

NR9/200.11/1963

9.1

COLORADO STATE PUBLICATIONS LIBRARY



3 1799 00125 0265

# COLORADO BUREAU OF MINES

State Services Building  
1525 Sherman Street  
Denver, Colorado 80203

A Division of the Department of Natural Resources

# Annual Report

For the Year

1963



**G. A. FRANZ, JR.**  
**Deputy Commissioner of Mines**

Publication Approved by E. G. Spurlin, State Controller



# COLORADO BUREAU OF MINES

State Services Building  
1525 Sherman Street  
Denver, Colorado 80203

A Division of the Department of Natural Resources

# Annual Report

For the Year

1963



**G. A. FRANZ, JR.**  
**Deputy Commissioner of Mines**

Publication Approved by E. G. Spurlin, State Controller

Printed by Publishers Press of Denver



# Table of Contents

	Page
Letter of Transmittal.....	3
Personnel .....	4
Commissioners of Mines.....	5
Districts of Inspection.....	6
Publications of the Bureau of Mines.....	8
Foreword .....	11
Minerals in 1963.....	13
Summary of Production.....	15
County Activity and Production.....	16
Safety Awards .....	41
Injuries .....	43
Summary of Injuries.....	44
Fatal Injuries .....	44
Lost-Time Injury Statistics.....	46
Men Employed .....	48
First Aid Training.....	49
Mineral Specimen Collections.....	49
Inspections .....	50
Information Reports .....	51
Radon Daughter Control Program.....	52
Dust and Gas Control Program.....	54
List of Mineral Operations.....	55
List of Highway Projects.....	80
List of Oil and Gas Drilling and Producing Companies.....	82

CONR  
4  
M 5  
1963

# Letter of Transmittal

May 1, 1964

Honorable John A. Love  
Governor of Colorado  
State Capitol  
Denver

Dear Governor Love:

In compliance with the requirements of Chapter 92, Article 32, Section 11, of the Colorado Revised Statutes 1953, I have the honor to transmit herewith the Report of the State Bureau of Mines for the year 1963.

Respectfully submitted,  
G. A. FRANZ, JR.  
Deputy Commissioner of Mines

## Personnel

G. A. FRANZ, JR., Deputy Commissioner.....	Lakewood
DAVID R. COLE, Senior Inspector.....	Grand Junction
NORMAN R. BLAKE, Inspector, District No. 1.....	Black Hawk
JOSEPH L. KEATING, Inspector, District No. 2.....	Colorado Springs
JOHN W. DOYLE, Inspector, District No. 3.....	Leadville
ELZIE D. RAY, Inspector, District No. 4.....	Montrose
JOHN H. PAKKA, Dust and Gas Inspector.....	Telluride
THOMAS D. HIGH, Uranium Mine Inspector.....	Palisade
WILLIAM E. HORN, Uranium Mine Inspector.....	Naturita
CALVIN T. WARNICA, Uranium Mine Inspector.....	Nucla
MARGARET G. LAWRENCE, Office Manager.....	Denver
THELMA L. MACMANUS, Senior Account Clerk.....	Denver
CATHERINE C. CLARK, Senior Statistical Clerk.....	Littleton
FERN F. COLBURN, Receptionist.....	Denver
GWEN J. BRITO, Clerk Typist.....	Delta

## Commissioners of Mines

HARRY A. LEE.....	May 11, 1895-May 10, 1903
E. L. WHITE.....	May 10, 1903-May 10, 1907
T. J. DALZELL.....	May 10, 1907-May 10, 1911
T. R. HENAHEN.....	May 10, 1911-May 10, 1915
FRED CARROLL.....	May 10, 1915-May 10, 1919
HORACE F. LUNT.....	June 1, 1919-June 1, 1923
JOHN T. JOYCE.....	June 1, 1923-June 12, 1939
EDWARD P. ARTHUR.....	June 12, 1939-August 26, 1943
FRED JONES.....	September 27, 1943-April 25, 1950
WALTER E. SCOTT, JR.....	May 3, 1950-May 31, 1959

## Directors of Natural Resources

DR. EDWARD L. CLARK.....	October 15, 1959-March 7, 1962
FELIX L. SPARKS.....	August 2, 1962-June 30, 1963

## Coordinator of Natural Resources

RICHARD T. ECKLES.....	August 15, 1963
------------------------	-----------------

## Deputy Commissioner of Mines

G. A. FRANZ, JR.....	June 1, 1959
----------------------	--------------

## Districts of Inspection

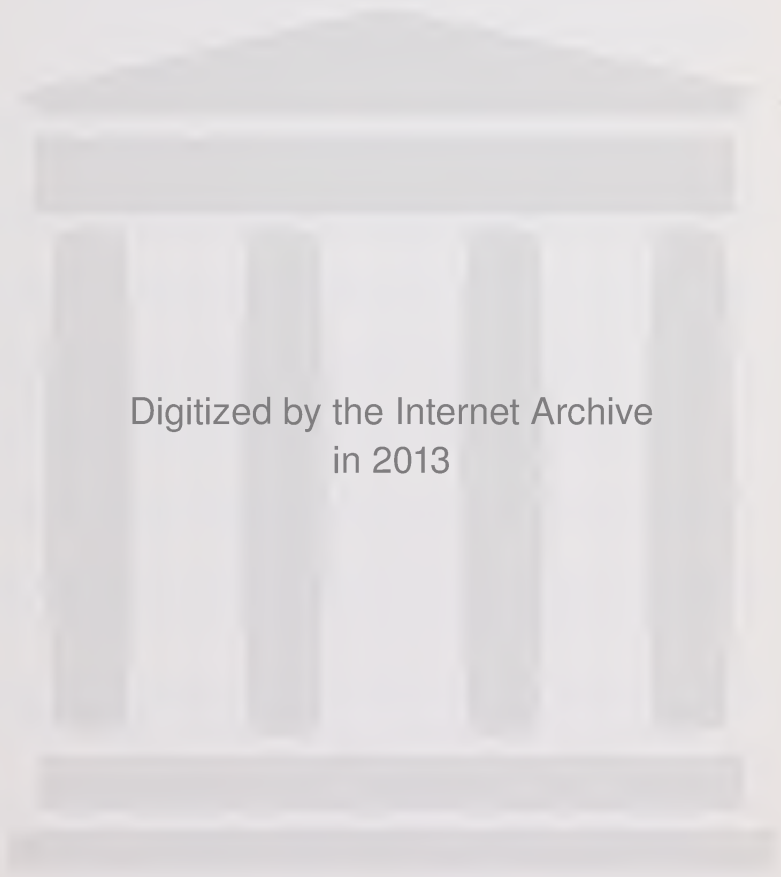
**DISTRICT NO. 1**, all of the following counties: Adams, Arapahoe, Boulder, Cheyenne, Clear Creek, Denver, Douglas, Gilpin, Grand, Jackson, Jefferson, Larimer, Logan, Morgan, Phillips, Sedgwick, Washington, Weld, Yuma, and that part of Park County lying north of Fairplay.

**DISTRICT NO. 2**, all of the following counties: Alamosa, Baca, Bent, Conejos, Costilla, Crowley, Custer, Elbert, El Paso, Fremont, Huerfano, Kiowa, Kit Carson, Las Animas, Lincoln, Otero, Prowers, Pueblo, Teller, and that part of Park County lying south of Fairplay.

**DISTRICT No. 3**, all of the following counties: Chaffee, Eagle, Garfield, Lake, Mineral, Moffat, Pitkin, Rio Blanco, Rio Grande, Routt, Summit, and that part of Gunnison County in the extreme northwest corner and lying north of the 39th degree of latitude, and that part of Saguache County lying south and east of the Continental Divide.

**DISTRICT NO. 4**, all of the following counties: Archuleta, Delta, Dolores, Hinsdale, La Plata, Mesa, Montezuma, Montrose, Ouray, San Juan, San Miguel, and Gunnison County, except the extreme northwest corner lying north of the 39th degree of latitude, and that part of Saguache County lying north and west of the Continental Divide.





Digitized by the Internet Archive  
in 2013

# Publications of the Bureau of Mines

## BULLETINS

Bulletin No. 1, Recommendations for Safety Appliance in Mining, Harry A. Lee, Commissioner of Mines, 1896.

Bulletin No. 2, Precious Metal Production for the Year 1898, Harry A. Lee, Commissioner of Mines, 1899.

Bulletin No. 3, Mining Laws, Relative to Bureau of Mines Precious Metal Production, Harry A. Lee, Commissioner of Mines, 1899.

Bulletin No. 4, Precious Metal Production, Harry A. Lee, Commissioner of Mines, 1901.

Bulletin No. 5, Precious Metal Production, Harry A. Lee, Commissioner of Mines, 1902.

Bulletin No. 6, Regulations Relative to the Construction, Equipment and Operation of Metalliferous Mines, Mills and Metallurgical Plants, Recommendations and Mineral Production for 1905, E. L. White, Commissioner of Mines, 1906.

Bulletin No. 7, Federal and State Laws Relating to Mining, Fred Carroll, Commissioner of Mines, 1916.

Supplement to Bulletin No. 7, Mining Laws Enacted by the Twenty-First General Assembly, Fred Carroll, Commissioner of Mines, 1917.

Supplement No. 2 to Bulletin No. 7, Amendments to the Mining Laws Enacted by the Twenty-Second General Assembly, Horace F. Lunt, Commissioner of Mines, 1919.

Supplement No. 3 to Bulletin No. 7, Amendments to Laws Relating to Mining Enacted by the Twenty-Third General Assembly, Horace F. Lunt, Commissioner of Mines, 1921.

Supplement No. 4 to Bulletin No. 7, Amendments to Laws Relating to Mining Enacted by the Twenty-Fourth General Assembly, Horace F. Lunt, Commissioner of Mines, 1923.

Bulletin No. 8, The Oil Shales of Northwestern Colorado, Horace F. Lunt, Commissioner of Mines, 1919.

Bulletin No. 9, Mine Safety Standards, Horace F. Lunt, Commissioner of Mines, 1920.

Bulletin No. 11, Federal and State Laws Relating to Mining, John T. Joyce, Commissioner of Mines, 1931.

- Bulletin No. 12, Mining Laws of Colorado, Edward P. Arthur, Commissioner of Mines, 1942.
- Bulletin No. 13, Mining Laws of Colorado, Fred Jones, Commissioner of Mines, 1946.
- Bulletin No. 14, Mining Laws of Colorado, Fred Jones, Commissioner of Mines, 1949.
- Bulletin No. 15, Oil Well Safety Laws, Walter E. Scott, Jr., Commissioner of Mines, 1953.
- Circular No. 1, Location of Lode and Placer Mining Claims, Walter E. Scott, Jr., Commissioner of Mines, 1953.
- Bulletin No. 16, Colorado Mining Laws with Rules and Regulations, Walter E. Scott, Jr., Commissioner of Mines, 1954.
- Circular No. 1, Revised, Location of Lode and Placer Mining Claims, Walter E. Scott, Jr., Commissioner of Mines, 1957.
- Bulletin No. 17, Safety Rules and Regulations (Condensed), G. A. Franz, Jr., Deputy Commissioner of Mines, 1959.
- Circular No. 2, Minerals of Colorado and Area Locations, G. A. Franz, Jr., Deputy Commissioner of Mines, 1960.
- Bulletin No. 18, Oil Well Safety Laws, G. A. Franz, Jr., Deputy Commissioner of Mines, 1961.
- Circular No. 3, Location Regulations for Lode and Placer Mining Claims, Tunnel Sites and Mill Sites, G. A. Franz, Jr., Deputy Commissioner of Mines, 1961.
- Bulletin No. 19, Colorado Mining Laws with Safety Rules and Regulations, G. A. Franz, Jr., Deputy Commissioner of Mines, 1962.

## REPORTS

- Report of Bureau of Mines, Colorado, from its Establishment in May, 1895, to November 30, 1896, Harry A. Lee, Commissioner of Mines.
- Annual Reports for 1897-1898, Harry A. Lee, Commissioner of Mines.
- Biennial Reports for 1899-1902, Harry A. Lee, Commissioner of Mines.
- Biennial Reports for 1903-1906, E. L. White, Commissioner of Mines.

Biennial Reports for 1907-1910, T. J. Dalzell, Commissioner of Mines.

Biennial Reports for 1911-1914, T. R. Henahen, Commissioner of Mines.

Biennial Reports for 1915-1918, Fred Carroll, Commissioner of Mines.

Annual Reports for 1919-1922, Horace F. Lunt, Commissioner of Mines.

Annual Reports for 1923-1924, John T. Joyce, Commissioner of Mines.

Annual Report for 1925 was not printed because of lack of funds. Manuscript is on file in the office of the State Bureau of Mines.

Annual Reports for 1926-1935, John T. Joyce, Commissioner of Mines.

Owing to lack of funds the Annual Report for 1936 was not published.

Annual Report for 1937, John T. Joyce, Commissioner of Mines.

Owing to lack of funds the Annual Report for 1938 was not published.

Annual Report for 1939, Edward P. Arthur, Commissioner of Mines.

Owing to lack of funds the Annual Report for 1940 was not published.

Annual Report for 1941, Edward P. Arthur, Commissioner of Mines.

Annual Reports for 1942 and 1943, Fred Jones, Commissioner of Mines.

List of Mines for 1944 and 1945, Fred Jones, Commissioner of Mines.

Annual Reports for 1946-1947, Fred Jones, Commissioner of Mines.

Annual Report for 1948 was not published.

Annual Reports for 1949-1958, Walter E. Scott, Jr., Commissioner of Mines.

Annual Reports for 1959-1963, G. A. Franz, Jr., Deputy Commissioner of Mines.

## Foreword

During the year the Colorado Bureau of Mines was called upon to answer more inquiries regarding mineral deposits in the State than in any previous year in the last decade. If nothing else, this is a positive indication that our mineral reserves are under surveillance and that their potential is being considered by the industry. In answering these inquiries we are forcefully reminded that our geological work in the State has been sadly neglected since our Colorado Geological Survey became inactive several years ago. Up to date bulletins and professional papers covering most all of our minerals now in demand are urgently needed. Current professional information on the location, size, and quality of our deposits would materially aid in bringing new industry to Colorado. A State Geologist, acting for the entire State in drafting cooperative works with the United States Geological Survey, would result in Colorado receiving the maximum aid from this federal agency. Up to date information would be made available for those desiring to locate in Colorado. Your Bureau of Mines would welcome the opportunity to work with a State Geologist.

Considerable interest was developed in 1963 for the possible erection of an Imperial type smelter in Colorado. This particular type of plant, it is so stated, will accept ores containing lead, zinc, copper as well as gold and silver and will make a separation so that each metal can be paid for at prevailing prices. There is no question of the desirability of a plant that can make this separation and the industry is to be complimented on their research into this subject.

For many years small properties in Colorado have been handicapped by the lack of milling facilities which would enable them to dispose of their milling grade ore as well as their high grade ore. The lack of this facility has kept many small operations from producing and as a result has seriously retarded development work at most small properties. A custom mill capable of sampling and purchasing small lots of ore from mines in the areas would correct many of the ailments of our mineral industry as they exist today. With several of these plants located at strategic places in our various mineral belts, small operators could and would produce Colorado ore with a small capital investment. Many small mines that have been able to continue production have developed into large operations and mining operations of any kind have materially aided community economy and employment.

Production of petroleum products from Colorado oil shale at this time appears to be approaching reality, many years earlier than anticipated. There are several indications that many of the major oil companies are vitally interested in



getting this research and production under way as soon as possible. Our Colorado School of Mines Research Foundation has indicated their desire to take over the United States Bureau of Mines plant and property located west of Rifle for the purpose of further research and investigation in association with several oil companies. Most of the major oil companies now have substantial holdings of oil shale property and have requested further leases from the Department of Interior. The expanding cost of petroleum exploration, along with increasing costs of proving up a field, has materially aided the prospects for early oil shale production. In all probability the safety jurisdiction of these properties will be with the Bureau of Mines and we wish to extend to all operators our full support in making this industry Colorado's largest and safest.

For their interest and support of mine safety we wish to thank the Governor of this State and the Colorado Legislature. For their assistance to our programs during the year, acknowledgment is gratefully given to the Occupational Health Section of the Colorado Health Department, the United States Bureau of Mines and the United States Public Health Service.

Information in this report and the compilation of the same came from the generous contributions and untiring efforts of every member of this Department, both clerical and inspection. Their unqualified support and loyalty are gratefully acknowledged.

G. A. FRANZ, JR.

## Minerals in 1963

Colorado's 1963 mineral production of \$340,878,270 was 3.4 million dollars more than in 1962, or an increase of slightly more than 1%. Metallic mineral production accounted for 40% of the total, nonmetallic minerals accounted for 14%, and mineral fuels accounted for 45%. Increased production was noted for 14 of the major minerals while 10 showed a decrease from 1962.

The decrease in uranium, tungsten, gold, pyrite, and beryl production was overcome by increased output of molybdenum, lead, zinc, silver, vanadium, and copper. Increased metal prices for lead, zinc, silver, and copper were an inducement for mining companies to conduct full scale operations for the year. Resumption of operations at the Keystone Mine in Gunnison County added materially to base metal production. Molybdenum production was steady during the year at the American Metals Climax property in Lake County, which accounts for the increased production of molybdenum. Uranium production was down 12.1 million dollars which was partially equalized by increased vanadium output. The first full year of reduced uranium purchases by the Atomic Energy Commission was in 1963 and this year's total is an indication of the amount of production which can be expected annually until 1970.

During 1963 many long inactive old silver, lead, and zinc properties, located on both sides of the Continental Divide, were opened for sampling and evaluation purposes and this work was in progress at the end of the year. Production from these properties will depend on the final evaluation of ore encountered and a continued marketable price for base and precious metals. This activity is the result of an increased demand and more favorable market prices for silver, lead, and zinc.

Of the important nonmetallic minerals produced in 1963, six increased over 1962 and four declined. Increased sand and gravel, stone, scoria, and limestone production was sufficient to overcome the slight drop in cement, clay, fluorspar, and gypsum. Miscellaneous nonmetallics increased considerably which indicates more demand for a larger variety of Colorado's nonmetal products. Activities at the Burlington Mine operated by the General Chemical Division, Allied Chemical Corporation, were curtailed considerably during the year which was responsible for a 75% drop in the State's fluorspar production. Sand and gravel production increased near 8% and stone production increased near 60% over 1962, which slightly overcame the losses in cement, clay, and fluorspar. Gemstone production increased 50% over 1962.

Mineral fuel production consisting of petroleum, gas, and

coal was off 10.5 million dollars in 1963 from 1962, a drop of 7%. The major decline was in petroleum production which was 12 million dollars less than in the previous year or 61 million less than in the peak year of 1957. Leveling off production from Adena, Plumb-Bush, and Rangely fields accounts for the decline despite water flooding operations which are calculated to extend recovery by over 100%. New discoveries have not kept pace with abandonments. Coal production increased 3.3 million dollars, due principally to production from the Energy Coal Company pits in Routt County. Other on-the-site steam electric plants now under construction will add to Colorado's coal production in 1964.

Colorado's mineral production is calculated by multiplying the units of production by the average yearly price of the mineral. Some average prices used in 1963 are as follows: Gold—\$35.00 per ounce, Silver—\$1.28 per ounce, Copper—30.6¢ per pound, Lead—11¢ per pound, Zinc—12¢ per pound, Molybdenum—\$1.40 per pound, Uranium—\$8.00 per pound, Vanadium—\$1.80 per pound.

Information in this report is gathered by Bureau of Mines inspectors and office personnel and although the production figures cannot be accepted as final they are as nearly accurate as is possible to secure at this early date. They are intended as a preliminary indication and cannot be used for tax or other valuation purposes. Petroleum production is supplied by the Colorado Oil and Gas Conservation Commission. Coal production is supplied by the State Coal Mine Division. Metallic and nonmetallic mineral production figures are received directly from the operator and in some cases where these reports are incomplete, an estimate from inspection reports is used.



# Production of Metals, Nonmetallics, Mineral Fuels

## State Totals

<b>Metallics</b>	<b>1963 Production</b>	<b>Cumulative Through 1963</b>
Molybdenum .....	\$ 66,393,503	\$ 679,426,293
Uranium .....	33,479,808	815,168,612
Vanadium .....	10,117,711	90,531,971
Zinc .....	13,102,189	390,701,328
Tungsten .....	1,369,392	42,650,845
Lead .....	4,578,580	338,189,238
Copper .....	2,553,175	104,208,718
Gold .....	1,355,146	917,074,675
Silver .....	2,994,812	598,170,320
Pyrite .....	607,780)	
Iron .....	160,000)	8,075,143
Beryl .....	150,195	1,280,484
Tin .....	66,450	503,233
Miscellaneous Metallics .....	2,540,000	13,730,120
<div style="display: flex; justify-content: space-between;"> <span><b>Total Metallic Mineral Production .....</b></span> <span style="text-align: right;"><b>\$139,467,741</b></span> <span style="text-align: right;"><b>\$3,999,709,978</b></span> </div>		
<b>Nonmetallics</b>		
Cement .....	\$ 16,595,840	\$ 160,272,046
Sand and Gravel .....	19,873,180	151,686,330
Stone .....	4,375,135	28,155,564
Limestone .....	2,452,161	35,846,915
Clay .....	1,459,299	18,542,292
Fluorspar .....	438,075	31,314,832
Feldspar, Mica, Gypsum .....	369,957	10,536,164
Volcanic Scoria, Pumicite .....	98,104	3,577,526
Peat Moss .....	118,729	395,439
Gemstones .....	61,525	334,203
Miscellaneous Nonmetallics .....	2,063,082	5,943,099
<div style="display: flex; justify-content: space-between;"> <span><b>Total Nonmetallic Mineral Production .....</b></span> <span style="text-align: right;"><b>\$ 47,905,087</b></span> <span style="text-align: right;"><b>\$ 446,604,410</b></span> </div>		
<b>Mineral Fuels</b>		
Crude Oil .....	\$110,255,919	\$1,877,486,772
Gas Sold .....	9,947,432)	
Gas (All classes, well head value)....	9,186,889)	167,036,685
Coal .....	24,115,202	2,131,001,058
<div style="display: flex; justify-content: space-between;"> <span><b>Total Mineral Fuel Production..</b></span> <span style="text-align: right;"><b>\$153,505,442</b></span> <span style="text-align: right;"><b>\$4,175,524,515</b></span> </div>		
<div style="display: flex; justify-content: space-between;"> <span><b>TOTAL STATE MINERAL PRODUCTION .....</b></span> <span style="text-align: right;"><b>\$340,878,270</b></span> <span style="text-align: right;"><b>\$8,621,838,903</b></span> </div>		

## County Activity and Production

### ADAMS (1)

\*Brighton

Area 1,250 square miles

Plants, projects, petroleum—84 men

Petroleum production of 478,045 barrels from 64 wells in Adams County was a decrease from the 607,988 barrels produced in 1962. Twenty-three fields were active in the County and a normal number of exploration and development wells were drilled. Sand and gravel was produced from pits operated by Cooley Sand & Gravel Company, Boise Cascade Sand & Gravel Company, and the Brannan Sand & Gravel Company. Some gold was recovered in the process of washing gravel.

Gold .....	\$	2,186
Silver .....		945
Total .....		\$ 3,131
Sand and Gravel .....	\$	3,256,830
Petroleum .....		1,376,770
Gas .....		67,109
Total .....		\$ 1,443,879
TOTAL PRODUCTION FOR COUNTY .....		\$ 4,703,840

### ARCHULETA (4)

\*Pagosa Springs

Area 1,364 square miles

Projects, petroleum—133 men

Petroleum was again the principal mineral product of Archuleta County. Approximately 103,000 barrels from 30 wells for the year, located mostly in the Gramps Field, made up the major part of this production. Crude petroleum was refined at the Oriental Refining Company Plant in Alamosa and Denver. Sand and gravel for construction purposes made up the balance of County mineral production. Some prospecting for rare minerals was evident.

Sand and Gravel .....	\$	94,129
Petroleum .....	\$	228,200
TOTAL PRODUCTION FOR COUNTY .....		\$ 322,329

### BACA (2)

\*Springfield

Area 2,565 square miles

Projects, petroleum—81 men

Intensive exploration drilling in Baca County has been responsible for petroleum production of 262,368 barrels coming

\*County seats

from 19 wells. Gas production amounting to 1,144,845 MCF from 19 wells added to county production. Production from this County has increased steadily for the past several years. Sand and gravel produced was used in highway construction and general contracting work.

Sand and Gravel .....	\$ 80,211
Petroleum .....	755,620
Gas .....	106,304
<hr/>	
Total .....	\$ 861,924
TOTAL PRODUCTION FOR COUNTY.....	\$ 942,136

**BOULDER (1)**

\*Boulder

Area 758 square miles

Mines, plants, quarries, projects, petroleum—203 men

Stone, sand and gravel, peat, fluorspar, uranium, gold and silver, clay and petroleum made up Boulder County's production in 1963. Due to unfavorable tungsten prices this once great Boulder County industry was at a standstill. Increased prices of silver, lead and zinc have some effect on stepped up exploration and development of these minerals. Steen Mining Company continued developing the Cash and Rex mines and some ore was milled from these properties at the Marion Mill which is operated by Earl G. Sweeney. Building stone production from this County's many quarries was steady during the year as demand for the vari-colored sandstone increased. Fluorspar production declined during the year due to cutbacks in mining and milling at the General Chemical Company's mine and mill. Petroleum production came from wells in the County. With increasing mineral prices in the offing, Boulder County's vast storehouse of minerals will have an effect on the County's economy.

Gold .....	\$ 8,386
Silver .....	2,272
Miscellaneous .....	2,000
<hr/>	
Total .....	\$ 12,658
Sand and Gravel .....	837,073
Fluorspar .....	438,075
Stone .....	230,317
Clay .....	40,000
Peat .....	27,391
Gemstones .....	1,200
<hr/>	
Total .....	\$ 1,574,056
Petroleum .....	\$ 6,578
TOTAL PRODUCTION FOR COUNTY.....	\$ 1,593,292

\*County seats

**CHAFFEE (3)**

\*Salida

Area 1,040 square miles

Mines, plants, quarries—23 men

The Western Feldspar Milling Company closed and dismantled its plant at Salida in November of 1963, bringing to a close long-standing operations in the County. L. & V. Products Company operated its new plant on the old smelter site where a special grade of volcanic scoria is ground and packaged and sold for its absorbing and deodorant qualities. The Monarch Quarry operated by Colorado Fuel and Iron Corporation resumed operations in June and continued through to the end of November. Limestone is mined and crushed for flux used at their Arkansas Valley plant in Pueblo. Other quarries in operation during the year were The Crystal Quarry operated by The Colorado Granite Company, and the Shannon Last Chance Quarry operated by the Colorado Granite Grit Company. Cotter Corporation did some work on the Stonewall Mine five miles south of St. Elmo.

Lead .....	\$	2,000
Zinc .....		4,000
		<hr/>
Total .....	\$	6,000
Sand and Gravel .....		80,040
Limestone .....		571,596
Stone .....		162,000
Feldspar, Mica, etc. ....		20,293
Gemstones .....		1,000
		<hr/>
Total .....	\$	834,929
TOTAL PRODUCTION FOR COUNTY .....	\$	840,929

**CLEAR CREEK (1)**

\*Georgetown

Area 395 square miles

Mines, plants, projects—170 men

Mine development in Clear Creek County was noticeably active during 1963, with 35 separate operations listed by the Bureau of Mines. Of significant value to the County were sampling and development operations at the Urad Mine which was purchased by American Metals Climax Company late in the year. Should the company elect to operate this molybdenum property located east of Berthoud Pass, it will definitely be a boost to County economy. During the year the Black Eagle Mill, owned by the Jack Pine Mining Company, was rehabilitated and placed in service for receiving custom ore by the Atlas Mining and Milling Company. Considerable ore was mined from Cascade Tunnel by Humphreys Engineering Com-

\*County seats

pany and this ore was shipped to out-of-state smelters. Many of the above mentioned 35 properties were in the process of sampling and developing ore which was made more attractive by the continual rise in silver and base metal prices. Bur-Jay Minerals worked steadily on development work at the Diamond property located in Silver Plume. Work was started late in the year on the Straight Creek Highway Pilot Bore by the Mid-Valley Incorporated, contractors for the State Highway Department.

Gold .....	\$	1,109
Silver .....		311,790
Copper .....		1,810
Lead .....		4,887
Zinc .....		6,648
Miscellaneous .....		40,000
<hr/>		
Total .....	\$	366,244
Sand and Gravel .....	\$	10,511
TOTAL PRODUCTION FOR COUNTY.....	\$	376,755

**CONEJOS (2)**

\*Conejos

Area 1,274 square miles  
 Mines, plants—49 men

Perlite processing at the Antonito plant operated by the Great Lakes Carbon Corporation was steady all year on ores shipped in from New Mexico. Some turquoise was mined at the King Turquoise Mine operated by W. P. King and located ten miles north of Manassa. Sand and gravel were also produced for highway and construction projects.

Sand and Gravel .....	\$	48,838
TOTAL PRODUCTION FOR COUNTY.....	\$	48,838

**COSTILLA (2)**

\*San Luis

Area 1,220 square miles  
 Quarry, petroleum—21 men

The Mesita Hill Quarry and Plant operated by the Colorado Aggregate, Incorporated, located at Mesita had a steady production of volcanic scoria during the year. Sand and gravel production and some oil well drilling activity added to the County's mineral employment.

Sand and Gravel .....	\$	95,341
Scoria .....		27,000
<hr/>		
Total .....	\$	122,341
TOTAL PRODUCTION FOR COUNTY.....	\$	122,341

\*County seats



**CUSTER (2)**

\*Westcliffe

Area 738 square miles

Mines, plants, quarry—41 men

Increased prices of silver, lead, and zinc stimulated activity in Custer County in 1963. Eight silver, gold, lead, and zinc properties were under development during the year which includes two mines that were active last year. Rancite used in soil conditioning was produced at the Abbit open pit mine south of Rosita. Vermiculite was produced at the Cook mine, perlite was produced at the Rosita Quarry and vermiculite was produced at Silver Cliff. In general much more varied activity was evident in 1963 from 1962.

Sand and Gravel .....	\$	1,000
Miscellaneous .....		48,980
		<hr/>
Total .....	\$	49,980
<b>TOTAL PRODUCTION FOR COUNTY.....</b>	<b>\$</b>	<b>49,980</b>

**DELTA (4)**

\*Delta

Area 1,161 square miles

Plant, project—33 men

Coal, sand and gravel, and soil conditioner comprised Delta County mineral production in 1963. Some road construction and reclamation projects added to County employment.

Sand and Gravel .....	\$	33,632
Coal .....	\$	167,197
<b>TOTAL PRODUCTION FOR COUNTY.....</b>	<b>\$</b>	<b>200,829</b>

**DENVER (1)**

\*Denver

Area 73 square miles

Plants—167 men

With the exception of sand and gravel, no minerals are produced in Denver County, although many mining and petroleum companies have their main offices in Denver. Many minerals produced in the State are processed and fabricated in Denver. The American Smelting & Refining Company Globe Plant, located in north Denver, refines metals from other areas which include cadmium. The General Chemical Division of Allied Chemical Corporation Plant located on West Bayaud Street processes pyritic ore for sulphuric acid and other chemicals.

Sand and Gravel .....	\$	256,930
<b>TOTAL PRODUCTION FOR COUNTY.....</b>	<b>\$</b>	<b>256,930</b>

\*County seats

**DOLORES (4)**

\*Dove Creek

Area 1,029 square miles

Mines, plants, projects—137 men

The increased price of silver had an effect on silver prospecting and development work in the County during the year. Earl Hotz developed ore at the Rosebud property and the Williams Mining Partnership reopened the California property with reported good ore showing. The Rico Argentine operated its Ramco Sulphuric Acid Plant most of the year as well as the Rico Mill which received ores from the Mountain Springs and Blaine properties. This ore was transported through the St. Louis Tunnel. Increased prospecting was generally noted in Dolores County during the year. Sand and gravel were produced for highway and construction work.

Gold .....	\$	2,500
Silver .....		46,000
Copper .....		4,000
Lead .....		148,720
Zinc .....		253,920
Pyrite .....		302,000
Miscellaneous .....		10,000
<hr/>		
Total .....	\$	767,140
Sand and Gravel .....	\$	30,000
TOTAL PRODUCTION FOR COUNTY .....	\$	797,140

**DOUGLAS (1)**

\*Castle Rock

Area 844 square miles

Mines, plants, quarries—34 men

Clay, crushed stone of various colors, feldspar, and sand and gravel comprised Douglas County mineral production in 1963. Clay was produced from the pits operated by Helmer Brothers, Robinson Brick and Tile Company, Stroud-Whisenhunt, and The Denver Brick and Tile Company. Crushed stone came from the quarries of M. & S. Incorporated and the Waterton Sand & Gravel Company. Sand and gravel plants in the County were active all year. Work continued on the South Platte River Dam above Waterton, a project of the Denver Water Board.

Sand and Gravel .....	\$	216,386
Limestone .....		2,889
Stone .....		5,600
Clay .....		401,877
Miscellaneous .....		3,000
<hr/>		
Total .....	\$	629,752
TOTAL PRODUCTION FOR COUNTY .....	\$	629,752

\*County seats

**EAGLE (3)**

\*Eagle

Area 1,686 square miles

Mines, plants, quarries, projects—574 men

Full scale production from the Eagle mines located on Battle Mountain and operated by The New Jersey Zinc Company was recorded all during 1963. This Company is Colorado's largest zinc producer and ranks high in lead and silver production. Development work has been satisfactorily maintained which insures an adequate ore supply for future operations. Zinc concentrates from the Company's underground mill are shipped to Canon City, Colorado, where The New Jersey Zinc Company operates a sintering plant. Preliminary engineering work near Basalt on the Fryingpan-Arkansas project added some employment in the County during the year. The Dotsero Quarry operated by the Lava Products Company was partially active during the year.

Gold .....	\$ 193,000
Silver .....	723,306
Copper .....	209,071
Lead .....	848,100
Zinc .....	7,083,582
	<hr/>
Total .....	\$ 9,057,059
Sand and Gravel .....	149,804
Scoria .....	15,150
	<hr/>
Total .....	\$ 164,954
TOTAL PRODUCTION FOR COUNTY.....	\$ 9,222,013

**EL PASO (2)**

\*Colorado Springs

Area 2,159 square miles

Mines, plants, quarries, projects, petroleum—193 men

Both the Castle Quarries, operated by Gene Schooler, and the Castle Concrete Company were active all year producing sandstone, sand and gravel. The Lennox Breed Quarry, operated by the Colorado Lime Company, was a steady producer of limestone in 1963. Dale Hoover produced clay from the Hecla Quarry located near the Air Force Academy. Work continued at the underground excavation of NORAD located in Cheyenne Mountain. The second phase of this project, which includes the erecting of steel buildings underground, is being conducted for the Corps of Army Engineers by the Utah Mining & Construction Company and the American Bridge Company.

\*County seats



Miscellaneous .....	\$ 80,000
Sand and Gravel .....	1,053,948
Limestone .....	160,000
Clays .....	24,270
<hr/>	
Total .....	\$ 1,238,218
Coal .....	\$ 5,190
TOTAL PRODUCTION FOR COUNTY.....	\$ 1,323,408

**FREMONT (2)**

\*Canon City

Area 1,562 square miles

Mines, plants, quarries, petroleum—254 men

Fremont is Colorado's most versatile County in production of nonmetallic minerals. During the year twenty different products were listed which include cement, dolomite, gypsum, gannister, stone, soil conditioner, limestone, granite, marble, clay, travertine, quartz, silica, graphite, barite, vermiculite, perlite, bentonite, uranium, and petroleum. By far the largest mineral industry in the County is the Portland Plant of the Ideal Cement Company. This Company and the Fibreboard Paper Products Company were recipients of Safety Achievement Awards from the Colorado Bureau of Mines during the year for operating in excess of five years without a lost-time accident. Cotter Corporation operated its uranium mill during the year on ores from Fremont, Jefferson, and other neighboring counties. Their new pilot flotation mill and laboratory has been active on metallurgical tests covering various ores in the district. An 8,500 foot test well was scheduled to be drilled in the Florence Field by the Signal Drilling & Exploration Company, Inc., of Denver. Florence Field was the first producing field in Colorado and this new venture is an attempt to locate petroleum pools at a lower level.

Uranium .....	.....
Cement .....	\$ 7,076,183
Sand and Gravel .....	66,033
Limestone .....	823,072
Stone .....	155,711
Clay .....	44,809
Perlite .....	16,974
Feldspar, Mica, etc. ....	2,104
Gypsum .....	63,258
<hr/>	
Total .....	\$ 8,248,144
Petroleum .....	75,707
Coal .....	1,556,820
<hr/>	
Total .....	\$ 1,632,527
TOTAL PRODUCTION FOR COUNTY.....	\$ 9,880,671

\*County seats

**GARFIELD (3)**

\*Glenwood Springs

Area 3,000 square miles

Mine, plant, quarry—193 men

Events which developed in 1963 bring the eventual opening and production of oil from Colorado oil shale at least ten years earlier than anticipated. Many of the major oil companies have leased land in Garfield County and offers have been made to the Department of the Interior to lease land withdrawn in 1930. Proposals were made by the Colorado School of Mines Research Foundation to operate the U. S. Bureau of Mines Oil Shale Mine and Plant above Grand Valley in conjunction with the assistance of several oil companies. These very fast developments in 1963, along with full cooperation from Colorado's Governor and Coordinator of Natural Resources, make opening of these resources at an early date almost certain. The Union Carbide Company, Nuclear Division, Rifle plant, operated steadily all year on ores from Colorado and Utah. Limerock was produced from the Basic Chemical Company quarry by the Moab Drilling Company and Frank H. Norberg Company produced limerock from the Glenwood Springs lime quarry for sugar beet processing.

Sand and Gravel .....	\$	10,236
Limestone .....		91,190
Total .....	\$	101,426
Gas .....		165,734
Coal .....		40,289
Total .....	\$	206,023
TOTAL PRODUCTION FOR COUNTY.....	\$	307,449

**GILPIN (1)**

\*Central City

Area 149 square miles

Mines, plants, placers—75 men

Mineral activity in Gilpin County was confined mostly to prospecting and development work. During the year 31 separate properties were active either on small production or development work. Early in the year steady development work was in progress at the Wilma molybdenum property near Apex. Some work was done at the Glory Hole, Incorporated, property and several peat bogs were in production. The Golden Gilpin mill processed some lead and zinc ores from mines in Clear Creek County and several old properties were reopened and sampled for possible silver production.

\*County seats

Gold .....	\$	295
Silver .....		1,800
Lead .....		200
Miscellaneous .....		1,100
		<hr/>
Total .....	\$	3,395
Sand and gravel .....		1,000
Peat Moss .....		15,458
		<hr/>
Total .....	\$	16,458
TOTAL PRODUCTION FOR COUNTY.....	\$	19,853

**GUNNISON (3 & 4)**

\*Gunnison

Area 3,243 square miles

Mines, plants, quarries, projects—387 men

Of great importance to Gunnison County in 1963 was the opening of the Keystone Mine and Mill above Crested Butte. This property was leased by F. G. McFarland and S. R. Hullinger from the American Smelting and Refining Company and was placed into operation early in the year. The property produces lead, zinc, and copper concentrates from crude ore mined in the Keystone Mine. The Atlas Mill operated by the Rocky Mountain Mining Company began operations late in the year on ores from the Micawber property. Many old properties were opened and sampled for gold, silver, lead, and zinc values, some of which showed encouraging results. Reclamation work on the Blue Mesa Dam, Curecanti Unit, was active all year and work started on the Morrow Point Dam at Cimarron. An exceptional amount of highway construction was in progress during the year and employment in the County was high. There was some activity in the Powderhorn area.

Gold .....	\$	2,319
Silver .....		285,742
Copper .....		132,848
Lead .....		146,873
Zinc .....		324,205
Miscellaneous .....		1,100
		<hr/>
Total .....	\$	893,087
Sand and Gravel .....		68,334
Stone .....		3,000
		<hr/>
Total .....	\$	71,334
Coal .....	\$	1,039,923
TOTAL PRODUCTION FOR COUNTY.....	\$	2,004,344

\*County seats

**HINSDALE (4)**

\*Lake City

Area 1,062 square miles

Mines—17 men

Hinsdale, like most other base and precious metal producing counties, was active in 1963 on development work. Several old properties were reopened and sampled for possible future production. The Independence Mining Company continued exploration work on the Empire Group, Gnome, and Highland Chief. C. N. Moritz operated the Golden Fleece and Joe Gomez and Ray Cole worked on the Last Chance Mine. The Big Pard Mining Company worked on the Pelican property during the summer months. Late in the year Newmont Mining Company sold the Ulay and Ute property to Edward Hughes of Grand Junction.

Gold .....	\$	717
Silver .....		803
Miscellaneous .....		300
Total .....		\$ 1,820
Sand and Gravel .....	\$	15,000
TOTAL PRODUCTION FOR COUNTY.....	\$	16,820

**JACKSON (1)**

\*Walden

Area 1,628 square miles

Petroleum—60 men

Petroleum production from some 54 wells in the County declined \$229,232 from the 1962 level. Gas production showed a slight increase as did sand and gravel.

Sand and Gravel .....	\$	9,525
Petroleum .....		1,332,438
Gas .....		25,008
Total .....		\$ 1,357,446
TOTAL PRODUCTION FOR COUNTY.....	\$	1,366,971

**JEFFERSON (1)**

\*Golden

Area 791 square miles

Mines, plants, projects, quarries, petroleum—324 men

Jefferson County continued to lead other counties of the State in clay production. Uranium was the chief metallic product and this was followed by a record production in sand and gravel. Lightweight aggregate production from Idealite and Aggregates, Incorporated, showed a substantial increase in 1963. In general, mineral production in Jefferson County increased. The many clay mines and pits located along the Hogback were active all year. Beryl Ores Company, located in Arvada, continued the purchase and refining of beryl ores from producers on the Front Range. Varicolored stone was quarried and crushed for the building trade. Uranium production from the Schwartzwald Mine declined in 1963 due to the Atomic

\*County seats

Energy Commission's stretch-out program which insures government purchase of uranium ore through 1970.

Gold .....	\$ 2,902
Silver .....	19
Uranium .....	.....
Beryllium .....	14,000
<hr/>	
Total .....	\$ 16,921
Sand and Gravel .....	1,691,108
Stone .....	1,314,152
Clay .....	594,711
Miscellaneous .....	3,000
<hr/>	
Total .....	\$ 3,602,971
TOTAL PRODUCTION FOR COUNTY.....	\$ 3,619,892

**LAKE (3)**

\*Leadville

Area 384 square miles

Mines, plants, projects—3,491 men

Work on reclamation projects, some new mining activity, and steady production along with expanded facilities at the Climax property, gave Lake County a record employment during the year. New and expanded milling facilities were installed at the Climax division of American Metals Climax property located on Fremont Pass. Their number four shaft, underground, and number five shaft, on surface, at the Storke level were bottomed during the year. Development drifts from these shafts were extended which opened ore deposits below the Storke level. Development continued in the Ceresco Ridge area which will eventually produce in excess of 5,000 tons per day of molybdenum ore. Steam air intake heaters were installed so that the main intake air serving underground ventilation can be heated to eliminate pipe freezing and produce a more comfortable working atmosphere. Tailing storage facilities were expanded and the water collection system was improved. The Homestake Tunnel, a project for delivering western slope water to the cities of Aurora and Colorado Springs, was started in mid-year by the W. A. Smith and Quad Construction Companies. This tunnel will, when completed, be five and three-tenths miles long. Access roads to the Homestake Tunnel portals were constructed by E. J. Rippey and Sons.

Molybdenum .....	\$66,393,503
Tungsten .....	1,169,392
Pyrite .....	305,780
Tin .....	66,450
<hr/>	
Total .....	\$67,935,125
Sand and Gravel .....	\$ 81,212
TOTAL PRODUCTION FOR COUNTY.....	\$68,016,337

\*County seats



**LA PLATA (4)**

\*Durango

Area 1,691 square miles

Mines, plants, quarries, projects, petroleum—476 men

Early in 1963 the Vanadium Corporation of America closed its uranium and vanadium concentrator located at the south city limits of Durango. Their milling operations were transferred to Shiprock, New Mexico, where they purchased the Kerr-McGee plant. The closing of this operation was a loss to the economy and employment of Durango and the State. All Vanadium Corporation of America ore mined in Colorado is being trucked to Shiprock, New Mexico, for processing. The increased price of silver, lead, and zinc was responsible for an increase in exploration and development of La Plata County gold, silver, lead, and zinc mines in the La Plata canyon district. Peat, sand and gravel production added to the county's mineral revenue. Work on the Lemon Dam on the Florida River was completed in mid-year and water storage was in progress immediately after completion. Oil and gas activity in the Mesa Verde, Red Mesa, Ignacio, and Bondad fields was steady during the year with average production. Road construction was in progress north of Durango.

Sand and Gravel .....	\$ 133,908
Peat Moss .....	10,000
	<hr/>
Total .....	\$ 143,908
Petroleum .....	167,147
Gas .....	4,150,456
Coal .....	139,849
	<hr/>
Total .....	\$ 4,457,452
TOTAL PRODUCTION FOR COUNTY.....	\$ 4,601,360

**LARIMER (1)**

\*Fort Collins

Area 2,640 square miles

Mines, plants, quarries, petroleum—229 men

The Boettcher Plant and Quarry operated by the Ideal Cement Company maintained steady production during 1963 and continued to be Larimer County's largest mineral operation. In excess of 14 stone quarries produced building, ornamental, and flagstone for the building trades and these stones are becoming increasingly popular in Colorado and neighboring states. The U. S. Gypsum Company's Loveland Quarry and the Munroe Pioneer Quarries were steady producers of gypsum for the sugar beet and cement industries. Beryl and mica production increased over 1962 production. Oil production from

\*County seats

over 40 wells in the County's seven fields was steady with an average amount of exploration drilling being conducted.

Beryllium .....	\$ 1,195
Cement .....	9,519,657
Sand and Gravel .....	782,316
Limestone .....	803,414
Stone .....	2,438,999
Feldspar, Mica, etc. ....	12,393
<hr/>	
Total .....	\$13,556,779
Petroleum .....	\$ 789,759
TOTAL PRODUCTION FOR COUNTY.....	\$14,347,733

**LAS ANIMAS (2)**

\*Trinidad

Area 4,798 square miles

Mines, projects, petroleum—69 men

The Empire Clay Products opened the new Huerfano Clay Pit in mid-year and continued operation of its Pit #1 near Trinidad. Robinson-Walker Refractories produced clay from the Trinidad pit southeast of Starkville and the Scott Mining Company operated steadily from its Santa Fe Mine. Oil and gas exploration was less during the year. Sand and gravel production in the County was steady.

Sand and Gravel .....	\$ 128,839
Clay .....	28,593
<hr/>	
Total .....	\$ 157,432
Gas .....	10,606
Coal .....	7,171,235
<hr/>	
Total .....	\$ 7,181,841
TOTAL PRODUCTION FOR COUNTY.....	\$ 7,339,273

**LOGAN (1)**

\*Sterling

Area 1,849 square miles

Projects, petroleum—520 men

Logan County produced 4,197,318 barrels of petroleum from 395 active wells during 1963. This was a decrease of 414,647 barrels from 1962. Gas production declined proportionally. An average amount of exploration drilling continued through the year with less than average success.

Sand and Gravel .....	\$ 5,800
Petroleum .....	12,088,276
Gas .....	744,077
<hr/>	
Total .....	\$12,832,353
TOTAL PRODUCTION FOR COUNTY.....	\$12,838,153

\*County seats

**MESA (4)**

\*Grand Junction

Area 3,334 square miles

Mines, plants, quarries, projects, petroleum—1,131 men

Uranium and vanadium production in Mesa County dropped slightly in 1963 due to the Atomic Energy Commission stretch-out program which guarantees uranium purchases to 1970. Climax Uranium Plant located in South Grand Junction operated steadily on ores from Colorado, Utah, and New Mexico. Clay, sand and gravel, sandstone, and building rock were other Mesa County minerals produced. Gas production from the County's eleven fields was steady. Several exploration wells were drilled during the year. The sampling and analytical operations on yellow cake, originally performed at the Atomic Energy Commission's Grand Junction Compound by Lucius Pitkin Company, was moved to Weldon Springs, Missouri, during the year. Freight consolidation and shipment routing procedures are still maintained at the Compound. Mesa County is still third in uranium production from some 40 active uranium mines located on Calamity, Outlaw, and Tenderfoot Mesas, and in the Gateway area near the Utah line. Reclamation and highway projects added to County employment.

Uranium .....	\$ 2,246,288
Vanadium .....	1,058,097
<b>Total .....</b>	<b>\$ 3,304,385</b>
Sand and Gravel .....	1,089,140
Stone .....	27,456
<b>Total .....</b>	<b>\$ 1,116,596</b>
Gas .....	253,337
Coal .....	399,318
<b>Total .....</b>	<b>\$ 652,655</b>
<b>TOTAL PRODUCTION FOR COUNTY.....</b>	<b>\$ 5,073,636</b>

**MINERAL (3)**

\*Creede

Area 923 square miles

Mines, plants—65 men

The mining and milling operation of the Emperius Mining Company at its Commodore and Amethyst mines was inactive during the first half of 1963. This materially affected mineral production in Mineral County. Operations were resumed in July on previously developed ore and production returned to

\*County seats



normal. Development work continued through most of the year at the Mexico mine operated by the Outlet Mining Company, and at the Monon mine operated by the Monon Leasing Company. The increased price of silver, lead, and zinc stimulated considerable prospecting in the County.

Gold .....	\$ 16,065
Silver .....	377,836
Copper .....	65,041
Lead .....	273,391
Zinc .....	449,145
Miscellaneous .....	100,000
<hr/>	
Total .....	\$ 1,281,478
Sand and Gravel .....	2,000
Miscellaneous .....	3,000
<hr/>	
Total .....	\$ 5,000
TOTAL PRODUCTION FOR COUNTY .....	\$ 1,286,478

**MOFFAT (3)**

\*Craig

Area 4,761 square miles

Mines, plant, petroleum—346 men

Petroleum production in Moffat County was steady from 118 wells located at 18 separate pools. Largest production came from the Pan American Petroleum Company, Sundance Unit at Iles Dome. Gas production was steady from over 73 wells, some of which produced both oil and gas. The uranium operations of the Union Carbide Company, Nuclear Division at Maybell were steady during 1963. Ore from the Bessie and Trace Elements pits was concentrated at the Company mill located northeast of Maybell. Sand and gravel pits were active during the summer months.

Uranium .....	.....
Sand and Gravel .....	\$ 85,876
Miscellaneous .....	1,000
<hr/>	
Total .....	\$ 86,876
Petroleum .....	3,732,998
Gas .....	1,232,943
Coal .....	797,821
<hr/>	
Total .....	\$ 5,763,762
TOTAL PRODUCTION FOR COUNTY .....	\$ 5,850,638

\*County seats

**MONTEZUMA (4)**

\*Cortez

Area 2,097 square miles

Mines, projects, petroleum—364 men

Four mines were active in Montezuma County in 1963, a 100 per cent increase over 1962. Increased metal prices were responsible for stepped up development and prospecting activity. E. P. Crawford worked the Brownsville Group, the Red Arrow Gold Corporation continued development work on the Red Arrow Group, the Spencer Mines Company continued development work at the Spencer Morris Group, and the Potts Brothers did some work on the Twin Canyon Group. Highway construction added to employment in the County. Petroleum production was steady from the various wells in the western and southern part of the County.

Gold .....	\$	7,500
Uranium .....		.....
Miscellaneous .....		1,000
		<hr/>
Total .....	\$	8,500
Sand and Gravel .....	\$	18,500
Petroleum .....		1,057,251
Gas .....		81,268
		<hr/>
Total .....	\$	1,138,519
TOTAL PRODUCTION FOR COUNTY.....	\$	1,165,519

**MONTROSE (4)**

\*Montrose

Area 2,240 square miles

Mines, plants, projects, petroleum—1,412 men

Although lower than in 1962, Montrose uranium and vanadium production still remained first among the counties of the State. This County also contains the deepest well in the State, the Uravan Number One, started by Kerr-McGee and bottomed in 1963 by Humble Oil Company at a depth in excess of 17,500 feet. The Uravan plant of Union Carbide Company, Nuclear Division, maintained steady production in 1963 on ores from company and private producers over the State. The Long Park, Monogram, Gypsum Valley, Bull Canyon, and other areas continued steady uranium and vanadium production despite a stretch-out program by the Atomic Energy Commission. Vanadium Corporation of America suspended operations at its new Naturita concentrator when their milling operations were moved to Shiprock, New Mexico, early in the year. Work on the Morrow Point and Crystal Dams located on the

\*County seats

Gunnison River below the Blue Mesa Dam, was in full swing during the year with abutment work and access roads being constructed in the canyon near the dam sites. The Colorado Bureau of Mines Branch Office, located at Naturita, reported continuing success in our Radiation Control work in the many mines on the Colorado Plateau and over the entire State.

Uranium .....	\$14,190,568
Vanadium .....	7,017,473
Miscellaneous .....	1,200
<b>Total .....</b>	<b>\$21,209,241</b>
Sand and Gravel .....	219,071
Miscellaneous .....	12,000
<b>Total .....</b>	<b>\$ 231,071</b>
Gas .....	720
Coal .....	394,601
<b>Total .....</b>	<b>\$ 395,321</b>
<b>TOTAL PRODUCTION FOR COUNTY.....</b>	<b>\$21,835,633</b>

**MORGAN (1)**

\*Fort Morgan

Area 1,300 square miles

Projects, petroleum—430 men

Morgan County was fourth in State petroleum production in 1963 with a total of 3,393,808 barrels of oil produced from 274 wells. Gas production was 1,165,287 (MCF) more than in the previous year. Exploration drilling declined and no new fields were opened.

Sand and Gravel .....	\$ 503,313
Petroleum .....	9,774,158
Gas .....	1,242,236
<b>Total .....</b>	<b>\$11,016,394</b>
<b>TOTAL PRODUCTION FOR COUNTY.....</b>	<b>\$11,519,707</b>

**OTERO (2)**

\*La Junta

Area 1,267 square miles

Plant—5 men

The only production from the County was sand and gravel production from Valley Concrete plant at Rocky Ford.

Sand and Gravel .....	\$ 164,475
<b>TOTAL PRODUCTION FOR COUNTY.....</b>	<b>\$ 164,475</b>

\*County seats

**OURAY (4)**

\*Ouray

Area 540 square miles

Mines, plants, projects—237 men

More attractive mineral prices in 1963 were responsible for considerable prospecting and development work in Ouray County mines. Fifteen separate operations were listed during the year in widely separated areas of the County. Of significant importance was the purchase by Federal Resources, Incorporated, of Salt Lake City, of the old Camp Bird property owned by Camp Bird Colorado, Incorporated. The new company started development in sampling operations late in the year on the Revenue and Virginus property in the Sneffels district which was originally leased by Camp Bird Colorado. Included in the purchase of the Camp Bird property were some 300 mining claims, a 500 ton selective flotation mill, and general mining equipment. Other old properties opened during the year in Ouray County were the Bachelor, Seniorita and Black Girl mines north of Ouray.

Gold .....	\$ 238,295
Silver .....	275,512
Copper .....	467,684
Lead .....	593,287
Zinc .....	965,025
	<hr/>
Total .....	\$ 2,539,803
Sand and Gravel .....	\$ 8,000
TOTAL PRODUCTION FOR COUNTY.....	\$ 2,547,803

**PARK (1 & 2)**

\*Fairplay

Area 2,178 square miles

Mines, plants, projects—155 men

Milling operations at the Mineral Concentrates & Chemical Company plant located 12 miles west of Lake George were intermittent during the year. The plant concentrated beryl ores from the Boomer and other Park County mines. The placer mining operations increased in the Fairplay, Como, and Beaver Creek areas with seven active during the year. Work continued on the erection of the Progressive Mill located in Sacramento

\*County seats

Gulch, southwest of Fairplay under the direction of Hugh Crawford and on the Como Mill located eight miles northwest of Como in Montgomery Gulch. Several mines in the County were active on development work and peat moss was produced at the Furman Ranch by Harvey F. Kemp. Road projects in the County added to employment.

Silver .....	\$	905
Uranium .....		.....
Beryllium .....		45,000
		<hr/>
Total .....	\$	45,905
Sand and Gravel .....		34,956
Stone .....		21,000
Peat Moss .....		25,880
Gemstones .....		18,000
		<hr/>
Total .....	\$	99,836
TOTAL PRODUCTION FOR COUNTY.....	\$	145,741

**PITKIN (3)**

\*Aspen

Area 975 square miles

Mines, petroleum—31 men

Of importance to Pitkin County were the mining operations of the Richmond-Hill Exploration Company who contracted with the Minerals Engineering Company for development work on the Highland Tunnel and Midnight properties. The B. C. Leasing Company, under the direction of Sidney Vicker, conducted exploration and development work on the Pride of Aspen mine located at the southwest city limits of Aspen. Several other properties in the County were evaluated for possible operation during the next year.

Sand and Gravel .....	\$	56,416
Gas .....		7,773
Coal .....		5,083,360
		<hr/>
Total .....	\$	5,091,133
TOTAL PRODUCTION FOR COUNTY.....	\$	5,147,549

\*County seats



**PUEBLO (2)**

\*Pueblo

Area 2,414 square miles

Mines, plants, projects, quarries, petroleum—309 men

Clay mining, sand and gravel production with some exploration drilling comprised Pueblo County mineral activity in 1963. Some exploration work was done on the Kathryn uranium mine by the Cotter Corporation. Several clay mines operated by The Denver Brick and Pipe Company, Arthur L. Wands, General Refractories Incorporated, Walter H. Everhart, Standard Fire Brick Company, and Harbison-Walker Refractories maintained a steady clay production during the year. These mines are located near Rock Creek, Stone City, and Mustang. Sand and gravel production was steady from the County's many pits and plants.

Sand and Gravel .....	\$ 898,468
Clay .....	53,147
Total .....	\$ 951,615
TOTAL PRODUCTION FOR COUNTY.....	\$ 951,615

**RIO BLANCO (3)**

\*Meeker

Area 3,264 square miles

Mines, petroleum—632 men

Rio Blanco County continued to hold first place in petroleum production from Rangely Field. Production from the County has leveled off without much variation from year to year. Exploration and development drilling was average. Rangely Field is unitized and is being operated by the California Company. Four uranium mines in the uranium peak area were active during the past year and highway projects added to County employment.

Uranium .....	.....
Sand and Gravel .....	\$ 89,557
Petroleum .....	52,761,341
Gas .....	1,052,013
Coal .....	33,198
Total .....	\$53,846,552
TOTAL PRODUCTION FOR COUNTY.....	\$53,936,109

**RIO GRANDE (3)**

\*Del Norte

Area 916 square miles

Mines—8 men

The W. S. Moore Company, under the direction of Robert Simon, conducted exploration and development work during

\*County seats

the summer months at the Summitville property, 28 miles south of Del Norte. Core drilling and tunnel work, some 2,500 feet in from the portal, will be conducted in the summer of 1964. Operators of the property are very encouraged by the copper showing in this property which was originally a gold producing property.

Sand and Gravel .....	\$	4,000
<b>TOTAL PRODUCTION FOR COUNTY.....</b>	<b>\$</b>	<b>4,000</b>

**ROUTT (3)**

\*Steamboat Springs

Area 2,331 square miles  
 Mines, petroleum—61 men

Prospecting and exploration work on the properties of W. A. Bowes was conducted during the year by Phil Ward and Boyles Brothers Drilling Company. Work was done on the Campbell property 30 miles northeast of Steamboat Springs, on the Elkhorn and Farwell properties in the Hahns Peak area, and on the Greenville property three miles east of Clark. Sand and gravel production was steady and petroleum production from the Curtis, Tow Creek, Sage, and Grass Creek fields remained about average.

Sand and Gravel .....	\$	187,516
Petroleum .....		266,095
Coal .....		3,965,547
<b>Total .....</b>	<b>\$</b>	<b>4,231,642</b>
<b>TOTAL PRODUCTION FOR COUNTY.....</b>	<b>\$</b>	<b>4,419,158</b>

**SAGUACHE (3 & 4)**

\*Saguache

Area 3,146 square miles  
 Mines—39 men

Development work on the Brighton Tunnel located five miles northwest of Bonanza and turquoise production from the Villa Grove turquoise mine comprised the mineral activity in eastern Saguache County for the year. The Raleigh properties were maintained on a standby basis. Cotter Corporation produced uranium ore from the Lookout Tunnel on the west side of the Continental Divide near Marshall Pass.

Uranium .....		-----
Sand and Gravel .....	\$	83,036
Gemstones .....		26,000
<b>Total .....</b>	<b>\$</b>	<b>109,036</b>
<b>TOTAL PRODUCTION FOR COUNTY.....</b>	<b>\$</b>	<b>109,036</b>

\*County seats

**SAN JUAN (4)**

\*Silverton

Area 392 square miles

Mines, plants—142 men

The Standard Metals Corporation held to steady production of gold, silver, copper, lead, and zinc ores from its American Tunnel and Shenandoah properties while development work progressed at the Argentine Tunnel. Their ore was concentrated in the Standard (Old Shenandoah) Mill. Standard Metals property includes the Sunnyside and Shenandoah Dives properties northeast of Silverton. Increased base metal and silver prices were responsible for considerable exploration and development work in this County during the year. Twelve separate properties and two mills were listed by the Bureau of Mines as active sometime during the year. These properties were located in Arasta Gulch, Cement Creek, Mineral Point, Red Mountain, Eureka and various other mineral areas. The Pride mill operated intermittently during the year.

Gold .....	\$ 45,615
Silver .....	205,658
Copper .....	149,174
Lead .....	711,035
Zinc .....	1,123,257
	<hr/>
Total .....	\$ 2,234,739
Miscellaneous .....	\$ 2,000
TOTAL PRODUCTION FOR COUNTY.....	\$ 2,236,739

**SAN MIGUEL (4)**

\*Telluride

Area 1,284 square miles

Mines, plants, projects, petroleum—859 men

Base and precious metal mining in the eastern end of this County and uranium and vanadium mining in the west end of the County kept San Miguel County high in mineral production in 1963. Operations at the Idarado Mining Company east of Telluride were steady during the year. Its properties extended from the Telluride side through the mountain over into the Red Mountain area. Ore mined from both San Miguel and Ouray County was treated in the Idarado mill located at Pandora. Uranium and vanadium mining continued steady in the western end of the County from the Slick Rock, Bull Canyon, Gypsum Valley, and Egnar area. The Atomic Energy Commission stretch-out program was responsible for a slight decrease in uranium production during the year. A fire at the Burro

\*County seats



Number Five shaft in the Slick Rock area suspended production from this property during May of 1963. Road construction and surfacing continued on Highway 80 south of Naturita.

Gold .....	\$ 623,385
Silver .....	722,738
Copper .....	1,371,556
Lead .....	1,697,449
Zinc .....	2,858,357
Uranium .....	4,834,992
Vanadium .....	1,162,141
	<hr/>
Total .....	\$13,270,618
Sand & Gravel .....	4,800
Stone .....	3,000
Gemstones .....	2,000
	<hr/>
Total .....	\$ 9,800
Petroleum .....	\$ 4,427
TOTAL PRODUCTION FOR COUNTY.....	\$13,284,845

**SUMMIT (3)**

\*Breckenridge

Area 616 square miles

Mines, plants, projects—260 men

The Wellington operation of Wellington Mine Association is of major importance to the mineral activity in Summit County. Their new mill was completed and started concentrating ore from the lower levels of the Wellington mine in May of this year. They are presently treating in excess of 100 tons per day with excellent recovery stated from the mill. Property is located in French Gulch north of Breckenridge. Work on the Dillon Dam was completed in August and water storage began immediately. Other projects in the County plus a considerable amount of activity in placer mining kept employment high during the year.

Gold .....	\$ 10,825
Silver .....	38,485
Copper .....	1,691
Lead .....	172,638
Zinc .....	32,050
Miscellaneous .....	12,462
	<hr/>
Total .....	\$ 268,151
Sand and Gravel .....	\$ 223,180
TOTAL PRODUCTION FOR COUNTY.....	\$ 491,331

\*County seats

**TELLER (2)**

\*Cripple Creek

Area 555 square miles  
Mines, plants—59 men

Granite, peat moss, beryl, and quartz were the only minerals produced in this once great gold producing County. Two mines, the El Paso and Molly Kathleen, were open to tourists while all of the other old gold producers remained closed due to an inadequate price for gold. Most mines are not maintained on a standby basis which results in a condition that will in time prove to be extremely expensive should the properties try to reopen.

Sand and Gravel .....	\$ 30,140
Stone .....	15,900
Peat Moss .....	40,000
Gemstones .....	1,425
<hr/>	
Total .....	\$ 87,465
TOTAL PRODUCTION FOR COUNTY.....	\$ 87,465

**WASHINGTON (1)**

\*Akron

Area 2,530 square miles  
Projects, petroleum—340 men

Exploration and development drilling in southeast Washington County was high during the year with above average success. County production of petroleum was 7,168,575 barrels compared to 8,980,912 barrels in 1962. This indicates that production is beginning to level off. Washington County remained in second place in petroleum production in the State.

Sand and Gravel .....	\$ 106,177
Petroleum .....	20,646,021
Gas .....	267,357
<hr/>	
Total .....	\$20,913,378
TOTAL PRODUCTION FOR COUNTY.....	\$21,019,555

**WELD (1)**

\*Greeley

Area 4,033 square miles  
Plants, petroleum—87 men

Weld County produced 1,789,757 barrels of oil from 120 wells in 1963 compared to 1,731,601 barrels in 1962. A slight decrease in gas production was recorded. Sand and gravel and coal were the other mineral products in the County.

Sand and Gravel .....	\$ 105,961
Petroleum .....	5,154,501
Gas .....	320,077
Coal .....	3,100,437
<hr/>	
Total .....	\$ 8,575,015
TOTAL PRODUCTION FOR COUNTY.....	\$ 8,680,976

\*County seats

## Safety Awards

For the first time in the history of the Colorado Bureau of Mines, a bronze plaque was awarded to the Union Carbide Corporation, Nuclear Division, Uravan Plant. This award is presented to the mineral industry operator obtaining the State's best safety record during the year. This will be an annual award.

Safety Achievement Awards, for operating either in excess of one million man-hours or five years without a lost-time injury, were awarded to The California Oil Company, Western Division, Ault, and to the General Chemical Division, Allied Chemical Corporation, Valmont Plant.

Safety awards for operating in excess of 30,000 man-hours without a lost-time injury were presented to:

Boise Cascade Sand & Gravel Company—Derby Pit

Castle Concrete Company, Inc.—Quarry

Cole & Bond Mining Company—Long Park & Monogram Mines

Colorado Fuel and Iron Corporation—Canon Dolomite Quarry

Colorado Fuel and Iron Corporation—Monarch Lime Quarry

Continental Consolidated Corporation—NORAD Phase II

Ideal Cement Company—Boettcher Plant

Ideal Cement Company—Portland Plant

New Jersey Zinc Company—Canon City Plant

Texaco Inc. Production Department, West—Wilson Creek Oil Field

Union Carbide Corporation, Nuclear Division—Maybell Mining Operations

Union Carbide Corporation, Nuclear Division—Bogus Shaft

Union Carbide Corporation, Nuclear Division—Burro Mines

Union Carbide Corporation, Nuclear Division—Deremo Mine

Union Carbide Corporation, Nuclear Division—Eula Bell Mine

Union Carbide Corporation, Nuclear Division—Paradox "D" Mine

Union Carbide Corporation, Nuclear Division—Paradox #5 & 6 Mine

Awards of Merit for cooperative safety endeavor were issued to:

Levi B. Barnes—Doagy #2 Mine

David Blake—Mining Operations

Broderick & Gibbons—Sand Pit & Plant

Certified Concrete Company—Sand Pit & Plant

Climax Molybdenum Company

Climax Uranium Company—Bonanza #2 Shaft

Climax Uranium Company—Mineral Joe #1 Mine  
Colonna & Company of Colorado, Inc.—English Quarry  
Colorado Lime Company—Lennox Breed Plant & Quarry  
Cotter Corporation—Cotter Mill  
Denver Brick & Pipe Company—Chamblin No. 2 Mine  
Empire Clay Products, Inc.—Pits Nos. 1, 2, 3, 4  
Fibreboard Paper Products Corporation—Coaldale Quarry  
Ralph Flesh & Son—Maybell Operations  
Fountain Sand & Gravel Company—Sand Pit & Plant  
General Chemical Division, Allied Chemical Corporation—  
Burlington Mine  
General Chemical Division, Allied Chemical Corporation—  
Denver Works  
Great Lakes Carbon Corporation—Antonito Plant  
Haas Well Service—Colorado Operations  
Harry H. Harp, Jr.—Midnight Mine  
Jones Brothers Mining Company—S B Claims  
Kilgroe-Atchison Construction & Paving Company—Quarry  
E. J. Longyear Company—Diamond Drilling  
Matterhorn Mining & Development Company—Carnation Mine  
Mountain Fuel Supply Company—Hiawatha Oil Field  
Mountain Fuel Supply Company—Powder Wash Oil Field  
New Jersey Zinc Company—Eagle Mines  
Peacock Well Service  
Pikes Peak Granite Company—Pikes Peak Quarry  
Rio Grande Gravel Company—Quarry  
Silver Hat Mining, Inc.—San Bernardo Mine  
Staats Mining Company—Hummer Mine  
Sterling Sand & Gravel Company—Sand Pit  
Transit Mix Concrete Company—Sand Pits & Plants  
Union Carbide Corporation, Nuclear Division—Maybell Plant  
Union Carbide Corporation, Nuclear Division—Nil #2 and  
Maybe Mines  
Union Carbide Corporation, Nuclear Division—Rifle Plant  
United States Gypsum Company—Loveland Quarry  
Utah Construction & Mining Company—NORAD Operations  
Valley Concrete Company—Lamar Valley Concrete Plant

## Injuries

The total number of lost-time injuries (one day or more) in the mineral industry, exclusive of coal mining, in 1963 was 664 or 74 less than in 1962, a 12% overall reduction. Total man-hours of exposure in 1963 was 37,308,000 or 1,094,400 man-hours more than in 1962. The overall frequency rate in 1963 was 17.8 or 2.5 less than in 1962. The 1963 severity rate was 2,184 or 513 higher than in 1962. Ten fatal injuries occurred, which is one more than the low record attained in 1962. Three of these fatalities occurred in underground mining, a reduction of two from the previous year. Five fatalities occurred on State and Federal projects and two in the petroleum industry. This total of ten is four less than the ten-year average. The severity rate was increased due to one more fatal and one more permanent partial disability in 1963. This steady overall improvement is due primarily to the efforts and sincere cooperation of the employers, employees of the industry and the Bureau of Mines inspectors.

Two of the mine fatalities were due to fall of ground and one was due to falling equipment. Four of the project fatalities are charged to transportation equipment and one to fall of man. One oil well fatal was charged to machinery contact and one to fall of man. One fatal occurred for every 1,039 men working underground or for every 3,500,900 man-hours worked. One fatal occurred for every 521 men working on projects or one for every 1,250,800 man-hours worked. One fatal occurred for every 1,834 men working on oil and gas wells or one for every 4,401,600 man-hours worked. Mine surface, quarries, and plants worked 5,648 men without a fatal injury during the year, or 13,233,600 man-hours without a fatal injury. One lost-time injury occurred for every 23 men working in the entire industry or one for every 56,334 man-hours worked.

All of the above fatal accidents were promptly investigated by Bureau of Mines inspectors as were all injuries considered of a serious nature. Complete reports covering these accidents and injuries were filed in the Bureau of Mines office by the inspectors and pertinent information as to the cause of these injuries was distributed to all inspectors immediately. Corrective recommendations were left with the operator and all similar situations in the State were corrected.

Specific cause, type, nature, and site of all lost-time injuries are listed in the following table as are the location and number of injuries by district and operation.



# Lost Time Injury Statistics—Mineral Industry

## SUMMARY OF INJURIES

	Total Man-Hours	Fatal Injuries	Lost-Time Injuries	Number of Days Lost	Frequency Rate Per One Million Man-Hours	Severity Rate Per One Million Man-Hours
Mines, Underground	9,016,800	3	335	23,981	37.1	2,659.
Mines, Surface	2,404,800	0	63	1,288	26.2	535.
Mills—Plants—Smelters	10,020,000	0	59	3,945	5.9	393.
Quarries—Pits	808,800	0	31	388	38.3	479.
State and Federal Projects	6,254,400	5	87	37,210	13.9	594.
Oil and Gas Industry	8,803,200	2	89	14,679	10.1	1,667.
<b>Totals</b>	<b>37,308,000</b>	<b>10</b>	<b>664</b>	<b>81,491</b>	<b>17.8</b>	<b>2,184.</b>

This table includes the loss of 60,000 days due to 10 fatalities and 11,640 days due to 7 permanent partial disabilities.

Frequency Rate	Number of Injuries × 1,000,000	Severity Rate	Total Time Charges in Days × 1,000,000
	Number of Man-Hours of Exposure		Number of Man-Hours of Exposure

## Injuries by Districts

District	Fatals	Mines, Underground	Mines, Surface	Mills—Plants—Smelters	Quarries—Pits	Projects	Oil Wells	Totals
District 1	3	28	4	12	22	13	37	116
District 2	0	1	7	4	6	15	1	34
District 3	1	115	12	19	3	13	36	198
District 4	6	191	40	24	0	46	15	316
<b>Totals</b>	<b>10</b>	<b>335</b>	<b>63</b>	<b>59</b>	<b>31</b>	<b>87</b>	<b>89</b>	<b>664</b>

## FATAL INJURIES

Cause of Injury

## Mines, Underground

Drilling in stope when 5 to 6 tons of ore released, crushing victim's head and body. Improper ground support.

5-10-63 Robert G. Averill 28 Idarado Mining Company Ouray

5-28-63	William H. Barnes	23	W. B. Eckman Mining Company	Montrose	In the act of replacing a post which was blown out by previous blasts, slab released causing head and internal injuries and death. Improper ground support.
8-24-63	James E. Pace	36	Idaraho Mining Company	San Miguel	Standing in skip compartment when skip was being lowered. Skip hung up, then released, crushing victim's legs. Death from shock and loss of blood. Carelessness of all concerned.
<b>Projects</b>					
2-20-63	George E. Crawford	55	W. A. & Z. H. Lowdermilk	Boulder	While operating his power shovel a runaway truck smashed into shovel cab, crushing Mr. Crawford. Died of internal injuries one day later. Equipment failure.
3-23-63	C. R. Blatter	50	F. H. Linneman, Inc.	Jefferson	Working on concrete forms when he fell 14 feet to the ground incurring a skull fracture and other injuries, causing death. Failure to use a safety device.
5-21-63	Billy Lee Stanley	20	Potashnick Construction Inc.	Summit	Mr. Stanley was driving his empty Euclid truck when he ran head on into a similar loaded truck. The impact caused his truck to overturn, throwing him under the loaded truck. Instant death. Improper supervision of driving rules. Lack of safety rules.
7- 5-63	Alvin J. Mott	44	Colorado Constructors, Inc.	La Plata	Driving an empty Euclid truck when it collided head on with a D W 20 loaded scraper. Mr. Mott was thrown out and was crushed by the front bumper of his vehicle. Instant death. Improper traffic regulations and poor judgment.
8- 9-63	Daniel G. Kascak	30	Johnson-MK	Montrose	Dozing out a road 365 feet above river on a 60 degree bank. Road settled and Cat went over bank inflicting crush injuries to Kascak, causing instant death. Incorrect road bed evaluation. Failure to abandon equipment.

**Oil Wells**

3-20-63	Charley Ray Loose	22	Allison Drilling Company	Washington	Mr. Loose crawled under a portable rig to repair pipe fitting while rig was drilling. Caught sweatshirt hood in rotating drive shaft. Basic skull fracture and multiple injuries. Carelessness and safety rule infraction.
10-24-63	Gerald A. Gerard	29	Moran Bros. Drilling Company	San Miguel	Working in derrick without safety belt attached. Lost balance while untying drill collar. Fell to floor of rig, causing death. Failure to use safety device. Failure to observe safety rule.

### LOST TIME INJURY STATISTICS—MINERAL INDUSTRY

AGENCY CAUSING INJURY (I = Injuries; F = Fatalities)	Mines		Surface		Mills-Plants Smelters		Quarries		Projects		Oil Wells		Grand Totals		
	Underground	Surface	I	F	I	F	I	F	I	F	I	F	I	F	Totals
	I	F	I	F	I	F	I	F	I	F	I	F	I	F	Totals
Atmosphere.....	4				1								5	5	5
Bars-Bins-Chutes.....	8	1			5		1		2		1		18	18	18
Belts-Conveyors-Pulleys.....	3				6		1				3		13	13	13
Cables-Hose-Ropes.....	13								1		4		18	18	18
Cars-Motors-Vehicles.....	60	8			8		2		9		2		89	4	93
Chains-Gears-Sprockets.....	1										4		5	5	5
Chemicals.....	2	1			3				2				8	8	8
Containers.....	7	3			1				1		1		13	13	13
Derricks-Headframes.....							1				6		7	7	7
Doors-Windows-Gates.....	2	1					1		2				6	6	6
Drills-Drilling Equipment.....	20	5			3				7		17	1	52	1	53
Dust and Particles.....	5	3							2				10	10	10
Electricity-Elec. Equipment.....	1	2			1				3				7	7	7
Explosives, Loading and Firing.....	3												3	3	3
Explosives, Transportation.....	1						1				2		4	4	4
Falling or Flying Objects.....		1									2		3	3	3
Falls-Floor-Ice-Snow.....	6	5			6				4		6	1	27	2	29
Flames-Fire-Heat.....	1	2			1				2		1		8	8	8
Hoists-Hoisting Apparatus.....	7	1					1		1		1		10	1	11
Ladders-Manways.....	15				1				1				18	18	18
Machinery-Tools.....	40	8			6		4		12		8		78	78	78
Materials.....	2	3			4				2		2		13	13	13
Metal Objects.....	24	4			4		1		6		13		52	52	52
Platforms-Staging-Scaffolds.....	6	2			1		1		3		1		13	13	13
Premature or Delayed Blasts.....	1	2							1				4	4	4
Rock-Ore-Ground.....	74	2			1				13		1		103	2	105
Screens.....	1	1					1						4	4	4
Shovels, Power.....	1	1					1		1				4	4	4
Tanks.....					1								1	1	1
Timber-Lumber-Poles.....	14	6			3				7		3		33	33	33
Tongs.....											10		10	10	10
Tracks.....	7				1								8	8	8
Unclassified-Insufficient Data.....	3	1					1						7	7	7
Totals.....	332	3	63		59		31		82		5	87	654	10	664

TYPE OF INJURY (I = Injuries; F = Fatalities)	Mines		Mills-Plants		Quarries		Projects		Oil Wells		Grand Totals	
	Underground	Surface	Smelters		I	F	I	F	I	F	I	F
Burns-Shock	5	3	3	3	3	4	4	4	4	22	22	22
Caught in or between	45	6	8	8	7	9	18	1	93	1	94	1
Fall on Same Level	11	11	3	11	3	2	2	30	30	30	30	30
Fall on Different Level	17	2	6	6	1	8	6	1	40	3	43	3
Handling	83	17	13	13	12	14	18	18	157	7	157	7
Inhalation-Suffocation	5	1	1	1	1	1	1	1	7	7	7	7
Slip-Stepping on	24	7	8	8	1	7	4	4	51	51	51	51
Striking against-Struck by	141	3	16	16	7	38	43	3	260	6	266	6
Unclassified-Insufficient Data	2	1	1	1	1	4	4	4	4	4	4	4
Totals	333	63	59	59	31	83	95	5	664	10	674	10
NATURE OF INJURY												
Amputations	4	1	1	1		2	4	2	12	12	12	12
Burns-Scalds-Shock	6	2	6	6	2	7	4	4	27	27	27	27
Cuts-Bruises-Lacerations-Punctures	143	20	19	19	15	42	43	43	282	282	282	282
Foreign Bodies	20	4	1	1	2	2	4	4	31	31	31	31
Fractures	59	3	16	16	2	16	5	16	2	116	10	126
Hernia	14	2	2	2	1	1	1	1	21	21	21	21
Occupational Diseases	1								1	1	1	1
Strains-Sprains-Dislocations	115	27	23	23	12	13	22	22	212	212	212	212
Nature Unknown	1				1	1	1	1	3	3	3	3
Totals	363	63	68	68	33	83	95	5	705	10	715	10
SITE OF INJURY												
Eyes	24	7	5	5	1	8	6	2	51	51	51	51
Head-Face-Neck	22	8	6	6	2	9	11	1	58	4	62	4
Trunk	107	27	29	29	12	27	19	2	221	2	223	2
Upper Extremities	70	11	14	14	8	17	33	153	153	153	153	153
Lower Extremities	109	18	18	18	7	32	27	1	211	1	212	1
General	3	1							3	3	3	3
Unclassified-Insufficient Data	1				1	1	2	2	2	2	2	2
Totals	336	71	72	72	31	83	96	5	699	10	709	10

## Men Employed

Employment in the mineral industries of Colorado increased by 110 over 1962. This increase was due to additional activity in evaluating and sampling silver, lead, and zinc properties and a slight increase in placer and mineral fuel exploration. Men laid off by the closing of some uranium mines, either opened small base metal mines or secured employments at milling and surface operations. Plant employment was increased at several large mineral operations and new plants in the sand and gravel industry accounted for some employment increase. These conditions were sufficient to overcome the drop in underground employment.

	Mines		Mills, Plants Smelters		Quarries & Pits		Placers		Projects		Oil Wells		Totals	
	No.	Men	No.	Men	No.	Men	No.	Men	Men	Men	Men	Men	Men	Men
District 1	99	300	44	511	31	174	30	69	504	1,531	1,531	3,089	3,089	
District 2	46	138	17	200	21	121	1	2	656	351	351	1,468	1,468	
District 3	33	1,998	12	2,339	7	20	4	60	279	997	997	5,693	5,693	
District 4	333	2,306	24	1,125	8	22	2	3	1,167	789	789	5,412	5,412	
Totals	511	4,742	97	4,175	67	337	37	134	2,606	3,668	3,668	15,662	15,662	

## TOTAL MEN EMPLOYED

	Underground		Surface		Totals	
District 1	195	1,363	1,531	3,089	1,531	3,089
District 2	165	952	351	1,468	351	1,468
District 3	1,708	2,988	997	5,693	997	5,693
District 4	1,851	2,772	789	5,412	789	5,412
Totals	3,919	8,075	3,668	15,662	3,668	15,662

## MEN EMPLOYED IN

Gold, Silver,  
Copper, Lead, Zinc  
1,100

Molybdenum  
2,300

Uranium  
4,500

Petroleum  
3,668

Other  
4,094

Totals  
15,662



**DIVISION OF OPERATIONS**

Base and Precious Metal Mines -----	96
Uranium Mines -----	380
Other Mining Operations -----	398
Projects -----	50
Oil Wells -----	200

**FIRST AID TRAINING**

The Colorado Bureau of Mines inspectors gave first aid training to 162 men in Colorado's mineral industry. The standard U. S. Bureau of Mines training course was used.

**MINERAL SPECIMEN COLLECTIONS**

Students, Scouts and other persons interested in Colorado minerals received 902 small mineral collections during the year.

# Inspections

Of the 1,386 inspections made during the year, 962 represented inspections made at as many separate mineral operations. Four hundred twenty-four were repeat inspections which occurred mostly at metal mines. In the course of these inspections, many return calls were made to ascertain compliance with previous recommendations and Inspection Reports were not submitted. The decrease of 100 inspections, under the 1962 figure, was caused primarily by the absence of one inspector who was on sick leave for four months during the year. Repeat inspections were made regularly at large properties and at properties where safety standards were below average.

## INSPECTIONS

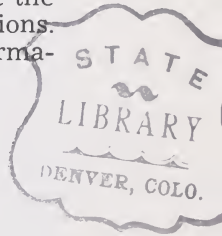
### Made By

1963	District 1 Blake	District 2 Keating	District 3 Doyle	District 4 Ray & Pakka	Total
January .....	22	30	18	66	136
February .....	17	16	20	39	92
March .....	29	30	27	57	143
April .....	33	30	7	46	116
May .....	21	32	32	49	134
June .....	34	25	14	45	118
July .....	9	35	21	50	115
August .....	32	33	21	35	121
September .....	28	21	12	41	102
October .....	31	13	23	37	104
November .....	23	19	23	57	122
December .....	32	7	..	44	83
Totals .....	311	291	218	566	1,386

	Mills, Plants, Mines	Smelters	Pits & Quarries	Placers & Bogs	Projects			Oil & Gas Wells, Plants	Total
					Road	Tunnel	Dam		
District 1....	76	64	74	10	7	2	4	74	311
District 2....	83	54	85	2	33	18	3	13	291
District 3....	72	37	19	1	10	13	11	55	218
District 4....	429	35	1	3	21	7	17	53	566
Totals ....	660	190	179	16	71	40	35	195	1,386

# Information Reports

A total of 820 Information Reports were submitted to the main office by inspectors during the year, an increase of 172 over 1962. These reports are permanently filed by mine name and county and give a running description of the operation during its active life. The increase this year was due to an extra effort on the part of our inspectors to bring these files up to date. Many old properties were opened for the first time in years which required an Information Report to complete the property operating statistics along with new work descriptions. Including the 1963 reports, our files cover descriptive information on 11,232 mineral operations in Colorado.



## INFORMATION REPORTS

Made By

1963	District 1 Blake	District 2 Keating	District 3 Doyle	District 4 Ray & Pakka	Total
January .....	4	3	35	64	106
February .....	3	..	..	43	46
March .....	..	2	1	35	38
April .....	3	1	..	29	33
May .....	5	5	..	19	29
June .....	9	9	..	19	37
July .....	20	8	2	34	64
August .....	26	10	..	55	91
September .....	9	7	..	65	81
October .....	2	3	..	34	39
November .....	18	13	7	29	67
December .....	52	24	83	30	189
Totals .....	151	85	128	456	820

District	Mines	Mills	Pits	Placers	Projects			Oil & Gas	Total
		Plants, Smelters	& Quarries	& Bogs	Road	Tunnel	Dam	Wells, Plants	
District 1....	59	21	36	30		1		4	151
District 2....	24	18	36	1		2	1	3	85
District 3....	45	14	8	1	5	2	4	49	128
District 4....	382	24	7	5	13	3	5	17	456
Totals ....	510	77	87	37	18	8	10	73	820

## Radon Daughter Control Program

During the year 1963, the Colorado Bureau of Mines program to control radon and its daughter products as a radiation hazard in Colorado's uranium mines continued under the same procedures and policies as originally set up in June 1961.

Through the cooperation and material support of the United States Public Health Service and the Colorado State Department of Public Health, facilities are available at the Bureau of Mines' Naturita field office to calibrate the radiation detection equipment used in this program. This service is available to mine operators and regulatory agencies within Colorado as well as those in neighboring states.

The concentration of radon and its daughter products in the atmosphere of Colorado's uranium mines does not remain at a fixed level once corrective action has been taken and the concentration reduced to acceptable limits, but varies from day to day. Situations and conditions are constantly changing in the various working places because of the very nature of mining operations. The changes that occur as mining progresses, continual opening and closing of individual mines, and other variables such as the weather, make the control of this hazard a continuing problem requiring periodic evaluation of the operating uranium mines. This evaluation is made through the use of air samples taken in the active mine working areas and air courses. Coupled with this periodic evaluation, corrective action must be initiated in the form of appropriate changes in ventilation systems in areas of excessive exposure in order to reduce the miners' exposure to acceptable limits.

Because of expanding the inspectors' duties during 1963, the total number of samples and inspections for radon daughter products was less than for 1962. However, the work load of samples and inspections per man-day chargeable to the program remained virtually the same. Detailed information on the status of the operating mines along with other statistics concerning this program are tabulated below.

During 1963 the Bureau of Mines continued to receive the results of radon daughter sampling conducted by other regulatory agencies and mine operators as well as the exchange of other pertinent information. The cooperation that has been received by the Bureau of Mines and its inspectors in carrying out this program has been excellent in all respects and is gratefully acknowledged.

DAVID R. COLE  
Senior Inspector

### 1963

Number of Separate Mines Sampled.....	367
Number of Men Catalogued for Exposure.....	3,526

**STATUS OF MINES DECEMBER 31, 1963**

(1.0 WL Represents 300 Micromicrocuries per Liter of Air)

Range	Number of Mines	Per Cent	Cumulative Per Cent
1.0 WL or Less .....	62	40½%	40½%
+1.0 WL through 3.0 WL....	72	47 %	87½%
+3.0 WL through 10.0 WL....	19	12½%	100 %
+10.0 WL and Over.....	0		
<b>Total .....</b>	<b>153</b>	<b>100 %</b>	

**COMPARISON OF STATUS OF MINES**

Range	Per Cent of Operating Mines		
	Dec. 31, 1961	Dec. 31, 1962	Dec. 31, 1963
1.0 WL or Less .....	45 %	52%	40½%
+1.0 WL through 3.0 WL....	27½%	38%	47 %
+3.0 WL through 10.0 WL....	23 %	10%	12½%
+10.0 WL and Over .....	4½%	0%	0 %
<b>Total .....</b>	<b>100 %</b>	<b>100%</b>	<b>100 %</b>

**SAMPLE AND INSPECTION STATISTICS**

Inspector	Number of Samples	Number of Inspections
Thomas High .....	703	266
William Horn .....	689	272
Calvin Warnica .....	724	278
<b>Total .....</b>	<b>2,116</b>	<b>806</b>

**CORRECTIVE ORDERS ISSUED FOR VENTILATION**

General .....	120
Removal of Men from Area.....	14
Compliance by Specified Date .....	1



## Dust and Gas Control Program

Believing that a great majority of industrial poisons enter the body with the inspired air and in keeping with the Colorado Bureau of Mines policy of making certain that employees in the mineral industry work in a healthy and safe environment, an inspector was assigned to the continuous evaluation of the dust and gas hazards in Colorado's mineral industry in January of 1963.

Early in 1963 additional equipment and materials necessary for taking dust samples and determining dust concentrations were purchased to supplement the equipment already on hand. Inspectors were trained in the sampling procedure and technique by United States Bureau of Mines Health and Safety Activity personnel at their Denver office. In addition to the airborne dust samples, a settled dust or "rafter" sample is taken for free silica determination. Upon completion of a survey and determination of dust concentrations and free silica content, the operator and District Mine Inspector are mailed a copy of the sample results. At this time the District Mine Inspector gives notice that dust concentrations in excess of allowable limits as set forth in Bureau of Mines Bulletin 19, "Colorado Mining Laws with Rules and Regulations," must be reduced to acceptable limits.

At the present time instruments are available for the field determination and detection of oxygen, carbon dioxide, carbon monoxide, hydrogen sulphide, nitrogen dioxide, and methane.

The notification and enforcement procedure for gas control is similar to that used for dust control and the surveys are often carried out simultaneously. However, through the use of direct-reading field instruments the results of a gas determination are available immediately and corrective action can be initiated at once in any area not meeting the minimum requirements set forth in Bureau of Mines Bulletin 19.

The cooperation of the United States Bureau of Mines in training our personnel and the Colorado State Department of Public Health and operators in Colorado's mineral industry in carrying out this program is gratefully acknowledged.

DAVID R. COLE  
Senior Inspector

# Mineral Operations by County in Colorado

## ADAMS COUNTY

Name of Property	Location	Operator's Name and Address	Product	Kind of Property
Dahlia Plant	Denver	Cooley Gravel Co., 6101 Lowell Blvd., Denver	Sand, Gravel	Plant
Inland	Derby	Boise Cascade Sand & Gravel Co., 7620 Madison St., Derby	Gold, Sand, Gravel	Plant
Mill at Pit R	Denver	Brannon Sand & Gravel Co., 4800 Brighton Blvd., Denver	Gold, Sand, Gravel	Plant
Mill at Pit #10	Denver	Brannon Sand & Gravel Co., 4800 Brighton Blvd., Denver	Gold, Sand, Gravel	Plant
North Plant	Denver	Cooley Gravel Co., 6101 Lowell Blvd., Denver	Gold, Sand, Gravel	Plant
Portable Washing Plant at Pit #5	Denver	Brannon Sand & Gravel Co., 4800 Brighton Blvd., Denver	Sand, Gravel	Plant

## ARAPAHOE COUNTY

Englewood Plant	Denver	Cooley Gravel Co., 6101 Lowell Blvd., Denver	Sand, Gravel	Plant
Littleton Plant	Denver	Cooley Gravel Co., 6101 Lowell Blvd., Denver	Sand, Gravel	Plant
Portable 219	Denver	Brannon Sand & Gravel Co., 4800 Brighton Blvd., Denver	Sand, Gravel	Plant

## BOULDER COUNTY

Beaver Lake	Boulder	Beaver Lake Peat Co., 2902 6th St., Boulder	Peat	Peat Bog
Boulder Gravel Products	Boulder	Boulder Gravel Products, Inc., Box 229, Boulder	Gold, Sand, Gravel	Plant
Brodies St. Vrain	Ft. Collins	Sterling Contracting Co., Box 759, Fort Collins	Stone	Quarry
Burlington	Boulder	General Chemical Div., Allied Chemical Corp., Box 228, Boulder	Fluorspar	Mine
Carroll Gore	Boulder	Centennial Peat Co., Box 420, Boulder	Peat	Peat Bog
Cash	Gold Hill	Carl Gore, Lyons	Stone	Quarry
Esso	Boulder	Steen Mining Co., 1790 E. Plumb Lane, Reno, Nevada	Gold, Silver	Mine
Fair Day	Jamestown	Plains Aggregate Co., Box 229, Boulder	Road Aggregate	Plant
		Buckskin Joe Drilling Co., Box 157, Arvada		
Green Thumb	Nederland	Roy Busby, et al., Silver Plume	Uranium	Mine
Harms	Boulder	Centennial Peat Co., Box 420, Boulder	Peat	Peat Bog
Hell Brothers	Boulder	W. F. Harms, Rt. 2, Box 75A, Boulder	Peat	Peat Bog
Ingersoll	Boulder	University of Colorado, Boulder	Stone	Quarry
	Boulder	University of Colorado, Boulder	Stone	Quarry

Name of Property	Location	Operator's Name and Address	Product	Kind of Property
Jacobson & Lyons	Beach Hill	Jacobson & Lyons Stone Co., Inc., Box C, Lyons	Stone	Quarry
King Mountain	Lyons	King Mountain Rock Co., Box 1189, Boulder	Stone	Quarry
Kline	Beach Hill Road	Sterling Contracting Co., Box 759, Fort Collins	Stone	Quarry
Lake Eldora	Nederland	McCoy & Jensen, 9800 Morrison Rd., Morrison	Peat	Peat Bog
Loukenen Brothers Quarries	Beach Hill	Loukenen Brothers Stone Co., Box 865, Lyons	Stone	Quarry
Marion	Sugar Leaf Road	Earl G. Sweeney, 1061 Grant St., Boulder	Tungsten, Tin	Mill
McCann	Eldorado Springs	Colorado Brick Co., Longmont	Clay	Mine
Pastore	Valmont	Pastore Gravel Co., 1946 Walnut St., Boulder	Gravel	Plant
Poorman,	Four Mile Canyon	National Bureau of Standards, Boulder	Experimental	Mine
Pit Nos. 1, 2	S. of Eldorado Spgs.	Eldorado Clay Co., Rt. 1, Box 759, Golden	Clay	Clay Mine
Rex	Summerville	Steen Mining Co., Box 1463, Boulder	Gold, Silver	Mine
Tip Top	Nederland	Mrs. Fannie Jackson, 8801 W. 41st Ave., Wheat Ridge	Gold, Silver, Copper, Lead	Mine
Valmont	Valmont	General Chemical Div., Allied Chem. Corp., Box 228, Boulder	Fluorspar	Plant

### CHAFFEE COUNTY

Colorado Granite Mill	Salida	Alpine Industrial Inc., Box 626, Salida	Granite	Mill
Crystal Quarry	Salida	Colorado Granite Co., 904 W. 2nd, Salida	Granite	Quarry
Homestake Mine	Ute Trail	M & S, Inc., Box 671, Salida	Feldspar	Quarry
L & V Crushing Plant	Salida	L & V Products Co., Box 626, Salida	Volcanic Ash	Plant
Monarch Lime Quarry	Monarch	Colorado Fuel & Iron Corp., Box 489, Salida	Limestone	Quarry
Shannon Last Chance	Mt. Princeton Resort	Colorado Granite Grit Corp., Box 426, Salida	Granite	Quarry
Stonewall	S. of St. Elmo	Cotter Corporation, Box 751, Canon City	Lead, Zinc	Mine
Western Feldspar Mill	Salida	Western Feldspar Milling Co., Box 671, Salida	Feldspar	Mill

### CLEAR CREEK COUNTY

Alma Lincoln	Idaho Springs	Robert H. DeLashmutt, Box 925, Idaho Springs	Tourist	Mine
Bald Eagle	Idaho Springs	B & E Mining Co., Box 822, Idaho Springs	Gold, Silver, Copper, Lead	Mine
Diamond	Silver Plume	Bur-Jay, Inc., Box 11, Silver Plume	Gold, Silver, Copper, Lead, Zinc	Mine
Dixie	Ute Creek	Westex Mining & Development, Inc., Box 667, Idaho Springs	Gold, Silver	Mine
Drummond	S. of Lawson	Drummond Mines, 512 Skyline Dr., Fort Collins	Silver, Lead, Zinc	Mine
Elida Tunnel	S. of Lawson	Colorado School of Mines, Mining Engineering Dept., Golden	Silver, Lead	Mine
Forge Hill	Virginia Canyon	Silver Wreath Mining Co., Rt. 3, Box 367, Golden	Gold, Silver, Copper, Lead	Mine

Name of Property	Location	Operator's Name and Address	Product	Kind of Property
Franklin	Gillson Gulch	Franklin Silver Age Mining Co., Wilson, Kansas	Gold, Silver, Copper, Lead, Zinc	Mine
Franks	Idaho Springs	Yukon-London, Inc., 3868 Estes, Wheat Ridge	Gold	Placer
Hamill	Wide Awake Gulch	P. & M. Mining Co., 450 S. Broadway, Denver	Gold, Silver, Copper, Lead, Zinc	Mine
Independence Tunnel	Empire	Betty Anne Moore, Box 236, Empire	Gold, Silver, Copper, Lead, Zinc	Mine
Johnny Bull	Silver Plume	Globe Hill Mining Co., 5365 W. 3rd Place, Denver 26	Gold, Silver, Copper, Lead, Zinc	Mine
Lamartine	Idaho Springs	Lamartine Mines, Inc., 313 W. Sheppard, Littleton	Silver, Lead, Zinc	Mine
Little Albert	Idaho Springs	F & E Mining Co., 1154 S. Ogden, Denver	Gold, Silver, Copper, Lead, Zinc	Mine
Miami Tunnel & Edgar	Idaho Springs	Colorado School of Mines, Mining Dept., Golden	Gold, Silver, Lead	Mine
Poor John Adit #2	Idaho Springs	Bee Vee Mines, Box 14, Lawson	Instruction	Mine
Rusty Shovel	Idaho Springs	Elmer Anderson, 322 S. Emerson, Denver	Gold, Silver, Copper, Lead, Zinc	Mine
Santa Fe	Idaho Springs	Lancy Lubliner Mining Co., 812 Emporia, Aurora	Gold	Mine
Silver Belle	Georgetown	Sil-Back Mining Corp., Box 394, Georgetown	Gold, Silver	Mine
Silver King	Silver Plume	Silver King Mines, Inc., Box 66, Idaho Springs	Silver, Lead, Zinc	Mine
Smith & Wesson #1 & #2	Georgetown	Silver Giant Mining Co., Box 14, Lawson Allen Simons, 3216 W. Dakota, Denver	Tourist	Mine
Star Tunnel	Idaho Springs	Callicotte & McWhorter, Colorado School of Mines, Golden	Silver, Lead	Mine
Stevens	Bakerville	Atlas Machinery & Exploration Co., Inc., Box 1205, Denver	Tourist	Mine
Straight Creek Tunnel	Loveland Pass	Mid-Valley, Inc., 5787 Sheridan Blvd., Arvada	Gold, Silver, Copper, Lead	Mine
Urad	Berthoud Falls	C. Ryan & Sons, 6001 McIntyre, Golden	Pilot Bore	Project
			Molybdenum	Mine

**CONEJOS COUNTY**

Antonito Processing	Antonito	Great Lakes Carbon Corp., Mining Products Div., Box 308, Antonito	Perlite	Plant
King Turquoise	Manassa	W. P. King, 4315 Sunset Garden Rd., S.W., Albuquerque, New Mexico	Turquoise	Mine

**COSTILLA COUNTY**

Mesita Hill	Mesita	Colorado Aggregate, Inc., Mesita	Volcanic Scoria	Plant and Quarry
-------------	--------	----------------------------------	-----------------	------------------

## CUSTER COUNTY

Name of Property	Location	Operator's Name and Address	Product	Kind of Property
Abbit	Rosita	Schmidt Construction Co., 1003 E. 2nd St., Florence	Rancide	Quarry
Big Horn	Hillside	Silver Lake, Inc., Hillside	Silver, Copper, Lead	Mine
Buckeye Holt	Wetmore	Eisenhauer & Decker, Wetmore	Gold, Silver	Mine
Cook	Silver Cliff	O. L. Braly, Wetmore	Vermiculite	Mine
Game Ridge	Rosita	Cotter Corporation, Box 751, Canon City	Silver, Lead	Mine
Hercules	Querida	Wells, Maular, Beach, 1201 Park Ave., Canon City	Gold, Silver	Mine
Lady Franklin	Silver Cliff	Cotter Corporation, Box 751, Canon City	Silver, Lead, Zinc	Mine
Rosita	Rosita	Persolite Products, Inc., Box 105, Florence	Perlite	Quarry
Silver Cliff	Silver Cliff	Associated Minerals Products, Inc., Box 97, Westcliffe	Vermiculite	Plant
Silver Lake #1	Hillside	Silver Lake, Inc., Hillside	Gold, Silver	Mine
Tomboy	Wetmore	Charles & Lyman Akin, Wetmore	Gold, Silver	Mine
Vidler	Westcliffe	Cotter Corporation, Box 751, Canon City	Silver, Lead, Zinc	Mine

## DELTA COUNTY

Chipeta Mill	Delta	Chipeta Mining Co., Box 571, Delta	Gypsum	Mill
Kissner Drilling Company	Cedaredge	Kissner Drilling Co., Box 97, Cedaredge		Drilling

## DENVER COUNTY

Denver Works	Denver	General Chemical Div., Allied Chemical Corp., Box 4040, S. Denver Station, Denver	Sulphuric Acid, Pyrite Cinders, Aluminum Sulphate	Plant
Globe Plant	Denver	American Smelting & Refining Co., 495 E. 51st St., Denver 16	Cadmium	Plant

## DOLORES COUNTY

Barlow Group	Graysill	Vanadium Corp. of America, Naturita	Uranium, Vanadium	Mine
California	Rico	Williams Mining Partnership, Box 305, Naturita	Gold, Silver, Copper, Lead, Zinc	Mine
Mountain Springs	Rico	Rico Argentine Mining Co., Rico	Gold, Silver, Copper, Lead, Zinc, Iron	Mine
Ramco Acid Plant	Rico	Rico Argentine Mining Co., Rico	Sulphuric Acid	Mine
Rico Mill	Rico	Rico Argentine Mining Co., Rico	Gold, Silver, Copper, Lead, Zinc, Iron	Plant
Rosebud	Silver Creek	Earl Hotz, Telluride		Mill
Saint Louis	Rico	Oddie Cross, Cortez	Gold, Silver, Copper	Mine
		Rico Argentine Mining Co., Rico	Gold, Silver, Copper, Lead, Zinc	Mine



**DOUGLAS COUNTY**

Name of Property	Location	Operator's Name and Address	Product	Kind of Property
Helmer Plant	Littleton	Helmer Bros., Rt. 1, Box 94, Littleton	Silica, Fireclay	Plant
Hogback #2, #3, #4	Waterton	Robinson Brick & Tile Co., 500 S. Santa Fe, Denver	Clay	Mine
M & S	Sedalia	The M & S, Inc., Box 131, Sedalia	Stone	Plant
Madis	N.E. Parker	Stroud Whisenhunt, 520 Anderson St., Castle Rock	Clay	Mine
Pioneer	Parker	Robinson Brick & Tile Co., 500 S. Santa Fe, Denver	Clay	Mine
Ringenberg	Waterton	Denver Brick & Pipe Co., Box 2329, Denver	Clay	Mine
Skeleton #2	Sedalia	The M & S, Inc., Box 131, Sedalia	White Quartz	Quarry
Stevens Ranch	Castle Rock	Stroud Whisenhunt, 520 Anderson St., Castle Rock	Clay	Mine
Stroh	Parker	Stroud Whisenhunt, 520 Anderson St., Castle Rock	Clay	Mine
Waterton	Waterton	Waterton Sand & Clay Co., 5953 S. Rapp, Littleton	Clay, Sandstone	Plant

**EAGLE COUNTY**

Dotsero	Dotsero	Lava Products, Inc., Box 370, Glenwood Springs	Volcanic Ash	Quarry
Eagle Mines	Gilman	The New Jersey Zinc Co., Gilman	Silver, Copper, Lead, Zinc	Mine and Mill
Frying Pan-Arkansas	Basalt	U. S. Bureau of Reclamation, Basalt		Project

**ELBERT COUNTY**

Buffalo	Klowa	Robinson Brick & Tile Company, 500 S. Santa Fe Dr., Denver	Clay	Mine
Tucker	Klowa	Denver Brick & Pipe Co., Box 2329, Denver	Clay	Mine

**EL PASO COUNTY**

Broderick & Gibbons Plant	Colorado Springs	Broderick & Gibbons, Inc., Box 1741, Colorado Springs	Sand, Gravel	Plant
Castle	Colorado Springs	Gene Schooler, 1412 N. Handcock, Colorado Springs	Sand	Plant
Castle	Garden of the Gods	Castle Concrete Co., Box 2462, Colorado Springs	Sand, Gravel, Limestone	Quarry and Plant
Hecla	Air Force Academy	Dale Hoover, 1515 Park Ave., Canon City	Clay	Mine
Lennox Breed	Near Pike View	Colorado Lime Co., Rte. 1, Colorado Springs	Limestone	Quarry and Plant
NORAD	Colorado Springs	Continental Consolidated Corp., Box 754, Colorado Springs		
		Utah Construction & Mining Co., Box 1580, Colorado Springs		Project

Name of Property	Location	Operator's Name and Address	Product	Kind of Property
North Cheyenne Canyon	Colorado Springs	Boyles Brothers Drilling Co., 1624 Pioneer Road, Salt Lake City		Core Drilling
Ramah	W. of Ramah	Monks Excavating & Ready Mix, Limon		Dam
Rampart Range	Rampart Range	Colorado Springs Public Utilities, 18 S. Nevada		Water Diversion Tunnel
Sand Pit #2	Colorado Springs	Transit Mix Concrete Co., Daniels Sand Div., Colorado Springs	Sand, Gravel	Pit and Plant

**FREMONT COUNTY**

Burnito	Canon City	Ray Sturbaum Mining Co., 225 Main St., Canon City	Ganister	Quarry
Byzantine	Canon City	Colonna & Co. of Colorado, Inc., Box 387, Canon City	Limestone	Quarry
Calcite	Howard	Colorado Limestone Co., Inc., Box 8, Howard	Limestone	Quarry
Canon Chemical	S. of Canon City	Canon Chemical Co., Box 1074, Colorado Springs	Zinc Slag	Mill
Canon Cream	Canon City	Colonna & Co. of Colorado, Inc., Box 387, Canon City	Limestone, Travertine	Quarry
Canon Dolomite	Canon City	Colorado Fuel & Iron Co., Box 316, Pueblo	Dolomite	Quarry
Coaldale	Coaldale	Fibreboard Paper Products, Box 63, Coaldale	Gypsum	Quarry and Plant
Coleman	Sand Gulch	Alex Lockhart & Sons, 431 Majestic St., Canon City	Granite	Quarry
Cotter	Canon City	Cotter Corp., Box 751, Canon City	Uranium	Mill
Cowan Travertine & Marble	Canon City	Cowan Brothers, 227 Main St., Canon City	Marble	Quarry
Eight Mile Park	Canon City	George Stroup, Eight Mile Park, Canon City	Clay	Mine
English	Near Chaffee-Fremont Co. Line	Colonna & Co. of Colorado, Inc., Box 387, Canon City	Marble	Quarry
Flint Mine	Wilson Creek	Joe Vigil, First St., Florence	Clay	Mine
Horney Ganister	Temple Canyon	Ralph J. Pierce, 108 Penn St., Canon City	Silica	Quarry
I & E	Canon City	William R. Irvin, Rt. 1, Penrose	Clay	Mine
Joan	Tallahassee Creek	Wesco Minerals, 107 S. 5th, Canon City		
		Seacol Mining Co., Inc., 826 Main St., Canon City		
Knob Hill	Tallahassee Creek	Pierce Brothers, Canon City	Uranium	Mine
Last Chance	Tallahassee Creek	C. B. Johnson, Box S, Cortez	Uranium	Mine
Little Abney	Tallahassee Creek	C. B. Johnson, Box S, Cortez	Uranium	Mine
Mica Lode	Royal Gorge Park	Elmer J. Smaller & John Fantecchio, Box 768, Canon City	Uranium	Mine
New Jersey Zinc Plant	Canon City	Alex Lockhart & Sons, 431 Majestic St., Canon City	Quartz	Quarry
		The New Jersey Zinc Co., Box 319, Canon City	Zinc	Plant
Parkdale	Parkdale	Mineral Products Co., Parkdale	Graphite, Barite, Vermiculite, Perlite	Mill
Penrose	Salt Canyon	Dale Hoover, 1515 Park Ave., Canon City	Silica	Quarry
Periselite	Florence	Periselite Products, Inc., Box 105, Florence	Perlite	Plant

Name of Property	Location	Operator's Name and Address	Product	Kind of Property
Phantom Canyon	Beaver Creek Rd.	George Stroup, Eight Mile Park, Canon City	Clay	Mine
Picnic Tree	Canon City	C. B. Johnson, Box S, Cortez	Uranium	Mine
Portland	Portland	Ideal Cement Co., Portland	Limestone	Quarry and Plant
Rock Products	Florence	Rock Products, Inc., Box 106, Florence	Quartz, Marble	Plant
Taylor Gulch	Taylor Gulch	Frank H. Norberg Co., 703 Guaranty Bldg., Denver	Limestone	Quarry
Thunder Mountain	Salida	U. S. Soil Conditioning Corp., Box 346, Salida	Soil Conditioner	Quarry
Triangle	Kerr Gulch	Silver Rocker Bentonite Co., Box 108, Salida	Bentonite	Quarry
Wild Rose	Texas Creek	Ralph J. Pierce, 108 Penn Ave., Canon City	Quartz	Quarry

**GARFIELD COUNTY**

Basic Chemical Quarry	Glenwood	Basic Chemical Corp., Box 270, Glenwood Springs	Limestone	Quarry
Garfield Rifle Mine	Rifle	Climax Uranium Co., Box 989, Grand Junction	Uranium, Vanadium	Mine
Glenwood Springs Lime Quarry	Glenwood Springs	Frank H. Norberg Co., 703 Guaranty Bank Bldg., Denver	Limestone	Quarry
Rifle Mill	Rifle	Union Carbide Co., Nuclear Div., Rifle	Uranium, Vanadium	Mill

**GILPIN COUNTY**

Bobtail	Black Hawk	Gus Bakos & Robert Hollenback, Black Hawk	Tourist	Mine
Bon Ton	Central City	Bon Ton Mining Co., 10983 W. Exposition Pl., Denver	Gold, Silver, Copper, Lead, Zinc	Mine
Braeher Ranch	Black Hawk	McCoy-Jensen, 9800 Morrison Rd., Morrison	Peat	Peat Bog
Carroll	Central City	Klame Corp., 5060 S. Inca, Englewood	Uranium	Mine
Couch Placers #1 & #2	Black Hawk	Staniel Couch, Box 146, Black Hawk	Gold, Tourist	Placer
Diamond Lil	Central City	Central Gold Mine & Mining Museum, Box 161, Central City	Gold, Silver, Copper, Tourist	Mine
Durand Brothers	Gilpin	Durand Brothers, 935 S. Patton Ct., Denver	Gold	Placer
Fools Luck	Missouri Gulch	Ashcraft & Patrick, 6513 Gray St., Arvada	Gold	Placer
Gangloff Placer #13670	Stewart Gulch	Columbine Peat Co., Box 187, Idaho Springs	Peat	Peat Bog
Gilpin	Gilpin	Omar Beagle, 2424 W. Yale, Denver	Peat	Peat Bog
Glory Hole	Central City	Glory Hole, Inc., Central City	Gold, Silver, Copper, Lead, Zinc	Mill
Gold Rock	Black Hawk	Paul J. Janes, 1010 Grand Ave., So. San Francisco 94080	Gold	Mine

Name of Property	Location	Operator's Name and Address	Product	Kind of Property
Golden Cycle	Perrigo	Altwater & Fraser, 4630 Quitman, Denver	Gold, Silver, Copper	Mine
Golden Gilpin	Black Hawk	Globe Hill Mining Co., 5365 W. 3rd Place, Denver	Gold, Silver, Copper, Lead, Zinc	Mill
Green	Black Hawk	Adams, Bowen & Todhunter, 3815 S. Elati, Englewood	Gold	Placer
Huddleson	Black Hawk	Mike McNulty, Black Hawk	Tourist	Mine
Little Colonel	Black Hawk	Black Hawk Trading Post, Black Hawk	Gold, Silver, Copper	Mine
Lode Star	Missouri Gulch	R. E. Clarida, 3120 W. Arizona, Denver	Gold, Silver, Copper	Mine
Mary Nuisance	Elk Creek	Amrhein & Thomsen, 2464 S. Delaware, Denver	Gold	Placer
National Bank Lode	Central City	Faye Tyson, Box 201, Central City	Tourist	Mine
Patricks Enterprise	Missouri Gulch	Robert W. Patrick, Rt. 1, Spencer, Indiana	Gold	Mine
Perigo	Perigo	John R. & Veda M. Hall, Rt. 2, Box 669, Golden	Gold	Placer
Phoenix Star	N. Beaver Creek	Graham & Eckholt, 3060 S. Bannock, Denver	Gold	Placer
Pritchett Tunnel	Missouri Gulch	George C. Pritchett, 819 S. Jay Court, Denver	Gold	Mine
Rider & Lawson	Black Hawk	Chalmers L. Reider, 630 Logan St., Denver	Gold	Placer
Rudolph Ranch	Black Hawk	Gus Rudolph, Black Hawk	Peat	Peat Bog
Silver Bell	Black Hawk	Eiven Jacobson, Rt. 2, Box 140, Golden	Peat	Peat Bog
Walter Stephens	Missouri Gulch	Walter Stephens, Black Hawk	Gold, Silver, Copper	Mine
Thunderbird	Missouri Gulch	Paul B. Pinnt, 823 S. Jay Court, Denver	Gold	Mine
Twin Buttes	Missouri Gulch	John J. Biernat, 1780 W. Wesley, Englewood	Gold	Mine
Wilma	Black Hawk	Nye Metals, Inc., Black Hawk	Molybdenum	Mine
Zacker	East Black Hawk	Ralph Zacher, Black Hawk	Gold	Placer
Trail Creek #1	NW of Granby Dam	John Babb, Granby	Gold, Silver, Fluorspar	Mine
Trail Creek Placer	NW of Granby Dam	C. J. Carlson, et al., 5872 Taft, Arvada	Gold	Placer

## GRAND COUNTY

## GUNNISON COUNTY

Anaconda	Gunnison	J. C. Warde Mining Co., 111 E. Georgia, Gunnison	Gold, Silver, Copper	Mine
Atlas Mill	Crested Butte	Rocky Mountain Mining, Austin	Gold, Silver, Copper, Lead, Zinc	Mill
Blue Mesa Project	Saphero	Tecon Corporation, Box 718, Gunnison	Reclamation	Project
Curecanti Unit	Saphero	Quad Construction, Inc., Box 116, Saphero	Copper, Molybdenum	Mine
Bon Ton	Cumberland Pass	Bear Creek Mining Co., 1498 S. Lujan, Denver	Copper, Molybdenum	Mine

Name of Property	Location	Operator's Name and Address	Product	Kind of Property
Bull Domingo	Italian Mountain	John Lambertson, Box 567, Gunnison Junction	Silver, Lead	Mine
Cebolla Creek Adits	Powderhorn	Hughes Mining Co., Box 1886, Grand Junction	Iron, Titanium	Mine
Copper King Tunnel	Ohio City	Lowell Staats, Nucla	Silver, Copper	Mine
DuPont DeNemours Claims	Powderhorn	Boyles Brothers Drilling Co., 1321 S. Main St., Salt Lake City	Rare Earths	Mine
Forest Hill Group	Taylor Park	Gaddis Mining Company, 1500 Mile High Center, Denver	Silver, Copper, Lead, Zinc	Mine
Forest Queen	Crested Butte	Forest Queen Mines, Inc., Box 396, Crested Butte	Silver, Lead	Mine and Mill
Italian Quarry	Marble	H. L. Arbogast, 234 31 1/3 Rd., Grand Junction	Marble	Quarry
Keystone	Crested Butte	McFarland & Hullinger, Box 238, Tooele, Utah	Gold, Silver, Copper, Lead, Zinc	Mine and Mill
Lake Irwin Dam	Crested Butte	Cal Hefner, Colorado Springs	Gold, Silver, Copper, Lead, Zinc	Dam
Micawber	Crested Butte	Rocky Mountain Mining, Rt. 1, Austin	Gold, Silver, Copper, Lead, Zinc	Mine
Morning Glory	Cumberland Pass	Bear Creek Mining Co., 1498 S. Lipan, Denver	Copper, Molybdenum	Mine
Pearl's Placer	Gold Creek	Chase & Wright, Ohio City	Gold, Quick Silver	Placer
Ruhter Placer	Taylor Park Store	P. H. Ruhler, 1187 Emporia, Aurora	Aluminum, Iron, Titanium	Placer
St. John (June Bug)	Hall Gulch	Harold Kane, Pitkin	Silver	Mine
Silent Friend	Hall Gulch	Jack McClain, Parlin	Silver	Mine
Skyline #2	Washington Gulch	Frank Hodgson & Harry Downing, Box 401, Crested Butte	Gold, Silver, Lead	Mine
Sloss Quarry	Gunnison	Jim Sloss, Tomichi Ranch, Gunnison	Building Stone	Quarry
Titan	Powderhorn	Earth Sciences, Inc., Box 737, Golden	Vermiculite	Mine
<b>HINSDALE COUNTY</b>				
Empire Group	Wood Mountain	Independence Mining Co., Box 333, Lake City	Gold, Silver, Copper, Lead, Zinc	Mine
Golden Fleece	Lake San Cristobal	C. N. Moritz, 2550 E. Flora Place, Denver	Gold, Silver, Copper, Lead, Zinc, Uranium	Mine
Last Chance	San Cristobal Hill	Joe Gomez & Ray Cole, Box 383, Lake City	Gold, Silver, Copper, Lead, Zinc	Mine
Pelican	Hansen Creek	Big Park Mining Corp., Swanson House, Lake City	Gold, Silver, Lead	Mine
<b>HUERFANO COUNTY</b>				
Huerfano Pit #4	NW of Walsenburg	Empire Clay Products, Inc., Box 156, Trinidad	Clay	Mine



## JEFFERSON COUNTY

Name of Property	Location	Operator's Name and Address	Product	Kind of Property
Aggregates, Inc.	Golden	Rocky Mountain Aggregates, Inc., Box 771, Golden	Crushed Stone	Plant
Ascension	Golden	Yellow Queen Uranium Co., 2027 E. Virginia, Denver	Uranium	Mine
Augusta	Evergreen	C & S Mining Co., 1661 S. Clay, Denver	Gold, Silver, Copper, Fluorspar	Plant
Beryl Ores Company	Arvada	Beryl Ores Co., 10000 Alkire St., Arvada	Beryl, Mica	Plant
Caldwell	Plainview	Denver Brick & Pipe Co., Box 2329, Denver	Clay	Mine
Church	Rocky Flats	Wesley D. Conda, Box 110, Rt. 1, Boulder	Clay	Mine
Church's Shale Pit	Golden	Duane Bruno, 929 E. Ellsworth, Denver	Shale	Mine
Clalite Aggregate Co.	Golden	Clalite Aggregate Co., 4250 McIntyre, Golden	Shale	Plant
Colorado School of Mines, Geophysical Observatory	Bergen Park	Hardrock Contracting Co., 900 Allison, Lakewood		Seismograph Station
Cooper	Buffalo	Earl M. Cooper, 1232 S. Eaton Court, Denver & Corder, 2520 Robinson St., Colorado Springs	White Quartz	Quarry
Daisy Bell	Twin Cedars	Crisler & Corder, 2520 Robinson St., Cotter Corp., Box 751, Canon City	White Quartz, Fluorspar	Quarry
Foothills	Idledale	Magdalena Mining & Milling Co., Box 751, Canon City	Uranium	Mine
Green Mountain & Rockwell	Rooney Road	Geo. W. Parfet Estates, Inc., Box 226, Golden	Clay	Mine
Harvey	Rocky Flats	John L. Harvey, 1609 Pierce St., Lakewood	Clay	Mine
Kilgroe & Atchison	14425 W. 32, Jefferson County	Kilgroe & Atchison Const. & Paving Co., Inc., Box 15385, Lakewood	Gravel	Plant
Ladwig Lease	Golden	Cotter Corp., Box 751, Canon City	Uranium	Mine
Lakewood	Golden	Lakewood Brick & Tile Co., 1325 Jay St., Lakewood	Clay	Mine
Lariat	Waterton	Robinson Brick & Tile Co., Box 1619, Denver	Clay	Mine
Lee	4000 Youngsfield St.	Lee Sand & Gravel Co., Box 128, Wheat Ridge	Clay	Mine
McIntyre Plant	Golden	Asphalt Paving Co., 14802 W. 44th, Golden	Gold, Sand, Gravel	Plant
Morrison Plant	Morrison	Bear Valley Gravel Co., Box 167, Morrison	Sand, Gravel	Plant
Mt. Carbon	W. of Denver	Duane Bruno, 929 E. Ellsworth, Denver	Sand, Gravel	Plant
Nare Prospect	Golden	L. D. Ohman, 800 Bonnie Brae Dr., Denver	Shale, Clay	Mine
North Golden	Golden	Denver Fire Clay Co., 3303 Blake St., Denver	Uranium	Mine
Pit #11 Plant	Ward Road	Brannan Sand & Gravel Co., 4800 Brighton Blvd., Denver	Clay	Mine
Platte Canyon Intake Dam	Waterton	F. H. Linneman, 1300 Harlan, Lakewood	Gold, Sand, Gravel	Plant
North Chieftan	Denver	Robinson Brick & Tile Co., Box 1619, Denver	Clay	Dam
Ramstetter	Guy Hill	James Ramstetter, Box 28, Rt. 2, Golden	Clay	Mine
Red Clay	Golden	Lakewood Brick & Tile Co., 1400 Jay St., Lakewood	White Quartz, Mica	Quarry
Rio Grande	Denver	Rio Grande Gravel Co., 123 Santa Fe Drive, Denver	Clay	Mine
			Gold, Sand, Gravel	Plant

Name of Property	Location	Operator's Name and Address	Product	Kind of Property
Rockwell	Golden	Geo. W. Parfet Estate, Inc., Box 226, Golden	Clay	Mine
Rocky Flats	Boulder	The Idealite Co., 806 Boston Bldg., Denver	Shale	Quarry and Plant
Rubey Standard	Golden	H. M. Rubey Clay Co., Box 226, Golden	Clay	Mine
Schwartzwalder	Golden	Denver-Golden Corp., 2138 Champa, Denver	Uranium	Mine
South Chieftan	Golden	Robinson Brick & Tile Co., Box 1619, Denver	Clay	Mine
State	Rocky Flats	Colorado Brick Co., Longmont	Clay	Mine
Strainland #1	Golden	Denver Brick & Pipe Co., Box 2329, Denver	Clay	Mine
Table Mountain, Inc.	Golden	Table Mountain, Inc., 2680 Youngsfield, Denver	Gold, Sand, Gravel	Plant
Tan Plastic	Golden	G. C. Bennetts & Sons, Rt. 1, Box 759, Golden	Clay	Mine
Terra Cotta	Golden	Lakewood Brick & Tile Co., 1400 Jay St., Lakewood	Clay	Mine
Tin Cup	Golden	Robinson Brick & Tile Co., Box 1619, Denver	Clay	Mine
Two Brothers	Golden	G. C. Bennetts & Sons, Rt. 1, Box 759, Golden	Clay	Mine

**LAKE COUNTY**

Boyles Brothers Drilling Co.	Climax	Boyles Brothers Drilling Co., Leadville		Drilling
Buffers Lake Plant	Climax	C. Ryan & Son, Climax	Sand, Gravel	Plant
Carlton Tunnel	Leadville	High Line Canal Co., Rocky Ford		Tunnel
Climax Mill	Climax	Rocky Mountain Bridge Co., Box 132, Pueblo	Construction	Mill
Climax Mine & Mill	Climax	Climax Molybdenum Co., a Div. of American Metals, Climax, Inc., Climax	Molybdenum, Tin, Tungsten	Mine and Mill
Hawk Eye	Leadville	New Era Mining Co., 324 Mt. Yale, Leadville	Gold, Sand, Gravel	Placer
Homestake Tunnel	Leadville	Quad Construction Co., Leadville		Tunnel
Miner Boy	Leadville	St. Louis Lease, 502 W. 7th St., Leadville	Gold, Silver, Lead, Zinc	Mine
Rosse	Leadville	Robert D. Elder, 310 W. 8th St., Leadville	Silver, Lead, Zinc	Mine
C. Ryan & Son	Climax	C. Ryan & Son, Climax	Sand, Gravel	Plant

**LA PLATA COUNTY**

Animas Valley Sand & Gravel	Durango	Animas Valley Sand & Gravel, Box 1001, Durango	Sand, Gravel	Quarry
Bell Quarry	Durango	Vanadium Corp. of America, Naturita	Limestone	Quarry
Bessie G. Mill	La Plata City	Copper Age Uranium Co., Box 124, Marvel	Copper	Mine and Mill
Bob's Excavation	Durango	Bob Rathjen, Box 3308, Durango	Sand, Gravel	Plant

Name of Property	Location	Operator's Name and Address	Product	Kind of Property
Brawner Mill & Tunnel	Lewis Mountain	Steward Brothers, Box 1303, Durango	Gold, Silver	Mine and Mill
Copper Age	La Plata Canyon	Copper Age Uranium Co., Box 124, Marvel	Copper	Mine
Grassy Hill	La Plata Canyon	B. E. T. Mining Co., Box 83, Monticello, Utah	Gold	Mine
Jenny Lind & Western Bell	Lewis Mountain	Steward Brothers, Box 1303, Durango	Gold, Silver, Lead	Mine
Lemon Dam	Durango	Colorado Constructors, Inc., 380 W. 62nd Ave., Denver		Dam
Mountain Valley Moss, Inc.	Hermosa	Mountain Valley Moss, Inc., Rt. 1, Durango	Peat	Peat Bog
Sarah G.	Durango	Charles C. Goulding, Box 210, Durango	Silver	Mine
V.C.A. Mill	Durango	Vanadium Corp. of America, Durango	Uranium, Vanadium	Mill
Wildcat	La Plata Canyon	C. Z. Reed, Rt. 1, Morgan Hill, California	Silver	Mine
Winnek, Inc.	Marvel	Jim Winnek, 5730 Admiral Place, Tulsa, Okla.		Drilling

### LARIMER COUNTY

Berthoud Quarries	Longmont	Colorado Stone Co., 1645 N. Main St., Longmont	Veneer strips, Stone	Quarry and Mill
Berthoud #26	Carter	Berthoud Pink Stone Co., Rt. 2, Box 99A, Berthoud		
Boettcher Plant	La Porte	Ideal Cement Co., Box 579, Fort Collins	Building stone	Quarry
Boettcher Quarry	La Porte	Ideal Cement Co., Box 579, Fort Collins	Limestone	Plant
Cajo #3	Buckhorn Canyon	Cajo Mines, Inc., Box 183, Loveland	Beryl, Quartz	Quarry
Chance	Masonville Road	Weaver Stone Quarries, 759 S. York St., Denver	Stone	Mine
Colorado Stone #1	East Beach Hill	Colorado Quarries, Rt. 2, Box 199, Loveland	Stone	Quarry
Corral Pole #2	Buckhorn Canyon	Arthur Johnson, 625 Mathews, Fort Collins	Beryl, Mica	Quarry
Goodwin	Fort Collins	Ernest W. Munroe, Rt. 2, Box 273, Fort Collins	Gypsum	Mine
Holly	Fort Collins	Norberg Construction Co., 703 Guaranty Bank Bldg., Denver	Limestone	Quarry
Jessen #1	Buckhorn Canyon	Cajo Mines, Inc., Box 183, Loveland	White Quartz	Plant
Jolux #2	Columbine	Jolux Mica Co., Box 575, Fort Collins	Mica, Beryl	Quarry
Langston	Columbine	Jolux Mica Co., Box 575, Fort Collins	Mica, Beryl	Plant
Loveland	Loveland	U. S. Gypsum Co., Estes Park Rt., Loveland	Gypsum	Mine
Loveland #15	Masonville Road	Colorado Stone Co., 1645 N. Main St., Longmont	Stone	Quarry
Loveland Plant	Loveland	Mineral Concentrate & Chemical Co., 1430 First Natl. Bank Bldg., Denver	Beryllium	Quarry
Munroe Pioneer	Fort Collins	Pinion Grove Lime Co., Box 273, Fort Collins	Gypsum, Limestone	Plant
Online	Masonville	Colorado Quarries, Rt. 2, Box 199, Loveland	Stone	Quarry
		Buckhorn-Olin Quarries, Estes Park Rt., Loveland	Stone	Quarry

Name of Property	Location	Operator's Name and Address	Product	Kind of Property
Pinion Grove	Fort Collins	Pinion Grove Lime Co., Box 273, Fort Collins	Limestone	Quarry
Primrose Beryl Lode	Buckhorn Canyon Road	Lawrence T. Childs, 1798 Ulster St., Denver	Beryl, Mica	Mine
Rex	Fort Collins	Norberg Construction Co., 703 Guaranty Bank Bldg., Denver	Limestone	Quarry
Rose Stone Quarries	East Beach Hill	Colorado Stone Co., 1645 N. Main St., Longmont	Stone	Quarry
Spears	Beach Hill	B. H. Spears & Son, Box 283, Lyons	Stone	Quarry
Sprague	Carter Lake	Borhound Pink Stone Co., Rt. 2, Box 99A, Berthoud	Stone	Quarry
Sterling	Taft Hill Road	Sterling Sand & Gravel Co., Rt. 3, Box 560, Fort Collins	Sand, Gravel	Plant
Stewart	Beach Hill	Stewart Ledge Stone Co., Box 193, Rt. 1, Longmont	Stone	Quarry
Troupe	Masonville Road	Sterling Stone Quarries, Box 58, Lyons	Stone	Quarry
Union Pacific	Fort Collins	Norberg Construction Co., 703 Guaranty Bank Bldg., Denver	Limestone	Quarry
Weaver	Masonville	Weaver Stone Quarries, 759 S. York St., Denver	Stone	Quarry
Wild South	Masonville	Wild's Stone Quarries, Eses Park Rt., Loveland	Stone	Quarry

LAS ANIMAS COUNTY

Huerfano Pit	Walsenburg	Empire Clay Products, Inc., Box 156, Trinidad	Clay	Mine
Pit #1, #3, #4	Trinidad	Empire Clay Products, Inc., Box 156, Trinidad	Clay	Mine
Santa Fe	Starkville	Scott Mining Co., Starkville	Clay	Mine
Trinidad	Starkville	Harbison-Walker Refractories, Box 150, Canon City	Clay	Mine

MESA COUNTY

Arrowhead #23	Calamity Mesa	Lee Moores, 2129 S. Broadway, Grand Junction	Uranium, Vanadium	Mine
Arrowhead #25	Calamity Mesa	Ed Knizley, 274 27 Rd., Grand Junction	Uranium, Vanadium	Mine
Arrowhead #27	Calamity Mesa	Art Inman, 920 S. 4th, Grand Junction Arlene M. Wellman, Box 1901, Grand Junction	Uranium, Vanadium	Mine
Austin	Beaver Mesa	Michael Montgomery, Box 211, Gateway	Uranium, Vanadium	Mine
Blue Ribbon #4	Calamity Mesa	Ed Knizley, 274 27 Rd., Grand Junction	Uranium, Vanadium	Mine
Bluebird & Jumbo #1	Outlaw Mesa	J. R. & J. A. Sage, 267½ Allyce Ave., Grand Junction	Uranium, Vanadium	Mine
Bonanza #2	Beaver Mesa	Climax Uranium Co., Box 989, Grand Junction	Uranium, Vanadium	Mine
Calco	Calamity Mesa	Floyd Hamrick, 159 Colorado Ave., Grand Junction	Uranium, Vanadium	Mine



Name of Property	Location	Operator's Name and Address	Product	Kind of Property
Carmack Potash	Sinbad Valley	Carmack Drilling Co., 1700 Broadway, Denver	Potash	Drilling
Century Tunnel	Beaver Mesa	Argo Mining Co., Box 1698, Grand Junction	Uranium, Vanadium	Mine
Cherokee Shaft	Beaver Mesa	H.O.L. Mining Co., Gateway	Uranium, Vanadium	Mine
Climax Uranium Mill	Grand Junction	Climax Uranium Co., Box 989, Grand Junction	Uranium, Vanadium	Mill
Crescent	Outlaw Mesa	Harold Price, Naturita	Uranium, Vanadium	Mine
Depression #2	Flat Top Mesa	Marion Trone, Norwood	Uranium, Vanadium	Mine
Depression #5	Flat Top Mesa	Delbert Burbridge, Box 187, Nucla	Uranium, Vanadium	Mine
Depression #6	Flat Top Mesa	Jim Gibson, Clifton	Uranium, Vanadium	Mine
Hubbard	Beaver Mesa	Marion Trone, Clifton	Uranium, Vanadium	Mine
Jacob's Ladder	Grand Junction	D. P. Mining Co., Gateway	Uranium, Vanadium	Mine
Jody #6, #8	Blue Mesa	Vern & Willis Kelley, Gateway	Uranium, Vanadium	Mine
July	Outlaw Mesa	United Stone Products Co., 1620 N. 1st, Grand Junction	Quartz	Quarry
June Mine	Outlaw Mesa	Charles E. Davis, Box 86, Naturita	Uranium, Vanadium	Mine
La Sal	Grand Junction	Lee Hetzel, Clifton	Uranium, Vanadium	Mine
Liberty Bell	Tenderfoot Mesa	Geo. Liverman, Box 431, Grand Junction	Uranium, Vanadium	Mine
Loma Quarry	Loma	H. L. Arbogast, Rt. 4, Grand Junction	Uranium, Vanadium	Mine
Lost Dutchman #1	Beaver Mesa	Luke Cautrell, 117 Royal, Clifton	Uranium, Vanadium	Mine
Lumsden	Beaver Mesa	Connie Randolph, Box 1014, Grand Junction	Uranium, Vanadium	Mine
Lumsden #2	Beaver Mesa	Shipman Mining & Exploration Co., Box 861, Grand Junction	Uranium, Vanadium	Mine
M. C. #10	Outlaw Mesa	E. E. Lewis, Inc., Box 1481, Grand Junction	Uranium, Vanadium	Mine
Mesa #8	Outlaw Mesa	United Stone Products Co., 1620 N. 1st, Grand Junction	Uranium, Vanadium	Mine
New Verde	Gateway	Argo Mining Co., Box 1698, Grand Junction	Stone	Quarry
October Adit	John Brown Mesa	Vern & Willis Kelley, Gateway	Uranium, Vanadium	Mine
Outlaw #23	Outlaw Mesa	D. P. Mining Co., Box 237, Gateway	Uranium, Vanadium	Mine
Packrat	Beaver Mesa	George Liverman, Box 431, Grand Junction	Uranium, Vanadium	Mine
Protector	Gateway	Ralph Foster & Sons, 2950 A 1/2 Rd., Grand Junction	Uranium, Vanadium	Mine
Rainbow	Outlaw Mesa	John Honstein, 717 Brassie Dr., Grand Junction	Uranium, Vanadium	Mine
Rajah #30	Beaver Mesa	Climax Uranium Co., Box 989, Grand Junction	Uranium, Vanadium	Mine
Ronnie #1 & #2	Outlaw Mesa	Oscar E. Jonson, Gateway	Uranium, Vanadium	Mine
		Harold Price, Box 74, Nucla	Uranium, Vanadium	Mine
		H.O.L. Mining Co., Box 567, Grand Junction	Uranium, Vanadium	Mine
		Phil Bunker, Nucla	Uranium, Vanadium	Mine
		Climax Uranium Co., Grand Junction	Uranium, Vanadium	Mine
		H.O.L. Mining Co., Box 567, Grand Junction	Uranium, Vanadium	Mine
		Henry Lehr, Box 212, Gateway	Uranium, Vanadium	Mine
		Model Mining Co., Grand Junction	Uranium, Vanadium	Mine
		George Liverman, 2236 Orchard Ave., Grand Junction	Uranium, Vanadium	Mine



Name of Property	Location	Operator's Name and Address	Product	Kind of Property
Rosebud	Tenderfoot Mesa	Jones Brothers, Box 183, Naturita	Uranium, Vanadium	Mine
Snowshoe & M.C. #3	Outlaw Mesa	Ralph Foster & Sons, 2950 A½ Rd., Grand Junction	Uranium, Vanadium	Mine
Thornton	Beaver Mesa	Charles V. Woodard, 2909 U.S. 50, Grand Junction	Uranium, Vanadium	Mine
United Sand & Gravel	Grand Junction	United Sand & Gravel Co., 714 S. 6th, Grand Junction	Sand, Gravel	Plant
United Stone Products	Grand Junction	United Stone Products Co., 1620 N. 1st, Grand Junction	Stone	Quarry
Ute Water Tunnel	Plateau Creek	E. E. Lewis, Inc., Box 1481, Grand Junction		Water Tunnel
Whitewater Sand & Gravel	Whitewater	Whitewater Sand & Gravel Co., 910 S. 10th, Grand Junction	Sand, Gravel	Plant

**MINERAL COUNTY**

Amethyst & Commodore	Creede	Emperius Mining Co., Creede	Silver, Lead, Zinc	Mine
Bull Dog Mine	Creede	Homestake Mining Co., Creede	Silver, Lead, Zinc	Mine
Creede Mill	Creede	Emperius Mining Co., Creede	Gold, Silver, Lead, Zinc	Mill
Mexico	Creede	King Solomon Mining Co., Creede	Gold, Silver, Copper, Lead, Zinc	Mine
Monon	Creede	Outlet Mining Co., Creede	Zinc	Mine
		Monon Leasing Co., Creede	Silver, Lead, Zinc	Mine

**MOFFAT COUNTY**

Maybell Mill	Maybell	Union Carbide Co., Nuclear Div., Maybell	Uranium	Mill
Trace Elements Pits	Maybell	Union Carbide Co., Nuclear Div., Maybell		
		Ralph Fiesh & Son, Walden		
		Art. Keas, Maybell		
		Grover Williams, Shockey Trailer Court, Craig, Colo.	Uranium	Mine

**MONTEZUMA COUNTY**

Brownville Group	Bull Hill	E. P. Crawford, 223 N. Ash, Cortez	Gold, Silver	Mine
Fritz & Erickson	Four Corners Area	Fritz & Erickson Drilling Co., Dove Creek		Drilling
Montezuma Valley Irrigation Tunnel	Hartman Draw	Montezuma Valley Irrigation Co., Cortez		Water Tunnel
Red Arrow	Mancos	First National Oil & Minerals Co., Box 1585, Pueblo		
Sexton Bros. Drilling	Four Corners Area	Sexton Brothers, Box 506, Cortez	Gold, Silver, Copper	Mine
Spencer	Echo Basin	Spencer Mining Co., Box 216, Mancos	Gold, Silver	Drilling
Twin Canyon Group	Twin Canyon	Charles & Wesley Potts, Mancos	Gold	Mine

## MONTROSE COUNTY

Name of Property	Location	Operator's Name and Address	Product	Kind of Property
American Eagle	Little Gyp Valley	John Dillon, Box 232, Naturita	Uranium, Vanadium	Mine
Anna May	Monogram Bench	Berry & Dillon, Box 361, Naturita	Uranium, Vanadium	Mine
April	Naturita	Cole & Bond, Box 188, Nucla	Uranium, Vanadium	Mine
Arrowhead Incline	Naturita	James Herring, Box 194, Nucla	Uranium, Vanadium	Mine
Babe Ruth	Bull Canyon	Cole & Bond, Box 188, Nucla	Uranium, Vanadium	Mine
Bagger	Long Park	Jack Bond, Nucla	Uranium, Vanadium	Mine
Bitter Creek	Long Park	O. E. Smart, Box 296, Naturita	Uranium, Vanadium	Mine
Black Diamond	Monogram Bench	Fred Morlang & Ed Wolverton, Box 115, Olathe	Uranium, Vanadium	Mine
Black Rock	Uravan	Dade & Shumway, 215 Landsdown, Grand Junction	Uranium, Vanadium	Mine
Blackburn	Monogram Mesa	Levi B. Barnes, Box 156, Nucla	Uranium, Vanadium	Mine
Blue Bell	Long Park	Woodrow Gripe, Box 225, Naturita	Uranium, Vanadium	Mine
Bob Tail	Uravan	Boyd Castor, Nucla	Uranium, Vanadium	Mine
Bogus	Monogram Mesa	Lowell Staats, Box 334, Nucla	Uranium, Vanadium	Mine
Brooks	Little Gyp Valley	Dave Blake, Nucla	Uranium, Vanadium	Mine
Buckeye	Long Park	Cole & Bond, Box 188, Nucla	Uranium, Vanadium	Mine
Buckhorn	Paradox	Union Carbide Co., Nuclear Div., Uravan	Uranium, Vanadium	Mine
Buckshot	Club Mesa	Mitchell & Fisher, Box 339, Naturita	Uranium, Vanadium	Mine
Butterfly #2	Paradox	D. A. Hager, Box 388, Naturita	Uranium, Vanadium	Mine
Camel #6	Bull Canyon	Boyd Castor, Box 764, Nucla	Uranium, Vanadium	Mine
Capella	Monogram Mesa	William Barnett, Sr., Box 93, Naturita	Uranium, Vanadium	Mine
Carmack Potash	Paradox Valley	Marion Trone, Norwood	Uranium, Vanadium	Mine
Cashin	Paradox	Dade & Shumway, 215 Landsdown, Grand Junction	Uranium, Vanadium	Mine
Cliffdweller	Uravan	Everett Blackburn, Placerville	Uranium, Vanadium	Mine
Club No. 2	Club Mesa	Calvin Sanders, Box 396, Nucla	Uranium, Vanadium	Mine
Club Sandwich	Dolores Rim	Carmack Drilling Co., 1700 Broadway, Denver	Potash	Drilling
Coloradium	Long Park	Gold Bar Resources, Inc., 455 E. 4th So., Salt Lake City	Silver, Copper	Mine
Columbia	Long Park	Glen Gardner, Box 202, Naturita	Uranium, Vanadium	Mine
Crab Orchard	Bull Canyon	Frank McKendrick, Box 316, Uravan	Uranium, Vanadium	Mine
Cripple Creek #2	Long Park	Vanadium Corporation of America, Naturita	Uranium, Vanadium	Mine
Crystal Dam	E. Portal of Uncompangre Monogram	Woodrow Gripe, Box 225, Naturita	Uranium, Vanadium	Mine
Deer Shaft	Monogram	Jerry Mayfield, Box 222, Naturita	Uranium, Vanadium	Mine
Diana	Lower Bull Canyon	Cole & Bond, Box 188, Nucla	Uranium, Vanadium	Mine
Dinah #2	Bull Canyon	Klingsmith & Neilson, Box 337, Uravan	Uranium, Vanadium	Mine
Doagy (Lower #1)	Monogram Bench	Pete Daguerre, Box 951, Uravan	Uranium, Vanadium	Mine
		Lark L. Washburn, Box 750, Uravan	Uranium, Vanadium	Mine
		U. S. Bureau of Reclamation, Montrose	Uranium, Vanadium	Drilling
		Booth Eckman, Box 127, Nucla	Uranium, Vanadium	Mine
		Naturita	Uranium, Vanadium	Mine
		Hickey & Erfurt, Box 603, Nucla	Uranium, Vanadium	Mine
		Hickey & Erfurt, Box 603, Nucla	Uranium, Vanadium	Mine
		Levi B. Barnes, Box 156, Nucla	Uranium, Vanadium	Mine

Name of Property	Location	Operator's Name and Address	Product	Kind of Property
Donald L.	Long Park	Lloyd Rainwater, Nucla Dade & Shumway, 215 Landsdown, Grand Junction	Uranium, Vanadium	Mine
Donna K.	Long Park	Dade & Shumway, 215 Landsdown, Grand Junction	Uranium, Vanadium	Mine
Duchess #2	Martin Mesa	Woodrow Gripe, Box 225, Naturita	Uranium	Mine
Duggan Adit	Monogram Mesa	Climax Uranium Co., Grand Junction	Uranium, Vanadium	Mine
Echo #6	Naturita	Lowell Finch & Oren Story, Naturita	Uranium, Vanadium	Mine
Equinox	Uran	American Eagle Leasing Co., Norwood	Uranium, Vanadium	Mine
Eula Belle	Mesa Creek	Union Carbide Co., Nuclear Div., Uravan	Uranium, Vanadium	Mine
Eureka	Carpenter Ridge	William Barnett, Naturita	Uranium, Vanadium	Mine
Fawn Springs Group	Bull Canyon	Charles H. Corey, Box 652, Durango	Uranium, Vanadium	Mine
Fawn Springs #5	Upper Bull Canyon	Oral Clark, Box 728, Nucla	Uranium, Vanadium	Mine
Fawn Springs #7, #13	Upper Bull Canyon	Delbert Burbridge, Box 187, Nucla	Uranium, Vanadium	Mine
Fawn Springs #9, 11, 12, 18, 21	Upper Bull Canyon	Dave Blake, Nucla	Uranium, Vanadium	Mine
Firecracker #4	Long Park	Oral Clark, Box 728, Nucla	Uranium, Vanadium	Mine
Fraction	Dolores Rim	Andrew Brothers, Box 333, Norwood	Uranium, Vanadium	Mine
Golden Eagle	Uran	Douglas Cleghorn, Uravan	Uranium, Vanadium	Mine
Good Hope	Uran	Alva A. Rockwell, Dove Creek Warren Wright & Allie Rinderle, Nucla and Grand Junction	Uranium, Vanadium	Mine
Gray Claim	Monogram Bench	Union Carbide Co., Nuclear Div., Uravan	Uranium, Vanadium	Mine
Greenback	Monogram Bench	Cole & Bond, Box 188, Nucla	Uranium, Vanadium	Mine
Guadalcanal	Long Park	D. C. Bunker, Box 153, Nucla	Uranium, Vanadium	Mine
Gyp	Gyp Valley	Walter Cravcraft & B. A. Garden, Box 142, Dove Creek	Uranium, Vanadium	Mine
Happy	Long Park	Calvin O'Bryant, Uravan	Uranium, Vanadium	Mine
Happy Thought	Monogram Mesa	Cole & Bond, Box 188, Nucla	Uranium, Vanadium	Mine
Hat	Slickrock	Allen Cross, Gen. Delivery, Cortez	Uranium, Vanadium	Mine
Henry Clay	Long Park	Roy Franklin, Box 911, Uravan	Uranium, Vanadium	Mine
Hidden Basin	Long Park	James Herring, Box 194, Nucla	Uranium, Vanadium	Mine
Himes Drilling	Nucla	Himes Drilling Co., Box 727, Nucla	Uranium, Vanadium	Drilling
Honeymoon	Middle Long Park	C. C. Sanders, Nucla	Uranium, Vanadium	Mine
Hummer	Monogram	Lowell Staats, Box 334, Nucla	Uranium, Vanadium	Mine
Independence	Lion Creek	Dade & Shumway, 215 Landsdown, Grand Junction	Uranium, Vanadium	Mine
Jensen & Jensen Well	Bedrock	Jensen & Jensen Brine Co., Box 37, Bedrock	Uranium, Vanadium	Mine
Joe	Dolores Rim	Douglas Cleghorn, 623 26½ Rd., Grand Junction	Salt Brine	Brine Well
Joe Pete	Wild Steer Canyon	Woodrow Gripe, Box 225, Naturita	Uranium, Vanadium	Mine
John K	Bull Canyon	Harvey Holt, Box 336, Johnson & Youvan Drilling Co., Naturita	Uranium, Vanadium	Mine
Johnson & Youvan	Four Corners Area	Johnson & Youvan Drilling Co., Naturita	Uranium, Vanadium	Mine
Lark #7	Lower Bull Canyon	Everett Blackburn, Placerville	Uranium, Vanadium	Mine
Lark #8	Lower Bull Canyon	James Galyean, Box 474, Nucla	Uranium, Vanadium	Mine
Last Dollar	Monogram	Levi B. Barnes, Box 156, Nucla	Uranium, Vanadium	Mine
Little Alice	Wild Steer Canyon	Woodrow Gripe, Box 225, Naturita	Uranium, Vanadium	Mine
Little Buckhorn	Carpenter Ridge	Russell Mayfield, Box 383, Nucla	Uranium, Vanadium	Mine
Little Dick	Dolores Bench	David Blake, Nucla	Uranium, Vanadium	Mine
Little Gyp	Little Gyp Valley	E. Lopez, Box 262, Monticello, Utah	Uranium, Vanadium	Mine
Long Park #1	Long Park	Cole & Bond, Box 188, Nucla	Uranium, Vanadium	Mine

Name of Property	Location	Operator's Name and Address	Product	Kind of Property
Long Park #6	Long Park	Lark L. Washburn, 3367 Bernada Dr., Salt Lake City	Uranium, Vanadium	Mine
Long Park #13	Middle Long Park	Jack Bond, Nucla	Uranium, Vanadium	Mine
Longyear Drilling Co.	Naturita	Russell Mayfield, Box 222, Naturita Longyear Drilling Co., 7650 8th, Minneapolis	Uranium, Vanadium	Drilling
MacPherson Drilling	Four Corners Arca	Malcolm MacPherson, Box 447, Montrose	Uranium, Vanadium	Drilling
Maggie "C"	Long Park	Ernie Berry & Clarence Banks, Box 19, Naturita	Uranium, Vanadium	Mine
Marjorie Ann	Paradox	Dade & Shumway, 215 Landsdown Rd., Grand Junction	Uranium, Vanadium	Mine
Mary Ann #4	Monogram Mesa	Cole & Bond, Box 188, Nucla	Uranium, Vanadium	Mine
Maybe	Monogram Mesa	Union Carbide Co., Nuclear Div., Uravan	Uranium, Vanadium	Mine
Media	Middle Long Park	Emory Dawes, Box 315, Uravan	Uranium, Vanadium	Mine
Meek Tunnel	Crawford	Gordon & Carlton Meek, Box 7, Maher	Uranium, Vanadium	Water Tunnel
Merry Widow	Eagle Basin	C. N. Athey, Naturita	Uranium, Vanadium	Mine
Mesa & Old Granddad	Naturita	Orval Care, Box 252, Naturita	Uranium, Vanadium	Mine
Mill Nos. 2, 4	Club Mesa	Javernick, Javernick & Borgeson, Box 484, Uravan	Uranium, Vanadium	Mine
Mineral Joe #1, 4, 11	Monogram Bench	Climax Uranium Co., Box 989, Grand Junction	Uranium, Vanadium	Mine
Mineral Joe #2	Monogram Bench	Richards & Richards, Nucla	Uranium, Vanadium	Mine
Mineral Park #2	Long Park	Floyd Smith, Grand Junction	Uranium, Vanadium	Mine
Modene	Sylvia's Pocket	Oddie Cross, Drawer U, Cortez	Uranium, Vanadium	Mine
Monogram (Lower & Upper)	Monogram Bench	John Cate, Slick Rock, 188, Nucla	Uranium, Vanadium	Mine
Monogram #12, #13	Martin Mesa	Glen Gardner, Naturita	Uranium, Vanadium	Mine
Monster	Saucer Basin	Stanley Reed, Naturita	Uranium, Vanadium	Mine
Morrow Point Dam	Cimarron	Junior Moores, 2129 S. Broadway, Grand Junction	Uranium, Vanadium	Mine
Mustard	Dolores Rim	Joe Hise, Uravan	Uranium, Vanadium	Mine
New Happy	Long Park	Johnson-MK, Box 259, Cimarron	Uranium, Vanadium	Dam
New Hope	Eagle Basin	U. S. Bureau of Reclamation, Montrose	Uranium, Vanadium	Mine
Nil #2	E. Paradox	Dave Cleghorn, Uravan	Uranium, Vanadium	Mine
North Star	Dolores Rim	Calvin O'Bryant, Box 124, Uravan	Uranium, Vanadium	Mine
Nucla	Dolores Bench	Glen Gardner, Box 294, Naturita	Uranium, Vanadium	Mine
		Union Carbide Co., Nuclear Div., Uravan	Uranium, Vanadium	Mine
		A. K. Joslin, Naturita	Uranium, Vanadium	Mine
		B. J. Burns, Uravan	Uranium, Vanadium	Mine
		Jerry Mayfield, Naturita	Uranium, Vanadium	Mine
		Russell Mayfield, Box 383, Nucla	Uranium, Vanadium	Mine
		Frank MacKendrick, Uravan	Uranium, Vanadium	Mine
Obnoxious	Upper Bull Canyon	Oral Clark, Nucla	Uranium, Vanadium	Mine
Opera Box	Monogram Bench	Cecil Bunker, Box 27, Nucla	Uranium, Vanadium	Mine
Ophir	Dolores Bench	Cecil W. Bunker, Box 27, Nucla	Uranium, Vanadium	Mine
Oversite (Lower)	Monogram Mesa	Lark L. Washburn, 3367 Bernada Dr., Salt Lake City, Utah	Uranium, Vanadium	Mine
Oversite (South)	Monogram	Polar Mesa Mining Co., Box 859, Moab, Utah	Uranium, Vanadium	Mine
Paradox "D"	East Paradox	Union Carbide Co., Nuclear Div., Uravan	Uranium, Vanadium	Mine
Paradox #5, 6	East Paradox	Union Carbide Co., Nuclear Div., Uravan	Uranium, Vanadium	Mine
Peanut #1, 2, 3, 4	Upper Bull Canyon	Gerard Randolph, Box 333, Naturita	Uranium, Vanadium	Mine
PEGGY, #1, #2	Naturita	Berry & Dillon, Box 237, Naturita	Uranium, Vanadium	Mine
Perry & Faast Drilling	Monogram Hill	John Dillon, Box 237, Naturita	Uranium, Vanadium	Mine
		Perry & Faast Drilling Co., Box 486, 32 Rd., Grand Junction	Uranium, Vanadium	Drilling



Name of Property	Location	Operator's Name and Address	Product	Kind of Property
Pi Warren	Paradox	Dade & Shumway, 215 Landsdown Rd., Grand Junction	Uranium, Vanadium	Mine
Picket Corral	Lower Bull Canyon	Keith & Don Andrews, Box 87, Nucla	Uranium, Vanadium	Mine
Pinion	Upper Bull Canyon	Boyd Castor, Nucla	Uranium, Vanadium	Mine
Prayer #9	E. of Utah St. Line	Dade & Shumway, 215 Landsdown Rd., Grand Junction	Uranium, Vanadium	Mine
R. A. M.	Club Mesa	Lark L. Washburn, 3367 Bernada Dr., Salt Lake City, Utah	Uranium, Vanadium	Mine
Radium Hill #10	Weddingbell Area	James F. Galyean, Box 474, Nucla	Uranium, Vanadium	Mine
Raven	Little Gyp Valley	Rex Holland, Naturita	Uranium, Vanadium	Mine
Red Bird #20	Carpenter Ridge	Woodrow Grine, Box 225, Naturita	Uranium, Vanadium	Mine
Red Rock #5	Marin Mesa	Black & Davis, Box 412, Paradox	Uranium, Vanadium	Mine
Red Sox	Dolores Rim	Gene Corta, Box 163, Redvale	Uranium, Vanadium	Mine
Republican	Long Park	Orval Care, Naturita	Uranium, Vanadium	Mine
Rex #38-Funnel	Eagle Basin	Frank Elder, Nucla	Uranium, Vanadium	Mine
Rigel	Monogram Bench	James Herring, Box 194, Nucla	Uranium, Vanadium	Mine
Rim Rock #5, #6	Weddingbell Area	Williams Mining Partnership, Box 305, Naturita	Uranium, Vanadium	Mine
Rim Rock Blues #2	Bull Canyon	Cole & Bond Mining Co., Box 188, Nucla	Uranium, Vanadium	Mine
Rim Rock Blues #6 East	Upper Bull Canyon	Union Carbide Co., Nuclear Div., Uravan	Uranium, Vanadium	Mine
Rim Rock Blues 16 & 17	Four Corners Area	Clyde & Wendell Jones, Box 183, Naturita	Uranium, Vanadium	Mine
Roy Quinn Drilling	Naturita	Dave Blake, Box 431, Nucla	Uranium, Vanadium	Mine
S.M.R. #2	Naturita	Calvin O'Bryant, Uravan	Uranium, Vanadium	Mine
Saint Patrick	Long Park	Dave Blake, Box 431, Nucla	Uranium, Vanadium	Mine
St. Patrick #9	Paradox	Cole & Bond, Box 188, Nucla	Uranium, Vanadium	Mine
Sandy	Dolores Rim	Roy Quinn, Naturita	Uranium, Vanadium	Mine
September Morn #1	Weddingbell Area	Orlie McLain, 346 S. Linden, Cortez	Gold, Silver	Drilling
September Morn #2	Weddingbell Area	Nelson & Klingsmith, Uravan	Uranium, Vanadium	Placer
Sesmo	Long Park	Dade & Shumway, 215 Landsdown Rd., Grand Junction	Uranium, Vanadium	Mine
Smith Drilling Company	Nucla	Douglas Cleghorn, 623 26 Rd., Grand Junction	Uranium, Vanadium	Mine
Sphinx	Middle Long Park	Douglas Hager, Box 388, Naturita	Uranium, Vanadium	Mine
Star #6	Dolores Rim	Githon Reed, Box 273, Naturita	Uranium, Vanadium	Mine
Sunbeam	Eagle Basin	Lark L. Washburn, 3367 Bernada Dr., Salt Lake City, Utah	Uranium, Vanadium	Mine
Sylvia	Sylvia's Pocket	Morrison & Morrison, Box 195, Nucla	Uranium, Vanadium	Mine
T.N.T. #3	Long Park	Felix Mendisco, Box 196, Naturita	Uranium, Vanadium	Mine
Tea Pot Dome	Upper Bull Canyon	Bank & Berry, Box 391, Naturita	Uranium, Vanadium	Mine
Three Jacks	Yellow Bird Bench	Dew Drop Mining Co., Nucla	Uranium, Vanadium	Mine
Thunderbolt	East Paradox	Jack Smith, Box 417, Nucla	Uranium, Vanadium	Mine
U.C.N.D. Mill	Uravan	Nelson & Klingsmith, Uravan	Uranium, Vanadium	Mine
Uranium Girl	Paradox	Lark L. Washburn, 3367 Bernada Dr., Salt Lake City, Utah	Uranium, Vanadium	Mine
		Dale Souther, Redvale	Uranium, Vanadium	Mine
		Allen Cross, Cortez	Uranium, Vanadium	Mine
		Nelson & Klingsmith, Uravan	Uranium, Vanadium	Mine
		Polar Mesa Mining Co. Moab, Utah	Uranium, Vanadium	Mine
		Dade & Shumway, 215 Landsdown Rd., Grand Junction	Uranium, Vanadium	Mine
		Polar Mesa Mining Co., Box 825, Moab, Utah	Uranium, Vanadium	Mine
		Union Carbide Co., Nuclear Div., Uravan	Uranium, Vanadium	Mine
		John W. Newman, Sr., Paradox	Uranium, Vanadium	Mine



Name of Property	Location	Operator's Name and Address	Product	Kind of Property
Uranus	Monogram Bench	Cole & Bond, Box 188, Nucla	Uranium, Vanadium	Mine
Uravan Acid Plant	Uravan	Union Carbide Co., Nuclear Div., Uravan	Sulphuric Acid	Plant
V.C.A. Concentrator	Naturita	Vanadium Corp. of America, Durango and Naturita	Uranium, Vanadium	Mill
Vacaton	Paradox Rim	Glen Neesham, Box 458, Nucla	Uranium, Vanadium	Mine
Vaden View	Wild Steer Canyon	Woodrow Gripe, Box 225, Naturita	Uranium, Vanadium	Mine
Valley View	Carpenter Ridge	E. E. Lewis, Inc., Box 1481, Grand Junction	Uranium, Vanadium	Mine
Van	S.E. Long Park	Fred Morlang & Ed Wolverton, Box 115, Olathe	Uranium, Vanadium	Mine
Vanadate	Middle Long Park	Dade & Shumway, 215 Landsdown Rd., Grand Junction	Uranium, Vanadium	Mine
Vanadium King	Long Park	Ernie Berry, Naturita	Uranium, Vanadium	Mine
Venture	Upper Bull Canyon	Fred Morlang & Ed Wolverton, Box 115, Olathe	Uranium, Vanadium	Mine
Whang Doodle	Wild Steer Canyon	Dade & Shumway, 215 Landsdown Rd., Grand Junction	Uranium, Vanadium	Mine
Whitney	Long Park	Boyd Castor, Box 663, Nucla	Uranium, Vanadium	Mine
Williams Crusher	Naturita	Woodrow Gripe, Box 225, Naturita	Uranium, Vanadium	Mine
		Albert Nickerson, Box 171, Montrose	Sand, Gravel	Plant
		Williams Lumber Company, Naturita		
<b>OTERO COUNTY</b>				
Rocky Ford Valley Concrete	Rocky Ford	Valley Concrete Co., Box 550, Rocky Ford	Sand, Gravel	Plant
<b>OURAY COUNTY</b>				
Alma	Stony Peak	Greenrock Mining Co., Box 444, Aztec, New Mexico	Gold, Silver	Mine
Bachelor	Ouray	Bachelor Mining Co., Box 100, Ouray	Gold, Silver, Copper, Lead, Zinc	Mine
Camp Bird	Canon Creek	Federal Resources Corp., Ouray	Gold, Silver, Copper, Lead, Zinc	Mine and Mill
Edna #1, #6	Ouray	Camp Bird-Colorado, Ouray	Gold, Silver, Copper, Lead, Zinc	Mine
Frank Hough	Engineer Mountain	St. Germain Foundation, Box 549, Ouray	Silver, Copper, Lead	Mine
Idarado	Red Mountain	Skyline Mining Co., c/o Willis Kelly, Box 237, Montrose	Gold, Silver, Copper, Lead, Zinc	Mine
Little Mike	Ouray	Idarado Mining Company, Ouray	Silver	Mill
Mountain Top	Stoney Mountain	D. P. Mining Co., c/o Willis Kelly, Gateway	Gold, Silver, Copper, Lead, Zinc	Mine
Pony Express Mill	Ouray	Andrew Sutvak & Merrill King, Box 172, Ouray	Silver, Lead	Mine
Revenue	Ouray	Roy Jones, Box 119, Ouray	Gold, Silver, Copper, Lead, Zinc	Mill
Rouville	Red Mountain	Federal Resources Corp., Ouray	Gold, Silver, Copper, Lead, Zinc	Mine
Senorita	Ouray	United States Silver Co., Box 512, Ouray	Gold, Silver, Copper, Lead	Mine
		Red Mountain Mining Corp, Inc., Box 386, Silverton	Gold, Silver, Copper, Lead	Mine
		Willred Mining & Milling Inc., Naturita	Gold, Silver, Copper, Lead	Mine
		Pechho, Jones and Tessitorie, Box 40, Ouray	Gold, Silver, Copper	Mine

Name of Property	Location	Operator's Name and Address	Product	Kind of Property
Silvertip Group	Ouray	T. J. Hankens, Box 147, Ouray	Gold, Silver, Copper, Lead, Zinc	Mine and Mill
Sunshine	Dexter Creek	Baumgardner Brothers, Box 201, Ridgeway	Silver, Lead, Zinc	Mine
Wewissa	Poughkeepsie	Gulch Kuykendall Mines, Cortez	Silver, Lead	Mine

**PARK COUNTY**

Boomer	Lake George	U. S. Beryllium, 306 Bon Durant Bldg., Pueblo	Beryllium	Mine
Como	Como	Process Engineering, Development & Equip Co., 4426 Vine, Denver	Gold, Silver	Plant
Double Eagle	Alma	Triagua Mining Co., Box 20, Alma	Silver	Mine
Furman Ranch	Jefferson	Harvey F. Kemp, 62 S. Kendall, Denver	Peat	Peat Bog
Golden Stake #1	Fairplay	Zacker & Couch, Black Hawk	Gold	Placer
Golden Stake #2	Fairplay	Albert E. Christie, 7149 Garden Lane, Commerce City	Gold	Placer
Grand Union	Como	Process Engineering, Development & Equip. Co., 4426 Vine, Denver	Gold, Silver	Placer
Hilltop	Fairplay	Four Mile Mining Co., Box 37, Alma	Silver, Lead	Mine
Little Lori	Fairplay	B. W. Perkins & W. Curtis, Box 231, Fairplay	Gold	Placer
Looks	Como	O'Dell Construction Co., 1395 Zuni, Denver	Gold	Placer
Penn Hill Placer	Penn Mountain	Hesser, Drake & Cole, Fairplay Hotel, Fairplay	Gold	Placer
Progressive Mill	Fairplay	Progressive Mill & Smelter Co., Fairplay	Gold, Silver, Copper, Lead, Zinc	Placer
Spruce Lodge	Tarryall	R. W. Beal & Carl Quist, Green Mt. Falls	Quartz	Mill
Tarryall Mill	Lake George	Minerals Concentrates & Chemical Co., Inc., 1430 1st Natl. Bank Bldg., Denver	Beryllium	Quarry
Twin Sisters	Buckskin Joe	A. M. Hansen, et al., 9000 W. 64th Place, Denver	Beryllium	Mill
Twinkle	Fairplay	Silver Star Mining Co., Box 251, Fairplay	Gold, Silver	Placer
Universal Peat Company	Jefferson	Universal Peat Co., 5926 W. Arizona, Denver	Silver, Lead	Mine
			Peat	Peat Bog

**PITKIN COUNTY**

Highland Tunnel	Aspen	Minerals Engineering Co., Box 150, Aspen	Silver, Lead, Zinc	Mine
Pride of Aspen	Aspen	B. C. Leasing Co., Box 270, Glenwood Springs	Silver, Lead, Zinc	Mine
Lamar Valley Concrete	Lamar	Valley Concrete Co., 4th & Washington, Lamar	Sand, Gravel	Plant

**PROWERS COUNTY**

**PUEBLO COUNTY**

Certified	Pueblo	Certified Concrete Co., Box 1340, Pueblo	Sand, Gravel	Plant
Chamblin #2	Mustang	Denver Brick & Pipe Co., 45th & Fox, Denver	Clay	Mine
Denver Fire Clay	Stone City	Arthur L. Wands, Stone City Rt., Pueblo	Clay	Mine
Fountain	Pueblo	Fountain Sand & Gravel, Box 535, Pueblo	Sand, Gravel	Plant

Name of Property	Location	Operator's Name and Address	Product	Kind of Property
Fox #1	Stone City	General Refractories, Inc., 721 W. 3rd St., Pueblo	Clay	Mine
Kathryn	Colorado Springs	Cotter Corp., Box 751, Canon City	Uranium	Mine
Nellie Helen	Stone City	Arthur L. Wands, Stone City Rt., Pueblo	Clay	Mine
Open Pit Mine	Stone City	General Refractories, Inc., 721 W. 3rd St., Pueblo	Clay	Mine
Red Mountain	Stone City	Walter H. Everhart, 2501 Cheyenne Ave., Pueblo	Clay	Mine
Rock Creek	Beulah	Standard Fire Brick Co., 24th & Albany, Pueblo	Clay	Mine
Siloam	Beulah	Harbison-Walker Refractories Co., Box 150, Canon City	Clay	Mine
<b>RIO BLANCO COUNTY</b>				
Midnight	Meeker	J & H Mining, Box 654, Meeker	Uranium	Mine
Uranium Peak	Uranium Peak	Devereaux Brothers, Meeker	Uranium	Mine
Boyles Brothers Drilling Co.	Del Norte	Boyles Brothers Drilling Co., Leadville	Silver, Copper, Lead, Zinc	Drilling
Summitville	Del Norte	W. S. Moore Co., South Fork, Colo.	Silver, Copper, Lead, Zinc	Mine
<b>RIO GRANDE COUNTY</b>				
<b>ROUTT COUNTY</b>				
Campbell	Steamboat	Phil Ward Construction Co., Rifle	Silver, Copper, Lead, Zinc	Mine
Elkhorn	Hahns Peak	W. A. Bowes, Box 97, Steamboat Springs	Silver, Lead	Mine
Farwell	Hahns Peak	W. A. Bowes, Box 97, Steamboat Springs	Silver, Copper, Lead, Zinc	Mine
Greenville	Clark	W. A. Bowes, Box 97, Steamboat Springs	Silver, Copper, Lead, Zinc	Mine
		Boyles Brothers Drilling Co., 1321 S. Main St., Salt Lake City	Silver, Copper, Lead, Zinc	Mine
<b>SAGUACHE COUNTY</b>				
Brighton	Bonanza	Johnson Leasing & Land Co., Bonanza	Silver, Copper, Lead, Zinc	Mine
Lookout	Marshall Creek	Cotter Corp., Box 751, Canon City	Uranium	Mine
Rowley #12	Bonanza	Superior Mines Corp., Box 127, Salida	Gold, Copper, Lead, Zinc	Mine
Villa Grove Turquoise Lode	Villa Grove	Meniess Winfield, Box 42, Salida	Turquoise	Mine
<b>SAN JUAN COUNTY</b>				
American Tunnel	Gladstone	Standard Metals, Inc., Silverton	Gold, Silver, Copper, Lead, Zinc	Mine
Argentine-Tunnel	Arasta Gulch	Standard Metals, Inc., Silverton	Gold, Silver, Copper, Lead, Zinc	Mine
Blackhawk	Silverton	John Distol, Silverton	Gold, Silver, Copper, Lead, Zinc	Mine
Boston DeWitt	Silverton	Skyline Mining Co., c/o Willis Kelly, Gateway	Gold, Silver, Copper, Lead, Zinc	Mine
Graysill Group	Durango	Vanadium Corp. of America, Naturita	Uranium, Vanadium	Mine
Illinois	Silverton	Jerry Dalla, 425 6th Ave., Durango	Gold, Silver, Lead	Mine

Name of Property	Location	Operator's Name and Address	Product	Kind of Property
Little Dora	Silverton	Leslie Morales, Box 597, Silverton	Tourist	.....Mine
Longfellow	Red Mountain Pass	Halliburton Oil Producing Co., Cameron Bldg., Oklahoma City, Okla.	Gold, Silver, Copper, Lead	.....Mine
Mighty Monarch	Silverton	Lone Eagle Mining Co., Inc., 401 E. 19th, Kansas City, Missouri	Gold, Silver, Copper, Lead, Zinc	.....Mine
Mogul	Silverton	John Distol, Silverton	Gold, Silver, Copper, Lead, Zinc	.....Mine
Pride Mill	Howardsville	Silver Wing Mining, Inc., Box 326, Silverton	Gold, Silver, Copper, Lead, Zinc	.....Mill
Richardson Group	Ouray	Richardson Mines, Box 546, Ouray	Gold, Silver	.....Mine and Mill
Shenandoah	Arasta Gulch	Standard Metals, Inc., Silverton	Gold, Silver, Copper, Lead, Zinc	.....Mine
Silver Cloud	Silverton	Tom Gilliland, Box 675, Bowling, Oklahoma	Gold, Silver, Copper, Lead, Zinc	.....Mine
Silver Wing	Eureka	Silver Wing Mining, Inc., Box 326, Silverton	Silver, Copper	.....Mine
Standard Mill	Silverton	Standard Metals, Inc., Silverton	Gold, Silver, Copper, Lead, Zinc	.....Mill
Andrus	Red Mountain Pass	Egon Norlander, Ouray	Gold, Silver, Copper, Lead, Zinc	.....Mine
Atlas & Clara	Matterhorn	Montonati Brothers, 683 4th, Durango	Gold, Silver, Copper, Lead, Zinc	.....Mine
Ava Jay	Slick Rock	Bull Draw Mining Co., Slick Rock	Gold, Silver, Copper, Lead, Zinc	.....Mine
Bachelor Shaft	Wedding Bell	Wolverton & Hotz, Box 274, Paonia	Uranium, Vanadium	.....Mine
Bald Eagle	Gyp Valley	Earl Hotz, Slick Rock	Uranium, Vanadium	.....Mine
Bean #6	Slick Rock	Lark L. Washburn, 3367 Bernada Dr., Salt Lake City	Uranium, Vanadium	.....Mine
Bean #10	Bean Patch	Webb Resources, 1645 Court Place, Denver	Uranium, Vanadium	.....Mine
Bean #17	Slick Rock	E. J. Johansen, Nucla	Uranium, Vanadium	.....Mine
Bean Patch Group	Bean Patch	Benny Martinez, Nucla	Uranium, Vanadium	.....Mine
Blackhawk	Telluride	Dulaney Mining Co., Box 224, Dove Creek	Uranium, Vanadium	.....Mine
		Benny Martinez, Box 315, Dove Creek	Uranium, Vanadium	.....Mine
		Dulaney Mining Co., Box 315, Dove Creek	Uranium, Vanadium	.....Mine
		Vanadium Corp. of America, Naturita	Uranium, Vanadium	.....Mine
		Don Risser, c/o First National Bank, Peoria, Ill.	Gold, Silver, Copper, Lead, Zinc	.....Mine
Black Jack	Egnar	Rearick & Wells, Egnar	Uranium, Vanadium	.....Mine
Bob	Slick Rock	Burwell Mining Co., Egnar	Uranium, Vanadium	.....Mine
Buckhorn	Bean Patch	Maley Mining Company, Dove Creek	Uranium, Vanadium	.....Mine
Burro #3, #5, #7	Slick Rock	Benny Martinez, Dove Creek	Uranium, Vanadium	.....Mine
		Delmar Bunker, Nucla	Uranium, Vanadium	.....Mine
Carnation	Slick Rock	Union Carbide Co., Nuclear Div., Uravan	Uranium, Vanadium	.....Mine
		Matterhorn Mining & Development, Box 1648, Grand Junction	Uranium, Vanadium	.....Mine
Cone #6	Bean Patch	Benny Martinez, Dove Creek	Uranium, Vanadium	.....Mine
Dereмо	Egnar	Union Carbide Co., Nuclear Div., Uravan	Uranium, Vanadium	.....Mine
Dynamo	Telluride	Koskinen Brothers, Box 474, Telluride	Gold, Silver	.....Mine
Falcon	Egnar	O. E. Jonson, Box 394, Dove Creek	Uranium, Vanadium	.....Mine

SAN MIGUEL COUNTY



Name of Property	Location	Operator's Name and Address	Product	Kind of Property
Faultless Favorite	Little Gyp Valley Old Ophir	Jerry Mayfield, Box 222, Naturita Rainbow Mining & Exploration, Placerville	Uranium, Vanadium	Mine
Frankie	Slick Rock Hill	Pete C. Franks, Egnar	Gold, Silver, Copper, Lead, Zinc	Mine
Gerald T. Ground Hog	Slick Rock Hamm Bench	Stocks & Nichols, Paradox Rex Holland, Box 148, Naturita Dade & Shumway, 215 Landsdown Rd., Grand Junction	Uranium, Vanadium Uranium, Vanadium	Mine Mine
Gypsum Valley #2	Little Gyp Valley	Carmack Drilling Co., 1700 Broadway, Denver	Uranium, Vanadium	Mine
Hangover Hawk	Egnar	Jerry Mayfield, Naturita	Potash	Drilling
Hawk #1	Egnar	Pete Franks, Egnar	Uranium, Vanadium	Mine
Iron Springs Placer	Egnar	Roger F. Graybeal, Box 105, Gateway	Uranium, Vanadium	Mine
Joe Dandy	Old Ophir	Oliver Brothers, Box 506, Norwood	Iron Oxide	Placer
La Junta	Sawpit	Colorado-Utah Uranium & Mining Co., Box 875, Uravan	Gold, Silver, Copper, Lead	Mine
Little Jimmy	Telluride	Harvey Baron & Billy Mahoney, Box 31, Telluride	Gold	Mine
Lucky B	Telluride	Shamrock Mining Co., Box 372, Telluride	Gold, Silver	Mine
Magpie	Slick Rock Gyp Valley	Pete Franks, Egnar Eugino Corta, Box 163, Redvale	Uranium, Vanadium	Mine
Marne	Egnar	Felix Mendisco, Naturita Frank Elder, Nucla	Uranium, Vanadium	Mine
Mickey (New Hangover)	Slick Rock Area	Charles Corey, Box 652, Durango	Uranium, Vanadium	Mine
New Dominion	Old Ophir	Burwell Mining Co., Egnar Randy Belisle, Ophir	Uranium, Vanadium Gold, Silver, Copper, Lead, Zinc	Mine Mine
Norther #6	Horse Range	E. J. Johannsen, Slick Rock	Uranium, Vanadium	Mine
North Slope	Dallas Divide	North Slope Mining Co., Rt. 2, Box 190, Montrose	Gold, Silver, Copper, Lead, Zinc	Mine
Idarado Mine	Telluride	Idarado Mining Company, Ouray	Gold, Silver, Copper, Lead, Zinc	Mine
Pandora Mill	Telluride	Idarado Mining Company, Ouray	Gold, Silver, Copper, Lead, Zinc	Mine
Parrot Group	Muleshoe Bend	Jack Milling, Egnar	Uranium, Vanadium	Mill
Pitchfork #2	Gyp Valley	Charles Pickens, Box 1599, Cortez	Uranium, Vanadium	Mine
Radium #4, 9, 10, 11	Bean Patch	Dulaney Mining Co., Box 315, Dove Creek	Uranium, Vanadium	Mine
Red Rock #5	Muleshoe	Eugenio Corta, Redvale Lark Washburn, 3367 Bernada Dr., Salt Lake City	Uranium, Vanadium	Mine
Roy Lee	Muleshoe	Lloyd Welch, Rt. 1, Dolores	Uranium, Vanadium	Mine
San Bernardo Group	Matterhorn	Silver Hat Mining, Inc., Box 664, Ophir	Gold, Silver, Copper, Lead, Zinc	Mine
S. B. Group	Dolores Rim	Francis C. & Wendell P. Jones, Box 183, Naturita	Uranium, Vanadium	Mine
Silver Hat Mill	Matterhorn	Silver Hat Mining, Inc., Box 664, Ophir	Gold, Silver, Copper, Lead, Zinc	Mill
Slide	Old Ophir	Randy Belisle, Ophir	Gold, Silver, Copper, Lead, Zinc	Mill
Strawberry Roan & Sage #11	Bishop Canyon	Charles Corey, Box 652, Durango	Uranium, Vanadium	Mine
Summit #21	Slick Rock	Emory Randolph, Naturita Burwell Mining Co., Egnar Climax Uranium Co., Grand Junction	Uranium, Vanadium Uranium, Vanadium Uranium, Vanadium	Mine Mine Mine



Name of Property	Location	Operator's Name and Address	Product	Kind of Property
Sunday #2	Gyp Valley	Clair Albano, Box 627, Blanding, Utah	Uranium, Vanadium	Mine
Sunrise #1	Dove Creek	Roy Franklin, Box 911, Uravan	Uranium, Vanadium	Mine
Tailholt	Dove Creek	Dulaney Mining Co., Box 315, Dove Creek	Uranium, Vanadium	Mine
Telluride Tunnel	Slick Rock	Joe Gomez, Slick Rock	Uranium, Vanadium	Mine
Vanadium Queen	Telluride	Bixt Brothers, Box 192, Telluride	Gold, Silver	Mine
Windswept	McIntyre Canyon	Wright & McDougald, Box 409, Moab, Utah	Uranium, Vanadium	Mine
Yellowbird	Gyp Valley	LaVerne Ray, Box 703, Nucla	Uranium, Vanadium	Mine
	Bean Patch	Dulaney Mining Co., Box 315, Dove Creek	Uranium, Vanadium	Mine

**SUMMIT COUNTY**

Blue Lake Dam	Breckenridge	Northwestern Engineering Co., Box 585, Breckenridge		Dam
Dillon Dam	Dillon	C. L. Hubner Construction Co., 4473 E. Evans, Denver		
Dillon Dam	Dillon	A. S. Horner, Dillon		Spillway Shaft
Landslide	Montezuma	Potashnick Construction Co., Dillon		Dam
Roberts Tunnel	Dillon	Keith Lindsey, Box 57, Montezuma	Silver, Lead, Zinc	Mine
		Denver Water Board, Box 146, Dillon		
		A. S. Horner Construction Co., Inc., Silverthorn		Tunnel
Shoe Basin	Montezuma	Don Swanson, Mike Vinson, 370 Central Ave., Brighton		
Silver Wing	Montezuma	Matt C. Johns, 6363 E. Evans, Denver	Silver, Lead, Zinc	Mine
Washington	Breckenridge	Burke-Martin Mining Co., Montezuma	Silver, Lead, Zinc	Mine
Wellington	Breckenridge	J. P. Webb, Breckenridge	Silver, Lead, Zinc	Mine
		Wellington Mine Association, Box 432, Breckenridge	Gold, Silver, Lead, Zinc, Cadmium	Mine and Mill

**TELLER COUNTY**

Alpen Meadows	Gillette	Alpen Meadows, Inc., Box 1074, Colorado Springs	Peat	Peat Bog
Black Cloud	Divide	Wayne Bangert, Box 633, Woodland Park	Quartz	Quarry
Comanche	Colorado Springs	Delhi-Taylor Oil Corp., Box 682, Moab, Utah	Beryllium	Mine
El Paso	Cripple Creek	El Paso Gold Tours, Inc., Antlers Hotel, Colorado Springs	Tourist	Mine
Florence	Cripple Creek	W. C. Burtis, 2001 Wyoming, Pueblo	Turquoise	Mine
Globe-Newmont	Globe Hill	Isbell Construction Co., Montrose	Gold	Mine
Mollie Kathleen	Cripple Creek	Black Diamond Mining Co., Box 999, Cripple Creek	Tourist	Mine
Pikes Peak	Florissant	Pikes Peak Granite Co., 2115 N. Tejon, Colorado Springs	Granite	Quarry

**WELD COUNTY**

Commander	Fort Collins	Sterling Contracting Co., Rt. 3, Box 560, Fort Collins	Gold, Silver, Copper, Lead, Zinc	Plant
Garner	Greeley	Western Rock Products Co., Box 1228, Greeley	Sand, Gravel	Plant

# Highway Projects

County	Location	Operator's Name and Address	Project
La Plata	South part of State	Ray L. Atchison, Aztec, New Mexico	Highway
Gunnison	Paonia Dam	Dewey Blair and Sons, Box 403, Olathe	Highway
Montezuma	Roaring Fork Creek	Brasier Brothers Construction Company, Norwood	Highway
La Plata	South of Ignacio	Burnett Construction Company, 508 8th Ave., Durango	Gravel Crusher
Gunnison	Spring Creek Road	C. K. & C. Construction Co., Rt. 2, Box 171, Brighton	Highway
Park	Kenosha Pass	Colorado Constructors, Inc., 380 W. 62nd Ave., Denver	Highway
Eagle	Wolcott North		
Gunnison	Highway 50 & 149		
Mesa	Clifton to Palisade	Corn Construction Co., Box 1501, Grand Junction	Highway
Mesa	Clifton to Cameo	Gardner Construction Co., Inc., Box 308, Palisade	Highway
	Ski Resort toward Mesa		
Las Animas	Highway 1, Aguilar	Hubner Construction Co. Inc. & C. L. Hubner Co., 4473 E. Evans Ave., Denver	Highway
El Paso	Highway 29		Highway
	Harrison Interchange		Highway
Clear Creek	East Portal Access Road		Highway
	Loveland Pass Overlay		Highway
Mesa	Molina	M. C. Jacobs Construction Co., Molina	Highway
La Plata	Kline to Red Mesa	Peter Kiewit & Sons Company, 1000 Kiewit Plaza, Omaha, Nebr.	Highway
Teller	Highway 67		Highway
Park	West side of Hoosier Pass		Highway
Summit	Hoosier Pass		Highway
Huerfano	85-87 North of Walsenburg	Dominic Leone Construction Co., 818 Oak St., Trinidad	Highway
Park	Highway 285		Highway
Mesa	North of Gateway	H. E. Lowdermilk Co., 1950 W. Dartmouth Ave., Englewood	Highway
Gunnison	Sapinero		Highway-Bridge
Clear Creek	6 & 40 Idaho Springs		Highway

County	Location	Operator's Name and Address	Project
Boulder	So. St. Vrain Project	W. A. & Z. H. Lowdermilk, 1950 W. Dartmouth Ave., Englewood	Highway
Huerfano	Highway 160, La Veta Pass	Z. H. Lowdermilk, Inc., 1950 W. Dartmouth Ave., Englewood	Highway
Montrose	Montrose	C. E. Mills Construction Co., Rt. 2, Box 231, Montrose	Highway
Archuleta	Pagosa Springs		Highway
Summit	Loveland Pass Approach	Morrison Knudson Construction Co., Box 4718, Silverthorn	Highway
Montezuma	Dolores-Cortez	Nielson, Inc., Box 684, Dolores	Highway
Ouray	Mother Cline Slide		Highway
Pueblo	Highway 85-87	Pioneer Construction Company, Box 898, Pueblo	Highway
Fremont	Florence-Canon City		Highway
El Paso	Breed-Monument		Highway
	Highway 24-Cathan		Highway
Custer	U. S. Highway 96		Highway
San Miguel	Disappointment Gap	E. J. Rippey & Sons, New Castle	Highway
Eagle	Gold Park		Highway
	Homestake Access Road		Highway
Gunnison	Highway 50 above Sabinero	Schmidt Construction Co., 8151 W. 49th Ave., Arvada	Highway
	Cochetopa Creek to Parlin		Highway
	East of Paonia		Highway
Prowers	Highway 285-387	Siegrist Construction Co., 7000 York St., Denver	Highway
El Paso	Highway 115 & 116		Highway
Concejos	Highway 17		Highway
La Plata	Durango Area	J. D. Simmons, Box 176, Durango	Highway
Montezuma	Rico-Dolores	Sterling Construction Co., Box 928, Sterling	Highway
Gunnison	Southeast of Crested Butte	Sturbaum Construction Co., 225 Main St., Canon City	Highway
El Paso	Harrison Road, South of Colorado Springs	V & V Construction Co., 211 W. Main St., Florence	Highway
Mesa	Construction	Wallace Beard Construction Co., 2041 N. 8th Ave., Grand Junction	Highway, Dams
Archuleta	Highway 84, Pagosa South	Watts Construction Co., Box 1056, Englewood	Highway

# Oil and Gas Drilling and Producing Companies

Name and Address of Company	County	Operation
Alamosa Drilling Company, Box 211, Alamosa	Costilla	Drilling
Allison Drilling Company, Box 709, Fort Morgan	Adams Larimer Washington Weld	Drilling
Arapahoe Drilling Company, 5030 E. Evans Ave., Denver	Mesa	Drilling
Aspen Drilling Company, Box 2060, Farmington, New Mexico	La Plata Montezuma	Drilling
Atlas Well Service, Inc., Box 387, Fort Morgan	Morgan Washington Weld	Drilling
Baker & Taylor, Box 2748, Amarillo, Texas	Baca	Drilling
Baker Well Service, Rangely	Rio Blanco	Drilling
Baney Well Service, Box 544, Sterling	Washington	Drilling
Barker Well Service, Box 637, Grand Junction	Mesa	Drilling
Beltramo Oil Company, 136 E. Front St., Florence	Fremont	Drilling
Hugh Bennett Drilling Company, Box 493, Kimball, Nebraska	Weld	Drilling
Morris Biffle, Farmington, New Mexico	La Plata	Drilling
Brinkerhoff Drilling Company, Denver	La Plata	Drilling
California Oil Company, Box 548, Ault	Rio Blanco Weld	Drilling
Calvert Drilling Company, Grand Junction	Montrose	Drilling
Canfield Drilling Company, Box 519, Fort Morgan	Morgan	Drilling
Capshaw Well Service Company, Box 1915, Casper, Wyoming	Jackson	Drilling
Carmack Drilling Company, 1700 Broadway, Denver	Montrose	Drilling
Chandler & Simpson, 1401 Denver Club Bldg., Denver	Moffat	Drilling
Circle A Drilling Company, 340 Denver Hilton Bldg., Denver	La Plata	Drilling
Colorado Well Service, Inc., Rangely	Rio Blanco	Drilling
Davis Drilling Co., 2008 Larkin Ave., Great Bend, Kansas	Baca	Drilling
Dellson Drilling Company, 1740 Broadway, Denver	Moffat	Drilling
Denver Drilling Company, Box 285, Fort Morgan	Weld	Drilling
John Dixon Drilling & Well Servicing Company, Box 467, Sterling	Weld	Drilling
Donnelly Casing & Pulling Company, Box 648, Sterling	Logan	Drilling
Dyer Drilling Company, 411 C. A. Johnson Bldg., Denver	Morgan	Drilling
Etman Drilling Company, Box 535, Kimball, Nebraska	Logan	Drilling
El Paso Natural Gas Company, Box 368, Ignacio	La Plata	Drilling
Equity Oil Company, Rio Blanco	Rio Blanco	Drilling
Exeter Drilling Company, 1117 Glenarm Pl., Denver	Rio Blanco	Drilling
Fort Collins Producing Corp., Wellington	Washington	Drilling
Fritz & Dugman, Box M, Aztec, New Mexico	Larimer	Drilling
	La Plata	Drilling



Name and Address of Company	County	Operation
Jaek Fritz, Box M, Aztec, New Mexico	La Plata	Drilling
Gardner Brothers Drilling Co., 1718 Davis Bldg., Dallas, Texas	Montezuma	Drilling
J. W. Gibson Well Service, Inc., 900 Western Federal Savings Bldg., Denver	Weld	Drilling
Great Western Drilling Company, Box 1659, Midland, Texas	Archuleta	Drilling
H & H Drilling Company, Highway 6 and 50, Grand Junction	Mesa	Drilling
H. K. P. Drilling Company, Rangely	Rio Blanco	Drilling
H & M Drilling Company, Rangely	Rio Blanco	Drilling
Haas Well Service, Box 264, Sterling	Weld	Drilling
Hathaway Company, Box 7, Marvel	La Plata	Drilling
Hayden & Griffith Oil Well Service, Inc., 900 S. Myrtle St., Kimball, Nebraska	Logan	Drilling
Ralph Hayes, Rangely	Rio Blanco	Drilling
Hegwer Drilling Company, Rangely	Rio Blanco	Drilling
W. W. Holmes, Box 567, Amarillo, Texas	La Plata	Drilling
Hondo Oil and Gas Company, Box 1000, Roswell, New Mexico	Moffat	Drilling
Horizon Oil and Gas Company, 500 Republic Bank Bldg., Dallas, Texas	Baca	Drilling
Hughes Brothers, 3955 E. Kentucky Ave., Denver	Archuleta	Drilling
Huron Drilling Company, 715 Farmers Union Bldg., Denver	La Plata	Drilling
J & H Drilling Company, Rangely	La Plata	Drilling
Julius Karchmer, 2919 2nd N.W., Albuquerque, New Mexico	Rio Blanco	Drilling
Kerr-McGee Oil Industries, Inc., Kerr-McGee Oil Bldg., Oklahoma City, Oklahoma	La Plata	Drilling
King Oil Company, Box 308, Aurora	Montrose	Drilling
Lemans Jay Bee Company, Casper, Wyoming	La Plata	Drilling
Loffland Brothers Company, Tulsa, Oklahoma	Logan	Drilling
Love Courson Drilling Company, 712 Patterson Bldg., Denver	La Plata	Drilling
M. & F. Oil & Gas Company, Box 1611, Colorado Springs	Larimer	Drilling
R. L. Manning, 1700 Broadway, 318 Continental Oil Bldg., Denver	Montezuma	Drilling
McClinton Drilling Company, Rt. 1, Box 34C, Broomfield	Moffat	Drilling
Mead Drilling Company, Rangely	Larimer	Drilling
Meirs Well Service, Box 325, Sterling	Rio Blanco	Drilling
Miracle & Fifer Drilling Company, Inc., 1225 First National Bank Bldg., Denver	Morgan	Drilling
Moran Brothers, Inc., Box 61, Farmington, New Mexico	Weld	Drilling
Mountain Fuel Supply Company, Box 1129, Rock Springs, Wyoming	Montrose	Drilling
Mountain States Drilling Company, 622 Patterson Bldg., Denver	Moffat	Drilling
H. F. Mueller Drilling Contractor, Box 1404, Farmington, New Mexico	Montezuma	Drilling
Murfin Drilling Company, 617 Union Center, Wichita, Kansas	La Plata	Drilling
Nebraska Drilling, Inc., 8646 W. Colfax Ave., Denver	Logan	Drilling
Nye Drilling Company, Box 1926, Denver	Weld	Drilling
O'Quinn & Murray, Inc., Box 325, Fort Morgan	La Plata	Drilling
Pan American Petroleum Corp., Box 1031, Kimball, Nebraska	Washington	Drilling
Panther Oil Company, Denver	Moffat	Drilling
Peacock Well Service, Rangely	Montezuma	Drilling
	Rio Blanco	Drilling



Name and Address of Company	County	Operation
Willard Pease Drilling Company, Grand Junction	Dolores	Drilling
Pioneer Drilling, Inc., Box 2211, Casper, Wyoming	Mesa	Drilling
Poor & Gallagher, Rt. 2, Box 290, Boulder	Boulder	Drilling
Post & Brown, Stafford, Kansas	Baca	Drilling
R & R Well Service, Rangely	Rio Blanco	Servicing
William Rassemussen, Marvel	La Plata	Drilling
Rayco Drilling Company, Box 1741, Farmington, New Mexico	Mesa	Drilling
Robie Drilling, Craig	Rio Blanco	Drilling
Sierra Petroleum Co., Inc., Box 232, Russell, Kansas	Bent	Drilling
Signal Drilling & Exploration, Inc., Box 79, Casper, Wyoming	Moffat	Drilling
Smith Drilling Company, Nucla	San Miguel	Drilling
Stone Drilling Company, 1807 Chaco Ave., Farmington, New Mexico	La Plata	Drilling
Lloyd Taylor, Farmington, New Mexico	La Plata	Drilling
Texaco, Inc., Craig	Moffat	Drilling
Thunderbird Drilling & Well Service, 1220 E. 23rd, Farmington, New Mexico	La Plata	Drilling
Tip Top Mining Company, 700 Griffith, Las Vegas, Nevada	La Plata	Drilling
Tippis Drilling Company, Inc., 914 Patterson Bldg., Denver	Bent	Drilling
Toles & Toles, Drilling Contractor, Rangely	Rio Blanco	Drilling
Toltek Drilling Company, 451 Pine Street, Abilene, Texas	Adams	Drilling
Twin Arrows Drilling Company, Rangely	Rio Blanco	Drilling
Well Completions, Inc., 16080 E. Smith Road, Denver	Grand	Drilling
Wells Drilling Company, Rangely	Rio Blanco	Drilling
Western Frontier Drilling Company, 1119 Mile High Center Bldg., Denver	Mesa	Drilling
Western Production Company, 900 Western Federal Savings Bldg., Denver	Larimer	Drilling
Work Over, Inc., 720 Patterson Bldg., Denver	Washington	Drilling





Name of