county, most of which is suitable for cultivation and is for sale by the state on favorable terms. On July 1, 1917, there was 5,253 acres of government land open to homestead entry, principally small isolated tracts of no value except for grazing purposes.

Transportation—The Union Pacific railroad follows the course of the Platte river through the county. The Burlington railroad follows the course of the Platte river northeast to Sterling, and a branch line of this system runs east from here through Phillips county into Nebraska. Another line runs north into Nebraska and another west through Weld county to Cheyenne, Wyoming. These roads make the town of Sterling one of the most important railroad points in eastern Colorado.

Highways—The Platte valley road, one of the principal automobile highways from the east into Colorado, follows the course of the Platte river through the county. At Sterling it is joined by the Omaha-Lincoln-Denver road, coming in from the east, and a branch of the Lincoln Highway. There are numerous county roads, usually well improved and sufficient in a general way for the transportation of farm crops to market.

Educational—There are 106 public district schools in the county and nine highschools, located at Atwood, Crook, Fleming, Iliff, Merino, Padroni, Peetz, Sterling and Willard. There are no private schools or colleges.

Climatological Data—The climate is comparatively mild and well suited for general agriculture and stockraising activities. The winters are comparatively short and are not subject to extremely low temperatures. The rainfall in the western part varies from 13 to 15 inches annually, and in the east from 15 to 17 inches. There is considerable variation from year to year, but a season seldom occurs in which there is not sufficient precipitation during the growing season to insure fair crops of small grain, forage and other products well adapted to this climate. As a usual thing about three-fourths of the rainfall comes during the growing season.

Tourist Attractions—There is heavy automobile tourist travel through this county over the two state highways named above. The county is generally level and devoid of natural scenic attractions, but the agricultural development under irrigation is extensive and visitors from eastern states show considerable interest in the agricultural districts. There are a num-

ber of points of historic interest in the county, one of the most important of which is Cedar Canon, about twelve miles northwest of Sterling, where Captain Jacob Downing, with a force of cavalry, fought an engagement with a band of Arapahoe Indians in 1864.

Cities and Towns—Sterling, the countyseat and principal town, is the largest and most prosperous city in northeastern Colorado. There is, perhaps, no town in the state that has shown a more consistent growth and development in the past five years. It is an important shipping point and trading center and is the home of a large beet sugar factory belonging to the Great Western Sugar company. Among the other towns in the county are Iliff, Proctor, Crook, Powell, Atwood and Merino, on the Union Pacific railroad; Fleming, on the Burlington railroad east of Sterling; Peetz and Padroni, on the Burlington railroad north of Sterling; and Willard and Stein, on the Burlington railroad west of Sterling.

Special Opportunities — There is probably 500,000 acres of arable land in this county that has never been broken. Most of it can never be irrigated, but the success of farming without irrigation here in the past ten years has demonstrated that this unbroken area may be expected to become profitable farming land. There is also room for considerable agricultural development in the cultivated areas through the introduction of more intensive methods of farming. Dairying is rapidly increasing in importance and steps are being taken to open a large milk condensery at the town of Sterling, which would result in a big increase of the number of dairy cattle.

MESA COUNTY

General Description—Mesa county is the center of the tier of western Colorado counties bordering on the state of Utah. It is of irregular triangular shape, with an extreme length in the north of about 84 miles, east and west, and a width of 62 miles on the western boundary and about 10 miles in the extreme northeastern corner. Its area is 2,024,320 acres, or a little less than two-thirds that of the state of Connecticut. Its surface is extremely varied and the altitude ranges from about 4,360 feet, at the point where the Grand river crosses the western boundary, to over 9,000 feet on the Uncompahgre plateau, in the south, and about 10,000 feet on the Battlement mesa, in the northeast.

Early History—Captain Gunnison's expedition passed down the Gunnison river to its confluence with the Grand river, and thence west along the Grand river into Utah, in 1853. Gunnison regarded this as a desert region of no value for agricultural purposes. This was included in the territory claimed by the Ute Indians, and no settlements were made here during the early history of Colorado, principally because of the hostile attitude of these red men. In the summer of 1881 these Indians were removed by treaty to the Uintah reservation, in Utah, and late in that year the territory included in Mesa county was thrown open to settlement. Farmers and stockmen immediately came in in great numbers, among them being George A. Crawford of Kansas, who, with a party of ranchmen, chose the junction of the Grand and Gunnison rivers as the site for a town. They laid out the new settlement in the fall of 1881 and at once began the construction of Grand Junction. This is now the "metropolis of the western slope." The county was organized in 1883 from a part of Gunnison county, and received its name from the great table land on its eastern side, called Battlement mesa.

Surface and Soil—The agricultural land here lies largely in the valleys of the Grand and Gunnison rivers. In the northern part there are two prominent ridges extending into the county. The Battlement mesa lies between the Grand and Gunnison rivers in the eastern part of the county and contains the highest elevations. The Book Cliff hills, so called for their variegated stratification, resembling the marbled edges of a book, capped with an almost level stratum of fucoidal sandstone representing the cover, extend south into the county from Garfield county, on the north side of the Grand river. In the south the Uncompahgre plateau extends into the county from Montrose county and continues into Utah under the name of Pinon mesa. The river valleys lie between these mesas and contain some of the best agricultural land in Colorado. The soil shows a very wide range in character and texture. In the Grand valley it is principally a fine sandy loam, with comparatively small areas of clay soil, popularly known as Mesa clay. On the higher lands the soil is also principally a sandy loam. A detailed soil survey of the Grand valley was made by the bureau of soils of the United States department of agriculture in 1905, published in 1906.

Population—The population of Mesa county has grown very rapidly. In 1890 it was 4,260; in 1900 it was 9,226, and it had increased to 22,197 in 1910. The present population is about 25,000. In 1910 the foreign-born population was 9.3 per cent of the total, the principal foreign nationalities being German, English, Canadian and Italian.

Drainage and Water Supply—The Grand river, the largest stream in Colorado, flows through the north-central part of the county. At Grand Junction it is joined by the Gunnison river. These two streams carry water for the irrigation of much more land than is now being watered along their courses. There are numerous small tributary streams, most of which carry plenty of water throughout the year. Domestic water in the valley sections is obtained principally from cisterns, filled through filters from the irrigating canals.

Industries—The principal industries are farming, stockraising, dairying, fruitraising, bee keeping, coal mining, metal mining and manufacturing. Farming is followed principally in the valleys of the Grand and Gunnison rivers and in the valley of the Plateau creek, a stream which flows into the Grand river from the Battlement mesa. In the Grand and Gunnison valleys farming operations are successful only where land is irrigated, the rainfall being insufficient to produce good crops without irrigation. In the Plateau valley the rainfall is much higher, but there is an abundance of water to supply more land than is now being farmed here, available from Plateau creek and its tributaries. Farming without irrigation has been successfully accomplished in what is known as the Glade park district, comprising about four townships on Pinon mesa at an altitude of 7,000 feet. About half of the district is mountain sage brush land, the remainder in pine, pinon and cedar. Fairly good crops of cereals have been produced, while potatoes and root crops are particularly fine. No scientific dry-farming system has ever been employed, however. Stockraising and stockfeeding are followed very extensively in the valleys, and thousands of cattle and sheep are grazed on the excellent pasture lands of the higher mesas. The cattle and hogs are for the most part high grade; there being several herds of registered dairy and beef cattle as well as registered hogs. The Book Cliff coal field lies in the northern part of the county and extends into the Grand mesa. The coal deposits are very extensive and range in character from bituminous to anthracite. There has been some metal mining in the county, but the mineralized districts lie chiefly remote from transportation in the southern part of the county and have been but little developed. The first sugar factory in Colorado was built at Grand Junction in 1896 and is still in operation. Plans are now under way for the development of rich shale lands lying in the northern part of the county and a plant for extracting oil and other valuable products from this shale has been established at the town of De Beque. Grand valley is one of the best fruit growing districts in Colorado, the principal fruits grown being peaches, pears and apples. There are three creameries, one each at Collbran, Mesa and Grand Junction. Summer dairying on Battlement mesa is a growing industry. There are two fruit and vegetable canning plants, one at Grand Junction and one at Appleton, on the line of the interurban railway. A 300-barrel flouring mill at Grand Junction utilizes all of the wheat and more than is grown in the county. There is also a small custom mill in the Plateau valley. Twelve or fourteen wholesale houses make Grand Junction their distributing point for the intermountain region and maintain offices and warehouses there. Other industries are a chemical manufacturing plant, two planing mills, an ice plant and a custom foundry.

Crops—The principal crops are alfalfa and other hays, sugar beets, wheat, oats, corn, rye, barley, potatoes, beans, garden vegetables, apples, pears, peaches, plums, apricots, cherries and small fruits.

Mineral Resources—The known minerals are carnotite, clays, coal, copper, hallarite, barite, gypsum, molybdenite, mica, oil shale, petroleum, building sand, granite, some limestone and sandstone. Several large specimens of petrified dinosaurs have been taken from the Juras-Triassic formations south of Grand Junction and Fruita to museums in the east.

Timber—There is some timber on the Battlement mesa and the Uncompahgre plateau, principally pine, cedar and pinon.

Land Values—Irrigated land here sells at from $35 to $250 an acre, and well improved orchards bring as high as $400 an acre. Nonirrigated land, valuable principally for grazing purposes, sells at from $4 to $25 an acre. On January 1, 1918, there was about 323,000 acres of privately-owned land

in the county, or a little less than 16 per cent of the total area. The county assessor reports 72,016 acres of this as being farmed under irrigation, 13,624 acres as bearing orchards, and 222,325 acres as grazing land. The United States reclamation service has completed an irrigation system to water 53,000 acres of land lying principally north of the Grand river, the water being brought to the land by a diversion canal leaving the Grand river a few miles above Palisade. About 22,900 acres of the land under this project is patented, 9,800 acres has been entered subject to the terms of the reclamation act, and 20,200 acres was withdrawn from entry, pending the opening of the project, but this land was open to entry early in 1918 and much of it was put in cultivation for 1918 crops. On July 1, 1917, there was 970,574 acres of government land open to homestead entry, most of which is valuable principally for grazing purposes or for its mineral. There is no state land in the county.

Transportation—The main lines of the Denver & Rio Grande and the Colorado Midland railroads follow in general the course of the Grand river west to Grand Junction, and the former continues west into Utah. A branch of the Denver & Rio Grande railroad leaves the main line at Grand Junction and runs southeast along the Gunnison river to Delta and Montrose, from which point it is narrow gauge, one branch running south to Durango and the other east to a junction with the main line at Salida. The Uintah railroad leaves the Denver & Rio Grande railroad at Mack and runs northwest into Garfield county and north to Dragon, Utah. An electric railway system extends from Grand Junction through the principal orchard districts to Fruita. The company is considering an extension of its line to Mack to connect with the Uintah railway.

Highways—The principal state highways are the Rainbow Route, which follows the Gunnison river to Grand Junction, and the Midland Trail, which follows the Grand river and joins the Rainbow Route at Grand Junction. The joint route extends westward, following in general the line of the Denver & Rio Grande railroad to Utah and on to Salt Lake City. There are numerous county highways, a total of about 2,300 miles, generally well improved and maintained. State Route No. 65, extending from a junction with the Midland Trail on Plateau creek to a junction with the Rainbow route at Delta, passes over the summit of Battlement mesa through a region dotted with more than a hundred beautiful lakes stocked with mountain trout.

Educational—There are 50 public district schools in the county and nine highschools, located at Appleton, Collbran, Fruita, Fruitvale, three at Grand Junction, and two at Palisade. The state owns a tract of 147 acres one mile east of Grand Junction, formerly the Teller Indian school. It has numerous brick buildings and would be suitable for a secondary agricultural school associated with the State Agricultural college. A private business college in Grand Junction, the curriculum of which embraces commercial subjects, stenography and typewriting, advanced accounting, telegraphy, etc., draws students from all of the western slope of the state and from eastern Utah.

Climatological Data—The climate of the Grand valley is perhaps the most delightful climate in Colorado. The rainfall here is extremely light, being less than 10 inches. The percentage of sunshine is higher than in any other part of the state, with the possible exception of the San Luis valley. The summers are long and warm, with moderately cool nights. The winters are not subject to extremely low temperatures, and there is little snowfall. On the high lands on the Battlement mesa and the Uncompahgre plateau the climate is somewhat more severe, with much heavier rainfall. The average annual precipitation on the Battlement mesa ranges from 15 to 20 inches, and on the Uncompahgre plateau from 15 to 25 inches. North and south of the Grand and Gunnison rivers the rainfall varies from 10 to 15 inches.

Tourist Attractions—Tourist travel to Grand Junction and the fruit growing districts of Grand valley has always been heavy. The completion of the Midland Trail and the Rainbow Route has greatly increased automobile travel in the past few years. There is much attractive scenery on the higher lands of the Battlement mesa and the Uncompahgre plateau, and travel into this territory is being gradually increased as automobile routes are being extended. The lakes on Battlement mesa, reached by State Route No. 65, offer a delightful place for summer outings. The altitude is from 9,000 to 10,000 feet. The lakes are well stocked with trout. There are many beautiful camping spots in parks, surrounded by aspens and pines. The Colorado national monument, about 25 square miles, lies within six miles of Grand

Junction to the west. Within it is Monument canon, so named from the cathedral spires and other curious formations in red sandstone which are among the most impressive scenic attractions in the state.

Cities and Towns—Grand Junction, the countyseat and principal town, lies on the Denver & Rio Grande railroad at the junction of the Grand and Gunnison rivers, near the central part of the county. It is the principal shipping point and trading center of the entire western slope and is one of the most progressive cities in Colorado, having the commission form of government. It owns its water system, bringing the purest of mountain water a distance of 26 miles. Palisade, on the Denver & Rio Grande railroad, northeast of Grand Junction, is the center of the most important fruitraising district in the county. Among the other towns are Fruita, Loma and Mack, in the lower Grand valley; Collbran, in the Plateau valley; and Whitewater, on the Denver & Rio Grande railroad, southeast of Grand Junction; De Beque, in the oil shale country along the Denver & Rio Grande railroad, in the northern part, and Clifton, on the Denver & Rio Grande and Colorado Midland railroads, east of Grand Junction.

Special Opportunities—There is a very large undeveloped area in this county. The rainfall is generally insufficient for successful farming operations without irrigation, but in recent years nonirrigated farming has been gradually increased and has been proving moderately successful. There are large areas of mineralized land in the southern part of the county which promise much for development when adequate transportation facilities are provided. Some of the richest oil shale deposits in the United States are found in the northern part of the county, principally in the neighborhood of De Beque. Recent experiments have shown that these shales carry from 10 to 90 gallons of oil per ton of shale, or even more. In addition to the oil this shale also contains large amounts of ammonium sulphate, dye stuffs and other valuable products. There has been comparatively little development of these raw natural resources, but active development operations are now under way. A large plant for the recovery of oil from shale has been erected at De Beque and plans are under way for similar plants in other parts of the district.

MINERAL COUNTY

General Description—Mineral county lies in the south-central part of the state, just west of the San Luis valley and near the crest of the continent. It is of a rectangular outline, with an extreme length, north and south, of 40 miles and an extreme width of 24 miles. The area is 554,240 acres, about 130,000 acres less than the area of the state of Rhode Island. The surface is generally rugged and mountainous and the altitude varies from 8,250 feet, where the Rio Grande river crosses the eastern boundary, to more than 13,000 feet at the summits of peaks in the San Juan range.

Early History—The first white visitors in the territory now comprising Mineral county were perhaps Spanish explorers and fortune hunters who passed up the valley of the Rio Grande river in search of gold. So far as is known the first English speaking white people to visit the territory were members of a party of explorers who followed the Rio Grande to its headwaters, in 1821-2. According to the diary of Jacob Fowler, a member of this party, they passed through what is now Mineral county in 1822. John C. Fremont's ill-fated fourth expedition, in search of a practicable route across the Rockies to the Pacific, crossed this territory in the fall of 1848 and was broken up near the Continental divide in December of that year. Some of its members followed the Rio Grande back into the San Luis valley, suffering untold hardships from the severe winter. In 1890 Nicholas C. Creede, an experienced prospector, found indications of pay ore in the mountains above Wagon Wheel Gap. He investigated and located a mineral vein, which he named the Holy Moses, but which never proved a valuable mine, although some ore was taken out. Soon after, Charles F. Nelson located the Solomon and other claims. A little town soon was established on Willow creek, where the town of Creede now stands. Reports of rich discoveries were spread abroad and in the spring of 1891 there was a great rush of prospectors and fortune hunters to the new camp. It was first called "King Solomon mining district," but was later called Creede, in honor of the discoverer of the first quartz veins. The Sunnyside camp, 3 miles west of Creede, was the first mining camp in this locality, and the Corsair Mining company took out some very rich ore early in the 90's. The Amethyst vein was located in August, 1891, having ore which yielded

from $35 to $5,000 a ton. The San Luis valley branch of the Denver & Rio Grande railroad was completed to Creede in 1891 and Creede became one of the livest mining camps in the state. The county was created in 1893 from parts of Hinsdale, Rio Grande and Saguache counties.

Surface and Soil—The surface is extremely rugged except for a few narrow valleys, which contain some land suitable for irrigation. The soil is very fertile in these valleys and raises good crops of wild hay, potatoes and vegetables. There is a limited amount of agricultural land in the county.

Population—The population in 1910 was 1,239, as compared with 1,913 in 1900. It is perhaps somewhat smaller at present than it was in 1910. The native white population in 1910 was 86 per cent of the total, but the percentage is perhaps somewhat greater today. Previous to the war the principal foreign population was German and English.

Drainage and Water Supply—The Rio Grande river, which has its source in the San Juan mountains further west, flows through the county and, with its tributaries, affords the only drainage. There are numerous smaller streams here, tributaries of the Rio Grande, all those flowing from the south having their sources in the San Juan mountains, and those flowing from the north rising near the Continental divide. They carry plenty of water throughout the year. The water supply is fully adequate for all purposes, its principal use being for the ranches and mines.

Industries—Mining is the principal industry. There is little land suitable for cultivation, the report of the county assessor showing only about 3,000 acres being farmed in 1917. There is considerable grazing land in the mountain valleys, lying chiefly within the national forests, and stockraising is followed to a considerable extent. There is good timber on the mountain slopes and lumbering and tie-making are followed in a small way.

Mineral Resources—The known minerals are gold, silver, copper, sulphur, barium, lead, zinc, fluorspar, alunite, sand, sandstone and other building stone. Gold, silver, lead, copper and zinc have been produced in considerable quantities and are still being produced, the most important mines being in the neighborhood of Creede. Fluorspar has been produced at Wagon Wheel Gap and is now one of the main products. Sulphur is now being produced in considerable quantities at Trout Creek, southwest of Creede.

Timber—There is considerable timber in the county, principally pine and spruce.

Transportation—The San Luis valley branch of the Denver & Rio Grande railroad has its terminus at Creede, the countyseat, and is the only railroad in the county.

Highways—The Spanish Trail, a primary state highway, crosses the Continental divide in the southwestern part of the county. A primary state highway leaves this road at South Fork, in Rio Grande county, and follows the Rio Grande river to Creede, and on to the Hinsdale county line. Here it strikes westward through the mountains, one branch going to Lake City, in Hinsdale county, and another to Silverton, in San Juan county. Autos travel to Lake City up to snowfall in November at present, and extensive improvements are contemplated for the near future. There are numerous wagon roads and trails, chiefly for the movement of ore, but most sections of the county are wholly inaccessible by automobiles.

Educational—There are four public district schools in the county and one highschool, located at Creede. There are no private schools or colleges.

Climatological Data—The rainfall in the extreme eastern part of the county, along the Rio Grande river, averages about 15 inches annually. It increases rapidly as the altitude increases, being above 25 inches along the crest of the San Juan mountains, which cross the southwestern part. This is one of the heaviest rainfall sections in the state, much of the water for the irrigation of lands in the San Luis valley having its origin in Mineral county. The climate is rather severe. The summers are short, and usually very warm in the lower altitudes. There is frost every month in the year in the higher altitudes and the snowfall during the winter is exceptionally heavy.

Tourist Attractions—Situated as it is, near the crest of the continent and containing the headwaters of many tributaries of the Rio Grande river, this county contains some of the most magnificent mountain scenery on the American continent. One of its distinctive scenic attractions is Wheeler national monument, in the northeast corner of the county, about 10 miles from Wagon Wheel Gap, and 13 miles from Creede. This park contains about 300 acres and has several shelter places for visitors. It was created

by presidential proclamation in 1908 and was named in honor of Captain George M. Wheeler, U. S. A., who carried on explorations under the direction of the war department in this section of Colorado in 1874. It contains some of the most unique and fantastic rock formations to be found any place in America, in some respects surpassing any other mountain scenery in Colorado. This park may be reached over a horseback trail from Creede, but a movement is now under way to have an automobile road built from the mining camp to the monument. Since the route lies wholly in the national forest and the improvements must be made by the federal government, there is little chance that anything definite will be accomplished until after the war. There is also much beautiful mountain scenery in the southern part of the county that needs further transportation to make it accessible. The Spanish Trail, recently completed, has greatly increased tourist travel to this section. Most of the mountain streams within the county afford good trout fishing. The Wagon Wheel Gap Hot Springs hotel has a two plunge bath house which cost $35,000 and the water is supplied from natural hot springs on the ground, having exceptional medicinal qualities.

Cities and Towns — Creede, the countyseat and principal town, is the western terminus of the Arkansas valley branch of the Denver & Rio Grande railroad. It is located at the mouth of one of the gulches from which most of Mineral county's metal wealth has been taken. Wagon Wheel Gap, on the Denver & Rio Grande railroad and the Rio Grande river, southeast of Creede, is in the center of a prosperous grazing district and is noted for its picturesque scenery. The hot springs located here are becoming more popular with tourists and health seekers every year.

Special Opportunities—Most of the opportunities offered here are in the direction of mining development. Though gold, silver, copper, lead and zinc have been produced in considerable quantities from the county continuously since 1891, they have come almost wholly from the Creede district. This has been one of the largest silver-producing districts of Colorado. In the mountains further west and south there is an immense area of presumably mineralized land which has never been adequately prospected. This is not an exceptionally rugged district nor difficult of access, but is wholly without transportation facilities. It is not inconceivable that rich mineral deposits may soon be discovered and opened up in this area. There is 518,993 acres of national forests in the county, or more than 93 per cent of the entire area. This territory is all open to prospecting and entry under the public land laws, and claims, after the existence of mineral bodies has been proved, may be filed upon and patented the same as on public lands not within the forest areas.

MOFFAT COUNTY

General Description—Moffat county is in the extreme northwestern corner of the state, the northern boundary being formed by the state of Wyoming and the western boundary by the state of Utah. It is a perfect rectangle in shape, with the exception of slight irregularities on the eastern boundary. Its extreme length east and west is about 91 miles and its width is about 55 miles. Its area is 3,033,600 acres, or about 50,000 acres less than that of the state of Connecticut. It is the second county in size in Colorado, being surpassed only by Las Animas county. In surface it is a broken plateau, becoming slightly mountainous in the northeast and in the extreme northwest. The altitude varies from about 5,400 feet, at the point where the Yampa river crosses the western boundary, to about 7,600 feet in the extreme northeastern part.

Early History—The territory now included in Moffat county was visited by many early prospectors and trappers. The first known white settler was Jim Baker, who built a log cabin in the Snake river valley near the Wyoming line, in the early 40's, and lived there for a great many years. About 1864 prospectors discovered gold in the vicinity of Hahns peak, in Routt county, and some of them wandered west into what is now Moffat county. No discoveries of gold were made in this county until a good many years later. The county was organized in 1911 from the western part of Routt county, and named in honor of David H. Moffat, builder of the "Moffat" railroad and one of the best known of Colorado's pioneers.

Surface and Soil—This county is a portion of a vast plateau, across which numerous streams have cut deep valleys and in some cases narrow, precipitous canons. The valleys are level and fertile and between them are numerous mesas, most of which contain considerable good agricultural land. The soil is principally sandy loam,

with a very wide range of color and texture. It is usually very deep and well suited for the raising of most crops grown in this latitude. No detailed soil survey of this area is available.

Population—Since the county was organized in 1911 there are no data available showing its population as returned by the 1910 census, it being up to that time a part of Routt county. The present population is about 5,800. This is almost exclusively a rural population. The percentage of foreign-born inhabitants is very small, as it is in other agricultural districts in the state. The population has grown very rapidly in the past three years, as a result of the settling up of thousands of acres of homestead land.

Drainage and Water Supply—The Yampa, or Bear river has its source in Routt county and flows west through the center of Moffat county, emptying into the Green river near the western boundary. It is fed by numerous tributaries, most of which carry only a limited supply of water during the drier parts of the year. Some of the southern part of the county is drained by tributaries of the White river. The Yampa river and the Little Snake river, its principal tributary in Moffat county, both carry an abundant supply of water the year round. These and other small streams contain water for many times as much land as is now being irrigated. Water for domestic purposes in most sections is obtained from wells and is reached at depths varying from 4 feet to 65 feet.

Industries—Farming and stockraising are the principal industries. There is some coal mining, but the vast coal deposits of the county are almost wholly undeveloped because of lack of transportation facilities. There has been some mining, but the mineralized areas are remote from transportation and their development at present is not profitable. Agriculture and stockraising in the past have been carried on principally along the Yampa and Little Snake rivers, but in the past two or three years considerable agricultural development has taken place on the high land northeast of Craig.

Crops—The principal crops are alfalfa, timothy, alsike, wild hay, small grains, forages, potatoes and garden vegetables.

Mineral Resources—The known minerals are carnotite, asphaltum, clays, copper, zinc, coal, gold, oil shale, silver, sandstone and other building stones. Vast deposits of oil shale, asphaltum and elaterite are among the county's richest resources.

Timber—There is some timber on the high lands in most sections of the county. It is heaviest in the northeastern portion, being principally pine and spruce in this region. Elsewhere cedar is about the only timber found.

Land Values—At the beginning of 1916 there was about 177,000 acres of land in private ownership, or approximately 6 per cent of the total area. Of this amount 18,110 acres was being farmed without irrigation; 13,364 acres is classed by the assessor as nonirrigated farm land and 98,674 acres as grazing land; the remainder is principally coal land and mineral claims. Irrigated farming land in this county may be had at prices ranging from $50 to $150 an acre; nonirrigated land, including grazing land, costs from $5 to $50 an acre. At the beginning of 1918 there was 190,396 acres of state land in the county, of which a considerable amount is good farming land. This is all for sale by the state upon very favorable terms. On July 1, 1917, there was 1,738,162 acres of government land open to homestead entry, including some good farming land and a vast amount of grazing land.

Transportation—The only railroad in this county is the Denver & Salt Lake railway, which extends west as far as Craig, the countyseat, or a distance of only about six miles into the county. The route of the proposed extension of this road follows in a general way the Yampa river westward through the county into Utah.

Highways—The principal state highway is the Vernal road, which follows in a general way the valley of the Yampa river west to Sunbeam, thence south and west across Wolf creek to the "K" ranch, thence into Utah and on to Salt Lake City. A good state road runs south from Craig to Meeker, the countyseat of Rio Blanco county, where it joins the Pikes Peak or Ocean to Ocean highway. Another road runs north from Craig to Wamsutter, Wyo. Although this is a new county, a comprehensive road program is being carried out and county and neighborhood roads are being rapidly improved. The county road fund for 1918 is approximately $40,000.

Educational—There are 30 public district schools in the county and two highschools, located at Craig and Maybell. There are no private schools or colleges.

Climatological Data—The average

annual rainfall varies from 13 to 20 inches, being heaviest in the northern and eastern parts. In the principal agricultural territory in the western part the rainfall is from 14 to 16 inches. The climate is comparatively mild, though the winters are somewhat long, with moderately heavy rainfall.

Tourist Attractions—The scenery in this county is rich and varied, but is comparatively little known, for the reason that transportation facilities have been so imperfect as to make it almost impossible for tourists to visit this section of the state. The completion of the Vernal highway has greatly increased motor tourist travel, and this section of Colorado is rapidly increasing in popularity among summer visitors. There is good fishing in most of the mountain streams and considerable game is to be found in most of the sections of the county.

Cities and Towns—Craig, the county-seat, is the principal town. It is the terminus of the Denver & Salt Lake railroad and has grown more rapidly than any other town in Colorado in the past three years. The Moffat county courthouse is now in course of construction here, being built of Moffat county blue sandstone. It will cost about $40,000, and, when completed, will be, perhaps, the finest building in northwestern Colorado. A modern brick and stone highschool building, costing $30,000, is also being erected. Other towns are Lay, Maybell and Sunbeam, on the Yampa highway; Great divide, on the Iron Springs divide, in the northern part; and Axial, on the Craig-Meeker highway, in Axial basin.

Special Opportunities—The principal opportunities offered here are along the line of agricultural development. There is, perhaps, more undeveloped agricultural land in this county than in any other county in the state. No county has so much government land open to homestead entry, including so large a percentage of farm land. There is also a considerable amount of state land in the county, almost wholly undeveloped. Land prices here are very low on account of the fact that government land may be obtained practically without cost. The coal deposits in this county are among the richest in Colorado. There are also valuable mineral deposits and a considerable area of mineralized land that has been very imperfectly prospected. Development in this county, however, has been retarded by lack of transportation facilities and will continue to be comparatively slow until the Denver & Salt Lake railroad, or some other railroad, is extended through the county.

MONTEZUMA COUNTY

General Description—Montezuma county is in the extreme southwest corner of Colorado, the southern boundary being formed by New Mexico and the western boundary by Utah. It is of an irregular rectangular outline with an extreme length, east and west, of about 50 miles and an extreme width, north and south, of about 38 miles. Its area is 1,312,640 acres, or about twice that of the state of Rhode Island. It is a broken table land in the south and west, rising rather abruptly to the summits of the La Plata mountains in the northeast. The altitude ranges from about 5,600 feet in the southeast to nearly 13,000 feet at the summits of some of the peaks in the northeast.

Early History—The first known inhabitants of this area were the Aztecs or Cliff Dwellers, who at one time lived in large numbers here and in adjoining parts of New Mexico, Arizona and Utah. Extensive ruins of their dwellings, temples and even of cities of considerable size are found in many of the canons in the southern and eastern parts of the county, especially in the vicinity of the Mesa Verde national park. The first known white settlers in what is now Montezuma county came in 1873, soon after the treaty of peace had been signed with the Indians of this region. There was much prospecting for gold here, but few important discoveries were made and most of the settlers were farmers, raising excellent crops in the Mancos and Montezuma valleys. The county was organized in 1889, being formed from the western part of La Plata county, and was named for a famous ruler of the Aztecs.

Surface and Soil—In the western part the surface is a high table land cut by numerous streams, all tributary to the San Juan river. Excellent farming land is to be found in the narrow valleys of these streams, as well as on many of the high mesas lying between them. The soil is a sandy loam, very deep and fertile, with a wide range of color and texture. Further east the country becomes broken and mountainous, suitable only for grazing purposes. The Montezuma national forest includes the northeastern corner of the county.

Population—The population in 1910 was 5,029. It was estimated at 7,100 at the beginning of 1918. It is entirely

a rural population, there being no cities having more than 2,500 inhabitants. In 1910 85.5 per cent of the inhabitants were native whites and the percentage of foreign population is somewhat lower at present. There is considerable Indian population, the southern part of the county being an Indian reservation.

Drainage and Water Supply—The southern and western parts of the county are drained by the San Juan river and its tributaries, while the Dolores river rises in the northeastern part and drains that territory. The principal tributaries of the San Juan in this county are the Mancos river, St. Elmo creek and Cross Canon creek. Most of these streams have their sources in a region of high rainfall in the eastern part of the county and carry plenty of water for irrigation purposes. Domestic water is obtained principally from wells and is found at depths ranging from 25 to 75 feet.

Industries—The principal industries are agriculture, stockraising and mining. A large percentage of the land in the western part of the county is suitable for cultivation and most of the higher land in the northwest contains fine grazing area. The agricultural territory is very imperfectly developed, chiefly because of the lack of transportation facilities. In the mountainous section in the northeast there is considerable mineral, and metal mining is being carried on to a limited extent. There are also extensive coal deposits in the eastern part and some coal is being mined.

Crops—The principal crops are alfalfa and other tame hay, wild hay, oats, barley, corn, potatoes, garden vegetables, apples and other tree fruits.

Mineral Resources—The known minerals are aikinite, clays, coal, gold, lead, silver, stone and sand. Gold, silver, copper and lead have been produced in considerable quantities and are still being mined. The coal deposits are bituminous and of good quality.

Timber—There is considerable timber in the northeastern part and some timber on the higher lands in other parts of the county. Pine and spruce predominate in the northeast, while cedar and pinon are more common in the lower altitudes.

Land Values—Irrigated land may be had at from $25 to $125 an acre, bearing orchards selling as high as $175 an acre. Nonirrigated farming land costs from $5 to $25 an acre and grazing land from $3 to $25 an acre. At the beginning of 1918 there was about 186,000 acres of privately-owned land in the county, or about 14 per cent of the area. Of this about 37,000 acres was being cultivated under irrigation and about 25,000 without irrigation; 115,000 acres is classified by the county assessor as grazing land, much of which ultimately will be placed in cultivation. At the beginning of 1918 there was 36,370 acres of state land in the county subject to sale by the state on very favorable terms. On July 1, 1917, there was 103,269 acres of government land open to homestead entry, a considerable part of which is suitable for cultivation. There is 229,763 acres of national forest in the county and 483,910 acres of reserved Indian land in the southern part.

Transportation—The Rio Grande Southern railroad, a narrow gauge road, enters the county east of Mancos from Durango, runs west to Dolores and north to Ridgway and Montrose.

Highways—The principal state highway is the road leading from Durango to Mancos, Mesa Verde national park and Cortez. An extension of this road has been improved westward into Utah and a road north from Cortez through Dolores and San Miguel counties to a connection with the Rainbow Route at Montrose is partially completed, but not open for travel. Numerous county roads are in a general way fairly adequate for moving crops to market.

Educational—There are 35 public district schools in the county and three highschools, located at Mancos, Cortez and Dolores. There are no private schools and no colleges.

Climatological Data—The rainfall varies from 13 to 17 inches in the agricultural districts in the west and south. In the north it increases rather rapidly, being about 25 inches in the extreme northeast corner. The climate is equable in the agricultural districts, especially favorable for general farming, fruitgrowing and stockraising.

Tourist Attractions—The Mesa Verde national park, located in this county, is growing rapidly in importance as a tourist point. Many remarkable ruins of the homes of ancient Cliff Dwellers are found in this region, affording one of the principal tourist attractions. There is much fine mountain scenery in the northeast, mostly inaccessible to automobile travel. Fairly good trout fishing is to be found in many of the streams.

Cities and Towns—Cortez, the

countyseat, is located near the center of the county just north of Mesa Verde national park. Mancos, the principal railroad town and shipping point, is also the principal gateway to the Mesa Verde national park. Dolores is also an important railway town. Other towns are Ariola, Bear Creek, Lebanon, Lewis, Yellow Jacket and Sandstone.

Special Opportunities—The principal opportunities offered here are along the line of agricultural development. There is perhaps room for twice as large a rural population as the county now supports, though any extensive development in this direction will probably wait upon better railroad facilities. The large deposits of coal in the county are but little worked, because of remoteness from markets. There is considerable mineral area which offers good opportunities for prospectors.

MONTROSE COUNTY

General Description — Montrose county lies somewhat south of the west-central part of this state, the western boundary being formed by the state of Utah. Its outline is that of a double rectangle with an extreme length east and west of about 86 miles and an extreme width of 35 miles. The area is 1,448,960 acres, or about one-fourth that of the state of New Hampshire. The surface in general is a broken table land crossed by numerous valleys extending generally from the southeast to the northwest. The Uncompahgre plateau extends northwest from the San Juan mountains across the central part of the county. The altitude varies from about 5,150 feet on the western boundary to about 9,600 feet at the most elevated points of the Uncompahgre plateau.

Early History — Montrose county lies north of the sections of Colorado territory visited by the early Spanish explorers and so far as authentic records go none of these fortune hunters ever entered the area now included in this county. It was explored in 1853 by a party headed by Captain Gunnison, but at that time was thought to be unfit for cultivation. This territory was the home of the Ute Indians when first visited by white people. A treaty was signed between the United States and this tribe in 1880 and in September 1881 the Indians were removed to the Uintah reservation in Utah, and the Uncompahgre valley was thrown open to settlement. Thousands of homeseekers flocked into this territory, some of them being merely gold seekers, but most of them farmers and stockmen. The county was organized in 1883 from a part of Gunnison county. Stockraising was then the principal occupation.

Surface and Soil—The Uncompahgre plateau crosses the county near the central part, dividing it roughly into two rectangles which are distinctly different in soil and general conditions. The eastern section is an irregular and broken table land, crossed in the northeast corner by the Gunnison river and near the center by the Uncompahgre river. The former stream has no valley worthy of note, but the Uncompahgre valley contains a large area of agricultural land, including some of the best general farming land in western Colorado. The western rectangle is drained by the Dolores river and contains considerable good farming land in the valleys of this stream and its tributaries. Much of the area in this region is covered with shale and similar formations and is of little value for farming purposes. The soils of the county are greatly varied in character, being chocolate colored loam on the higher areas, such as Bostwick park and Log Hill mesa; sandy loam on the mesa west of the Uncompahgre river in the Paradox valley; clayey loam along the San Miguel and Uncompahgre rivers, and adobe along the east side of the Uncompahgre river. A detailed soil survey of the Uncompahgre valley was made by the bureau of soils of the United States department of agriculture in 1910 and published in 1912. No soil survey of the western part of the county is available.

Population—The population in 1910 was 10,291 as compared with 4,535 in 1900. The present population is in the neighborhood of 13,500. In 1910 native white people made up 90.7 per cent of the entire population. The percentage of foreign-born population is perhaps somewhat lower now than it was then. Previous to the war the principal foreign nationalities represented were German, Russian, English and Canadian.

Drainage and Water Supply—The eastern part of the county is drained by the Gunnison, Cimarron and Uncompahgre rivers, the latter being tributaries of the former. All carry a fair supply of water the year round, but the Gunnison, which has little irrigable land along its course, carries more water than can be used near it, while the Uncompahgre carries a supply insufficient for irrigating the broad valley through which it flows.

This condition gave rise to the construction of a large irrigation system in the county known as the Uncompahgre project, built by the United States reclamation service. The San Miguel river furnishes the principal water supply for a large area of land known as Wrights mesa and the Tabaquatche parks, as well as the San Miguel valley. The Beaver creeks also furnish water for Wrights mesa, while West Paradox is watered from springs and storage reservoirs. In most parts of the county cisterns have been dug for domestic water. In the irrigated districts these usually are filled through filters from irrigation ditches.

Industries—General farming is the principal industry. This includes stockraising, dairying, bee keeping and fruitgrowing, all of which are carried on to a considerable extent. Metal mining is followed rather extensively, chiefly in the western part. There is some coal mining also, principally in the west. Montrose has a variety of industries, chief of which are manufacturing in a small way and general merchandising.

Crops—The principal crops are alfalfa and a wide variety of other cultivated hays, wild hay, wheat, oats, barley, rye, potatoes, corn, onions, cabbage, apples, peaches, pears and other tree fruit; grapes, berries and other small fruit.

Mineral Resources—The known minerals are carnotite and other radium- and vanadium-bearing ores, clays, coal, copper, gold, oil shale, petroleum, natural gas, silver, sand and building stone.

Timber—There is some timber in the high altitudes, principally pine and cedar.

Land Values—Irrigated land in this county costs from $50 to $300 an acre, depending principally on local conditions. Nonirrigated land of little value except for grazing purposes costs from $10 to $25 an acre and sometimes as high as $100 an acre when there is a certainty that water will be available for irrigation. Grazing land having no prospect of water for irrigation sells at from $5 to $15 an acre. At the beginning of 1918 there was approximately 263,000 acres of privately-owned land in the county, of which about 77,000 acres was being cultivated under irrigation, including fruit land, and 35,000 acres classed as nonirrigated land. There is approximately 148,000 acres of grazing land, little of which is susceptible of irrigation. On July 1, 1917, there was 670,253 acres of government land open to homestead entry, some of which is good for agricultural purposes but most of which is valuable only as grazing land. There is no state land in this county.

Transportation—The principal narrow gauge branch of the Denver & Rio Grande railroad extends into this county as far as Montrose. A standard-gauge line follows the valley of the Uncompahgre river northwest from that city into Delta county and on to Grand Junction. Another branch of this road extends southward from Montrose to Ridgway, where it connects with the Rio Grande Southern railroad to Durango.

Highways—The principal state highway is the Rainbow Route, which follows in general the course of the Rio Grande railroad through the county. A branch leaves this at Montrose and runs southward to Ouray and Silverton. A secondary state road extends from Montrose westward into Paradox valley, in the western part of the county, connecting with a Utah state road to Salt Lake City. This road has recently been improved and promises to become one of the principal outlets from Utah. In a general way the county highways in the eastern part of the county are ample for the movement of crops. In the western part they are being rapidly developed.

Educational—There are 45 public district schools in the county, and four highschools, located at Montrose, Nucla, Olathe and Uncompahgre. There are no private schools and no colleges.

Climatological Data—The rainfall varies widely. In the northern part of the Uncompahgre valley it is less than 10 inches annually. It increases rapidly toward the south and southwest, being above 25 inches on the higher parts of the Uncompahgre plateau. From here it decreases rapidly toward the west, being about 15 inches in the valleys of the Dolores river and its tributaries in the eastern part of the county. The climate is generally mild and healthful. The summers are comparatively long and the winters are not subject to extremely low temperatures except on the Uncompahgre plateau. Where water is available for irrigation and soil conditions are favorable, this is one of the best agricultural sections of the state.

Tourist Attractions—The completion of the Rainbow Route has greatly increased automobile tourist travel through this section of the state. There is much attractive mountain scenery and a number of picturesque canons in the eastern half of the

county which are now being visited by a large number of people every year. The high altitudes of the Uncompahgre plateau are not easily accessible at present, but roads are being rapidly planned for this territory. There is good trout fishing in the streams in most sections of the county. Buckhorn lakes will soon be an attractive place, reached from Montrose. A trip from Montrose to Ouray is worth many times its cost.

Cities and Towns—Montrose, the countyseat, is the principal town. It has a brick and tile factory, two flour mills, a creamery, and other small manufacturing industries. It is the principal distributing point for the surrounding agricultural territory. Other towns are Olathe and Uncompahgre, on the Denver & Rio Grande railroad; Nucla and Naturita, on the San Miguel river, in the west-central part; and Paradox, in the extreme western part.

Special Opportunities—The principal opportunities offered here are for agricultural and mining development. There is water available for the irrigation of a little more land in the eastern part of the county than is now being watered. In the extreme west there is sufficient water to supply many times the land that is now being cultivated under irrigation. Transportation facilities are far removed, however, and development here will be slow. The mineralized area lies principally in the western part of the county and its development is likewise retarded by lack of transportation.

MORGAN COUNTY

General Description—Morgan county lies in the north-central part of the state and includes a considerable part of the South Platte valley. It is almost a perfect square, 36 miles long and 36 miles wide. Its area is 823,040 acres, or about 140,000 acres more than that of the state of Rhode Island. The South Platte valley crosses the center of the county, east and west. North of this the surface is principally a prairie, somewhat higher than the river bottom. The altitude varies from 4,100 feet, in the northeast, to about 4,600 feet in the southwest.

Early History—Morgan county was organized in 1889 from a part of Weld county. Long's expedition passed through this territory en route to the Rocky mountains in 1820, and it was from a point in what is Morgan county that they first caught sight of the peak afterwards named in honor of the leader of the expedition. The country is described by Dr. James, historian of the expedition, as an undulating plain "presenting the aspect of hopeless and irreclaimable sterility." It was regarded with the same lack of favor by most of the early visitors. A few stockraisers began to establish homes in the river valley in the early 60's, and for 20 years stockraising was carried on rather extensively. Farmers began to come into this territory in the early 80's and gradually to take up the government homestead land and begin the cultivation of the soil. The town of Brush was begun in 1882 and named in honor of Jared Brush, a pioneer irrigator then living at Greeley. A fort had been established on the Platte river in 1861 and named Fort Morgan, in honor of Colonel Christopher A. Morgan. This fort was garrisoned by United States troops, the garrison being maintained principally for the protection of the stage line which passed this way and carried United States mail. The town of Fort Morgan, founded in 1884, now occupies the site of this ancient fort, but the original military post has been entirely destroyed. It was abandoned in 1868.

Surface and Soil—The South Platte valley crosses the central part of the county, east and west. A low range of hills marks the boundary of the river bottoms on each side of the river, beyond which the country spreads out into vast rolling prairies. The soil of the valley and of the narrower valleys of numerous tributary creeks is principally sandy loam with some alluvial deposits, very fertile and yielding readily to cultivation. On the high prairie lands the soil is principally a sandy loam with occasional patches of adobe or gumbo. No detailed soil survey of this area is available.

Population—The population in 1910 was 9,577, as compared with 3,268 in 1900. The present population is approximately 14,600. In 1910 foreign-born white people made up 14 per cent of the total population. The principal foreign nationalities were Russian, Danish and German. The Russians here are principally sugar beet workers.

Drainage and Water Supply—The Platte river and its tributaries drain the county and furnish the principal water supply for irrigation purposes. The principal tributaries are Bijou, Badger and Big Beaver creeks, entering the river from the south. Water for domestic purposes is obtained from wells in many parts of the county. In the Platte river valley it is reached at

depths ranging from 5 feet to 50 feet, and on the prairie lands to the north and south from 25 feet to 500 feet.

Industries—The principal industries are farming, stockraising, stockfeeding, dairying and manufacturing. Farming without irrigation has been carried on rather extensively north and south of the Platte river in the past half dozen years. Irrigated farming is confined largely to the Platte river valley, and stockraising and stockfeeding are followed rather extensively here in connection with general farming. Until recent years large numbers of cattle were grazed on the prairie lands north and south of the river, but these lands are now being utilized largely for general farming purposes. Feed crops are grown extensively on the irrigated lands along the rivers and thousands of cattle and sheep are shipped in here annually to be fattened for market. The principal manufacturing industry is the making of beet sugar, factories belonging to the Great Western Sugar company being located at Fort Morgan and Brush. The dairy interests of the county have had a steady and consistent growth the past few years; especially is this true on the dry lands, where each farm supports from half a dozen to a dozen or more cows. One creamery at Brush and another at Fort Morgan furnish a local market for the butter fat and each creamery has done a business of about $35,000 the past year. Some cream is shipped to Denver, making a total cream business for the county of no small proportions. In connection with the farm dairies there are about 350 silos in the county.

Crops—The principal crops are alfalfa and other hays, sugar beets, potatoes, wheat, corn, oats, barley, rye, pinto beans, milo and other forages, garden vegetables and some fruits, principally hardy tree fruits.

Mineral Resources—The known minerals are clays, sand, gravel and building stone.

Land Values—Irrigated land in this county sells at from $50 to $200 an acre, and nonirrigated land at from $5 to $25 an acre. On the first day of January, 1918, there was about 458,000 acres of privately-owned land in the county, or a little less than 56 per cent of the total area. The records of the county assessor show that 72,545 acres of this was being cultivated under irrigation, and 5,603 acres was natural hay land. The same authority classes 98,212 acres as nonirrigated farm land, and 277,924 acres as grazing land. At the beginning of 1918 there was 57,944 acres of state land in the county, mostly agricultural, for sale by the state under favorable conditions. On July 1, 1917, there was 2,600 acres of government land open to homestead entry, principally very small tracts of no value except for grazing purposes.

Transportation—The main line of the Union Pacific railroad follows the South Platte valley through the county. The Burlington railroad runs east and west across the county, south of the Platte river. It branches at Brush, the main line running east through Washington and Yuma counties, and another line running north into Logan county.

Highways—The principal state highway is the Platte valley road, which follows the Platte river through the county. It is joined at Brush by the Burlington highway, coming in from the east through Yuma and Washington counties. There are numerous county highways, generally well improved and maintained, and sufficient for transportation of crops to market.

Educational—The schools stand among the best in the state. There are three accredited highschools, located respectively at Fort Morgan, Brush and Weldona. Wiggins has two years of highschool work, and Hillrose, Orchard, Snyder, Goodrich and Morey each offers one year's work. In addition to the highschools there are 12 public grade schools and 63 one-room rural schools. There are now 14 standardized schools. The average salary of teachers in the county is $74.95.

Climatological Data—The climate here is mild and equable. The average annual rainfall varies from 12 to 15 inches, and most of it comes during the growing season. The summers are generally long and warm, while the winters are comparatively short and not subject to extremely low temperatures. This part of Colorado is especially noted for its healthful climate. The Eben-Ezer Home Sanitarium, which offers accommodations for consumptives of limited means, was located here principally because of the favorable climate.

Tourist Attractions—Automobile tourist travel through this county over the Platte Valley and Burlington highways is heavy and is growing each year. There are few points of scenic interest in the county, but visitors from the east are usually much interested by the extensive development of agriculture under irrigation. The site of the old government fort, erected in

1861, is of some historic interest, and although no remains of it are at present visible, a monument erected by the D. A. R. marks the site.

Cities and Towns—Fort Morgan, the principal city and the countyseat, is located near the central part of the county on the Burlington and Union Pacific railroads. It is growing rapidly and is one of the most important towns in northeastern Colorado. It has a well-equipped sugar factory. Brush, on the Burlington railroad, further east, is the principal shipping point for a prosperous agricultural district and is the home of a sugar factory belonging to the Great Western Sugar company. Other towns are Orchard, Goodrich, Weldona and Snyder, on the Union Pacific railroad, and Wiggins, Vallery and Hillrose, on the Burlington railroad.

Special Opportunities—There is perhaps 300,000 acres of fertile arable land in this county that has never been broken. Though the rainfall here is not so heavy as in some other sections of eastern Colorado, the experience of the past half dozen years has proved that farming without irrigation can be carried on successfully here provided crops are raised which are especially adapted to this territory. Pinto beans and forage crops usually make good yields. Efforts are being made to bring about the construction of a milk condensery at Fort Morgan.

OTERO COUNTY

General Description—Otero county is situate in the southeastern part of the state, in the heart of the Arkansas valley. It is of an irregular rectangular outline, 42 miles long, north and south, at the eastern boundary, and 36 miles wide. The area is 762,080 acres, or about 80,000 acres more than that of the state of Rhode Island. The surface is a level or broken prairie traversed by the valley of the Arkansas and narrower valleys of several tributaries, chief of which is Timpas creek. The altitude varies from about 4,000 feet, at the point where the Arkansas river crosses the eastern boundary, to 5,100 feet in the southwest.

Early History—Otero county was on the main line of travel for hunters and trappers in the early part of the nineteenth century. After the establishment of Bent's Fort, in Bent county, frequent parties of soldiers passed through what is now Otero county, and followed the Santa Fe Trail over Raton pass to Santa Fe. As early as 1842 there was a regular camping place for trappers at the mouth of King Arroyo, on the present site of La Junta. The actual settlement of the county did not begin until the early 60's. The first settlers were principally cattlemen and sheepmen. The agricultural development of this area did not begin until some time in 1874, when the Rocky Ford ditch was constructed. The county was organized in 1889 from a part of Bent county and was named for Miguel Otero, one of the founders of the town of La Junta.

Surface and Soil—The Arkansas river flows across the northern part of the county. The valley here is broad and contains a large amount of good, level agricultural land. The soil in the valley of the Arkansas and along the tributaries is an alluvial loam or sandy loam, with comparatively little adobe. On the higher levels it is a sandy loam, varying considerably in texture and color. There are about nine townships in the county too rugged for cultivation, except a few very fertile valleys; most of this, which is suitable only for grazing purposes, lies in the southern part of the county and is well supplied with springs. A detailed soil survey of most of the irrigated area in this county has been made by the bureau of soils of the United States department of agriculture.

Population—Since Crowley county was created from a part of Otero county in 1911, it is impossible to make comparisons of the present population with that of previous years. The development of the county was very rapid, as is shown by the reports of the census bureau previous to the division. In 1890 the population was 4,192; in 1900 it was 11,522; and in 1910 it was 20,201. The present population is approximately 23,000. In 1910 the foreign population of Otero county, as then constituted, was 9.5 per cent of the total. Previous to the war the principal foreign nationalities were Russian, Mexican and German.

Drainage and Water Supply—The Arkansas river and its tributaries drain the county and furnish practically all the water for irrigation. The principal tributaries are the Purgatoire river and Timpas creek, on the south, Apishapa creek, on the extreme west, and Horse creek, on the northeast. The water rights here are among the oldest in Colorado and supply a larger proportion of the area of the county with irrigation water than is supplied in any other county in this part of the state. Water for domestic purposes is obtained principally from artesian wells and is reached at depths vary-

ing from 430 feet to 1,100 feet. Stock water is obtained at shallow depths in the irrigated districts.

Industries—The principal industries are farming, stockraising, stockfeeding and manufacturing. Farming is carried on principally in the Arkansas valley and in the smaller valleys of the various tributary streams. The development of the nonirrigated districts has been rapid in the past half dozen years, and success here has been such as to justify the belief that development will be even more rapid in the coming decade. This has long been one of the principal stockraising counties in the state, the principal stock being cattle and sheep. Large numbers of cattle and sheep are shipped into the county every fall to be fattened for market. A sugar factory belonging to the American Beet Sugar company is located at Rocky Ford and one belonging to the Holly Sugar company at Swink. There are also alfalfa meal mills at each of these places. The canning of fruits and vegetables is an important industry here, large canning factories being located at Manzanola, Fowler and Rocky Ford. There is also a large flour mill located at La Junta.

Crops—The principal crops are alfalfa, wheat, oats, barley, rye, corn and beans; cantaloupes and other melons; sugar beets and garden vegetables, and a variety of seed crops. Milo, kafir corn and similar forage crops are raised rather extensively in the nonirrigated districts.

Mineral Resources—The known minerals are clays, including some fire clay; gravel, building sand, building stone and cement materials.

Land Values—At the beginning of 1918 there was 260,000 acres of privately-owned land in the county, or about 34 per cent of the total. Of this amount 76,269 acres, or 10 per cent of the total area, was being cultivated under irrigation, and 1,193 acres was improved fruit land, also irrigated. The county assessor reports that 19,174 acres was being farmed without irrigation, and 159,846 acres was classed as grazing land. Irrigated land in this county sells at from $75 to $200 an acre, and nonirrigated land at from $5 to $25 an acre. On January 1, 1918, there was 102,661 acres of state land in the county, including much good agricultural area, for sale by the state on favorable terms. On July 1, 1917, there was 13,780 acres of government land open to homestead entry, most of which is of little value except for grazing purposes.

Transportation—The main line of the Santa Fe railroad enters this county along the Arkansas river, in the east. At La Junta it branches, one line following the Arkansas river west to Pueblo, and the main line running southwest along Timpas creek to Trinidad and on to California. The Arkansas Valley branch of this system runs north of the river to a junction with the main line at Swink.

Highways—The principal state highway is the Santa Fe Trail, which follows in a general way the course of the Santa Fe railroad through the county, branching at La Junta, the north branch running to Pueblo and the south branch to Trinidad and on to the Pacific coast. Numerous county highways are fairly well improved and are ample for the transportation of crops to market except in some of the more remote nonirrigated districts. The Santa Fe Trail is among the best improved roads in the state, most of the bridges being built of concrete, one across the Arkansas river at La Junta having cost $60,000.

Educational—There are 49 public district schools in the county, and four highschools, located at Fowler, La Junta, Manzanola and Rocky Ford. There are no private schools or colleges. The schools will compare favorably with any in the state.

Climatological Data—The climate here, as in other sections of the Arkansas valley, is mild and healthful, and especially adapted for general agriculture and stockraising. The summers are long and warmer than in most other sections of the state, and the winters are comparatively short and mild. The rainfall varies from 12 to 16 inches, being heaviest in the extreme southeast.

Tourist Attractions—The improvement of the Santa Fe Trail through this county has greatly increased automobile tourist travel from the east by this route. Possibly no other route to Colorado is more generously patronized than this one. There are no points of special scenic interest in the county, but travelers from the east always show much interest in the development of irrigation as it is seen in this valley.

Cities and Towns—La Junta, the countyseat and principal town, is located on the Arkansas river, at the junction of two branches of the Santa Fe railroad. It is an important railway town and the principal shipping point in the Arkansas valley. Rocky Ford, also on the Santa Fe railroad, is the second town in the county and is

the center of a very prosperous agricultural district. The Rocky Ford cantaloupe, which is the standard of excellence all over the country, takes its name from this city, in the vicinity of which it is extensively cultivated. Swink, between La Junta and Rocky Ford on the Santa Fe railroad, is an important agricultural town. Manzanola is the center of the most prosperous fruit and vegetable growing district in this section, and is noted for its canning industry. Among the other towns in the county are Fowler, near the western boundary, which is noted for its pure spring water, the Crewsdale dairy, and the Fowler creamery; Cheraw and Randall, on the Arkansas Valley branch of the Santa Fe railroad; and Timpas and Benton, on the main line, south of La Junta.

Special Opportunities—Although agricultural development in this county has been more rapid than in most counties in the state, there is still considerable room for extension along this line. There is a considerable area of good nonirrigated land not yet broken and the experience of farmers on land of this nature in the county in the last few years has shown that success may be obtained here by following improved agricultural methods and especially by keeping dairy cattle and raising forage crops.

OURAY COUNTY

General Description—Ouray county lies in the southwestern part of the state, including a part of the rich mineral belt known as the San Juan district. It is of an irregular triangular outline, with the base toward the north. The extreme length north and south is 33 miles and the extreme width is about 29 miles. Its area is 332,160 acres, or about one-half that of the state of Rhode Island. The southern part is mountainous and the northern part is level or broken, including a portion of the Uncompahgre valley. The altitude varies from 6,300 feet at the north boundary to over 14,000 feet at the summit of some of the mountains in the southern part.

Early History—This territory was included in the tract of land ceded by the Southern Ute Indians to the United States in 1873. It had been but little explored previous to this time, but settlers and prospectors flocked into the entire territory immediately after the treaty was ratified, and rich mineral discoveries were soon made in the district now included in Ouray county. In the summer of 1875 a permanent mining camp grew up in the heart of the mountains near the southern end of Cimarron range. This camp formed the nucleus of the town of Ouray, which was named in honor of a well known Ute chief whose services to the whites in this section were very great. Rich discoveries of gold and silver were made in the Mt. Sneffels district in 1875 and two years later the Virginius mine was opened. The county was organized in 1887, at that time extending west to the state line and including the territory now embraced in Dolores and San Miguel counties.

Surface and Soil—The only agricultural area in the county lies in the northern part, principally in the valley of the Uncompahgre river. The soil here is extremely fertile, is under irrigation and yields exceptionally large crops. It is principally a sandy loam, or clayey loam soil similar to that of the lower Uncompahgre valley. A thorough survey of the Uncompahgre valley was made by the bureau of soils of the United States department of agriculture in 1910, and published in 1912. This survey applies to a small part of Ouray county. The southern part of the county, from Ridgway to the southern boundary, is extremely rugged and is valuable chiefly for its timber and mineral resources.

Population—The population in 1910 was 3,514, as compared with 4,731 in 1900. The decrease was due principally to a decline in mining activities. There has been considerable agricultural development in the northern part of the county in the last 10 years and the population at present is in the neighborhood of 4,000. In 1910 the foreign white population was 25 per cent of the total. It is considerably less at the present time. Previous to the war the principal foreign nationalities were Austrian, Swedish and Italian.

Drainage and Water Supply—The Uncompahgre river and its tributaries drain the county and supply water for irrigation and other necessary purposes. These streams have their sources in the region of high rainfall and usually carry an abundant supply of water the year round. Water for domestic purposes in the northern part is provided largely from cisterns and in some cases from springs and wells.

Industries—The principal industries are mining, agriculture, stockraising and lumbering. Mining is confined to the mountainous districts in the south, where rich deposits of precious and semi-precious metals have been pro-

duced for a great many years. Agriculture is followed mostly in the upper Uncompahgre valley, and stockmen in this section graze their herds on the fine grazing lands within the national forests. There are valuable coal deposits in the county and coal has been mined to a limited extent during the past year. Lumbering has been followed only to supply local needs.

Crops—The principal crops are alfalfa, natural hay, small grain, potatoes and garden vegetables.

Mineral Resources—The known minerals are antimony, alunite, bismuth, clays, copper, gold, iron, lead, silver, tungsten, zinc, granite, sandstone and a wide variety of other stones.

Timber—There is considerable heavy timber on the mountain slopes within the national forest, principally red and white spruce and yellow pine.

Land Values—Irrigated land may be had here at prices ranging from $50 to $150 an acre; and nonirrigated land, some of which may be cultivated, at from $5 to $40 an acre. At the beginning of 1916 there was, according to the records of the county assessor, about 117,000 acres of privately-owned land in the county, or 35 per cent of the entire area. Of this amount a little over 11,000 acres was being cultivated under irrigation; 2,574 acres of this is farmed without irrigation, and approximately 160,000 acres is classed as grazing land. There is approximately 3,000 acres of state land, principally valuable for grazing purposes, which may be purchased from the state on reasonable terms. On July 1, 1917, there was 29,440 acres of government land open to homestead entry, most of which is of little value except as grazing land. The national forest area within the county is 134,383 acres.

Transportation—A branch of the Denver & Rio Grande railroad extends south from Montrose to Ouray. At Ridgway it connects with the Rio Grande Southern railroad, extending south to Durango.

Highways—The principal state highway is that leading south from the Rainbow Route at Montrose, up to the Uncompahgre valley by way of Ridgway to Ouray and thence south across the mountains to Silverton. Another state highway follows the course of the Rio Grande Southern railroad west and south to Placerville and Telluride, in San Miguel county. In the northern part of the county there are numerous county roads adequate in a general way to serve the agricultural territory. In the southern part there are numerous mountain highways and trails leading principally from Ouray into the various mining districts.

Educational—There are 13 public district schools in the county, and three highschools, located at Ouray, Ridgway and Colona. There are no private schools and no colleges.

Climatological Data—The rainfall is comparatively heavy in all sections of the county. In the northern part it varies from 15 to 25 inches. In the mountainous districts south from Ridgway it is above 25 inches, in some cases being as much as 40 inches. The climate in the northern part is mild and favorable for general farming. In the mountainous districts, further south, it is more severe, the snowfall of the winter being extremely heavy and the high areas being subject to extremely low temperature.

Tourist Attractions—Ouray has long been noted as one of the popular tourist points in the state. A mineral hot spring located here is famed for its curative properties and has been much visited by healthseekers. The mountainous area about Ouray and further south is exceptionally picturesque. The highway between Ouray and Silverton was one of the first mountain highways constructed in this section of the state and was originally operated as a toll road. It is now a good automobile highway and is traveled annually by thousands of tourists and sightseers.

Cities and Towns—Ouray, the countyseat, is the principal town, the terminus of a branch of the Rio Grande railroad and the principal supply point for the mining camps further south. Ridgway, at the junction of the Rio Grande and Rio Grande Southern railroads, is a prosperous agricultural town and shipping point. Other towns are Colona, Eldredge, and Mayfield, on the Rio Grande railroad, and Red Mountain, Ironton and Camp Bird, mining towns.

Special Opportunities—The principal opportunities offered here are in the line of mineral development. There is a vast amount of highly mineralized area in the southern part of the county that has been only partially prospected. The mineral deposits now being worked yield good values at greater depths and there is opportunity for profitable investment in the further development of known ore bodies. There is some room for agricultural development in the northern part.

PARK COUNTY

General Description—Park county lies almost in the exact center of the state and includes the beautiful mountain-rimmed meadow known as South park. The western boundary is formed by the Park range, which in some sections is the Continental divide. It is extremely irregular in outline, about 60 miles long, north and south, and having an extreme width of about 45 miles. Its area is 1,415,680 acres, or a little less than one-fourth that of the state of Vermont. The surface is principally hilly or mountainous except for the park above referred to, which lies near the central part of the county and is nearly 50 miles long and from 10 to 40 miles wide. The altitude varies from about 7,200 feet, at the point where the Platte river crosses the eastern boundary, to more than 14,000 feet at the summits of some of the peaks in the western part.

Early History—Captain Pike and his exploring party crossed the southern end of South park in the latter part of 1806, soon after he had made his famous effort to scale Pikes peak. There are traditions of Spanish explorers in this territory in search of gold, but no trace of Spanish diggings has been found. After Pike's visit there was little travel into this part of Colorado until the active search for gold began in 1858 and 1859. A party of prospectors, including W. J. Holmes, crossed the front range into the South park basin in the summer of 1859 and after considerable prospecting without favorable results they pitched camp on the bank of the stream which was later called Tarryall creek. A settlement was built here, which was called Tarryall. Some placer gold was discovered and the camp grew rapidly. All of the placer ground was soon staked off and newcomers were told to move on. A party of prospectors, who had visited Tarryall and had not been warmly received, traveled further west and established a camp which they called Fairplay. Gold dust was also discovered in this territory and the new camp grew rapidly. It is now the countyseat of Park county. During the early mining activities Park county was one of the principal producing districts and was organized as one of the original 17 counties in Colorado territory. It was named in honor of the beautiful valley on the rim of which most of the prospect camps were located.

Surface and Soil—The surface of South park is level or rolling, crossed by numerous small streams which have their sources in the surrounding mountains. It is one of the best natural meadows in Colorado. The geological formations here show that it was one time the bed of an inland lake and the soil is made up of deposits from the waters of this ancient sea. It is very fertile and produces excellent crops despite the high altitude and short seasons. Farming is followed to a limited extent in the valleys of some of the streams along the rim of the park. The park is surrounded on all sides by rugged mountainous areas, and the South Platte river, which drains this territory, has cut its way out to the eastern plains, forming one of the most picturesque canons in Colorado. No soil survey of this county is available.

Population—There has been considerable fluctuation in the population of this county, due to the variation in the success of mining operations. In 1880 it was 3,970; in 1890, 3,548; in 1900, 2,998, and 2,492 in 1910. The present population is about 3,500. In 1910 the foreign-born population was 16.2 per cent of the total. The principal foreign nationalities then were Swedish, German and English.

Drainage and Water Supply—This county lies in the South Platte watershed, the South Platte river having its headwaters on the western rim of the park. The rainfall in this area is heavy and much of the water used for irrigating lands in northeastern Colorado has its origin in the county. In South park water for domestic purposes is in some cases obtained from wells and is reached at depths ranging from 15 feet to 75 feet.

Industries—The principal industries are stockraising, farming, dairying, lumbering and metal mining. There are valuable coal deposits in the county, but they have never been developed. Good building stone is available here and some has been quarried, principally for local use. South park is one of the most important stockraising districts in the state.

Crops—The principal crops are native hay, potatoes, small grain and garden vegetables.

Mineral Resources—The known minerals are bismuth, clays, coal, copper, fluorspar, lead, manganese, silver, vanadium, zinc, cement materials and a variety of building stone.

Timber—There is considerable timber in the mountainous areas surrounding South park, principally pine, cedar, spruce and aspen.

Land Values—At the beginning of

1918 there was about 248,000 acres of privately-owned land in the county, a little more than 17 per cent of the total area. The county assessor classes 21,675 acres of this as natural hay land, 4,383 acres as nonirrigated farm land, and 177,111 acres as grazing land. The remainder is principally mineral and coal land. Irrigated land here, principally natural meadow, sells at from $50 to $125 an acre, and nonirrigated land at from $5 to $30 an acre. On January 1, 1918, there was 95,469 acres of state land in the county, including much fine grazing area and some farming land, for sale by the state on favorable terms. On July 1, 1917, there was 277,027 acres of government land open to homestead entry, including a considerable amount of good pasture land and some promising mineral territory, the latter being open to prospecting under the federal land laws and subject to patent after ore deposits have been properly located. The national forest area in this county is 642,086 acres.

Transportation—The Platte Canon branch of the Colorado & Southern railroad follows the Platte river through the northern part of this county and extends southward from Fairplay to Buena Vista, in Chaffee county. The Colorado Midland railroad runs through the south end of the county, crossing South park. A branch of the Colorado & Southern railroad leaves the Platte Canon line at Como and runs northeast over Boreas pass to Breckenridge. Branch lines run from Fairplay to Mudsill and Alma, mining camps.

Highways—There are two primary state highways extending through this county. One runs southwest from Denver by way of Como and Fairplay to a junction with the Midland Trail at Buena Vista, and the other is the Pikes Peak, or Ocean to Ocean route, which runs west from Colorado Springs across the south end of South park, also joining the Midland Trail at Buena Vista. There are numerous secondary state highways and county roads, generally moderately well improved, and many trails leading to the mountain mining camps.

Educational—There are 30 public district schools in the county. There are two highschools, at Fairplay and Hartsel. There are no private schools or colleges.

Climatological Data—The climate of South park is very similar to that of the other mountain parks in Colorado, chief of which are North and Middle parks. Although the altitude is above 7,000 feet, this territory is surrounded on all sides by mountains, thus being protected from disagreeable winds during the winter. The summers are short and warm and the winters, though cold, are not disagreeable because of the high percentage of sunshine and the small amount of moisture in the atmosphere. The average annual rainfall in South park proper varies from 14 to 16 inches. It is considerably higher in the mountainous country surrounding the park, except for a small area in the northeastern corner. Along the Continental divide, in the northwest, the annual precipitation averages above 20 inches. The snowfall during the winter months is extremely heavy in the mountainous areas in the western part of the county and especially on the boundary line between this and Summit county.

Tourist Attractions—South park is one of the most picturesque mountain valleys in Colorado, and automobile tourist travel through this section has been greatly increased since the completion of the two state highways before mentioned. Railroad tourist travel into South park has always been heavy. The mountainous regions in the northern and western parts are becoming more and more popular each year as highways are opened, making them accessible to automobile travel. The streams are well stocked with trout and are perhaps visited by more fishermen each year than the streams of any other section of Colorado. There is considerable small game in and about the park, principally grouse and sage hens. Among the popular resorts in the county are Lake George, Hartsel, Bailey, Cassells and Shawnee. Many Denver people have cottages along the Colorado & Southern railroad in this county and spend a considerable part of the summer here.

Cities and Towns—Fairplay, the countyseat and one of the oldest towns in the county, is on the Colorado & Southern railroad in the western part. Como, also on the Colorado & Southern railroad, near Fairplay, is an important shipping point. Alma, in the western part, is a mining camp. In addition to these towns are the resorts before mentioned and the town of Hartsel, on the Colorado Midland railroad.

Special Opportunities—There is a large amount of government land in this county, including both homestead area and national forest. It is all subject to patent under the mineral land laws and much of it is perhaps highly mineralized. Some of the government

land is also well adapted to farming and stockraising. Although agriculture and stockraising have been carried on successfully here for many years, there is still considerable room for development in this direction. The coal and stone resources are extensive, but their development will probably wait on the improvement of transportation facilities.

PHILLIPS COUNTY

General Description—Phillips county lies in the northeastern corner of the state, the north boundary being formed by Sedgwick county, and the eastern boundary by the state of Nebraska. It is rectangular in outline, about 31 miles long, east and west, and 20 miles wide. Its area is 440,320 acres, or a little more than two-thirds that of the state of Rhode Island. Its surface is principally level prairie, and the altitude varies from 3,600 feet, in the east, to about 3,900 feet in the northwest.

Early History—This county was organized in 1889 from a part of Logan county and was named in honor of R. O. Phillips, secretary of a land company which laid out a number of towns in northeastern Colorado. Like other eastern Colorado counties, it was grazing territory in the 70's and early 80's, though no permanent settlements were established during this period. The era of agricultural development began about 1885 and continued actively until about 1893. A series of unfavorable seasons at this time discouraged many of the homesteaders and they gave up their claims, returning to the states further east from which they came. The new period of settlement began in the late 90's and from that time on agricultural development has been very rapid and successful.

Surface and Soil—The surface is principally level, with a few broken or rolling areas in the north and extreme south. The soil is principally a sandy loam, with occasional patches of adobe and other hard soils. It is uniformly fertile and generally contains just about the right proportion of sand to make it work easily. There are few sections of the state where the soil yields better crops without irrigation. There is no soil survey of this area available.

Population—Like a good many other counties in eastern Colorado, the population here has been subject to some fluctuation. In 1890 it was 2,642, and was perhaps still larger at the beginning of 1893. A succession of unfavorable seasons began in 1893 and in 1900 the population had decreased to 1,583. In 1910 it was 3,179. The present population is approximately 5,000. In 1910 the foreign-born population was 8.8 per cent of the total, the principal foreign nationalities being Swedish and German. The percentage of foreign population is somewhat lower at the present time.

Drainage and Water Supply—Frenchman creek, a tributary of the Republican river, is the principal stream in the county. It has its source further west in Logan county and flows east through the central part of Phillips county. There are a few other small streams, principally tributaries of the Republican river. These streams usually become dry, or nearly so, during the summer months and for that reason have no value as sources of water supply for irrigation purposes. There is a strong underflow of "sheet water" here, which is reached at depths varying from 10 to 220 feet. Wells sunk to this underflow are pumped principally by windmills and furnish a large portion of the water for domestic purposes and for livestock. In some cases these wells are pumped by engines and a supply of water for irrigation for limited areas is obtained.

Industries—The principal industry is general farming, which includes dairying and stockraising. This is one of the best nonirrigated farming sections of the state. There is almost no waste land in the county and the cultivated area is increasing rapidly each year. The district tributary to Holyoke has for many years been one of the most successful dairy farming sections in the state. Stockraising was formerly the principal industry, but the range upon which stockmen depended for their pasture has in recent years been cut up into comparatively small farms and stockraising operations are now being carried on in a different way. Most farmers keep some beef cattle and hogs, but cattle here are now usually fattened for market instead of being sold for feeders as they were during the earlier history of the county.

Crops—The principal crops are corn, wheat, oats, barley, rye, potatoes, kafir, milo and other sorghums, sudan grass and similar forage crops, pinto beans and garden vegetables. Both spring and winter wheat are grown here, winter wheat perhaps producing a slightly better average yield. The production of sorghums and other forage crops is increasing steadily.

Mineral Resources—The known minerals are clays, which have been used to a limited extent for the manufacture of brick; building sand and building stone.

Land Values—At the beginning of 1918 there was about 392,000 acres of privately-owned land in the county, or a little less than 90 per cent of the total area. Most of this is classed by the county assessor as nonirrigated farm land, though not nearly all of it is now being cultivated. Land in this county sells at from $20 to $75 an acre, depending principally on the location and improvements. On January 1, 1918, there was 18,585 acres of state land in the county, principally agricultural land, which may be purchased from the state on favorable terms. On July 1, 1917, there was 1,252 acres of government land open to homestead entry, principally small isolated tracts of little value.

Transportation—A branch of the Burlington railroad runs through the central part of the county by way of Holyoke, the countyseat. This is the only railway in the county.

Highways—The principal highway is the Omaha-Lincoln-Denver road, an important automobile route leading into the state from the east. A secondary state highway runs north from Holyoke to Julesburg, in Sedgwick county, and south from Holyoke to Wray, in Yuma county. The numerous county roads are comparatively well improved and are in good condition the year round. They are in a general way sufficient to care for the present agricultural development.

Educational—There are 36 public district schools in the county, and two highschools, located at Holyoke and Haxtun. There are no private schools or colleges.

Climatological Data—The climate here is mild and equable, well suited for general farming and stockraising. The summers are comparatively long and warm and the winters are not subject to extremely low temperatures. The rainfall varies from 16 to 19 inches, being the heaviest in the eastern part. Approximately three-fourths of it comes during the growing season, between April and October. It varies considerably from year to year, but is seldom so light that crops especially adapted to this locality do not make fair yields.

Tourist Attractions—There is little natural scenery here of interest to tourists, but there is considerable automobile tourist travel over the Omaha-Lincoln-Denver road to the mountainous regions further west. This travel is increasing steadily and the county derives considerable benefit from it.

Cities and Towns—Holyoke, the countyseat and principal town, is located on the Burlington railroad near the central part of the county. It is the center of a prosperous farming and dairying section and is an important shipping point. Haxtun, on the Burlington railroad, in the western part, is the center of a rapidly developing general farming district and is growing steadily. Paoli, a comparatively new town between Haxtun and Holyoke, is becoming an important grain shipping point.

Special Opportunities—The principal opportunities offered here are along the line of agricultural development. There is probably 200,000 acres of arable land in the county that has never been broken. It has excellent soil and under proper methods of cultivation yields good crops of small grain, corn, forages and similar products. The rainfall here is comparatively regular and farmers who have lived in the county for as long as 25 years say there has not been an absolute crop failure during that period.

PITKIN COUNTY

General Description—Pitkin county is located in the central part of the state, just west of the main range of the Rockies, and includes a portion of the highly mineralized area that first introduced Colorado to the world. It is of extremely irregular outline, about 54 miles in length along the north boundary and about 30 miles in width north and south through the central part. Its area is 652,160 acres, or about 30,000 acres less than the state of Rhode Island. The surface varies from rugged mountains resplendent with natural grandeur to broad valleys in which agriculture is practiced profitably. Several mesas scattered through the county provide considerable areas of level, fertile and productive farm land. The altitude varies from about 6,625 feet in the northwestern part to more than 14,200 feet at the summits of some of the peaks in the east and south.

Early History—The first white settlers in this area were prospectors who were attracted to the Leadville district, but found it overcrowded and pushed out into the unknown country further west. In 1879 these fortune hunters made discoveries of rich silver ore on the upper Roaring Fork

and one or two cabins were erected on the present site of the town of Aspen. The following year the town itself was laid out and soon became one of the leading mining camps of the west. The principal metal value found here was silver, and for a good many years Pitkin county was one of the leading producers of the white metal. A branch of the Denver & Rio Grande railroad was completed to Aspen in 1887 and the Midland line was finished to the town the following year. In 1900 the county had a population of 8,929, this being the crest of the boom. The county was organized in 1881 from a part of Gunnison county.

Surface and Soil—The surface of the county is extremely rugged and picturesque along the Continental divide and the other ranges which form the natural topographic boundaries between Pitkin and its neighboring counties. There is a large area of level land in the valleys of the Frying Pan, Roaring Fork and Crystal rivers, as well as along all of the tributaries of these main drainage streams of the county. These valleys compare favorably with the best farming land in the state as to soil fertility, climate and the production of diversified crops. The soil is deep, fertile and exceptionally free from rock, while the growing season is sufficiently long to allow the usual farm crops to mature.

Population—The population in 1910 was 4,566. At the present time it is about 5,000 and is located principally in the mining districts. The foreign-born population in 1910 was 27.2 per cent of the total, compared with 29.2 per cent in 1900. The percentage is somewhat lower now than it was in 1910. Most of the foreigners are metal miners. Previous to the war the principal foreign nationalities were Austrian, Italian, Swedish and English.

Drainage and Water Supply—The territory included in this county lies in the Grand river watershed. The principal streams are the Frying Pan, Roaring Fork and Crystal rivers, all tributaries of the Grand river. These rivers have their sources in regions of extremely high precipitation and carry plenty of water the year round.

Industries—Metal mining is one of the principal industries and the Aspen district has attained worldwide fame as a steady producer of silver and lead ores. Stockraising, however, has now increased to a point where it challenges the superiority of the mining industry. Stock produced from the Pitkin county ranges commands usually a higher price on the market than stock from the lower sections of the state. The raising of purebred Hereford and Shorthorn cattle is becoming common in the valleys. Pitkin county now enjoys the distinction of having the grand champion Belgian stallion of the International Stock show within its borders. This animal is worth $25,000. Raising of general farm crops is also an industry that is gradually on the increase and destined to become a potent factor in the development of the county.

Mineral Resources—The known minerals are antimony, arsenic, barium, clays, coal, copper, gold, iron, lead, silver, zinc, and a wide variety of building stones.

Timber—There is plenty of heavy timber on the mountain slopes, principally pine, spruce and cedar.

Land Classification—At the beginning of 1918 there was about 83,000 acres of privately-owned land in the county, or about one-eighth the total area. Of this, according to the records of the county assessor, 15,125 acres was being cultivated under irrigation, about 40,000 acres was classed as grazing land, 10,000 acres as coal land, and 15,000 acres as mineral land. There is about 2,425 acres of state land and 51,340 acres of government land open to homestead entry. The national forest area within this county is nearly 511,000 acres. This area under the control of the forest service provides range for approximately 15,000 cattle and 60,000 sheep, and is used by the owners of the ranches adjacent to the forest.

Transportation—The main line of the Colorado Midland railroad runs across the northeast corner of the county and follows the north boundary for several miles along the Frying Pan river. Branches of both the Midland and the Denver & Rio Grande railroads extend south along the Roaring Fork river to Aspen. The Crystal River railroad runs south along Crystal river from Carbondale to the town of Marble, in Gunnison county.

Highways—The principal state road is Highway No. 25, running from Glenwood Springs up the Roaring Fork valley to Aspen and thence east over the Continental divide at Independence pass, being a link of the Ocean to Ocean highway. Numerous other roads and trails are used principally to serve the several mining camps.

Educational—There are 15 public district schools, one joint school and one highschool, located at Aspen.

There are no private schools and no colleges.

Climatological Data—The rainfall is heavy in all sections of this county. In the southern part along the mountain range it averages above 25 inches annually. The lowest average annual precipitation along the north boundary is perhaps about 20 inches. In the winter the snowfall is ordinarily heavy, thereby affording ample moisture to provide water for power and irrigation purposes, but this county is not subject to extremely low temperatures, except in the high altitudes in the southern part. The weather bureau records indicate that in some years the ground is practically devoid of snow up to the first of the year in the farming communities; and as a rule the snow has disappeared in time to allow early plowing and cultivation. A failure of crops owing to climatic conditions has seldom occurred. The summers are warm, but are not characterized by the extreme heat of the lower elevations. Mountain breezes tend to equalize the temperature. The nights are always cool and the days warm. In summer the climate is ideal; in winter it is not severe.

Tourist Attractions—Pitkin county enjoys the distinction of having within its borders some of the most picturesque mountain scenery to be found in the Rocky mountains. Its eastern boundary lies upon the Continental divide, with Grizzly peak, 14,020 feet, its high point. From Grizzly peak there juts out to the west the Elk Mountain range, a spur of the Rockies, which culminates in Castle peak, 14,259 feet high. This great mountain uplift is broken by long spurs running north to the valley floor, with clear mountain streams running between. These streams are all well stocked with trout and have many delightful camping spots along their courses. Better highway facilities are the principal need for the development of this scenic region.

Towns—Aspen, the countyseat, is the principal city and the most important mining camp and supply point. Among the other towns are Norrie, Thomasville, Ruedi, Janeway, Sewell, Emma, and Rathbone.

Special Opportunities—The principal opportunities offered here are in the direction of mining development. Although this county has been producing metals steadily for more than 35 years, there are still wide areas that have been only inadequately prospected and possibly mineral deposits fully as rich as those now being worked yet lie hidden beneath the mountain sides. There are rich coal deposits in the county which have been but little developed. The stone and other mineral resources will probably wait for development until the tributary Rocky Mountain territory is more thickly settled. Opportunities are open for the settler and prospective purchaser of ranch property for stockraising and for the production of general farm crops. There is no better farming land in the entire state than is found in the garden spots of this county, along the broad expanses of fertile soil in the valleys.

PROWERS COUNTY

General Description—Prowers county lies in the southeastern part of the state, including a large part of the Arkansas valley. The eastern boundary is formed by the state of Kansas. It is an almost perfect rectangle 48 miles long north and south and 37 miles wide. Its area is 1,043,200 acres, or about 200,000 acres less than the state of Rhode Island. The surface is principally level valley in the north and somewhat higher broken prairie in the south. The altitude varies from 3,200 feet at the point where the Arkansas river crosses the eastern boundary to about 4,000 feet in the southwest.

Early History—Prowers county is on the route of most of the early visitors to Colorado. Pike and his little band of soldiers followed the Arkansas river through this county in 1806; Long's party took the same course in 1820; in 1845 Fremont went this way on his third expedition to the Rocky mountains; Captain Gunnison with his expedition passed this way in 1853; General Stephen W. Kearney followed this route with his little army bound for New Mexico in 1846, taking this detour for the sake of safety instead of the old Santa Fe Trail across the southeastern corner of Baca county; General Russell and his little band of gold seekers took the same trail in their journey to the Pikes Peak region in 1858. The early settlers in the county were principally stockmen who began to come in the 60's. In the early 80's the development of agriculture began and has been rapid in this county ever since. Prowers county was organized in 1889 from a part of Bent county and was named in honor of John W. Prowers, an early associate of William Bent and a representative in the Colorado legislature in 1881-1882.

Surface and Soil—The Arkansas river crosses the northern part of the county and its broad valley contains

practically all of the irrigated farm land. South of this river the surface rises into a broken table land containing much good nonirrigated farming territory. The soil in the valley is chiefly underlaid with Benton and Dakota sediments, and is principally an alluvial or sandy loam with restricted areas of adobe and other harder soils. On the uplands the soil is principally a sandy loam, very fertile and yielding readily to cultivation. It is very retentive of moisture and in recent years has proved to be of excellent agricultural character. There is a detailed soil survey of this area available, to be found in the annual report of the bureau of soils, department of agriculture, for the year 1902.

Population—The population of this county has grown steadily. In 1890 it was 1,969; in 1900 it was 3,766, and had increased to 9,520 in 1910. The present population is approximately 15,000. In 1910 the foreign-born population was 8.2 per cent of the total. At that time the principal foreign nationalities were Mexican and German.

Drainage and Water Supply—The Arkansas river and its tributaries drain the county and furnish much of the water for irrigation. A group of large reservoirs lie in the southern part of Kiowa county and extend into northern Prowers county, furnishing water for the irrigation of a large area of land. North of Lamar there is one of the most extensive systems of irrigation from reservoirs in the state. Water for domestic purposes is obtained principally from wells and is reached at depths varying from 10 to 75 feet.

Industries—The principal industries are farming, stockraising, stockfeeding, dairy farming and manufacturing. Until recently farming operations were confined largely to the Arkansas valley and the southern part of the county was used exclusively for grazing purposes. In recent years farming without irrigation has been extended rather rapidly in the south and is proving very successful. A beet sugar factory belonging to the American Beet Sugar company is located at Lamar. The Helvetia Milk Condensing company has a large condensery at Lamar. It was opened in the early part of 1914. The plant has a capacity sufficient to handle the production of 12,000 dairy cattle, or 150,000 pounds of milk daily. There are large alfalfa meal mills located at Hartman, Bristol, Kornman, Wiley, May Valley, Holly and Millwood. The largest flour mill in the state, with a daily capacity of 1,025 barrels of white flour and 300 barrels of other grain and an elevator capacity of 650,000 barrels, is located at Lamar.

Crops—The principal crops are alfalfa and other hay, sugar beets, cantaloupes and other melons, wheat, oats, rye, barley, corn, potatoes and garden vegetables. Broomcorn and various forage crops are grown rather extensively in the southern part of the county.

Mineral Resources—The known minerals are clays, glass sand, building sand, stone of several varieties and valuable shale.

Land Values—At the beginning of 1918 there was approximately 520,000 acres of privately-owned land in the county, or about 50 per cent of the total area. Of this amount, according to the record of the county assessor, 87,848 acres was being farmed under irrigation; 3,792 was classed as natural hay land, and 427,012 acres as grazing land. The remainder is principally town and city lots and railroad rights of way. Irrigated land here sells at from $75 to $200 per acre and nonirrigated at from $5 to $20 an acre. January 1, 1918, there was 55,521 acres of state land in the county, including much good farming land for sale by the state on easy terms. On July 1, 1917, there was 17,061 acres of government land open to homestead entry, principally small isolated tracts suitable only for grazing purposes.

Transportation—The main line of the Santa Fe follows the Arkansas river through the county, running south of the river most of the way. The Arkansas Valley branch of this road leaves the main line at Holly and runs through the irrigated district north of the river. It is connected with the main line by a branch road extending from Lamar to Kornman Junction and north to May Valley.

Highways—The principal state highway is the Santa Fe Trail, which follows in a general way the course of the Arkansas river through the county. The Dallas-Canadian-Denver highway runs south from the Santa Fe Trail at Lamar, through Baca county, being one of the principal highways from Colorado to the Gulf coast. Numerous county roads are fairly well improved and sufficient for the transportation of crops to market.

Educational—There are 60 public district schools in the county and four highschools, located at Granada, Holly, Wiley and Lamar. There is an academy and a business college at Lamar.

Climatological Data—The climate here, as in other sections of the Arkansas valley, is mild and open, very healthful and well adapted to general farming and stockraising, there being more full days of sunshine than at Phoenix, Ariz., or Los Angeles, as shown by the records of the United States weather bureau. The summers are longer than in most sections of Colorado; the winters are comparatively short and mild. The rainfall in the northern part of the county varies from 12 to 15 inches and in the southern part from 15 to 18 inches.

Tourist Attractions—The Santa Fe Trail is one of the principal routes for automobile tourists from the East into Colorado. In recent years there has been considerable tourist travel from points in this county, principally Holly and Lamar, south into Baca county. Although Prowers county has none of the rugged scenery which attracts tourists in large numbers to Colorado, it has an agricultural development under irrigation not surpassed in any other part of the country, and tourists often spend many days traveling through the farming districts.

Cities and Towns—Lamar, the countyseat and principal city, is located on the Santa Fe railroad in the western part of the county. It possesses water works, sewer system, electric light and power plant, public heating plant and a 1,025-barrel flour mill. The Intermountain Railway, Light and Power company, which has its headquarters and power plant at Lamar, is extending its transmission lines to carry electric light into railroad towns in both Bent and Prowers counties, with distributing plants and lines to provide electric light and power for hundreds of farmers in many of the smaller rural communities. Holly, on the Santa Fe near the eastern boundary, is the center of a prosperous agricultural district and is the second city in size. It has a good system of water works, sewer system, electric light and power, and is an ideal residence city. Other towns are Granada, on the main line of the Santa Fe; Wiley, Bristol and Hartman on the Arkansas Valley branch; and Webb and Plains in the southern part of the county.

Special Opportunities—The principal opportunities offered here are along the line of agricultural and manufacturing development. A large area of good farming land in the southern part of the county is not yet in cultivation and the experience of good farmers in this territory in the past few years has proved that farming without irrigation, especially with dairy farming as a basis of operation, will be uniformly successful. There are extensive deposits of good glass sand near Lamar, which have been thoroughly tested and proved to be equal to the best glass sand found in this country. Drilling for oil has been in progress in this locality for a good while. If oil or gas should be developed in commercial quantities the establishment of glass factories would be especially profitable. There is considerable good building stone, principally sandstone, in the county.

PUEBLO COUNTY

General Description—Pueblo county lies in the south-central part of the state and includes a considerable portion of the Arkansas valley, one of the best known agricultural areas in Colorado. It has an irregular outline with an extreme length north and south of 54 miles on the eastern boundary, and an extreme width of 54 miles. Its area is 1,557,120 acres, or a little more than one-half that of the state of Connecticut. The surface is principally a broken plain, through the central part of which passes the valley of the Arkansas river. In the southwest it rises gradually into a rugged foothill district, the altitude varying from about 4,350 feet, at the point where the Arkansas river crosses the eastern boundary, to a little over 8,000 feet in the extreme southwest.

Early History—Captain Zebulon Pike and his party of explorers camped at the mouth of Fountain creek in November, 1806, and built a breastwork of cottonwood logs for defense. It was from this camp that Pike started on his attempt to scale Pikes peak. Two members of Long's expedition visited this same territory in 1820, but found no traces of Pike's stockade. Jacob Fowler and a party of adventurers visited this region in 1822 and built a log house near the present site of the city of Pueblo. Charles and William Bent built a fort and trading post some distance west of the mouth of Fountain creek in 1826, but soon abandoned it for another which they built near the present site of the city of Las Animas. Jim Beckwith, a mulatto, perhaps established the first permanent settlement where Pueblo now stands, in 1842. It was a sort of adobe fort enclosed with cottonwood pickets, built for protection against the Indians, and was called Fort Nepesta. It was burned and plundered by Ute Indians on Christmas day, 1854. Captain Gunnison passed through what is now Pu-

eblo county along the Arkansas river, in the early part of 1853, and wrote an interesting account of his visit here. Green Russell and his party of prospectors passed up the Arkansas river in June, 1858, and turned north up Fountain creek toward the Pikes Peak region. In 1859 a settlement was begun on the east side of Fountain creek, called Fountain City. About two years later a rival town was laid out on the bank of the Arkansas river and was called Pueblo. These settlements grew very slowly until early in the 70's when a large influx of stockmen and homesteaders through this part of Colorado gave them a new lease on life. From that time on the growth of the city of Pueblo was rapid. Pueblo county was one of the original 17 counties in Colorado Territory.

Surface and Soil—The soil is principally a sandy loam in the more elevated prairie sections and an alluvial or clayey loam in the Arkansas valley. There are some districts having considerable slate and shale, much cut by erosions and unsuitable for cultivation. These are of limited area. Most of the prairie part of the state is comparatively level. In the southwest the surface is hilly and mountainous, with numerous small mountain valleys containing some good farm land and a large amount of fine grazing area. No soil survey of this county is available.

Population—The population of Pueblo county has grown very rapidly. In 1880 it was 7,617; in 1890 it was 31,491; in 1900 it was 34,448; and in 1910 it was 52,223. The present population is about 64,000. In 1910 the foreign-born population was 18.5 per cent of the total, the principal foreign nationalities being Austrian, Italian, German, Irish and English. At that time the urban population was 85 per cent of the total, being confined to the city of Pueblo.

Drainage and Water Supply—The Arkansas river flows through the central part of the county and, with its tributaries, furnishes the drainage and supplies water for irrigation. The Arkansas river and most of the tributary streams carry plenty of water the year around, the supply being sufficient for irrigation of much more land than is now being watered. In the agricultural districts water for domestic purposes is obtained largely from wells.

Industries—The principal industries are manufacturing, agriculture, stock-raising, dairying and quarrying. Manufacturing is confined largely to the city of Pueblo and its suburbs. The steel mills of the Colorado Fuel & Iron company are located here, employing over 6,000 men. There are more than 100 other manufacturing establishments, representing about 30 different lines of the manufacturing industry. It is an important packing center, has the largest brick and tile works west of the Mississippi river and the largest tent and awning factory in the west. Its factories employ about 7,500 men and have a monthly pay roll of about $1,500,000. Farming under irrigation is confined to the valley of the Arkansas river and the narrower valleys of a few of its tributaries. Farming without irrigation is being rapidly extended on the prairie lands north and south of the river and is proving almost uniformly successful. The dairying industry has developed very rapidly in the past half dozen years. Important stone quarries are located on Turkey creek, in the northeastern part of the county, at Lime, south of Pueblo, and at various other places. Pueblo county sandstone, quarried on Turkey creek, was used for the construction of the Pueblo county court house and for numerous other structures in the state. Marble from Pueblo county has also been used extensively for building purposes. The Colorado Fuel & Iron company quarries large amounts of limestone annually, principally from the deposits in the vicinity of the town of Lime.

Crops—The principal crops are alfalfa and other hays, wheat, oats, rye, barley, corn, potatoes, sugar beets, pinto beans, garden vegetables, small fruits and some tree fruits.

Mineral Resources—The known minerals are clays of many varieties, including excellent fireclay; good glass sand, marble, granite, limestone, sandstone and other building stones. Drilling for petroleum is now going on in several parts of the county and favorable showings of oil have been found.

Timber—There is some timber in the southeastern part, principally pine, cedar and spruce.

Land Values—At the beginning of 1918 there was about 749,000 acres of privately-owned land in the county, or about 48 per cent of the total area. The records of the county assessor show that a little over 40,000 acres of this is being farmed under irrigation, 65,361 acres is nonirrigated farm land, and 614,350 acres is classed as grazing land. The remainder is principally town and city lots and railroad rights of way. Irrigated land in this county sells at from $75 to $300 an acre, and nonirrigated land costs from $8 to $25

an acre. On January 1, 1918, there was 208,413 acres of state land in the county, including a considerable amount of good farming area, for sale by the state on favorable terms. On July 1, 1917, there was 20,860 acres of government land open to homestead entry, principally isolated tracts of little value except for grazing purposes. The national forest area is 35,456 acres.

Transportation—This county is well served by railroads, the city of Pueblo being one of the most important railroad centers in the west. The Santa Fe and Missouri Pacific railroads follow the course of the Arkansas river west to Pueblo, and the Santa Fe runs west to Canon City and north to Colorado Springs and Denver. The Colorado & Southern and Denver & Rio Grande railroads run north and south through the county by way of Pueblo to Trinidad, in Las Animas county. The main line of the Denver & Rio Grande railroad runs west from Pueblo along the Arkansas river to Canon City and Leadville and thence west to Grand Junction and Salt Lake City. The Colorado-Kansas railroad runs northeast from Pueblo to the stone quarries in upper Turkey creek, in the vicinity of Stone City.

Highways—The county is also well served with primary state highways. The North and South road runs through the central part of the county by way of Pueblo, and the Santa Fe Trail, one of the principal highways entering the state from the east, follows the Arkansas river to Pueblo and westward as the Rainbow Route to Canon City, Salida, Gunnison, Grand Junction and Salt Lake City. There are numerous secondary state highways and county roads, generally well improved and maintained. This county has one of the best highway systems in Colorado.

Educational—There are 49 public district schools in the county, and two highschools, located at Pueblo. There are also a number of private schools and business colleges located here.

Climatological Data—The climate is mild and equable. The city of Pueblo and the Arkansas valley have a very high percentage of sunshine, the average being more than 300 sunshiny days annually. The rainfall in the northern and eastern parts of the county, including the Arkansas valley, averages from 12 to 15 inches annually. In the southwest it increases very rapidly, being more than 25 inches annually in the extreme southwestern corner.

Tourist Attractions—Automobile tourist travel to this county is very heavy and is increasing steadily. The Santa Fe Trail is one of the most popular automobile tourist routes from the east into Colorado and the Midland Trail is perhaps the most heavily traveled automobile highway across the Rocky mountains in Colorado. In the southeastern part of the county there is an attractive scenic mountainous area which is reached by good automobile highways from Pueblo. Beulah and Rye are the most important tourist points in this section of the state. The streams in this region are fairly well stocked with trout and are popular fishing waters.

Cities and Towns—Pueblo, the countyseat, is the second city in Colorado in size. One of the largest manufacturing centers in the west, and a railroad point of great and growing importance. It has a large wholesale and jobbing trade and its trade territory is being steadily extended. Among the other important towns are Boone, Avondale, and Nepesta, in the Arkansas valley; Eden and Pinon, on Fountain creek; Lime and Brooks, south of Pueblo; Turkey creek and Stone City, in the northwest; and Beulah and Rye, in the southwest.

Special Opportunities—There is perhaps 300,000 acres of arable land in this county not yet broken. Until recently most of the prairie land in Pueblo county was utilized for grazing purposes. At the present time, however, much of this grazing land is being broken and farmed and such agricultural operations are proving very successful. Small grains, pinto beans and forage crops do well in the nonirrigated districts, the rainfall being almost always sufficient for maturing the varieties best adapted to this territory. The building stone resources of the county are very extensive and only partially and imperfectly developed. There are excellent deposits of glass sand along the Arkansas river, which would be rapidly developed for the manufacture of glass should oil or gas be discovered here in commercial quantities. There is considerable mineralized area in the southwest, which has been prospected extensively, but never developed.

RIO BLANCO COUNTY

General Description—Rio Blanco county lies in the northwestern part of the state, the western boundary being formed by the state of Utah. It is of an irregular rectangular shape, forming the north portion of the old

Uintah Indian reservation. Its area is 2,062,720 acres, or about two-thirds that of the state of Connecticut. It is the fourth county in Colorado in size, being surpassed only by Las Animas, Moffat and Weld counties. Its extreme length, east and west, is about 110 miles and the extreme width along the western boundary is about 40 miles. The surface in the west is a high broken plateau, rising rather abruptly in the east to the mountainous district known as the White river plateau. The altitude varies from about 5,800 feet at the western boundary to more than 12,000 feet at the summit of some of the peaks in the eastern part.

Early History—This territory has played a prominent part in the early history of Colorado as a result of encounters here with the Ute Indians, which finally led to the removal of all Colorado members of this tribe to western Utah. In the spring of 1878 Nathan C. Meeker, for whom the town of Meeker, the countyseat of Rio Blanco county, was named, was appointed Indian agent in this territory. He had trouble with the Indians from the first and in the fall of 1879 he asked for troops to protect him and his associates. Major T. T. Thornburgh, with a company of 160 men, was commissioned to assist Meeker, and started for the White River agency in September of 1879. On the morning of September 29th Major Thornburgh and his men were ambushed in Red canon, a narrow ravine in the north part of Rio Blanco county, and 15 soldiers were killed and 35 wounded. Major Thornburgh himself was killed and scalped. Meanwhile a party of Utes attacked Meeker and the employees at the Indian agency, killed most of them and took the women prisoners. Immediately following these outrages there was a general demand for the removal of the Indians from this territory and in 1881 about 17,000 of them were placed on the Uintah reservation in Utah. Rio Blanco county was organized in 1889 from the northern portion of Garfield county.

Surface and Soil—The principal agricultural land is found in the valley of the White river and on the high plateau south of this stream. The surface of this plateau is broken by numerous streams, most of which flow through deep ravines. The mesas between these streams contain large areas of fertile agricultural and grazing land. The soil is principally sandy loam or alluvial deposits of great depth and very fertile. The eastern part of the county is mountainous. No soil survey of this area is available.

Population—The population in 1910 was 2,332, as compared with 1,690 in 1900. At the present time the population is about 4,500. In 1910 the foreign-born white population made up about 8.2 per cent of the total. The percentage is perhaps about the same at the present time.

Drainage and Water Supply—The White river and its tributaries drain most all of the county and furnish water for irrigation and other purposes. While there is comparatively little land being cultivated under irrigation, there is water available for practically all of the arable land which does not lie too high to be watered. Domestic water in most sections is obtained from wells and is found at depths ranging from 15 feet to 75 feet.

Industries—General farming, including stockraising and dairying, is the principal industry. The area included in this county has long been one of the principal open range sections of Colorado and great herds of beef cattle still graze on the plateaus and along the streams. There are valuable coal deposits, but they have been worked only to supply fuel for local use. Rich mineral beds are found in the western part of the county, especially oil shale and carnotite, but they are almost wholly undeveloped. Lumbering has been followed to a limited extent only to supply the local demand.

Crops—The principal crops are alfalfa, natural hay, potatoes, and small grains.

Mineral Resources—The known minerals are asphaltic rock, asphaltic sand, carnotite, coal, petroleum, oil shale, sandstone, limestone, granite and other valuable stone.

Timber—In the eastern part there is an abundance of heavy timber, principally pine and spruce. On the high lands in the western part there is small timber, principally cedar.

Land Values—Irrigated land in this county sells at from $50 to $125 an acre; nonirrigated farming land from $5 to $25 an acre, and grazing land, of which there is an immense amount, ranges in value from $3 to $10 an acre. At the beginning of 1918 there was about 172,000 acres of privately owned land in the county, or a little more than eight per cent of the total area. Of this amount only about 28,000 acres is classed as agricultural land, and 119,000 acres as grazing land. The remainder is principally coal and mineral land. There is no state land

in Rio Blanco county. On July 1, 1917, there was 1,333,242 acres of government land open to homestead entry. A considerable amount of this is suitable for agriculture and will be placed under cultivation when better transportation facilities are provided. This county ranks second in the amount of available homestead land. The national forest area is 349,306 acres.

Transportation—The only railroad entering this county is the Uintah railroad, which leaves the Denver & Rio Grande railroad at Mack, in Mesa county, runs north through Garfield county and across the southwestern corner of Rio Blanco county to Dragon, Utah. Regular stage service is maintained between Rifle, on the Denver & Rio Grande, in Garfield county, and Meeker, the countyseat of this county. Stage service is also maintained between Meeker and Craig, the western terminus of the Denver & Salt Lake railroad.

Highways—The principal highway is the Ocean to Ocean road which runs north from Rifle to Meeker and west along the White river into Utah. There is a good secondary state highway between Meeker and Craig. There are numerous other county highways, especially in the western part of the county, which are barely sufficient, however, to serve the demands of farmers and ranchmen who live far from railroads.

Educational—There are 26 public district schools in the county, and one highschool, located at Meeker. There are no private schools and no colleges.

Climatological Data—The rainfall is extremely varied. On the White river plateau, in the eastern part of the county, it averages about 25 inches annually. North and west of this there is a belt having an average rainfall of from 15 inches to 20 inches. In the western part of the county there is an average rainfall of from 13 to 15 inches. The climate in the White river valley and on the plateaus to the south is comparatively mild and very favorable to general agriculture. In the eastern part, where the altitude is much higher, the summers are short and the winters are long, subject to extremely low temperatures and very heavy snowfall.

Tourist Attractions—Some of the finest fishing and hunting grounds in Colorado are found in this county. There is a considerable amount of big game to be found here, including deer, elk, wildcat and an occasional bear. The streams are all fairly well stocked with trout and are not fished out early in the season, as they are in the sections of the state near to railroads. Some of the most picturesque mountain scenery in the state is to be found in the eastern part of the county, in the neighborhood of Marvin Lodge. The completion of the Ocean to Ocean highway across this county has greatly increased tourist travel, but further extension of highways is necessary to make it possible for tourists to visit the most attractive scenic regions of the county.

Cities and Towns—Meeker, the countyseat and principal town, is located in the beautiful upper valley of the White river and is one of the most picturesque towns in western Colorado. Other towns are Whiteriver, Delaney and Rangely, all in the White river valley.

Special Opportunities—The principal opportunities for development here are in the line of agricultural extension and mining. At the present time less than five per cent of the agricultural land within the county is being cultivated and there is range available for a great many more head of stock than are now being pastured. The mineral deposits of the county, particularly coal, oil shale and carontite, have hardly been touched. Development along these lines, however, must be deferred until further transportation facilities are provided for marketing the output.

RIO GRANDE COUNTY

General Description—Rio Grande county lies in the south-central part of the state and includes most of the western extension of the San Luis valley. It is of an irregular rectangular outline, with an extreme length east and west of 30 miles and an extreme width north and south of 25 miles. The surface is generally level except in the southwest, where it rises abruptly into the San Juan mountains. Its area is 574,720 acres, or a little less than one-half that of the state of Delaware. The altitude ranges from about 7,600 feet where the Rio Grande river crosses the eastern boundary to about 13,000 feet at the summits of peaks of the San Juan mountains in the southwest.

Early History—Early explorers frequently followed the Rio Grande river across the territory now included in this county, usually in search of gold, which they expected to find in the sands of the stream and in the

mountains beyond. John C. Fremont's fourth Rocky Mountain expedition crossed this area in 1848 and came to grief in the bleak San Juan range further west. In 1860 a colony of Mexicans settled in the valley of the Rio Grande river, not far from the present site of Monte Vista. In 1870 gold was discovered in the western part of the county and for several years mining development was rapid. For awhile in the early 80's this county ranked third in the state in gold production. The county was organized in 1874 from parts of Conejos and Costilla counties, and was named from the principal stream of the San Luis valley.

Surface and Soil—That portion of the county lying in the San Luis valley is level, with a very rich soil of great depth, well adapted for general farming. In the southeast the surface is more broken, rising rather rapidly to the summit of the Continental divide. The valley soil is a sandy loam, easily worked and extensively cultivated. In some sections it contains too much alkali, due to excessive sub-irrigation and imperfect drainage, but enterprises are now under way for draining a large acreage and much of it already has been reclaimed in this way. Recent investigations indicate that gypsum counteracts the bad effects of alkali in this soil and recommendations have been made that steps be taken for using some of the huge stores of gypsum in the state for this purpose. The only soil survey available is that made by the bureau of soils of the United States department of agriculture, published in 1904.

Population—The population of the county in 1910 was 6,563. The present population is estimated at 7,500. The urban population, being that of the city of Monte Vista, was 38.8 per cent of the total in 1910, and the percentage is somewhat less today. In 1910, 89 per cent of the people were native whites, and the percentage of foreigners is perhaps somewhat less now. Previous to the war Germans made up by far the largest part of the foreign-born population.

Drainage and Water Supply—The Rio Grande river and its tributaries drain the county and afford water for irrigation. These streams carry plenty of water the year around, having their sources in high altitudes where the precipitation is very heavy. There is water available for the irrigation of practically all the arable land in the county. Domestic water in the agricultural sections is obtained principally from artesian wells, which are drilled to depths varying from 100 to 400 feet, and from reservoirs.

Industries—The principal industries are agriculture, stockraising, dairying and mining. A very large percentage of the people are engaged in agriculture and stockraising, and agricultural property makes up nearly 60 per cent of the total county wealth. Farming without irrigation is impracticable in most parts of the county because of light rainfall, but there is plenty of water for irrigation and there are few places where farming under irrigation is more successful. Grazing land is available here in abundance within the national forest areas, and plenty of feed crops are raised for finishing livestock for market. Cattle and sheep are raised on a large scale and no county in the state in proportion to its size equals this in the production of hogs. Only Weld county, which is more than four times as large, equals it in total output. There is some mining in the southwestern part, but lack of transportation facilities has retarded mineral development. Lumbering is carried on to a limited extent in the southwest.

Land Values—At the beginning of 1918 there was about 177,000 acres of land in private ownership, according to the records of the county assessor, or approximately 31 per cent of the area of the county. Irrigated land with good water right costs from $40 to $150 an acre and nonirrigated land, some of which will ultimately be irrigated, but most of which is valuable chiefly for grazing, may be had at from $5 to $25 an acre. On January 1, 1918, there was 20,868 acres of state land, including some excellent farming land, most of which is for sale by the state upon favorable terms. On July 1, 1917, there was in the county 55,660 acres of government land open to homestead entry, most of which is of little value except for grazing purposes. There is 234,783 acres of national forests within the county, containing a large amount of good grazing land which may be utilized by residents of the county at very reasonable rates.

Crops—The principal crops grown are alfalfa and other tame hays, wild hay, field peas, wheat, barley, oats, potatoes and root crops grown for stock feed.

Mineral Resources—The known mineral resources are gold, silver, copper, asbestos, alunite, sand, clays, granite and other varieties of stone. Gold, silver and copper have been produced in considerable quantities and the clays in some sections have been uti-

lized for brick making. Some granite and other stones have been quarried.

Timber—There is considerable timber in the western and southwestern part, chiefly pine, spruce and cedar.

Transportation—The San Luis valley branch of the Denver & Rio Grande railroad follows the course of the Rio Grande river through the county and the San Luis Central road leaves this line near Monte Vista and runs north to Center, in Saguache county. Regular stage service is maintained from Monte Vista to the towns of Jasper, Stunner and Platoro, mining camps, and from Del Norte to these towns and to Summitville, in the same mining district, and Carnero and La Garrita, agricultural towns in Saguache county.

Highways—The principal state highway is the Spanish Trail, which follows in general the Rio Grande river west to South Fork, whence it turns south to Wolf Creek pass, where it crosses the Continental divide. Another state road leaves this at Monte Vista and runs north to Saguache, where it connects with a branch of the Rainbow Route. Numerous secondary state highways and county roads afford ample routes for the marketing of crops from the agricultural districts.

Educational—There are 26 public schools in the county and two high-schools, located at Del Norte and Monte Vista. There are no private schools and no colleges.

Climatological Data—The average annual rainfall in that part of the county lying in the San Luis valley varies from 7 to 10 inches. It increases rapidly in the higher altitudes, being above 25 inches in the extreme southwest corner. The climate in the valley is equable, with open winters and short, warm summers.

Tourist Attractions—The opening of the Spanish Trail has greatly increased tourist travel to this section of the state. Some of the finest mountain scenery in the west is to be found in the mining districts in the southwestern part of the county. There is good trout fishing in the Rio Grande river and its various tributaries in the county.

Cities and Towns—Monte Vista, the principal town in the county and one of the most prosperous in the valley, is the center of a wonderfully rich and prosperous agricultural district and is the site of the State Home for Disabled Volunteer Soldiers. Del Norte, the county seat, is also the center of a prosperous farming and stockraising community. Other towns are Granger and South Fork, on the Denver & Rio Grande railroad, and Summitville and Jasper, mining camps in the southwestern part.

Special Opportunities—The principal opportunities offered here are in the line of agricultural development. There is a considerable acreage of arable land still unbroken, and water available for the irrigation of more land than is now being watered. This is also one of the best stockraising sections of the state, with range available for more cattle and sheep than are now being pastured and plenty of room for increasing the output of feed crops. Hog raising has developed rapidly in the past ten years and there is still room for expansion. Dairy farming also is profitable and will increase in importance as the county is more thickly settled. There is much promising mineral territory in the southwest, which will be developed rapidly when better transportation facilities are provided.

ROUTT COUNTY

General Description—Routt county lies in the northwestern part of the state, the north boundary being formed by the state of Wyoming and a part of the eastern boundary by the Continental divide. It is of an extremely irregular rectangular shape, 75 miles long, north and south, and about 42 miles wide. Its area is 1,425,280 acres, or about 168,000 acres less than that of the state of Delaware. The surface is generally rough or mountainous, except in the valley of the Yampa river and its tributaries. The altitude varies from about 6,230 feet, at the point where the Yampa river crosses the western boundary, to approximately 12,000 feet at the summit of some of the peaks on the eastern boundary.

Early History—This section of Colorado was frequently visited by trappers, explorers and prospectors previous to 1860, but no settlement was made until about 1866. In 1864 a prospector named Way discovered placer gold at the base of Hahns peak while returning to Clear Creek county, from which place he had started on his prospecting tour. He told the story of his discovery to Joseph Hahn, for whom the peak later was named. The two organized a party of miners and went to the territory in 1866, establishing a small settlement near the present site of the town of Hahns Peak. They encountered many hardships in the severe winter that fol-

lowed and finally gave up further efforts to develop their discovery. The county was organized in 1877 from a portion of Grand county and was named in honor of John L. Routt, twice governor of Colorado.

Surface and Soil—Much of the central and western parts of the county is an extension of the great plateau that makes up nearly all of Moffat county. This is traversed by the Yampa, or Bear river, which has its source in the southern part of the county. This is the principal agricultural part and also includes the home ranches of most of the stockmen. The soil here is extremely fertile and in spite of the short seasons produces some of the best agricultural crops grown in Colorado. In the eastern part the surface becomes much more broken and rises rapidly to the summit of the Continental divide, which forms the eastern boundary. The southern end of the county contains the headwaters of the Grand river. No soil survey of this county is available.

Population—The population of Routt county in 1910 was 7,561. At that time, however, Routt county extended west to the Utah line, including all of what is now Moffat county. The population of that part of the county was very small, however, in 1910, as the Denver & Salt Lake railroad was not extended west from Steamboat Springs until several years later. The present population of Routt county is in the neighborhood of 8,500. In 1910 the foreign-born white people constituted 9.8 per cent of Routt county as it was then constituted. The foreign population is perhaps slightly larger in what is today included in Routt county. The principal foreign nationalities previous to the war were German, English and Canadian.

Drainage and Water Supply—The Yampa, or Bear river rises in the southeastern part of the county, and, with its tributaries, furnishes the principal drainage and most of the water for irrigation purposes. The numerous small tributaries of the Grand river have their sources in the southeastern corner. In the agricultural sections of the county water for domestic purposes is obtained principally from springs and running streams, as the country is well watered.

Industries—The principal industries are farming, stockraising, dairying, coal mining, lumbering and metal mining. The farming operations in the past have been confined largely to stockraising, but general agriculture is being followed more extensively since the completion of the Denver & Salt Lake railroad through the county. Coal mining has developed very rapidly in the past five years, and Routt county now ranks fourth in the annual coal output.

Crops—The principal crops are alfalfa, timothy, alsike, wild hay, small grain, potatoes, garden vegetables, strawberries and other small fruits.

Mineral Resources—The known minerals are asphaltic rock, clays, coal, corundum, copper, gold, lead, silver, sand and a variety of building stone.

Timber—There is much heavy timber in the northern and eastern parts of the county, principally pine and spruce. In other sections there is lighter timber, principally cedar with some pine.

Land Values—At the beginning of 1918 there was about 380,000 acres of privately-owned land in the county, or approximately 26 per cent of the total area. Of this amount about 40,000 acres is being cultivated under irrigation, and 34,000 acres without irrigation. The county assessor classes 220,626 acres as grazing land, 17,900 acres as timber land, 62,000 acres as coal land, and 2,876 acres as mineral land. The remainder is principally town and city lots and railroad rights of way. Irrigated land in this county costs from $10 to $100 an acre, and nonirrigated land, including grazing land, from $7.50 to $30 an acre. At the beginning of 1918 there was 73,541 acres of state land, including a considerable amount of agricultural area, and some coal land, most all for sale by the state upon reasonable terms. On July 1, 1917, there was 229,239 acres of government land open to homestead entry, most of which is valuable principally for grazing purposes.

Transportation—The Denver & Salt Lake railroad enters the county in the southeast, runs northwest to Steamboat Springs and west along the valley of the Yampa river to Craig, in Moffat county. A number of small branch lines serve coal mines located near the main railway line.

Highways—The principal state highway is the Vernal road, which crosses the county east and west by way of Steamboat Springs, following in general the valley of the Yampa river. Another state highway leaves this road near Steamboat Springs and runs south to a connection with the Midland Trail at Wolcott. Still another state road runs east from Steamboat Springs across the mountains to Walden, in Jackson county. Numerous

other highways traverse the southern and western parts of the county, being in general ample for the movement of farm crops to market.

Educational—There are 61 public district schools in the county and four highschools, located at Hayden, Oak Creek, Steamboat Springs and Yampa. There are no private schools or colleges.

Climatological Data—The precipitation in this county is extremely varied. A small section in the southeastern corner has an average annual rainfall of from 13 to 15 inches. In the western part the rainfall varies from 18 to 20 inches. In the eastern and northern part it varies from 20 to 25 inches, being about 21 inches at Steamboat Springs. The climate is somewhat severe. The winters are long, but in the valleys conditions are favorable for general farming. In the northern part the snowfall is extremely heavy and the winters are long and severe.

Tourist Attractions—Steamboat Springs has long been a popular tourist resort and is being visited by increasing numbers of vacationists and health seekers every year. The town was given this name because of the peculiar puffing sounds emitted by some of the mineral springs here, the noise being somewhat similar to that of a river steamboat in action. The group of springs here is perhaps the largest in the world. They are about 100 in number and include almost every variety of mineral and medicinal springs known. The water varies greatly in temperature, in some of the springs being almost at boiling point. There is a large open-air bathing pool fed by some of these springs which is growing in popularity every year and promises in time to become a rival of Glenwood Springs in popularity. The mountain scenery in the vicinity of Steamboat Springs and the northern part of the county is widely varied and wonderfully attractive. For several years ski carnivals and other winter sports have been held at Steamboat Springs, the ski course there being one of the finest in the world. The streams are well stocked with trout and big game is abundant in the mountains.

Cities and Towns—Steamboat Springs, the countyseat and principal town, is located on the Denver & Salt Lake railroad, in the upper Yampa valley. It is surrounded by a good agricultural and stockraising district Oak Creek, south of Steamboat Springs on the Denver & Salt Lake railroad, and Mount Harris, west of Steamboat Springs, are the principal coal mining camps. Other towns are Hayden, Yampa, Milner and Sidney, all on the Denver & Salt Lake railroad, and Hahns Peak, in the northern part, formerly the countyseat.

Special Opportunities—Perhaps the most promising opportunities here for development are in the line of coal and metal mining. The Routt county coal deposits are among the most extensive and valuable in the state. The coal now being produced is bituminous and of excellent quality. There are deposits of anthracite coal in the northern part of the county, as yet undeveloped because of lack of transportation facilities. There are considerable deposits of copper, gold and other metals in the northern part which have been but little developed and there is a large mineralized area in this part of the county which has been only imperfectly prospected. The agricultural area of the county has not been fully developed and would support perhaps twice as large an agricultural population as it now has.

SAGUACHE COUNTY

General Description—Saguache county is in the south-central part of the state and includes the northern end of the San Luis valley. It is of an irregular shape, with an extreme length, east and west, of about 85 miles, and an extreme width, north and south, of about 48 miles. Its area is 2,005,120 acres, or about 100,000 acres greater than the combined areas of the states of Rhode Island and Delaware. The eastern boundary is formed by the Sangre de Cristo mountain range and the Continental divide passes across the northwestern corner. The San Luis valley extends about 30 miles north into the central part of the county. The surface here is an extremely level plain, which rises gradually to the Sangre de Cristo range on the east. The altitude ranges from 7,500 feet in the south to more than 14,000 feet at the summits of peaks of the Sangre de Cristo range. For a distance of more than 50 miles every peak in this range rises to a height of 13,500 feet or more.

Early History—Available records do not show that the early Spanish explorers who entered the southern end of the San Luis valley came north into the territory now included in Saguache county. Scores of early exploring expeditions, including the fourth attempt of James C. Fremont to cross the Continental divide, followed the course of the Rio Grande river up the valley, but none of them strayed north into the

wide plains of Saguache, though the distance was only a few miles. The first settlement was made in 1865 on the Saguache river, near the present town of Saguache, by a number of soldiers of the First Regiment of Colorado Volunteers. In 1867, Otto Mears, whose name is woven into the history of every county in southwestern Colorado, began his work of opening up wagon roads into the San Juan district and for several years he did considerable work in Saguache county. The county itself was organized in 1867 from a part of Costilla county. The name is of Indian origin, said to be abridged from a Ute expression meaning "blue earth." The first settlers were chiefly miners, prospectors and cattlemen.

Surface and Soil—In the south-central part the surface is a level plain, which rises abruptly in the east to the Sangre de Cristo range and more gradually in the north to the Cochetopa hills and the high peaks of the Continental divide. The soil of the valley portion is a sandy loam, made up principally of detritus laid down by the vast lake which at one time covered this area. Further north the soil is coarser, made up chiefly from the weathering of the rocks in the nearby mountains. The soil in the valley is of great depth and exceptionally fertile. In some districts the percentage of alkali is so high as to interfere with successful crop raising, but plans are now being worked out for neutralizing this element and reclaiming considerable areas which are not now being cultivated. There is no detailed soil survey available except a general survey of the San Luis valley made by the bureau of soils of the United States department of agriculture and published in 1904.

Population—The population in 1910 was 4,160 and the present population is approximately 7,000. Saguache, the countyseat, is the only town having more than 1,000 people, so that the entire population is rural, according to the census bureau classification. About 95 per cent of the people in 1910 were native whites, and approximately the same percentage continues today. Previous to the war the three leading foreign nationalities were German, English and Swedish. The number of Spanish-speaking people, principally Mexicans, is considerable.

Drainage and Water Supply—Most of the streams in the southern part of the county carry considerable water the year round in their upper courses but lose themselves in the sands near the southern boundary. They include the Saguache river and its tributaries, the San Luis, La Garita and Carnero creeks. In the northwest are several streams belonging to the Pacific watershed. The principal one is Cochetopa creek, which finds an outlet into the Gunnison river through Tomichi creek. There are a few unimportant lakes, and several reservoirs supplement the flow of the streams of the valley for irrigation purposes. In the lower valley water for domestic purposes is obtained chiefly from artesian wells, the depth to water ranging from 100 to 300 feet. There is water available for the irrigation of considerably more land than is now being cultivated under irrigation.

Industries—Farming and stockraising are the principal industries. At the beginning of 1918 about 425,000 acres of land in the county, or a little more than 21 per cent, was in private ownership. About 38,000 acres, according to the county assessor's records, was being cultivated under irrigation, and about 48,750 acres, mostly irrigated, was classed as natural hay land. There is approximately 335,000 acres of privately-owned land classed as grazing land, a considerable part of which may ultimately be placed under irrigation. The higher lands in the north are valuable chiefly for grazing purposes. Mining has been followed to a considerable extent in the mountainous areas of the north and east. There are about 20 producing mines, of which the principal output is gold, silver, copper, lead and iron. Dairy farming is being followed successfully and is increasing in importance.

Crops—The principal crops are hay, both tame and wild; field peas, potatoes, barley, oats, wheat and various root crops raised for stock feed.

Mineral Resources—The principal minerals founds in the county are alunite, clays, copper, gold, iron, lead, manganese, sand, silver, building stone and zinc. There is much promising mineral territory in the county that has not been adequately prospected. The iron mines at Orient, in the eastern part of the county, are the principal producers of iron ore in the state.

Timber—There is considerable timber in the north and northwestern parts of the county and some along the abrupt slopes of the Sangre de Cristo range in the east. It is chiefly pine and spruce.

Land Values—Irrigated land in this county with good water right may be

purchased at from $20 to $75 per acre. Grazing land, with comparatively little improvements and with isolated tracts of farming land, may be had at from $3 to $20. At the beginning of 1918 there was 99,721 acres of state land in the county for sale at reasonable prices and on favorable terms. On July 1, 1917, there was about 449,000 acres of government land open to homestead entry, most of which is of little value except for grazing.

Transportation—A narrow gauge line of the Denver & Rio Grande railroad, extending from Salida to Alamosa, passes through the eastern end of the county. A branch leaves this line at Villa Grove and runs to the iron mines at Orient, at the base of the Sangre de Cristo range; another leaves it at Moffat and extends eastward to the mining camp of Crestone and south to Cottonwood, in the Baca land grant. The San Luis Central road extends north from the San Luis Valley branch of the Denver & Rio Grande near Monte Vista, to Center, in the extreme southern part of Saguache county. The main narrow gauge branch of the Rio Grande crosses the Continental divide at Marshall pass, in the northern part of the county.

Highways—A branch of the state highway known as the Rainbow Route passes through the northern part of the county, coming as far south as Saguache. A state highway runs directly south from this road at Saguache to the Spanish Trail at Del Norte. Several secondary state highways and numerous county roads traverse the county, being in a general way sufficient for the transportation of farm products to market.

Educational—There are 35 public district schools in the county, and two highschools, located at Saguache and Center, respectively. There are no private schools and no institutions of higher learning.

Climatological Data—In the southern valley sections of the county the average annual rainfall varies from seven to ten inches, being too light for successful farming without irrigation. It increases gradually toward the north, reaching a maximum of about 20 inches in the Cochetopa hills and very rapidly to the east, being close to 25 inches in the Sangre de Cristo mountains. The snowfall in these ranges is almost always ample to furnish plenty of water for irrigation. In the southern part of the county the summers are somewhat shorter than in the eastern agricultural sections of the state, on account of the higher altitude. The winters are open and not excessively cold. Much lower temperatures prevail in the mountainous parts of the county.

Scenic Attractions—The construction of a branch of the Rainbow Route through this county has greatly popularized the picturesque scenery of the northern sections, and the number of tourist visitors is increasing rapidly. Much beautiful mountain scenery in the eastern and western parts is yet inaccessible because of lack of highway facilities. There is good trout fishing in Saguache and Cochetopa creeks.

Cities and Towns—Saguache, the countyseat and principal town, is situated near the center of the county, on the Saguache river. Center, in the extreme southern part, is a prosperous agricultural town. Other towns are Bonanza, Crestone, Moffat, Sargents and Villa Grove.

Special Opportunities—The principal opportunities here are for the further development of agricultural and stockraising possibilities. The county would support an agricultural population perhaps twice as large as it now has. An immense area of mineralized land in the mountainous section has been but little prospected.

SAN JUAN COUNTY

General Description—San Juan county is in the southwestern part of the state, in the heart of what is known as the San Juan mining district. This mining district takes its name from the San Juan mountains, the principal mountain range in this section of Colorado, while the agricultural district to the south, popularly known as the San Juan basin, takes its name from the San Juan river, which drains southwestern Colorado and northwestern New Mexico. The county is of triangular shape, with an extreme length, north and south, of 30 miles, and an extreme width, east and west at the base of the trinagle, of 25 miles. Its area is 289,920 acres, or a little more than two-fifths that of the state of Rhode Island. There are but four smaller counties in Colorado; these are Denver, Gilpin, Clear Creek and Lake counties. The surface is extremely rugged with the exception of a few small mountain valleys. The altitude ranges from about 8,500 feet at the point where the Animas river crosses the southern boundary, to about 14,000 feet at the summits of some of the peaks in the north.

Early History—So far as is known

the early Spanish explorers did not penetrate the rugged area now included in this county, though Spanish names have been given to numerous rivers and mountains here. John C. Fremont's fourth expedition is supposed to have reached a point in this county late in 1848, before the severe winter forced the few remaining members of the party to make a painful journey back over the mountains into the San Luis valley. John Baker's expedition passed through this region in 1860. Prospectors found pay ore here about 1870, but it was not until after this district had been purchased from the Southern Ute Indians in 1873 that settlers began to come in. Mining development was rapid, for this is one of the richest gold and silver-bearing areas in the state. The Durango & Southern railroad, now a part of the Denver & Rio Grande system, was completed in 1882 and from that time on an immense store of wealth was poured out from the mines in the narrow canons above Silverton. The county was organized in 1876, being taken from the northern part of La Plata county.

Surface and Soil—San Juan county enjoys the distinction of being the only county in Colorado in which there is not a single farm and not an acre of land which may be classed as genuine farming area. It is perhaps the only rural county in the United States in which farming is not carried on, even to a limited extent. The soil in some of the narrow mountain valleys is extremely fertile, being principally alluvial deposits, dark in color and rich in plant foods. These areas are extremely small, however, and the altitude is so high that no crops grow except a few hardy garden vegetables and certain wild grasses. The rock strata here have been wrenched and tilted sharply into unnatural positions by the mighty upheavals which in the ages past disfigured this once comparatively level area. The great irregularity of topography and strata brings to the surface a wide range of geological formations and affords the prospector and miner opportunity to examine practically all the strata that one would encounter in drilling down nearly four miles from the top of the most recent geological formations to the bottom of the most ancient. Among the principal mountain peaks in the county are Garfield. Hunchback, Sultan, Canby, Kendall, King Solomon, and Rio Grande Pyramid, the last named being 13,773 feet high.

Population—The population in 1910 was 3,063, and was perhaps about the same at the beginning of 1918. The census bureau found the native whites making up only 55.4 per cent of the entire population. The percentage of foreigners is perhaps considerably lower at present. Previous to the breaking out of the world war the leading foreign nationalities represented were Austrian, Italian, Swedish and English. These foreigners are, of course, principally miners.

Drainage and Water Supply—The headwaters of the Animas river are in this county, and this, with numerous small tributary streams, furnishes the drainage and water supply. This is a region of high precipitation and little difficulty is experienced in obtaining an abundance of water for all purposes except occasionally where mines are located on steep slopes far above the streams.

Industries—Mining is the principal industry and gives employment directly or indirectly to perhaps 75 per cent of the population. Some stock are pastured in the mountain valleys. There is considerable timber, and lumbering has been followed to a limited extent to supply local needs. Some brick has been made for local use at Silverton.

Mineral Resources—The known minerals are antimony, arsenic, bluestone, clay, copper, fluorspar, gold, iron, lead, molybdenum, silver, tungsten, zinc, sand and a wide variety of stone. Gold, silver, copper, lead and zinc have been produced in large quantities and still are being produced. The production of tungsten has begun in the past few years and is increasing steadily.

Timber—There is plenty of timber on the mountain slopes and along the streams, principally pine, spruce and aspen.

Land Classification—At the beginning of 1918 there was about 25,000 acres of privately-owned land in the county, about nine per cent of the entire area. Of this amount 200 acres was classed by the county assessor as grazing land, 195 acres as timber land and the remainder as producing and nonproducing mining claims, railroad rights of way and town and city lots. There is 8,840 acres of state land and no government homestead land in the county. The national forest area is 200,209 acres.

Transportation—A narrow gauge branch of the Denver & Rio Grande railroad extends from Silverton to Durango. Short lines connecting with

this road at Silverton extend into the three principal canons radiating from the town and serve the most important mining districts.

Highways—The highway from Silverton to Ouray is widely known as one of the most remarkable mountain highways in America, traversing an exceptionally picturesque scenic area. A road is now under construction from Durango to Silverton, which, when completed, will make it possible for the automobile traveler to leave the Spanish Trail at Durango and run north through some of the finest mountain districts in Colorado to the Rainbow Route at Montrose, or vice versa. There are numerous mountain trails, used principally for the movement of ores and for carrying supplies to mines.

Educational—There are but two public district schools in the county, and one highschool, located at Silverton. There are no private schools and no colleges.

Climatological Data—The precipitation here is extremely heavy, averaging above 25 inches in all parts of the county. The climate is somewhat severe, the summers being short and pleasant and the winters long, subject to very low temperatures and heavy snowfall. Transportation is well maintained throughout the winter, the district being seldom cut off from communication by rail with the outside territory for more than a few days at a time.

Tourist Attractions—Silverton has long been recognized as one of the beauty-spots of Colorado, and has been visited annually by hundreds of tourists. The town itself, situated in a narrow mountain valley with lofty peaks on all sides, is rivaled in the picturesqueness of its location only by the neighboring towns of Telluride and Ouray. The mountains here afford a wonderfully varied vista of forests, waterfalls, canons and rugged peaks, such as can be found only in the San Juan region. The completion of the Durango-Silverton highway will greatly increase automobile tourist travel and will make accessible to automobile travelers some of the most wonderful mountain scenery on the continent. There are numerous interesting remains of the life of foreign ages to be found here, both man and beast. Ruined cliff dwellings similar to those of the Montezuma valley are found in the upper Animas canon. Fossil remains of huge animals, principally mammals, belonging to a geological period of the remote past, when this was a comparatively level country, perhaps near the shore of a great lake, are found in the rocks.

Cities and Towns—Silverton, the countyseat and principal city, is the supply point for the rich mining districts, lying principally to the north. Other towns are Eureka, Animas Forks, Gladstone and Chattanooga.

Special Opportunities—The only opportunities of importance offered here are along the line of further mining development or of prospecting. There is considerable territory in the county that has never been mined and further prospecting may reveal pay ore in these districts. There is also opportunity in nearly all the mining camps for the investment of money in the further development of veins already located and partly opened. The immense profits that have been made in mining in this district are the best proof of the probable returns to be derived from such investments, when carefully made and safeguarded.

SAN MIGUEL COUNTY

General Description—San Miguel county lies in the southwestern part of the state, the western boundary being formed by the state of Utah. It is of rectangular form with regular boundary lines except in the east and southeast, where mountain ranges form the county division. Its extreme length, east and west, is about 75 miles and the extreme width is about 25 miles. The area of the county is 824,320 acres, or about 325,000 acres less than the area of the state of Delaware. The altitude varies from about 5,000 feet in the west to nearly 14,000 feet at the summits of some of the peaks on the eastern boundary.

Early History—This district like other sections of southwestern Colorado, was the home of a pre-historic race known as the Cliff Dwellers and remains of their abodes are to be found in numerous canons in the western part of the county Early Spanish explorers probably got as far north as San Miguel county but no authentic records of their wanderings are available. Spanish names are common for mountain ranges and small streams in this as in other sections of southwestern Colorado. The first record of any mining in the county was in 1875 when placering for gold was carried on in a small way on some of the sand banks of the San Miguel river. The county was organized in 1883 from a part of Ouray county.

Surface and Soil—The surface in the

west is a broken plateau or table land, crossed by numerous canons and narrow valleys. It rises gradually to the central part and then abruptly into the mountain ranges which form the southeast and east boundary. The soil of the narrow valleys is principally alluvial and of great fertility. The mesas and plateaus in the western part are of a sandy loam or gravelly soil suitable for cultivation in some sections but in others are made up of shales and cannot be farmed. There is no soil survey of this area available.

Population—The population in 1910 was 4,700 and is perhaps about the same at the present time. The census bureau in 1910 found 65.9 per cent of the total population to be native whites. The percentage of foreigners is somewhat less today but is still large because of the considerable number of foreign-born workmen in the mines. Previous to the war the principal foreign-born nationalties were Finnish, Austrian, Italian, English and German.

Drainage and Water Supply—The San Miguel river has its source near the San Miguel mountains on the southeastern border and drains the entire eastern part of the county. The Dolores river flows across the western part. These streams furnish a good supply of water the year round. The San Miguel river and its tributaries carry most of the water for the mining operations in the eastern end and an abundant supply for the limited amount of irrigable land in this part of the county. Water for domestic purposes in some sections is obtained from wells, being reached at depths ranging from 25 to 125 feet.

Industries—The principal industries are mining, agriculture, stockraising and lumbering. Perhaps 50 per cent of the people in the county depend directly or indirectly upon mining activities for support. There is considerable arable land in the western part of the county but little of it has ever been broken because of remoteness from transportation facilities. Good pasture is found in the national forest areas in the eastern part of the county and stockraising is followed rather extensively, especially along the streams in this section.

Timber—Heavy pine and spruce timber is found on the mountain slopes and lumbering and tie-making have been followed rather extensively. There is considerable pinon and cedar timber, especially in the western part.

Crops—The principal crops are alfalfa, natural hay, small grains, potatoes and vegetables.

Mineral Resources—The known minerals are antimony, barium, clays, copper, coal, carnotite, and other radium ores, fluorspar, gold, iron, lead, platinum, silver, tungsten, zinc, sand and a wide variety of building stone. Gold, silver, copper, lead and zinc have been produced in large quantities for a great many years and are still being produced. Carnotite has been mined to some extent for about 10 years. Some clay has been dug for brick making and building stone has been quarried to a limited extent for local uses.

Land Values—Irrigated land in this county costs from $45 to $100. Nonirrigated land, some of which is suitable for cultivation but most of which is of little use except for grazing purposes, may be had at from $2.50 to $25. At the beginning of 1918 there was about 117,000 acres of privately-owned land in the county or about 14 per cent of the area of the county. According to the record of the county assessor, 8,709 acres was being cultivated under irrigation in 1917, and 5,677 acres without irrigation. The county assessor classes 85,102 acres of the privately-owned land as grazing land, the remainder being producing and non-producing mining claims, railroad rights of way, and town and city lots. At the beginning of 1918 there was 25,373 acres of state land in the county, some of which is mineralized and most of which is valuable for grazing purposes. This land may be purchased from the state government upon reasonable terms. On July 1, 1917, there was 341,802 acres of government land open to homestead entry, some of which is suitable for cultivation. The national forest area is 176,176 acres.

Transportation—The Rio Grande Southern railroad passes through the extreme eastern end of the county. This is the only railroad and points on the western border are fully 60 miles from shipping stations.

Highways—Highway development in this county has been slow. A primary state road now in fair condition runs from Telluride along the route of the Rio Grande Southern railroad to Ridgway, in Ouray county. This connects at Placerville with the road through Norwood and Naturita into the Paradox valley. Another road runs south from Norwood across San Miguel county into Dolores county. County roads are generally poorly improved and serve only a small portion of the large territory in the western part.

Educational—There are 22 public district schools in the county and two

highschools, located at Telluride and Norwood. There are no private schools and no colleges.

Climatological Data—The rainfall in the western part averages about 14 inches, but increases rapidly toward the east, being about 25 inches in the eastern half of the county. The climate in the western part is mild and pleasant and in the mountain districts in the east the winters are long and severe. The summers are short but pleasant. The snowfall during the winter is extremely heavy in this part of the county.

Tourist Attractions—Telluride has long been a popular stopping place for railway tourists visiting western Colorado. It is beautifully located in the narrow mountain valleys, surrounded on all sides by high mountain peaks. A lack of well improved automobile roads has kept this district back in comparison with other sections of western Colorado during the past four or five years when automobile travel has been increased very rapidly. Scenic attractions here are as fine as can be found any place in Colorado. Good trout fishing is to be had in the mountain streams which have no mines or mills along their courses to muddy the waters. Trout lake in the southeastern part of the county is a popular fishing resort.

Cities and Towns—Telluride, the countyseat and the principal town, is the heart of the most important mining district in the county. Placerville, on the Rio Grande Southern railway, is the shipping point for a vast farming and mining community in western San Miguel and Montrose counties. Among the other towns are Ophir, a mining center; Sawpit, Vance Junction and Leonard—small railroad towns, and Norwood, in the western part, an important point on the Paradox highway.

Special Opportunities—Although metal mining has been carried on in this county for a great many years there is still mineralized area that has not been well prospected. In the western part of the county there are large carnotite deposits which have enjoyed almost no development. The western half of the county has very few inhabitants and offers opportunity for development along various lines. but such development will perhaps wait upon further transportation facilities.

SEDGWICK COUNTY

General Description—Sedgwick county lies in the extreme northeastern corner of the state and is bounded on the north and east by the state of Nebraska. It is a perfect rectangle, 30 miles long, east and west, and about 18 miles wide. Its area is 339,840 acres, or about one-half that of the state of Rhode Island. The South Platte valley crosses the northern part and the remainder is principally level or broken prairie. The altitude varies from 3,400 feet, in the northeast, to 3,675 feet in the southwest.

Early History—This small corner has played an important part in the early history of Colorado. The Long expedition followed the Platte valley through this county in 1820. Immediately following the discovery of gold in the foothills comparatively heavy travel sprang up between the mountain gold camps and points on the Missouri river, by way of the South Platte river. The Leavenworth and Pikes Peak express, the route of the first regular stage service to be established to the Rocky Mountain gold camps, followed the Platte valley through the corner of what is now Sedgwick county. One of the stations on this route was Julesburg, named in honor of Jules Beni, a Frenchman popularly known as "Old Jules." The Union Pacific railroad was extended to this point in 1867 and for a good many years Julesburg was the western terminus. In 1881 the Union Pacific, Denver and Gulf railroad, known as the "Julesburg Cut-off" was extended west, first to La Salle and ultimately to Denver. The town of Julesburg, the site of which has been changed four times, was, during this early period, the most important point in eastern Colorado. Cattleraising was almost the only industry followed in this section of Colorado until about 1885. For a great many years large herds of cattle roamed over the plains of Sedgwick county, fattening on the short buffalo and grama grass, which made this district one of the favorite haunts of the buffalo before the white hunters came. In the late 80's farmers began to take up homesteads in this section of the state, gradually robbing the stockmen of their fine range. The development of agriculture along the Platte river was rapid as the farming possibilities began to be realized. The fact that water was available for irrigation in the northeastern corner of the state was possibly one of the factors which prevented the development, in this early period, of any of the non-irrigated land lying south of the Platte river valley. The actual development of this territory began only within the past decade. This county was organized in 1889 from a part of Logan

county, and was named in honor of General John Sedgwick, a Union officer in the Civil war who commanded Fort Wise, on the Arkansas river.

Surface and Soil—The surface is varied, but is generally level or slightly rolling. A low range of hills skirts the Platte river on both sides, sloping off to a gently rolling plain which covers about four-fifths of the county. The valley of the Platte river is broad and very fertile. The soil is principally a black loam, from two to five feet in depth, with clay and sandy subsoil. There is no detailed soil survey available.

Drainage and Water Supply—The Platte river flows across the northern part of the county and affords the principal drainage and water supply for irrigation. A few small streams, tributaries of the Republican river, rise in the southeast. Water for domestic purposes is obtained principally from wells and is reached in the South Platte valley at from 12 to 40 feet. On the prairies south of the river it is reached at a depth of from 150 to 300 feet.

Population—In 1890 the population was 1,293. As a result of unfavorable farming seasons in the early 90's, many of the homesteaders left their claims, and in 1900 the population had fallen to 971; in 1910 it was 3,061, an increase of 215.2 per cent in ten years. The present population is about 4,200. In 1910 the foreign-born population was 12.4 per cent of the total, the principal foreign nationalities being German and Russian.

Industries—The principal industries are farming, stockraising and dairying. Farming under irrigation has been successfully followed here for 20 years. There had been comparatively little development of the agricultural lands in the southern part of the county, where no water for irrigation is available, until within the past decade, and at the present time large areas in this section of the county are unbroken. Dairy farming is increasing in importance each year. Stockraising, which was at one time almost the only industry followed in the county, is still carried on extensively and stockfeeding is an important industry in the South Platte valley, where large quantities of stock feed are raised every year.

Crops—The principal crops are alfalfa and other hays, sugar beets, potatoes, corn, wheat, oats, rye, barley, forages, pinto beans and garden vegetables.

Mineral Resources—The known minerals are clays, utilized to some extent for making brick; sand and building stone.

Land Values—On January 1, 1918, there was about 289,000 acres of privately-owned land in the county, or approximately 85 per cent of the total area. Of this amount, according to the records of the county assessor, 20,670 acres was being farmed under irrigation, 5,173 acres was classed as natural hay land, 178,894 acres as nonirrigated farm land, and 82,274 acres as grazing land. The remainder is principally railroad rights of way and town and city lots. Irrigated land here sells at from $100 to $200 an acre, and nonirrigated land at from $40 to $60 an acre. At the beginning of 1918 there was in the county 28,988 acres of state land, principally agricultural land, for sale by the state on favorable terms. On July 1, 1917, there was only 199 acres of government land open to homestead entry, consisting of small isolated tracts of no value for farming.

Transportation—The main line of the Union Pacific railroad passes through the extreme northern part of the county, by way of Julesburg. The Denver branch of the Union Pacific follows the Platte river southwest from Julesburg into Logan county and on to Denver.

Highways—The principal state highway is the Platte Valley road, which connects with the Lincoln Highway near Julesburg. A secondary state highway runs south from Julesburg to a connection with the Omaha-Lincoln-Denver road at Holyoke, in Phillips county. There are numerous state roads, generally well improved. In the southern part of the county, where agricultural development is limited, highway development is likewise limited.

Educational—There are 26 public district schools in the county, and two highschools, located at Julesburg and Sedgwick, the latter being a county highschool. There are no private schools or colleges.

Climatological Data—The climate is comparatively mild and very favorable for general farming and stockraising. The summers are warm and the winters are not subject to extremely low temperatures. This county lies in what is known as the rain belt of eastern Colorado, the average annual precipitation varying from 17 to 21 inches, being heaviest in the northeastern part. There is considerable variation in the rainfall from year to year, but it is usually sufficient for

growing without irrigation such crops as are best adapted to this locality. Usually about three-fourths of the precipitation comes during the growing season.

Tourist Attractions—There is considerable tourist travel from the east through this county over the Platte valley road. There are many points of historic interest, chief of which are the site of old Fort Sedgwick, the various sites of the town of Julesburg and other stations on the famous "Overland Trail," as the stage route to the gold camps was called in the early days.

Cities and Towns—Julesburg, the countyseat and principal town, is located on the Union Pacific railroad near the north boundary of the county. It is an important shipping point and is especially interesting because of its early history. At one time, when it was the terminus of the Union Pacific railroad, it had a population of nearly 8,000. The present population is about 1,500. Other towns are Ovid, Sedgwick and Dorsey, all on the Union Pacific railroad.

Special Opportunities—There is perhaps 200,000 acres of unbroken arable land in the southern part of this county, all very fertile soil and with sufficient rainfall to produce good crops without irrigation. There has been some agricultural development in this part of the county in the past few years and the success that has attended these farming operations is the best evidence of what may be expected from the development of the unbroken areas.

SUMMIT COUNTY

General Description—Summit county is situate in the north-central part of the state and includes that portion of the highly mineralized area of Colorado known as the sulphide belt. The Gore range forms most of the western boundary, and the eastern boundary is formed by the Williams Fork mountains and the Continental divide, here called the Snowy range. It is very irregular in outline, having an extreme length, north and south, of about 48 miles, and an extreme width of 38 miles. Its area is 415,360 acres, or about two-thirds that of the state of Rhode Island. The surface is mostly mountainous. The altitude varies from about 8,500 feet, in the north, to more than 14,000 feet at the summit of some of the peaks along the eastern and southern boundaries.

Early History—The first settlers in this section of Colorado were prospectors and gold miners. A party of 14 men crossed the Snowy range in August, 1859, and made important discoveries of placer gold on sandbars in the bed of the upper Blue river near the present site of the town of Breckenridge. News of their discovery spread rapidly and in 1860 the town of Breckenridge had become one of the most important placer gold camps in Colorado. During the early mining period most of the gold was taken from placer mines, and Summit county leads the state in the production of placer gold. Rich gold and silver bearing veins were soon discovered, however, and lode mining was carried on rather extensively even in the early 60's. Summit county is one of the original 17 counties in the Colorado territory, as it was organized in 1861. It was much larger then than now, including most of the area now divided into Eagle, Garfield, Grand and Routt counties.

Surface and Soil—This is one of the most mountainous counties in Colorado. Its boundaries are formed entirely by mountain ranges with the exception of a short stretch on the north, forming its boundary with Grand county. About the only level land is found in the valley of the Blue river, where agriculture is carried on to a limited extent. The soil here is wonderfully fertile, but the range of crops is limited because of the short seasons. No soil survey of the county is available.

Population—The population of Summit county in 1910 was 2,003, and in 1900 it was 2,744. The decrease was due principally to a decline in mining activities. At the present time the population is in the neighborhood of 3,500. In 1910 the foreign-born white population made up 21.5 per cent of the total. The principal foreign nationalities are Swedish, English and Canadian.

Drainage and Water Supply—The Blue river has its source in the southern part of this county, and, with its tributaries, affords the only drainage and supplies water for the irrigation of such land as can be cultivated.

Industries—Mining is the principal industry. Agriculture is carried on to a limited extent in the valley of the Blue river, and stockraising has always been profitable because of the large amount of good natural grass available here for pasture. Lumbering has been followed principally to supply the local demands.

Crops—The principal crops are nat-

ural hay and potatoes. Some garden vegetables are also raised.

Mineral Resources—The known minerals are clays, copper, gold, iron, lead, manganese, molybdenum, tungsten, sand, silver, zinc and a wide variety of building stone.

Timber—There is an abundance of heavy timber on the mountain slopes, principally pine, spruce and aspen.

Land Classifications—At the beginning of 1918 there was about 30,000 acres of privately-owned land in this county, or approximately 7 per cent of the total area. Of this amount 5,200 acres is being cultivated under irrigation and 22,000 acres is classed by the county assessor as grazing land. Most of the area is mineral and timber land. On January 1, 1918, there was 1,411 acres of state land in the county, valuable principally for grazing purposes. On July 1, 1917, there was 10,515 acres of government homestead land open to entry in the county, most of which is of little value except for grazing.

Transportation—A branch of the Colorado & Southern railroad extends from Como across Boreas pass to Breckenridge, the countyseat. A branch of the Denver & Rio Grande railroad, now operated by the Colorado & Southern, runs from Leadville to Breckenridge. A short branch line extends from this line to the mining camps of Dillon and Keystone.

Highways—The only state highway in this county is that running north from Fairplay through Breckenridge down the valley of the Blue river to a connection with the Vernal road at Kremmling. There are numerous county roads and trails developed principally to serve mining camps in various sections of the county.

Educational—There are nine public schools in the county, and two high-schools, located at Breckenridge and Dillon. There are no private schools or colleges.

Climatological Data—The precipitation in this county is extremely heavy: in the northern part it runs from 17 to 20 inches; in the southern part it increases rapidly, varying from 20 to 30 inches annually. The climate is somewhat severe. The summers in the valley of the Blue river are short and pleasant and the winters are long and subject to extremely low temperatures, and the snowfall in the southern part of the county is perhaps as heavy as in any section of Colorado.

Tourist Attractions—Although some of the most beautiful mountain scenery in Colorado is found in this county, it is but little known to tourists and travelers because of the difficulty in reaching it. Breckenridge, in the upper valley of the Blue river, is a beautifully located mountain town, but is difficult of access both by rail and by highway. The highway extending along the valley of the Blue river is in fair condition, but the mountain passes are never open until late in the year and automobile tourists seldom find their way into this region of artistic natural beauty.

Cities and Towns—Breckenridge, the countyseat, is the principal town, and is located in the upper valley of the Blue river, on the Colorado & Southern railroad. It is the center of the most important mining district, and is one of the best known mining camps in Colorado. Other mining towns are Dillon, Montezuma, Robinson and Kokomo.

Special Opportunities—The principal opportunities offered here are along the line of mineral development. Although mining has been carried on extensively in this county for more than 50 years, there are still large areas of mineralized land that have never been developed. In recent years rich mineral values, especially zinc, have been uncovered at great depths, and the lode mines are now producing more than the placers. Rich deposits of molybdenum have been opened up in the past two or three years and mills are now being constructed for the reduction of these ores. Mining men generally are convinced that molybdenum will in a short time rank close to the top among the mineral products of this county. The principal minerals now produced are gold, silver, copper, lead and zinc. Of these, zinc ranks first in value of output.

TELLER COUNTY

General Description—Teller county lies in the central part of the state, directly west of Colorado Springs, with Pikes peak, the best known mountain in Colorado, lying near the eastern boundary. It is an irregular rectangle in outline, about 27 miles long, north and south, and 21 miles wide in the southern part. Its area is 350,080 acres, or a little less than one-half that of the state of Rhode Island. Its surface is principally mountainous, with a few tracts of rolling mountain valley land. The altitude varies from 7,600 feet, in the north, to about 13,000 feet at the summits of some of the mountain peaks in the southeast.

Early History—The fact that mere chance and good luck play an important part in the operations of the prospector for precious metals, is well illustrated in the early history of the Cripple Creek district, now one of the richest gold producing areas in the world. During the early years of mining development in Colorado there was no production from what is now Teller county. Prospectors spent considerable time in the territory west of Pikes peak, but their reports were uniformly unfavorable. In 1885 there was a rush of gold hunters to Mt. Pisgah, which overlooks the city of Cripple Creek, said to have been started by a "salted" mine. The entire Cripple Creek territory was carefully explored at that time, but no discoveries of gold were made. Cripple Creek was then little more than a lonely cattle ranch. A herder named Robert Womack had more faith in this territory than most of the prospectors who had visited it and during his spare time he did considerable prospecting in the pastures where the city of Cripple Creek now stands. He discovered insignificant seams of gold and staked out a claim which he called "The Chance." Other cowboys laughed at him, but he continued his search. In January 1891 he picked up a piece of float ore that looked favorable and sent it to an assayer. In a few days he received a report to the effect that it carried $250 in gold a ton. He returned to the spot where he found the float and dug a prospect hole. In a few days he uncovered a vein carrying rich sylvanite. This was on what later came to be known as the El Paso lode, one of the richest in the Cripple Creek district. He was so elated with his discovery that he made a trip to Colorado Springs and drank more whisky than was good for him in celebration of his luck. While crazed with drink he disposed of his claim for $500 in cash. He then spread the news of his findings through the streets of Colorado Springs and in a few days the cow pastures in the Cripple Creek district were literally swarming with gold hunters. Claims were staked out every place and Mt. Pisgah for the third time became a scene of activity. This was the beginning of the real development in the Cripple Creek mining district. In 1891 the gold production of Teller county was about $200,000. It increased very rapidly, and in 1896 it was greater than the combined production of all other districts in the state. In 1901, just 10 years after Womack's discovery, the gold production from the Cripple Creek district was $24,986,990, or about six times the production from the remainder of the state. The deserted cow pastures in the region of Mt. Pisgah have produced up to date nearly $360,000,000 in gold. Teller county was organized in 1899 from parts of El Paso and Fremont counties and was named in honor of Henry M. Teller, for 30 years United States senator from Colorado.

Surface and Soil—The surface is mountainous except for small areas of valley land in the central and northern parts. The soil of these valleys is principally a dark colored loam of great fertility and produces fair crops, despite the short seasons. No soil survey of this area is available.

Population—The population of Teller county has varied considerably with the success of mining operations. In 1900, one year after the county was organized, it was 29,002; in 1910 it had fallen to 14,351, chiefly as a result of the decline in mining activities. The present population is about 18,000. In 1910 the foreign-born population was 16.4 per cent of the total, the principal foreign nationalities at that time being Swedish, English, German and Canadian.

Timber—There is considerable heavy timber in the mountainous areas, principally pine and spruce.

Drainage and Water Supply—The northern part of the county is drained by small streams flowing into the South Fork of the South Platte river. The Arkansas divide crosses the central part of the county and a number of streams, tributary to the Arkansas river, rise in the southern part. The streams have their sources in regions of high precipitation and carry plenty of water throughout the year.

Industries—The principal industry is metal mining, confined largely to what is known as the Cripple Creek district. Farming and stockraising are carried on to a limited extent in the mountain valleys. Some stone has been quarried for local uses. The mineral output of this county has at times been larger than that of any other county in Colorado. At the present time Teller county ranks second, following Lake county.

Crops—The principal crops are natural hay, small grain, raised principally for forage; potatoes and some garden vegetables.

Mineral Resources—The known minerals are antimony, clays, fluorspar, gold, molybdenum, phenacite, silver, tantalum, topaz, tourmaline and other

gem stones; volcanic ash and a variety of building stone.

Land Classifications—At the beginning of 1918 there was about 145,000 acres of privately-owned land in the county, or a little more than 41 per cent of the total area. Of this amount, according to the records of the county assessor, 1,440 acres was natural hay land, 13,360 acres was nonirrigated farm land, and 88,680 acres grazing land. The remainder was principally mineral area. On January 1, 1918, there was 11,880 acres of state land in the county, valuable principally because of its possible mineral deposits. On July 1, 1917, there was 34,000 acres of government land open to homestead entry, including some good grazing area and much promising mineral territory. The national forest area in this county is 74,007 acres, including some promising mineral land.

Transportation—The Colorado Midland railroad crosses the north-central part of the county. The Midland Terminal railroad, belonging to this system, runs south from the town of Divide into Cripple Creek, and the Cripple Creek & Colorado Springs railroad, popularly known as the Cripple Creek Short Line, runs from Colorado Springs west to Cripple Creek, and the other towns of the Cripple Creek district.

Highways—The principal state highway is the Pikes Peak or Ocean to Ocean route, which runs west from Colorado Springs over Ute pass into this county, following in general the course of the Colorado Midland railroad. A secondary state highway leaves this route at Divide and runs south through Cripple Creek to Canon City. Another secondary state road follows in general the course of the Cripple Creek Short Line from Colorado Springs to the Cripple Creek district. There are numerous county roads and trails only moderately well improved, constructed principally to serve the mining districts.

Educational—There are 26 public district schools in the county and three highschools, located at Cripple Creek, Divide and Victor. There are no private schools or colleges.

Climatological Data—The climate here is somewhat severe. The summers are short and comparatively warm, though frost occurs in the high altitude every month in the year. The winters are long and are subject to extremely low temperatures and heavy snowfall. The average annual precipitation varies from 16 to 22 inches, being heaviest in the east-central part.

Tourist Attractions—The Cripple Creek district has been a mecca for tourists ever since it came to be known as one of the richest gold mining districts in the world. The Cripple Creek Short Line, ever since its construction, has been one of the most popular tourist railroads in the state. It passes through a region of attractive mountain scenery south of Pikes peak and serves all of the rich mining area of the Cripple Creek district. The petrified forests and interesting fossils in the vinicity of Florissant are well known to travelers and attract many tourists. In late years these interesting and valuable remains of an ancient geological age have been largely destroyed by tourists in their constant search for "specimens." Woodland Park, on the Colorado Midland railroad, is a charming resort and is famous for its excellent view of Pikes peak. The construction of the Ocean to Ocean highway has greatly increased automobile tourist travel through this territory.

Cities and Towns—Cripple Creek, the countyseat and principal town, is situate in the south-central part of the county in the heart of the gold mining district. It is an attractive mountain town and one of the most prosperous mining camps in the west. Florissant, on the Colorado Midland railroad, is the center of the principal stockraising district. The principal mining camps, in addition to Cripple Creek, are Victor, Anaconda, Elkton, Cameron, Goldfield and Altman.

Special Opportunities—The principal opportunities offered here are perhaps in the direction of mining development. In recent years much capital has been profitably employed in the extension of deep mining operations and the construction of tunnels to remove the water from lower workings of the mines. The producing district is very small, but it is not beyond the range of possibility that an extension of tunnels may trace ore veins into a territory outside of the district now being worked. It is well known that geologists, during the early history of Colorado, reported unfavorably on the Cripple Creek district because of the peculiar geological formations here, and these same peculiar formations make it almost impossible to determine what the extent of the ore bodies is.

WASHINGTON COUNTY

General Description—Washington county lies in the northeastern part of

the state. A small section of the northwestern part is in the irrigated valley of the Platte river, and the remainder lies principally in the prairie district of eastern Colorado, where farming is followed without irrigation. It is of an irregular rectangular outline, 60 miles long, north and south, and 48 miles wide in the southern part. The width of the northern half is about 36 miles. It is principally a rolling prairie. The altitude varies from about 4,000 feet in the north to 4,800 feet in the extreme southwest.

Early History—There was comparatively little travel through this section of Colorado during the early period of settlement in the gold camps, most of it going to the north along the South Platte valley and to the south through the Arkansas divide region. In the early 70's stockmen began to graze their herds on the rich prairie grass here and for 20 years what is now Washington county was a part of the great eastern Colorado pasture over which thousands of Texas longhorns were grazed without restriction. This territory was practically all government land at that time and cowboys riding the range answered for fences to keep track of the herds of different stockmen. The agricultural development of the county began about 1885, when homesteaders began to file on the government land. In the early 90's many of these homesteaders were discouraged, as a result of two or three bad seasons, and went back east. In the early part of the present century a new tide of immigration set in and since that time the agricultural development of this territory has been rapid and successful. The county was organized in 1887 from a part of Weld county. A part of it was taken in 1889 to form Yuma county, and parts of Adams and Arapahoe counties were annexed in 1903.

Surface and Soil—Few counties in the state have a more uniform surface than Washington county. The valley of the Platte river crosses the extreme northwestern corner. The remainder is a level or rolling prairie, with fertile soil, well adapted to cultivation. In the north the soil is a sandy loam with a mixture of adobe and other harder elements, but only a few small areas have so much sand as to make them unsuitable for cultivation. There is no soil survey of this area available.

Population—The population in 1900 was 1,120; in 1910 it was 6,002. The increase was partly accounted for by the addition of territory as mentioned above. The population at the present time is approximately 9,500. In 1910 foreign-born whites made up 8.5 per cent of the total population, the principal foreign nationalities being German, Russian and Swiss.

Drainage and Water Supply—The Arickaree river flows across the extreme southeastern corner and Red Willow creek, a tributary of the North Fork of the Republican, crosses the northeastern corner. Other streams are all tributaries of the South Platte river, which flows across the extreme northwestern corner of the county. These streams carry no reliable supply of water for irrigation. A strong underflow of water is found in most sections of the county and is reached at depths varying from 75 to 200 feet. Wells drilled to this underflow are pumped principally by windmills and furnish most of the water for domestic purposes and for livestock. In some cases a limited amount of water from wells is used for irrigation.

Industries—The principal industries are farming, stockraising and dairying. Formerly stockraising was practically the only occupation of the people living here, but in the past 20 years general agriculture has been developed very rapidly and successfully, and dairy farming in the past 10 years has largely taken the place of general stockraising, especially where the stockmen relied on free range for their pasture. This free range, which at one time made this section of Colorado a paradise for Texas longhorn steers, has in recent years been cut up into small farms, which in most cases are being cultivated today.

Crops—The principal crops are wheat, corn, oats, barley, rye, potatoes, sugar beets, kafir, and other forage crops; beans and garden vegetables.

Mineral Resources—The known minerals are clays, which have been utilized to a limited extent for brick making; fluorspar, fuller's earth, gravel, building sand and building stone.

Land Values—At the beginning of 1918 there was 1,131,000 acres of privately-owned land in the county, or about 70 per cent of the total area. Of this, according to the record of the county assessor, 6,687 acres is being farmed under irrigation, and 1,530 acres is classed as natural hay land. Most of the range is classed as non-irrigated farming land, though a comparatively small part of it is now being cultivated. Irrigated land in this county sells at from $75 to $125 an acre, and unimproved irrigated land from $10 to $35 an acre, though some

highly improved unirrigated farms are held at as high as $100 an acre. On January 1, 1918, there was 95,710 acres of state land in the county, most of which is suitable for cultivation and is for sale by the state on favorable terms. On July 1, 1917, there was 51,322 acres of government land open to homestead entry, principally small isolated tracts of little value except for grazing.

Transportation—The Burlington railroad runs across the northern part of the county by way of Akron, and the Union Pacific railroad crosses the extreme northwestern corner.

Highways—The principal state road is the Burlington highway, which follows in general the course of the Burlington railroad across the county. This is one of the important automobile highways leading into the state from the east. Secondary state highways run south from Akron to Flager, Kit Carson county, and north from Siebert in Kit Carson county to Sterling, by way of Otis. The numerous county highways are generally well improved and are sufficient to care for the present agricultural development in the rural districts.

Educational—There are 120 public district schools in the county, and one highschool, located at Akron. There are no private schools or colleges.

Climatological Data—The climate here is much the same as that of other sections of eastern Colorado. The summers are long and warm, generally favorable for general farming, and stockraising. The average annual rainfall in the eastern part varies from 15 to 18 inches, and in the western part from 12 to 15 inches. Probably three-fourths of it comes during the growing season.

Tourist Attractions—There is comparatively little natural scenery here of interest to tourists, but large numbers of automobile travelers cross the county by way of the Burlington highway to the mountainous districts further west.

Cities and Towns—Akron, the countyseat and principal town, is a division point on the Burlington railroad near the central part of the county. It is the center of a prosperous agricultural district and is growing rapidly. Other towns are Otis and Pinneo, on the Burlington railroad; and Cope, Harrisburg, Linden and Arickaree, in the southern part of the county.

Special Opportunities—The principal opportunities offered here are along the line of agricultural development. There is perhaps 700,000 acres of arable land in this county which has never been broken. The government experiment farm, near Akron, is equipped to furnish new comers in this locality with the most desirable information about suitable crops and proper methods of farming. Dairying has been developed very rapidly in the territory adjacent to the Burlington railroad in the past decade and dairy farmers have generally made excellent profits. This industry has been rapidly extended into the districts more remote from railroads and promises within a few years to become the basis of farming operations in most all sections of the county.

WELD COUNTY

General Description—Weld county is situate in the northern part of the state, slightly east of the center, and constitutes the northern end of the South Platte valley. It is of a double rectangular shape with maximum dimensions of 70 miles north and south and 72 miles east and west, and minimum dimensions of 35 miles east and west. Its total area is 2,574,080 acres, more than three times the total area of the state of Rhode Island and equal to four-fifths of the area of Connecticut. In 1887 and 1889 a part of the county was taken to form Logan, Washington and Morgan counties. It is the third county in the state in point of size, ranging next to Las Animas and Moffat counties. The surface is level prairie, slightly rolling and with a low range of hills bordering the Cache la Poudre river near the western boundary. The South Platte flows almost directly north through the county from the southern boundary line to Greeley, where it turns east. The Cache la Poudre traverses the county from the west and flows into the South Platte about four miles east of Greeley. The altitude varies from a maximum of approximately 5000 feet in the southwest corner of the county to about 4400 feet on the eastern boundary.

Early History—Although there is comparatively little in the way of written record of the early history of the county, it is established that French trappers came up the South Platte to the headquarters of the Thompson and St. Vrain only a few years after the Revolutionary war. In 1835 Colonel Dodge, commanding an expedition for the United States government, came up the South Platte and passed through Weld county. The following year Lieutenant Lancaster Lupton, a

member of his party, returned to what is now Weld county and established a residence and trading post, the ruins of his fort being visible still only a short distance north of the present town of Fort Lupton. Fort St. Vrain was established as a trading post about 1837 by Colonel Ceran St. Vrain, and about 1840 Fort Vasquez was established north of Fort Lupton and on the present North and South highway. The ruins are still plainly visible from the road. The rapid growth of agriculture came with the beginning of the irrigation era, which commenced at about the time of the establishment of the city of Greeley in 1870. The county is one of the original seventeen counties of Colorado territory and was named in honor of Lucius L. Weld, first territorial secretary of Colorado.

Surface and Soil—Weld county soils are either sedimentary or residual, both classes standing high in agricultural production. For a wide stretch along the river beds the soil is a sandy loam of alluvial formation, known as Laurel sandy loam, with a depth ranging from two to five feet. This soil is particularly well suited to onions, cabbage and sugar beets. From Eaton to the Cache la Poudre, including Pleasant Valley and adjoining sections, is an extensive area of Billings loam and the same soil is found from the edge of the Platte river beds to a point northeast of Kersey and in other parts of the county. Colorado fine sandy loam occupies a large area of Weld county, including the city of Greeley. Colorado loam and Colorado adobe are present in this soil in different places. A soil survey of the Greeley area, extending westward toward Larimer county, has been prepared by the bureau of soils of the department of agriculture, but there is no survey of the rest of the county.

Population—Although Weld county today is but little more than one-third its original area it is fourth in comparison with other counties of the state from the standpoint of population. In 1890 its population was 11,736; in 1900, 16,808; in 1910, 39,177. The estimated population at the present time is approximately 50,000. In 1910 the foreign population of the county was 12 per cent of the total, the principal foreign nationalities being Russian, German and Swedish.

Drainage and Water Supply—The South Platte and its tributaries, the Cache la Poudre, Big Thompson, Little Thompson, Boulder and St. Vrain, with various other small streams, drain the county and furnish all the water used for irrigation, except such as is derived from the Laramie and Grand rivers and brought over the divide into the watershed of the Cache a Poudre. Water rights on the streams of the county are of exceptional value and command a high price. Water for domestic purposes is found at depths varying from 35 feet to 260 feet.

Industries—The principal industries are farming, stockraising, stockfeeding and manufacturing, the last named industry being confined largely to plants using the products of the farms. Irrigated and nonirrigated farming are commanding almost equal attention at the present time and in the unirrigated districts of the eastern part of the county and the rich irrigated districts in the Johnstown and Fort Lupton sections dairying is commanding unusual attention. Stockfeeding, including lambs, cattle and hogs, is one of the chief industries of this district, as of others where the by-products from the manufacture of beet sugar are available. There are three sugar factories in the county, located at Windsor, Eaton and Greeley. Milk condenseries at Johnstown and Fort Lupton have proved eminently satisfactory, both to the owners and to farmers, who have been enabled to add another cash crop, at the same time adding to the fertility of the soil. Vegetable canning factories, located at Windsor, Greeley and Fort Lupton; pickle salting stations at various points in the county, and flour mills at Greeley, Eaton, Milliken, Johnstown and Fort Lupton conclude the list of industries dealing chiefly with farm products.

Crops—The principal crops are alfalfa, seed beans, pinto beans, wheat, oats, rye, barley, corn, potatoes, sugar beets, cucumbers, tomatoes, cabbages and a wide variety of vegetables used for canning. On the unirrigated plains in the eastern part of the county, milo, kafir, corn and other forage crops are raised extensively.

Mineral Resources—The mineral resources of the county are confined to clay, gravel, sand, stone and coal. The coal fields in the southwestern part of the county give employment to a large number of men.

Land Values—At the beginning of 1918 there was 284,687 acres of land under irrigation in the county and 745,550 acres farmed without irrigation. In addition to these areas 810,906 acres was classed as grazing land and 13,419 as natural hay land. Irrigated land in the county sells at from $75 to $250 an acre, or higher in some instances, and nonirrigated land sells

at from $15 to $60 an acre. On January 1, 1918, there was 173,799 acres of state land in the county for sale by the state on favorable terms, and on July 1, 1917, there was 11,274 acres of homestead land unoccupied in the county. This land, however, is of but little value except for grazing.

Transportation—The Union Pacific, the Colorado & Southern, the Burlington and the Great Western, commonly known as the "Sugar Road," provide fairly adequate transportation facilities for the county. The Denver-Cheyenne line of the Union Pacific traverses the western part of the county from north to south; the Omaha branch leaves the Denver-Cheyenne line at La Salle and runs east along the valley of the Platte river. The main line of the Burlington crosses the southeast corner of the county, passing through Keenesburg and Roggen, while the Cheyenne branch of the Burlington furnishes transportation to the northeast section of the county, passing through Stoneham, New Raymer, Keota, Grover and other towns. The Great Western road is operated by the Great Western Sugar company for its own purposes and runs from Eaton to Longmont, in Boulder county, serving Johnstown and other important towns along the line. The Colorado & Southern branch extends from Greeley through Windsor into Larimer county. Another branch of the Burlington crosses the southwest corner of the county, running from Brighton, in Adams county, to Boulder.

Highways—The Denver-Cheyenne highway traverses the county from north to south, practically following the line of the Union Pacific. Well improved roads lead from Greeley through Windsor to Fort Collins; from Greeley to Loveland and from the southern part of the county to Loveland, Berthoud, Longmont and Boulder. furnishing a variety of routes by which Estes Park may be reached. Two roads cross the southern part of the county from east to west; the Boulder-Fort Morgan road passing through Fort Lupton, Hudson, Keenesburg and Roggen, and the Greeley-Fort Morgan road following the valley of the Platte through Kersey and Masters to Morgan county. Well improved prairie roads lead north and east from Greeley, one passing through Barnesville, Fosston and Buckingham into New Raymer, Stoneham and Keota, and the other following a more northerly route through Galeton and Hungerford to Grover and Hereford. The roads of the county are well constructed and the bridges are of a permanent and substantial character.

Educational—There are 220 district public schools in the county, including five consolidated schools and three joint grade schools. There are 28 highschools in the county, two of which are at Greeley, one being operated in connection with the State Teachers college. The others are located in the following towns: Windsor, Eaton, Platteville, Pierce, New Raymer, Frederick, Keota, Fort Lupton, Erie, La Salle, Roggen, Hudson, Stoneham, Grover, Briggsdale, Buckingham, Big Bend, Johnstown, Mead, Milliken, Gilcrest, Gill, Nunn, Carr, Severance, and Kuner. The State Teachers college is located at Greeley and is amply provided with grounds and buildings and all modern appliances.

Climatological Data—The climate here, as in the adjoining counties, is equable and well suited to the agricultural pursuits which predominate in the county. The summers are comparatively long and the winters usually are not severe. The rainfall varies from 12 to 15 inches, but is uniform over the entire county.

Tourist Attractions—Except for the chalk bluffs in the northeast part of the county, there is comparatively little of scenic interest to be seen, but the county is practically the gateway to many mountain resorts and thousands of people pass through every year en route to the resorts to be found at the high altitudes to the west. Well-kept tourist roads lead to the foothills from all parts of the county.

Cities and Towns—Greeley, the countyseat, is the largest city in the county, having a population of approximately 11,000. A number of other important cities in the county practically follow the lines of the railroads. Along the line of the Union Pacific the more important towns are Fort Lupton, Platteville, La Salle, Evans, Eaton, Ault, Pierce and Nunn. Windsor, on the Fort Collins branch of the Colorado & Southern, is in the center of an agricultural community. In the southeastern part of the county the principal towns are Hudson, Keenesburg and Roggen. Kersey and Kuner are prosperous towns on the Eastern line of the Union Pacific, and Briggsdale, Grover, Keota, Buckingham, New Raymer and Stoneham are the more important towns in the northeastern part of the county. In the southwestern part of the county Erie, Firestone, Frederick and Dacono are coal mining centers. Johnstown and Milliken are

the principal towns in the intensively cultivated section southwest of Greeley.

Special Opportunities—Although agricultural development has arrived at a high stage in the larger part of the county, there are still large areas of land capable of production which are not now being cultivated. There are also some opportunities for the extension of irrigation, although these are essentially limited and must depend largely upon flood waters, as the ordinary flow of the South Platte and its tributaries is now being used. The development of nonirrigated farming has accomplished much in the past and undoubtedly will continue to offer an attractive field for many years to come. There is also a good deal of coal land in the southwestern part of the county which offers profitable investment.

YUMA COUNTY

General Description—Yuma county is in the northeastern part of the state, the eastern boundary being formed by the states of Kansas and Nebraska. It is a part of the great prairie section that forms eastern Colorado. Its outline is rectangular, 60 miles long, north and south, and about 40 miles wide. Its area is 1,514,880 acres, or a little more than one-half that of the state of Connecticut. The surface is a rolling prairie. The altitude varies from 3,500 feet in the east to 4,200 feet in the southwest, the average being about 3,750 feet.

Early History—This county was organized in 1889 from a part of Washington county. Parts of Adams and Arapahoe counties were annexed to it in 1903. The express route between Leavenworth, Kansas, and the Pikes Peak district, established in 1859, crossed the southeastern corner of what is now Yuma county on the divide between the Republican river and Solomon's Fork. This stage was regularly maintained until late in the 80's. Although there was considerable travel through the county at this time, no settlements were made until about 1876. In the late 70's pioneer cattlemen began locating their ranches along the valleys of the various streams in this territory, and for several years this was one of the most popular stockraising sections of Colorado. There was little agricultural development until about 1885. From that time until about 1893 numerous homesteaders located in the county and began farming on a limited scale.

Surface and Soil—The surface is principally rolling prairie, broken by a few long ranges of hills in the northern part and along the North Fork of the Republican river. The plains section south of the Republican river is one of the best nonirrigated farming districts in Colorado. The soil is principally a sandy loam, with clay subsoil. It is very fertile, easily worked, and produces good yields of practically all crops grown in this latitude. No soil survey of this territory is available.

Population—The population in 1900 was 1,729; in 1910 it was 8,499, but the increase is partly accounted for by additions of the territory above referred to, made in 1903. At the present time the population is about 12,000. In 1910 the foreign-born population was 6.2 per cent of the total, the principal foreign nationalities at that time being German, Russian and Swedish.

Drainage and Water Supply—The North Fork of the Republican river has its source in the county, fed by springs, and flows eastward into Nebraska. The Arickaree river flows northeast across the south half of the county and enters the Republican soon after it passes out of Colorado into Nebraska. The South Fork of the Republican river flows across the southeast corner. There are numerous small streams tributary to these rivers in various sections of the county, most of which have running water the entire year. There is comparatively little irrigated land in this county. Water for domestic purposes, of excellent quality, is obtained principally from wells and is reached here at depths varying from 10 feet to 190 feet. These wells, pumped by windmills, furnish a considerable portion of the water for livestock.

Industries—The principal industries are farming, stockraising and dairying. This county is one of the principal grain-producing nonirrigated districts of the state. It was formerly a popular range country and stockraising is still carried on extensively, but stock are usually fattened for the market here instead of being sold for feeders as formerly. Dairy farming has been developed rather extensively in the past 10 years and has been very successful.

Crops—The principal crops are wheat, corn, oats, barley, rye, potatoes, alfalfa, cane and other forage crops, and beans.

Mineral Resources—The known minerals are clays, which have been used to a limited extent in the manufacture of brick; gravel, building sand and building stone.

Land Values—At the beginning of 1918 there was about 977,000 acres of privately-owned land in the county, or approximately 64 per cent of the total area. According to the records of the county assessor 2,494 acres of this land was being cultivated under irrigation, 493,058 acres was classed as nonirrigated farm land, and 4,757 acres as natural hay land. The remainder is principally grazing land. Not nearly all of the area classed by the assessor as nonirrigated farming land is under cultivation at this time. Irrigated land in this county sells at from $100 to $150 an acre; nonirrigated land at from $10 to $75 an acre, depending largely on location and improvements. On January 1, 1918, there was 59,201 acres of state land in the county, most of which is suitable for farming, and is for sale by the state of Colorado on favorable terms. On July 1, 1917, there was 7,465 acres of government land open to homestead entry, principally small isolated tracts of no value except for grazing purposes.

Transportation—The main line of the Burlington railroad runs across the center of the county, this being the only railroad.

Highways—Three principal highways traverse the county, two running north and south through Yuma and Wray, and one running east and west through the same towns, only a short distance north of the center of the county. The numerous county highways are generally well improved and are at present sufficient for transportation of farm products to market.

Educational—There are 125 public district schools in the county, and two highschools, located at Wray and Yuma. There are no private schools or colleges.

Climatological Data—The climate here is much the same as that in other sections of eastern Colorado and is practically identical with the climate of western Kansas and Nebraska. The summers are warm and comparatively long, well suited for general farming and stockraising. The winters are mild. This section is situate in what is known as the rain belt of eastern Colorado. The average annual rainfall varies from 18 to 20 inches, about three-fourths of it coming during the growing season.

Tourist Attractions—Although there is little natural scenery here of interest to tourists, there is considerable automobile tourist travel across the county by way of the Burlington highway to the mountainous districts further west. There are some points of historic interest in the county, chief of which is Beecher Island, in the Arickaree river, 16 miles south of Wray, where General George A. Forsyth, with a band of 50 scouts, fought an engagement with about 1000 Indian warriors in the latter part of 1868.

Cities and Towns—The principal city is Wray, the countyseat, located on the Burlington railroad, in the eastern part of the county. It is an important shipping point and the center of a very prosperous agricultural section. It is also an important supply station for a large farming district to the south. Yuma, near the western boundary, on the Burlington railroad, is the second city in size and a very important shipping point. Other towns are Laird and Eckley on the Burlington railroad, and Idalia, Kirk, Joes, Vernon, Armel, Hale, Happyville, and Wales in the southern part.

Special Opportunities—The principal opportunities offered here are in the direction of agricultural development. Fully 90 per cent of the area of the county is arable land, of which not to exceed 30 per cent is now in cultivation. The uniform success of farming operations here in the past ten years is the best evidence of what may be expected from the development of the unbroken areas.

Railway Distances From Denver

In the accompanying list only incorporated towns are given, and only distances from Denver, but by reference to the map accompanying this volume it will not be difficult to determine the railroad distances between nearly all important places in the state. The railroad given is the road on which the town is located or the nearest road. If it is on more than one road only one is named in most cases, being that over which the distance from Denver is the shortest. Which of these towns are county seats may be determined from the table on page 64. The following abbreviations are used:

Burlington, Chicago, Burlington & Quincy; C. & S., Colorado & Southern; C C. Short Line, Colorado Springs & Cripple Creek District; D. & R. G., Denver & Rio Grande; D., B. & W., Denver, Boulder & Western; D. & S. L., Denver & Salt Lake; Gt. W., Great Western; Midland, Colorado Midland; M. P., Missouri Pacific; R. I., Chicago, Rock Island & Pacific; Santa Fe, Atchison, Topeka & Santa Fe; U. P., Union Pacific.

Town	Railroad	Distance, Miles
Aguilar	C. & S.	195
Akron	Burlington	112
Alamosa	D. & R. G.	252
Alma	C. & S.	121
Antonito	D. & R. G.	280
Aspen	Midland	203
Ault	U. P.	63
Basalt	Midland	250
Bayfield	D. & R. G.*	450
Berthoud	C. & S.	54
Black Hawk	C. & S.	39
Blanca	D. & R. G.	232
Bonanza	D. & R. G.*	245
Boulder	U. P., C. & S.	27
Breckenridge	C. & S.	110
Brighton	U. P.	19
Brush	Burlington	88
Buena Vista	Midland	176
Burlington	R. I.	166
Canon City	D. & R. G.	160
Carbondale	Midland	271
Castle Rock†		32
Cedaredge	D. & R. G.*	385
Central City	C. & S.	45
Center	San Luis Central	277
Cheyenne Wells	U. P.	177
Collbran	Midland	365
Colorado Springs†		75
Cortez	D. & R. G.*	506
Craig	D. & S. L.	255
Crawford	D. & R. G.*	390
Creede	D. & R. G.	321
Crested Butte	D. & R. G.	316
Creston	D. & R. G.	273
Cripple Creek	C. C. Short Line	126
Dacono	U. P.	25
DeBeque	Midland	340
Del Norte	D. & R. G.	283
Delta	D. & R. G.	373
Dillon	C. & S.	120
Dolores	D. & R. G.	478
Durango	D. & R. G.	451
Eads	M. P.	230
Eagle	D. & R. G.	329
Eaton	U. P.	59
Eldora	D., B. & W.	63
Elizabeth	C. & S.	39
Empire	C. & S.*	55
Erie	Burlington	26
Estes Park‡		70
Eureka	Silverton Nor.	525
Evans	U. P.	48
Fairplay	C. & S.	115
Firestone	U. P.	27
Flagler	R. I.	123
Fleming	Burlington	144
Florence	D. & R. G.	152
Fort Collins	U. P.	68
Fort Lupton	U. P.	26
Fort Morgan	Burlington	78
Fountain†		88
Fowler	Santa Fe	154
Frederick	U. P.	26
Frisco	C. & S.	120
Fruita	D. & R. G.	384
Georgetown	C. & S.	50
Gilcrest	U. P.	40
Gillett	Midland	119
Glenwood Spgs	Midland	284
Golden	C. & S.	16
Goldfield	C. C. Short Line	119
Granada	Santa Fe	252
Granby	D. & S. L.	99
Grand Junction	Midland	373
Grand Valley	Midland	327
Greeley	U. P.	52
Green Mt. Falls	Midland	90
Grover	Burlington	147
Gunnison	D. & R. G.	288
Gypsum	D. & R. G.	336
Hartman	Santa Fe	272
Haxtun	Burlington	156
Hayden	D. & S. L.	238
Holly	Santa Fe	262
Holyoke	Burlington	173
Hooper	D. & R. G.	280
Hotchkiss	D. & R. G.	398
Hot Sulphur Spgs.	D. & S. L.	109
Hudson	Burlington	29
Hugo	U. P.	115
Idaho Springs	C. & S.	37
Ignacio	D. & R. G.	426
Iliff	U. P.	151
Johnstown	Gt. W.	46
Julesburg	U. P.	197
Kersey	U. P.	54
Kiowa	C. & S.*	46
Kremmling	D. & S. L.	126
Lafayette	Burlington	22
La Jara	D. & R. G.	266
La Junta	Santa Fe	182
Lake City	D. & R. G.	351
Lamar	Santa Fe	235
LaSalle	U. P.	46
Las Animas	Santa Fe	201
LaVeta	D. & R. G.	190
Leadville	Midland	212
Limon	U. P., R. I.	90
Longmont	Burlington	37
Louisville	C. & S.	19
Loveland	C. & S.	60
Lyons	Burlington	48
Manassa	D. & R. G.*	276
Mancos	D. & R. G.	491
Manitou	Midland	81
Manzanola	Santa Fe	163
Marble	Crystal River	299
Mead	Gt. W.	45
Meeker	D. & R. G.*	355
Merino	U. P.	127
Milliken	Gt. W.	43
Minturn	D. & R. G.	302
Moffat	D. & R. G.	263
Monte Vista	D. & R. G.	269

Town	Railroad	Distance, Miles
Montrose	D. & R. G.	351
Monument†		60
Morrison	C. & S.	17
New Castle	Midland	296
Nunn	U. P.	72
Norwood	D. & R. G*	424
Nucla	D. & R. G*	450
Oak Creek	D. & S. L.	194
Olathe	D. & R. G.	362
Olney Springs	M. P.	158
Ophir	D. & R. G.	422
Ordway	M. P.	169
Otis	Burlington	126
Ouray	D. & R. G.	387
Pagosa Springs	D. & R. G.	421
Palisade	Midland	361
Palmer Lake†		52
Paonia	D. & R. G.	406
Peetz	Burlington	148
Pitkin	D. & R. G.	315
Platteville	U. P.	35
Poncha Springs	D. & R. G.	220
Pueblo†		119
Red Cliff	D. & R. G.	294
Rico	D. & R. G.	443
Ridgway	D. & R. G.	377
Rifle	Midland	310
Rocky Ford	Santa Fe	172
Saguache	D. & R. G.*	265
Salida	D. & R. G.	215
Sanford	D. & R. G.*	271
Seibert	R. I.	134
Silt	Midland	303
Silver Plume	C. & S.	54
Silver Cliff	D. & R. G.*	210
Silverton	D. & R. G.	497
Simla	R. I.	115
Springfield	Santa Fe*	285
Steamboat Spgs	D. & S. L.	214
St. Elmo	C. & S.	153
Sterling	Burlington	123
Sugar City	M. P.	174
Superior	C. & S.	20
Swink	Santa Fe	177
Telluride	D. & R. G.	422
Trinidad†		210
Two Buttes	Santa Fe*	285
Victor	C. C. Short Line	119
Walden	C. W. & E.	256
Walsenburg	C. & S., D. & R. G.	171
Ward	D. B. & W.	53
Wellington	C. & S.	85
Westcliffe	D. & R. G.	209
Wiley	Santa Fe	233
Windsor	C. & S.	65
Wray	Burlington	165
Yampa	D. & S. L.	185
Yuma	Burlington	138

*Not directly on a railroad. The road given is the nearest.

†The Colorado & Southern, Denver & Rio Grande and Santa Fe railroads serve towns between Denver and Pueblo and the distance is about the same by all lines. The two first named roads have direct lines from Denver to Trinidad and the Santa Fe route is by way of La Junta.

‡No railroad approaches nearer than 22 miles of Estes Park, which lies near the east entrance to the Rocky Mountain national park. The distance given is by way of Lyons.

ALTITUDES OF COLORADO MOUNTAINS

NAME	COUNTY	Elevation, Feet
Achonee Mountain	Grand	12,656
Adams Mountain	Grand	12,115
Albion Mountain	Boulder	12,596
Alpine Peak	Clear Creek	11,525
Alps Mountain	Clear Creek	10,508
Anchor Mountain	Dolores	12,325
Andrews Peak	Grand	12,564
Antero, Mount	Chaffee	14,245
Apache Peak	Boulder-Grand	12,873
Apiatan Mountain	Grand	10,888
Arapahoe Peak	Boulder-Grand	13,506
Arkansas Mountain	Lake	13,797
Arrow Peak	San Juan	13,803
Arthur Mountain	El Paso	10,805
Audubon Mountain	Boulder	13,223
Augusta Mountain	Gunnison	12,615
Avery Peak	Gunnison	12,652
Axtel Mountain	Gunnison	12,013
Baker Mountain	Grand	12,406
Bald Mountain	Boulder	11,470
Bald Mountain	Summit	13,964
Bald Mountain	Teller	12,365
Baldy Mountain	Gunnison	12,809
Baldy Peak	Ouray	10,615
Banded Peak	Archuleta	12,376
Bear Mountain	San Juan	12,950
Beautiful Mountain	Mineral	12,746
Beckwith Mountain	Gunnison	12,371
Belleview	Rio Grande	12,727
Big Bull Mountain	Teller	10,826
Big Chief Mountain	Teller	11,220
Bison Peak	Park	12,400
Blackhawk Peak	Gilpin	10,323
Blackhawk Peak	Dolores	12,687
Blanca Peak	Costilla-Huerfano-Alamosa	14,390
Bowen Mountain	Grand	12,541
Buck Mountain	Routt-Jackson	11,375
Buckeye Peak	Lake	12,863
Buffalo Peak	Summit	13,541
Calico Peak	Dolores	12,035
Cameron Cone	El Paso	10,705
Capitol Mountain	Pitkin	13,997
Cascade Mountain	Gunnison	11,707
Cascade Mountain	Grand	12,320
Castle Peak	Gunnison-Pitkin	14,259
Cement Mountain	Gunnison	12,212
Chama Peak	Archuleta	12,027
Chapin Mountain	Larimer	13,052
Chief Mountain	Clear Creek	11,710
Chimney Peak	Hinsdale-Ouray	11,785
Chiquita Mountain	Larimer	12,458
Cinnamon Mountain	Gunnison	12,270
Cirrus Mountain	Grand	12,804
Clarence King Mtn.	Boulder	13,176
Colorado Mountain	Gilpin	10,884
Comanche Peak	Boulder	13,491
Cone Mountain	Clear Creek	12,230
Conejos Peak	Conejos	13,180
Copper Mountain	Summit	12,475
Copper Mountain	Teller	10,226
Courthouse Mountain	Hinsdale-Ouray	12,165
Cover Mountain	Park	10,165
Coxcomb Peak	Hinsdale-Ouray	13,663
Craig Mountain	Grand	12,005
Crested Butte	Gunnison	12,172
Crestone Peak	Saguache	14,233
Crystal Peak	Hinsdale	12,927
Culebra Peak	Costilla-Las Animas	14,069
Cumulus Mountain	Grand	12,724
Dakota Hill	Gilpin	10,930
Del Norte Peak	Rio Grande	12,378
Dickenson Mountain	Larimer	11,874
Double Top Mountain	Gunnison	12,192 / 12,178
Dunraven Mountain	Larimer	12,548
Eagle Peak	Dolores	12,105
Echo Mountain	La Plata	13,305
Elbert Mountain	Lake	14,402
Electric Peak	Grand	11,943
Elephant Mountain	Rio Grande	11,790
Elk Mountain	Mineral	11,030
Elk Mountain	Eagle-Summit	12,718
Elliott Mountain	Dolores	12,337
Emerson Mountain	La Plata	13,147
Emmons Mountain	Gunnison	12,414
Engineer Mountain	Hinsdale-Ouray-San Juan	13,190

NAME	COUNTY	Elevation, Feet
Engineer Mountain	San Juan	12,972
Eolus Mountain	La Plata	14,079
Estes Cone	Larimer	11,017
Ethel Mountain	Routt-Jackson	11,940
Evans Mountain	Park-Lake	13,580
Evans Mountain	Clear Creek	14,260
Expectation Mountain	Dolores	12,071
Fairchild Mountain	Larimer	13,502
Fisher Mountain	Mineral	12,855
Fisher Mountain	Grand	12,280
Fletcher Mountain	Summit	13,917
Flora Mountain	Clear Creek-Grand	13,122
Florida Mountain	La Plata	13,076
Fox Mountain	Mineral	11,520
Freeman Peak	Jefferson	11,627
Garfield Mountain	El Paso	10,925
Garfield Mountain	San Juan	13,065
Garfield Peak	Gunnison	12,136
Gilpin Peak	Ouray-San Miguel	13,682
Glacier Peak	Summit	12,654
Gothic Mountain	Gunnison	12,646
Grant Peak	San Juan-San Miguel	13,692
Gray Head	San Miguel	10,994
Grayrock Peak	San Juan	12,488
Grays Peak	Clear Crk.-Summit	14,341
Graystone Peak	San Juan	13,489
Greenhorn Mountain	Huerfano-Pueblo	12,334
Green Mountain	Jefferson	10,530
Greylock Mountain	La Plata	13,571
Grizzly Peak	La Plata	13,695
Grizzly Peak	Dolores-San Juan	13,738
Hague Peak	Larimer	13,562
Hale Mountain	Grand	11,747
Hallett Peak	Grand-Larimer	12,723
Handies Peak	Hinsdale-San Juan	14,008
Harvard, Mount	Chaffee	14,375
Helmet Peak	Montezuma	11,976
Hermosa Mountain	Dolores-San Juan	12,574
Hesperus Peak	Montezuma	13,225
Holy Cross Mountain	Eagle	13,978
Homestake Peak	Eagle	13,217
Hope Mountain	Mineral	12,841
Horseshoe Mountain	Park-Lake	13,902
Howard Mountain	Grand	12,814
Humboldt Peak	Custer-Saguache	14,044
Hunchback Mountain	San Juan	13,133
Ida Mountain	Grand-Larimer	12,868
Irving Peak	La Plata	13,210
Jacque Mountain	Summit	13,235
Jacque Peak	Summit	13,205
Jugged Mountain	San Juan	13,829
James Peak	Clear Creek-Grand-Gilpin	13,260
Johnny Bull Mountain	Dolores	12,018
Jura Knob	San Juan	12,617
Kendall	San Juan	13,480
Kingston Peak	Clear Creek-Gilpin	12,137
Klondike Mountain	Boulder	10,802
La Garita	Mineral-Saguache	13,725
La Plata Peak	Chaffee	14,332
Lead Mountain	Grand	12,532
Leviathan Peak	San Juan	13,528
Lillie	Larimer	11,384
Lincoln Mountain	Park-Summit	14,287
Lizard Head	Dolores-San Miguel	13,156
Lonesome Peak	Grand	10,588
Longs Peak	Boulder	14,255
Lookout Mountain	Grand	10,155
Lookout Mountain	Larimer	10,633
Lookout Peak	San Juan-San Miguel	13,674
Lulu Mountain	Grand	11,720
McCauley Peak	La Plata	13,551
McGregor Mountain	Larimer	10,482
Madden Peak	Montezuma-La Plata	11,980
Mahana Peak	Boulder	12,629
Marcellina Mountain	Gunnison	11,349
Maroon Peak	Pitkin	14,126
Martha Washington Mt.	Larimer	13,269
Massive Mountain	Lake	14,402
Matterhorn Peak	Hinsdale	13,589
McClellan, Mount	Clear Crk.-Summit	13,423
Meadow Mountain	Boulder	11,634
Mears Peak		13,008
Meeker Mountain	Boulder	13,911
Metroz Mountain	Mineral	11,900
Mineral Hill	Summit	10,885
Mineral Point	Gunnison	12,541
Monitor Peak	La Plata	13,703
Monument Hill	La Plata	10,880
Monument Peak	Mineral	10,641
Mosquito Peak	Park-Lake	13,784
Mummy Mountain	Larimer	13,413
Naki Peak	Grand	12,221
Navajo Peak	Boulder-Grand	13,406
Nebo Mountain	San Juan	13,192
Nebraska Hill	Gilpin	11,548
Nigger Hill	Summit	10,171
Nimbus Mountain	Grand	12,730
Nipple Mountain	Fremont	10,068
North Italian Mt.	Gunnison	13,225
Ohio Peak	Gunnison	12,251
Old Baldy	Costilla-Huerfano	14,176
Old Baldy Mountain	Rio Grande	12,602
Oregon Hill	Gilpin	10,884
Orton Mountain	Boulder	11,662
Oso Mountain	La Plata	13,706
Otis Peak	Grand-Larimer	12,478
Ouray, Mount	Chaffee	13,956
Overlook Point	La Plata	12,995
Owen Mountain	Gunnison	13,102
Parrott Peak	La Plata	11,876
Parry Peak	Clear Creek-Grand	13,345
Pearl Mountain	Gunnison	13,484
Peeler Peak	Gunnison	12,219
Pigeon Peak	La Plata	13,961
Pikes Peak	El Paso	14,110
Pilot Knob	San Juan-San Miguel	13,750
Pisgah Mountain	Clear Creek-Gilpin	10,085
Pole Creek Mountain	Hinsdale	13,740
Pool Table Mountain	Mineral	12,142
Porphry Peaks	Grand	11,155 / 11,355
Potato Hill	San Juan	11,876
Potosi Peak	Ouray	13,763
Princeton, Mount	Chaffee	14,196
Prospect Mountain	Lake	12,608
Ptarmigan Hill	Eagle	12,174
Ptarmigan Peak	Park-Lake	13,736
Purple Peak	Gunnison	12,989
Quandary Peak	Summit	14,256
Red Cloud Peak	Hinsdale	14,050
Red Hill	La Plata	10,670
Red Mountain	Grand	11,505
Republican Mountain	Clear Creek	12,393
Rhyolite Mountain	Teller	10,771
Richmond Mountain	Gunnison	12,543
Richthofen Mountain	Grand	12,953
Rio Grande Pyramid	Hinsdale	13,830
Rolling Mountain	San Juan	13,694
Rosalie Peak	Park	13,575
Rosa Mountain	Teller	11,495
Ruby Peak	Gunnison	12,749
Rudolph Hill	Gunnison	10,130
Saddle Mountain	Park	10,815
Saddle Mountain	Mineral	12,033
St. Vrain Mountain	Boulder	12,162
San Bernardo Mt.	San Miguel	11,845
San Luis Mountain	Teller	10,490
San Luis Mountain	Mineral-Saguache	14,149
Satanta Peak	Grand	11,885
Sawtooth Mountain	Mineral	12,590
Sawtooth Mountain	Boulder-Grand	12,304
Saxon Mountain	Clear Creek	11,535
Schuylkill Mountain	Gunnison	12,188
Shavano Peak	Chaffee	14,239
Sheep Mountain	Gunnison	13,180
Sheep Mountain	Mineral	12,374
Sheep Mountain	Eagle-Summit	12,380
Sheep Mt., North	Eagle-Summit	12,429

NAME	COUNTY	Elevation, Feet
Sheridan Mountain	La Plata	12,785
Sherman Mountain	Park-Lake	14,038
Shoshone Peak	Boulder	13,579
Silex Mountain	San Juan	13,627
Silverheels Mountain	Park	13,825
Simpson, Mount		14,055
Sioux Mountain	Boulder-Grand	13,310
Sneffels, Mount	Ouray	14,158
Snowdon Peak	San Juan	13,070
Snowmass Mountain	Pitkin-Gunnison	13,970
Sopris, Mount	Pitkin	12,823
Spanish Peak, West	Huerfano-Las Animas	13,623
Spanish Peak, East	Huerfano-Las Animas	12,708
Specimen Mountain	Grand-Larimer	12,482
Star Peak	Gunnison	13,562
Stoll Mountain	Park	10,915
Stones Peak	Larimer	12,928
Stony Mountain	Ouray	12,677
Storm King Peak	San Juan	13,742
Storm Peak	Larimer	13,336
Storm Ridge	Gunnison	11,859
Stormy Peak	Park	11,748
Sugarloaf	Eagle-Summit	12,556
Sugarloaf Peak	Clear Creek	12,513
Sugarloaf Rock	Hinsdale	10,831
Sultan Mountain	San Juan	13,336
Summit Peak	Archuleta	13,272
Sunlight Peak	La Plata	14,084
Sunshine Mountain	San Miguel	12,945
Sunshine Peak	Hinsdale	14,018
Tanima Peak	Boulder-Grand	12,417
Tarryall Peak	Park	11,300
Taylor Peak	Gunnison	13,419
Taylor Peak	Grand-Larimer	13,150
Telescope Mountain	Dolores	12,210
Teocalli Mountain	Gunnison	13,220
Terra Tomah Peak	Larimer	12,686
The Guardian	San Juan	13,617
Tilton Mountain	Gunnison	12,633
Torrey Peak	Clear Crk.-Summit	14,336
Trachyte Mountain	Teller	10,863
Trinchera Mountain	Costilla-Huerfano	13,546
Trinity Peak	San Juan	13,752 13,804 13,745
Turret Peak	La Plata	13,819
Twilight Peak	San Juan	13,153
Twin Sisters	Larimer	11,435
Twin Sisters	San Juan	13,438
Uncompahgre Peak	Hinsdale	14,306
Union Mountain	Summit	12,336
Vermilion Peak	San Juan-San Miguel	13,870
Vestal Peak	San Juan	13,846
Vigil Peak	El Paso	10,075
Wasatch Mountain	San Miguel	13,551
West Needle Mt.	San Juan	13,050
Wetterhorn Peak	Hinsdale-Ouray	14,020
Wheatstone Mountain	Gunnison	12,543
Whitecross Mountain	Hinsdale	13,550
White Dome	San Juan	13,607
Whitehouse Mountain	Ouray	13,496
White Pine Mountain	Larimer	10,250
White Rock Mountain	Gunnison	13,532
Wildhorse Peak	Ouray	13,271
Wilson Mountain	Dolores	14,250
Wilson Peak	San Miguel	14,026
Windom Mountain	La Plata	14,084
Witter Peak	Clear Creek	12,856
Yale, Mount	Chaffee	14,187
Ypsilon Mountain	Larimer	13,507
Zirkel Mountain	Larimer-Routt	11,815

LAKES AND RESERVOIRS

Name	County	Altitude
Arapahoe	Gilpin	11,165
Antero Res.	Park	8,934
Adams Res.	Adams	....
Adobe Creek Res.	Bent-Kiowa	4,150
Bradford	Huerfano	5,850
Black Hollow Res.	Weld	5,065
Bee	Larimer	5,175
Bolles	Boulder	5,040
Boedecker	Larimer	5,075
Bison Res.	Teller	10,400
Blue	Conejos	11,937
Burch's	Boulder	5,145
Beasley Res.	Boulder	5,195
Boulder	Boulder	5,228
Boyd Lakes	Larimer	4,960
Bent County Res.	Bent	4,300
Barr	Adams	....
Badger Res.	Morgan	....
Big Creek Lakes	Jackson	9,010
Boetcher	Jackson	8,160
Breman	Gunnison	10,325
Balsam	San Juan	11,435
Big Nile	Adams	....
Clear	Clear Creek	9,870
Chicago	Clear Creek	11,350
Crater	Jefferson	8,877
Chinn	Clear Creek	11,020
Chasm	Boulder	13,269
Caroline	Clear Creek	11,853
Castlewood Res.	Douglas	6,475
Calkins	Weld	4,975
Curtis	Larimer	5,080
Cheesman	Jefferson	6,856
Crystobal	Hinsdale	11,800
Clear Lake	San Juan	11,875
Devils	Hinsdale	11,968
Duck	Clear Creek	11,070
Diamond	Boulder	10,960
Dorothy	Boulder	12,557
Douglas	Larimer	5,200
Demmel	Larimer	5,250
Dead	Teller	10,900
Dye Res.	Otero	4,150
Emerald	Hinsdale	10,020
Eldora	Boulder	9,245
Edith	Clear Creek	10,117
Eileen	La Plata	8,924
Erdman	Pueblo	4,610
Empire Res.	Morgan-Weld	....
Fossil Creek Res.	Larimer	4,890
Fountain Valley Res.	El Paso	5,800
Grand	Grand	8,369
Gold	Boulder	8,600
Gerard Res.	Prowers	4,050
George	Park	6,915
Hoffman	Boulder	5,120
Hazel	San Juan	11,420
Hazel	La Plata	12,420
Head	Alamosa	7,527
Hermit Lakes	Hinsdale	9,975
Horse Creek Res.	Bent-Otero	4,950
Hungerford	Pueblo	4,520
Huerfano	Pueblo	4,725
Hayden Res.	Pueblo	....
Ice	Clear Creek	12,188
Ignacio Res.	La Plata	8,375
Isabelle	Boulder	10,852
Irish	Larimer-Boulder	5,090
Jasper	Boulder	10,733
Julesburg Res.	Sedgwick-Logan	....
Jackson	Morgan	....
Jim Crowe Res.	Weld	....
King Res.	Kiowa-Prowers	3,860
Lost	Boulder	9,980
Lower Crater	Gilpin	10,580
Los Lagos	Boulder-Gilpin	8,693
Loch Lamond	Clear Creek	11,140
Lena	Routt	9,980
Lorland	Larimer	5,022
Loch Ivanhoe	Pitkin	10,930
Long	Boulder	10,499
McIntosh	Boulder	5,060

Name	County	Altitude
Moraine	El Paso	10,215
Monarch	Grand	8,340
Mills	Larimer	11,496
Maroon	Pitkin	9,700
Molas	San Juan	10,488
Margareta	Routt	10,450
Milton	Weld	....
Middle Plum Res.	Prowers	4,100
Meredith	Crowley	4,308
Minnequa	Pueblo	4,740
Naylor	Clear Creek	11,348
New Windsor Res.	Weld	4,920
North Plum Res.	Prowers	4,100
North Butte Res.	Prowers	4,200
Nee Nashe Res. No. 3.	Kiowa	3,870
Nee Sopah Res. No. 5.	Kiowa	3,860
Nee Gronda Res. No. 4.	Kiowa	3,840
Nee Skah Res.	Kiowa	3,885
Owens	Boulder	5,220
Otanawanda	Ouray	8,900
Palmer	Douglas	9,210
Peterson	Boulder	9,245
Price Res.	Prowers	3,850
Pisgah	Gilpin	9,656
Powderhorn	Hinsdale	11,830
Point of Rocks Res.	Logan	....
Res. No. 2	El Paso	11,270
Res. No. 4	Teller	10,900
Res. No. 5	Teller	10,900
Res. No. 7	El Paso	12,080
Res. No. 8	El Paso-Teller	11,675
Riverside Res.	Weld	....
Res. No. 1, No. 2.	Kiowa	3,770
Res. No. 4	Kiowa	4,025
Res. No. 1	Otero	4,750
Res. No. 4	Otero	4,750
Res. No. 5	Otero	4,750
Shaw	Mineral	9,830
Spruce Lakes	Mineral	11,263
Silver	San Juan	11,675
Seeley	Weld	4,715
San Cristobal	Hinsdale	8,997
Santa Maria	Mineral	9,475
San Luis	Alamosa	7,525
Strawberry	Grand	8,340
Summit	Clear Creek	12,740
Slater	Clear Creek	11,385
Silver	Boulder	10,190
Swedes	Boulder	5,095
Snowden	Otero	4,820
Seven Lakes	Teller	10,900
Sanchez Res.	Costilla	8,500
Stanley Res.	Jefferson	....
Twin Lakes	Lake	9,012
Trout	San Miguel	9,750
Terry	Boulder	5,095
Timnath	Weld	4,900
Two Buttes Res.	Baca-Prowers	4,230
Turkey Creek Res.	Pueblo	5,580
Thatcher	Pueblo-El Paso	5,395
Upper Crater	Gilpin	10,997
Upper Nile	Adams	....
Wellington	Jefferson	9,863
Warren	Larimer	4,985
Woods	Weld	4,860
Woods	Eagle	9,405
Webster Park Res.	Fremont	5,950
Williams-McGreery	Morgan	....

This list includes only some of the more important lakes and reservoirs in the state. There are hundreds of small lakes in the mountains, many of which have no names. On Battlement mesa and Grand mesa, in Delta and Mesa counties, there are more than a hundred comparatively small lakes lying at an altitude above 8,000 feet, all well stocked with trout.

ALTITUDE AND LOCATION OF MOUNTAIN PASSES

Name of Pass	County	Elevation
Antelope	Gilpin	8,050
Argentine	Summit	13,286
Arapahoe	Boulder-Grand	11,906
Beckwith	Gunnison	9,890
Boreas	Park-Summit	11,489
Berthoud	Clear Creek-Grand	11,306
Breckenridge	Summit-Park	11,503
Buchanan	Boulder-Grand	12,304
Buffalo	Jackson-Routt	10,180
Beckwith	Gunnison	9,850
Ceballa	Hinsdale	10,394
Cumbres	Conejos-Archuleta	10,003
Cochetopa	Saguache	11,306
Cinnamon	Hinsdale-San Juan	12,300
Devil's Thumb	Boulder-Grand	11,900
East River	Gunnison	11,163
Elwood	Conejos-Archuleta	11,678
Eagle	La Plata	10,750
Fremont	Lake-Summit	11,320
Fawn Creek	Grand	9,430
Georgia	Park-Summit	11,476
Hagerman	Lake	11,495
Halfmoon	Saguache	12,712
Hoosier	Park-Summit	10,313
Hancock	Gunnison-Chaffee	12,263
Hayden	Fremont	10,780
Hunter	Lake-Pitkin	12,226
Independence	Lake-Pitkin	12,095
Lake Creek	Lake-Gunnison	12,226
La Veta	Huerfano-Costilla	9,378
Loveland	Clear Creek-Summit	11,876
Medanos	Saguache-Huerfano	10,150
Mosquito	Park-Lake	13,188
Mosea	Huerfano-Saguache	9,713
Marshall	Saguache	10,950
Monarch	Chaffee-Gunnison	11,650
Muddy	Jackson-Grand	8,772
Music	Custer-Saguache	11,800
Meadow	Rio Grande-Mineral	10,300
Milnero	Grand-Larimer	10,759
Ohio	Gunnison	10,033
Ophir	San Juan-San Miguel	11,350
Poudre Lakes	Grand-Larimer	10,192
Pearl	Pitkin-Gunnison	12,715
Poncha	Chaffee-Saguache	8,945
Rollins	Boulder-Grand	11,680
Raton	Las Animas	7,893
San Francisco	Las Animas	8,560
Sangre de Cristo	Huerfano-Costilla	9,459
Slumgullion	Hinsdale	11,025
Swampy	Gunnison	10,365
Stony	San Juan	12,594
Tarryall	Park	12,456
Tennessee	Lake	10,276
Trout Creek	Chaffee-Park	9,346
Trimble	La Plata	13,076
Ute	Jackson-Routt	10,900
Victor	Teller	10,202
Weminuche	Hinsdale	10,622
Weston	Lake-Park	12,109
Wolf Creek	Mineral-Archuleta	10,850

COUNTY AGRICULTURAL AGENTS

Twenty-eight counties in Colorado have joined with the federal government and the state agricultural college in the employment of county agricultural agents under the Smith-Lever

act. These agents have proved their value in furthering agricultural development in the counties where they are employed and indications are that all farming counties will have agents within another year. The following is the complete list of county agents on June 15, 1918:

Counties Employing Agents	Agents	Address
Adams	Geo. R. Smith	Brighton
Arapahoe	Walter A. Groom	Littleton
Boulder	H. H. Henderson	Longmont
Delta	E. H. Divilbiss	Delta
Douglas	V. R. Tucker	Castle Rock
El Paso	W. H. Lauck	Colorado Springs
Fremont	R. R. Jeffries	Canon City
Garfield	R. C. Allred	Glenwood Springs
Huerfano	Waldo Kidder	Walsenburg
Jefferson	F. C. Tripp	Golden
Kit Carson	H. O. Strange	Burlington
La Plata	E. D. Smith	Durango
Larimer	D. C. Bascom	Ft. Collins
Las Animas	C. E. Smith	Trinidad
Lincoln	Scott Wisner	Hugo
Logan	Geo. C. Gurckhalter	Sterling
Moffat	H. B. Kobey	Craig
Montezuma	G. P. Newsom	Cortez
Montrose	H. C. Nevius	Montrose
Morgan	C. G. McCord	Ft. Morgan
Otero	W. F. Droge	Rocky Ford
Phillips	L. J. Worthington	Holyoke
Prowers	E. B. Darrow	Lamar
Rio Grande	C. D. Hyatt	Monte Vista
Routt	J. C. Hale	Steamboat Springs
Saguache	Wm. O. Sauder	Center
Sedgwick	Walter J. Ott	Julesburg
Weld	M. E. Knapp	Greeley

ELECTED STATE OFFICIALS

The accompanying list gives the names of all governors of Colorado since the creation of Colorado territory in 1861. The lists of other state officials include only the names of those elected to the various offices since the admission of Colorado into the Union as a state, in 1876, and the terms for which they were elected.

TERRITORIAL GOVERNORS

William Gilpin	1861-1862
John Evans	1862-1865
Alexander Cummings	1865-1867
A. C. Hunt	1867-1869
Edward McCook	1869-1873
Samuel H. Elbert	1873-1874
Edward McCook	1874-1875
John L. Routt	1875-1876

STATE GOVERNORS

John L. Routt	1876-1879
Frederick R. Pitkin	1879-1883
James B. Grant	1883-1885
Benjamin H. Eaton	1885-1887
Alva Adams	1887-1889
Job A. Cooper	1889-1891
John L. Routt	1891-1893
Davis H. Waite	1893-1895
Albert W. McIntire	1895-1897
Alva Adams	1897-1899
Charles S. Thomas	1899-1901
James B. Orman	1901-1903
James H. Peabody	1903-1905
Alva Adams	1905
James H. Peabody	1905
Jesse F. McDonald	1905-1907
Henry A. Buchtel	1907-1909
John F. Shafroth	1909-1913
Elias M. Ammons	1913-1915
George A. Carlson	1915-1917
Julius C. Gunter	1917

LIEUTENANT GOVERNOR

Lafayette Head	1877-1879
Horace A. W. Tabor	1879-1881
Horace A. W. Tabor	1881-1883
Wm. H. Meyers	1883-1885
Peter W. Breene	1885-1887
Norman H. Meldrum	1887-1889
William G. Smith	1889-1891
William Story	1891-1893
David H. Nichols	1893-1895
Jared L. Brush	1895-1897
Jared L. Brush	1897-1899
Francis Carney	1899-1901
David C. Coates	1901-1903
Warren A. Haggott	1903-1905
Arthur Cornforth	1905-1907
E. R. Harper	1907-1909
Stephen R. Fitzgarrald	1909-1911
Stephen R. Fitzgarrald	1911-1913
Stephen R. Fitzgarrald	1913-1915
Moses E. Lewis	1915-1917
James E. Pulliam	1917-1919

SECRETARY OF STATE

Wm. M. Clark	1877-1879
Norman H. Meldrum	1879-1881
Norman H. Meldrum	1881-1883
Melvin Edwards	1883-1885
Melvin Edwards	1885-1887
James Rice	1887-1889
James Rice	1889-1891
Edwin J. Eaton	1891-1893
Nelson O. McClees	1893-1895
Albert B. McGaffey	1895-1897
Charles H. S. Whipple	1897-1899
Elmer F. Beckwith	1899-1901
David F. Mills	1901-1903
James Cowie	1903-1905
James Cowie	1905-1907
Timothy O'Connor	1907-1909
James B. Pearce	1909-1911
James B. Pearce	1911-1913
James B. Pearce	1913-1915
John E. Ramer	1915-1917
James R. Noland	1917-1919

STATE TREASURER

George C. Corning	1877-1879
Nathan S. Culver	1879-1881
W. C. Sanders	1881-1883
Fred Walsen	1883-1885
George R. Swallow	1885-1887
Peter W. Breene	1887-1889
W. H. Brisbane	1889-1891
James N. Carlile	1891-1893
Albert Nance	1893-1895
Harry E. Mulnix	1895-1897
George W. Kephart	1897-1899
John H. Fesler	1899-1901
James N. Chipley	1901-1903
Whitney Newton	1903-1905
John A. Holmberg	1905-1907
Alfred E. Bent	1907-1909
William J. Galligan	1909-1911
Roady Kenehan	1911-1913
Michael A. Leddy	1913-1915
Allison E. Stocker	1915-1917
Robert H. Higgins	1917-1919

AUDITOR OF STATE

David C. Crawford	1877-1879
Eugene K. Stimson	1879-1881
Joseph A. Davis	1881-1883
J. C. Abbott	1883-1885
Hiram A. Spruance	1885-1887
Darwin P. Kingsley	1887-1889
L. B. Schwanbeck	1889-1891
John M. Henderson	1891-1893
F. M. Goodykoontz	1893-1895
Clifford C. Parks	1895-1897
John W. Lowell	1897-1899
George W. Temple	1899-1901
Charles W. Crowter	1901-1903
John A. Holmberg	1903-1905
Alfred E. Bent	1905-1907
George D. Statler	1907-1909
Roady Kenehan	1909-1911
Michael A. Leddy	1911-1913
Roady Kenehan	1913-1915
Harry E. Mulnix	1915-1917
Charles H. Leckenby	1917-1919

ATTORNEY GENERAL

A. J. Sampson	1877-1879
Charles W. Wright	1879-1881
Charles Toll	1881-1883
D. C. Urmy	1883-1885
Theodore H. Thomas	1885-1887
Alvin Marsh	1887-1889
Samuel W. Jones	1889-1891
Jos. H. Maupin	1891-1893
Eugene Engley	1893-1895
Byron L. Carr	1895-1897
Byron L. Carr	1897-1899
David M. Campbell	1899-1901
Charles C. Post	1901-1903
Nathan C. Miller	1903-1905
Nathan C. Miller	1905-1907
William H. Dickson	1907-1909
John T. Barnett	1909-1911
Benjamin J. Griffith	1911-1913
Fred Farrar	1913-1915
Fred Farrar	1915-1917
Leslie E. Hubbard	1917-1919

SUPERINTENDENT OF PUBLIC INSTRUCTION

Joseph C. Shattuck	1877-1879
Joseph C. Shattuck	1879-1881
Leonidas S. Cornell	1881-1883
Joseph C. Shattuck	1883-1885
Leonidas S. Cornell	1885-1887
L. S. Cornell	1887-1889
Fred Dick	1889-1891
Nathan Coy	1891-1893
John F. Murray	1893-1895
Angenette J. Peavey	1895-1897
Grace Espey Patton	1897-1899
Helen L. Grenfell	1899-1901
Helen L. Grenfell	1901-1903
Helen L. Grenfell	1903-1905
Katherine L. Craig	1905-1907
Katherine L. Craig	1907-1909
Katherine M. Cook	1909-1911
Helen M. Wixon	1911-1913
Mary C. C. Bradford	1913-1915
Mary C. C. Bradford	1915-1917
Mary C. C. Bradford	1917-1919

RANK IN POPULATION, 1910

County—	Rank	Population
Denver	1	213,381
Pueblo	2	52,223
El Paso	3	43,321
Weld	4	39,177
Las Animas	5	33,643
Boulder	6	30,330
Larimer	7	25,270
Mesa	8	22,197
Otero	9	20,201
Fremont	10	18,181
Teller	11	14,351
Jefferson	12	14,231
Delta	13	13,688
Huerfano	14	13,320
Conejos	15	11,285
La Plata	16	10,812
Lake	17	10,600
Montrose	18	10,291
Arapahoe	19	10,263
Garfield	20	10,144
Morgan	21	9,577
Logan	22	9,549
Prowers	23	9,520
Adams	24	8,892
Yuma	25	8,499
Chaffee	26	7,622
Routt	27	7,561
Kit Carson	28	7,483
Rio Grande	29	6,563
Washington	30	6,002
Lincoln	31	5,917
Gunnison	32	5,897
Costilla	33	5,498
Elbert	34	5,331
Bent	35	5,043
Montezuma	36	5,029
Clear Creek	37	5,001
San Miguel	38	4,700
Pitkin	39	4,492
Saguache	40	4,160
Gilpin	41	4,131
Cheyenne	42	3,687
Ouray	43	3,514
Archuleta	44	3,302
Douglas	45	3,192
Phillips	46	3,179
San Juan	47	3,063
Sedgwick	48	3,061
Eagle	49	2,985
Kiowa	50	2,899
Baca	51	2,516
Park	52	2,492
Rio Blanco	53	2,332
Summit	54	2,003
Custer	55	1,947
Grand	56	1,862
Mineral	57	1,239
Jackson	58	1,013
Hinsdale	59	646
Dolores	60	642

RANK OF COUNTIES IN AREA

County—	Rank	Area
Las Animas	1	3,077,760
Moffat	2	3,033,600
Weld	3	2,574,080
Rio Blanco	4	2,062,720
Gunnison	5	2,034,560
Mesa	6	2,024,320
Saguache	7	2,005,120
Garfield	8	1,988,480
Larimer	9	1,682,560
Lincoln	10	1,644,800
Baca	11	1,633,280
Washington	12	1,613,440
Pueblo	13	1,557,120
Yuma	14	1,514,880
Montrose	15	1,448,960
Routt	16	1,425,280
Park	17	1,415,680
Kit Carson	18	1,381,760
El Paso	19	1,357,440
Montezuma	20	1,312,640
Grand	21	1,194,240
Elbert	22	1,188,480
La Plata	23	1,184,540
Logan	24	1,166,080
Kiowa	25	1,150,720
Cheyenne	26	1,137,280
Jackson	27	1,044,480
Prowers	28	1,043,200
Eagle	29	1,036,800
Fremont	30	996,480
Bent	31	975,360
Huerfano	32	960,000
San Miguel	33	824,320
Morgan	34	823,040
Costilla	35	810,000
Adams	36	807,680
Archuleta	37	780,800
Delta	38	768,640
Otero	39	762,080
Conejos	40	714,960
Chaffee	41	693,120
Dolores	42	667,520
Pitkin	43	652,160
Hinsdale	44	621,440
Rio Grande	45	574,720
Crowley	46	560,800
Mineral	47	554,240
Douglas	48	540,800
Arapahoe	49	538,880
Jefferson	50	536,320
Alamosa	51	500,000
Boulder	52	488,960
Custer	53	478,080
Phillips	54	440,320
Summit	55	415,360
Teller	56	350,080
Sedgwick	57	339,840
Ouray	58	332,160
San Juan	59	289,920
Clear Creek	60	249,600
Lake	61	237,440
Gilpin	62	84,480
Denver	63	37,120
		66,341,120