

NR9/1001/1958

### BUREAU OF MINES

Museum Building

14th Avenue and Sherman Street

**DENVER 2, COLORADO** 

# ANNUAL REPORT

for the Year

1958



WALTER E. SCOTT, JR. Commissioner of Mines

Publication Approved by E. G. Spurlin, State Controller

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# Letter of Transmittal

May 1st, 1959

Honorable Steve McNichols Governor of Colorado State Capitol Building Denver 2, Colorado

Dear Governor McNichols:

In compliance with the requirements of the law, 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 1958.

Respectfully submitted,

Walter E. Scott, Jr., Commissioner of Mines

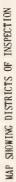
# Personnel of The Colorado Bureau of Mines 1958

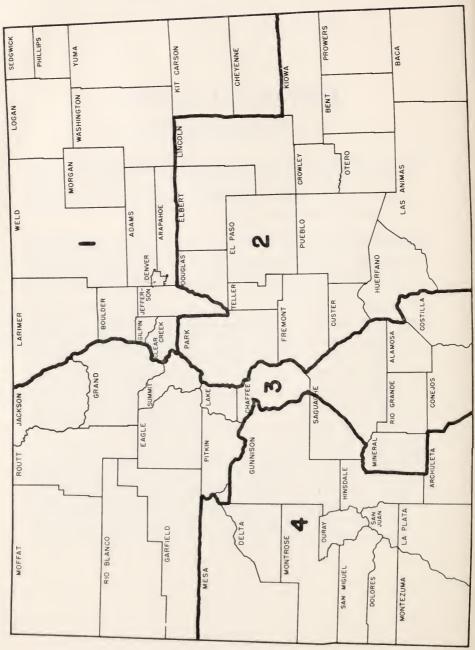
WALTER E. SCOTT, JR., Commissioner of Mines. Central City G. A. (BUD) FRANZ, JR., Deputy Commissioner......Denver NORMAN R. BLAKE, Inspector, District No. 1.....Black Hawk FRED E. THEOBALD, Inspector, District No. 2.....Canon City JOHN W. DOYLE, Inspector, District No. 3....Canon City ELZIE D. RAY, Inspector, District No. 4....Montrose JOSEPH L. KEATING, Deputy Inspector Leadville JOHN H. PAKKA, Deputy Inspector Telluride RICHARD C. GROOM, Minerals ....Denver MARGARET G. LAWRENCE, Administrative Asst....Denver THELMA L. MacMANUS, Account Clerk......Denver NAOMI S. JONES, Clerk Stenographer Denver AGNES K. BRENNAN, Clerk Typist Denver

# **Districts of Inspection**

COLORADO BUREAU OF MINES

- **DISTRICT NO. 1**, all of the following counties: Adams, Arapahoe, Boulder, Cheyenne, Clear Creek, Denver, Gilpin, Jefferson, Kit Carson, Larimer, Logan, Morgan, Phillips, Sedgwick, Washington, Weld, and Yuma.
- **DISTRICT NO. 2**, all of the following counties: Baca, Bent, Crowley, Custer, Douglas, Elbert, El Paso, Fremont, Huerfano, Kiowa, Las Animas, Lincoln, Otero, Park, Prowers, Pueblo, and Teller.
- **DISTRICT NO. 3**, all of the following counties: Alamosa, Chaffee, Conejos, Costilla, Eagle, Garfield, Grand, Jackson, 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 the 39th degree of latitude and that part of Saguache County lying north and west of the Continental Divide.





# **Commissioners of Mines**

HARRY A. LEE	May 11, 1895-May 10, 19	03
E. L. WHITE	May 10, 1903-May 10, 19	07
T. J. DALZELL	May 10, 1907-May 10, 19	)11
T. R. HENAHEN	May 10, 1911-May 10, 19	)15
FRED CARROLL	May 10, 1915-May 10, 19	)19
HORACE F. LUNT	June 1, 1919-June 1, 19	23
JOHN T. JOYCE	June 1, 1923-June 12, 19	139
EDWARD P. ARTHUR	June 12, 1939-August 26, 19	43
FRED JONES	September 27, 1943-April 25, 19	50
WALTER E. SCOTT, JR	May 3, 1950	

# **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.

#### REPORTS

- Report of Bureau of Mines, Colorado, from its establishment in May, 1895, to November 30, 1896, Harry A. Lee, Commissioner of Mines, 1896.
- Report for the Year 1897, Harry A. Lee, Commissioner of Mines, 1898.
- Report for the Year 1898, Harry A. Lee, Commissioner of Mines, 1899.
- Biennial Report for the Years 1899-1900, Harry A. Lee, Commissioner of Mines, 1900.
- Biennial Report for the Years 1901-1902, Harry A. Lee, Commissioner of Mines, 1903.
- Biennial Report for the Years 1903-1904, E. L. White, Commissioner of Mines, 1905.
- Biennial Report for the Years 1905-1906, E. L. White, Commissioner of Mines, 1907.
- Biennial Report for the Years 1907-1908, T. J. Dalzell, Commissioner of Mines, 1909.
- Biennial Report for the Years 1909-1910, T. J. Dalzell, Commissioner of Mines, 1911.
- Biennial Report for the Years 1911-1912, T. R. Henahen, Commissioner of Mines, 1913.
- Biennial Report for the Years 1913-1914, T. R. Henahen, Commissioner of Mines, 1914.
- Biennial Report for the Years 1915-1916, Fred Carroll, Commissioner of Mines, 1916.
- Biennial Report for the Years 1917-1918, Fred Carroll, Commissioner of Mines, 1919.

- Annual Report for the Year 1919, Horace F. Lunt, Commissioner of Mines, 1920.
- Annual Report for the Year 1920, Horace F. Lunt, Commissioner of Mines, 1921.
- Annual Report for the Year 1921, Horace F. Lunt, Commissioner of Mines, 1922.
- Annual Report for the Year 1922, Horace F. Lunt, Commissioner of Mines, 1923.
- Annual Report for the Year 1923, John T. Joyce, Commissioner of Mines, 1924.
- Annual Report for the Year 1924, John T. Joyce, Commissioner of Mines, 1925.
- Annual Report for the Year 1925 was fully prepared but, because of lack of funds, was not printed. The manuscript is on file in the office of the State Bureau of Mines.
- Annual Report for the Year 1926, John T. Joyce, Commissioner of Mines, 1927.
- Annual Report for the Year 1927, John T. Joyce, Commissioner of Mines, 1928.
- Annual Report for the Year 1928, John T. Joyce, Commissioner of Mines, 1929.
- Annual Report for the Year 1929, John T. Joyce, Commissioner of Mines, 1930.
- Annual Report for the Year 1930, John T. Joyce, Commissioner of Mines, 1931.
- Annual Report for the Year 1931, John T. Joyce, Commissioner of Mines, 1932.
- Annual Report for the Year 1932, John T. Joyce, Commissioner of Mines, 1933.
- Annual Report for the Year 1933, John T. Joyce, Commissioner of Mines, 1934.
- Annual Report for the Year 1934, John T. Joyce, Commissioner of Mines, 1935.
- Annual Report for the Year 1935, John T. Joyce, Commissioner of Mines, 1936.
- Owing to lack of funds the 1936 Annual Report of the State Bureau of Mines was not published.
- Annual Report for the Year 1937, John T. Joyce, Commissioner of Mines, 1938.
- Owing to lack of funds the 1938 Annual Report of the State Bureau of Mines was not published.

- Annual Report for the Year 1939, Edward P. Arthur, Commissioner of Mines, 1940.
- Owing to lack of funds the 1940 Annual Report of the State Bureau of Mines was not published.
- Annual Report for the Year 1941, Edward P. Arthur, Commissioner of Mines, 1942.
- Annual Report for the Years 1942 and 1943, Fred Jones, Commissioner of Mines, 1944.
- List of Mines for the Year 1944, Fred Jones, Commissioner of Mines, 1945.
- List of Mines for the Year 1945, Fred Jones, Commissioner of Mines, 1946.
- Annual Report for the Year 1946, Fred Jones, Commissioner of Mines, 1947.
- Annual Report for the Year 1947, Fred Jones, Commissioner of Mines, 1948.
- Annual Report for 1948 was not published.
- Annual Report for the Year 1949, Walter E. Scott, Jr., Commissioner of Mines, 1950.
- Annual Report for the Years 1950 and 1951, Walter E. Scott, Jr., Commissioner of Mines, 1952.
- Annual Report for the Year 1952, Walter E. Scott, Jr., Commissioner of Mines, 1953.
- Annual Report for the Year 1953, Walter E. Scott, Jr., Commissioner of Mines, 1954.
- Annual Report for the Year 1954, Walter E. Scott, Jr., Commissioner of Mines, 1955.
- Annual Report for the Year 1955, Walter E. Scott, Jr., Commissioner of Mines, 1956.
- Annual Report for the Year 1956, Walter E. Scott, Jr., Commissioner of Mines, 1957.
- Annual Report for the Year 1957, Walter E. Scott, Jr., Commissioner of Mines, 1958.

### Foreword

The Bureau of Mines of the State of Colorado was established by an Act of the Tenth General Assembly and approved March 30, 1895. The Bureau of Mines Law established the office of Commissioner of Mines which had been authorized by the Colorado State Constitution in 1876 (Article 16, Section 1), and charged the Commissioner of Mines, among other things, with the supervision of Metal Mine Inspection and the enforcement of laws relative to health and safety in Metal Mines. Subsequently, this Act was broadened to include "any ore mill, sampling works, smelter, metallurgical plant, rock quarry, clay pit, and rock excavations, tunnels, or mine workings of whatever kind or character, except coal mines."

The Thirty-sixth General Assembly in 1947 passed an Act requiring, in addition to the above, that the Commissioner of Mines conduct safety inspection of all oil wells, property and equipment appurtenant immediately and used in connection with producing oil wells and further charged him with the enforcement of laws relating to the health, safety, and welfare of any person employed in such wells, or other property.

From time to time, and by various opinions and decisions, the Colorado Bureau of Mines, under the direction of the Commissioner of Mines, has been authorized and empowered to make safety inspections of all underground metal or mineral mines, open pit or other surface mines, rock and mineral quarries, clay pits and mines, earth and rock dams, water canals, highway excavations, highway gravel pits, all rock excavations, rock tunnels or any mine workings of whatever kind or character (except coal mines), ore mills, mineral grinding plants, highway gravel crushing plants, sampling works, smelters, chemical plants producing a chemical from ore or minerals, metallurgical plants, oil and gas wells and all equipment and machinery used in connection with any of the above and all buildings thereon.

The Commissioner of Mines was authorized to make such rules and regulations as may be necessary for carrying out provisions of safety, and he has further been charged with the enforcement of laws relating to the health, life, safety and welfare of all persons employed in any of the above mentioned categories. The Commissioner, upon receipt of reliable information indicating any condition that might be injurious or dangerous to the health or safety of workmen employed in these places, or any time when he deems it necessary, makes inspections or has inspections made by the inspectors of the Bureau of Mines who report to him on any unsafe condition or unsafe practice. Whenever possible, all accidents are inquired into and a record is kept giving complete information concerning accidents. All fatal accidents are promptly inquired into by an inspector and a complete written report, made to the Commissioner of Mines, becomes a part of the records of the Bureau of Mines.

The Bureau of Mines is required to disseminate such information concerning mining and minerals as may be required by the public, and when he has opportunity and means, the Commissioner of Mines is charged with collecting and preserving mineral specimens and accumulating technical and other data relating to mining, metallurgical processes and geology. He is also required to examine, report on and record the geological formation of important mining districts or mining areas.

The Commissioner of Mines has authority to undertake any research project which would be of assistance to those engaged in mining or which in any way would help to develop the mineral resources of Colorado. He is charged with the responsibility of making investigations regarding prospecting, buying, selling, transporting, treating and reducing ores and minerals, and of recording the progress of the mineral industry providing, of course, that he has means therefore to do so.

The Commissioner of Mines may, from time to time, with the consent of the Governor, compile, publish and distribute bulletins on subjects, districts and counties. When considering a county or district, the report shall give in detail the history of the locality, the geology, the record of mines and mills, the processes of treatment with results, and shall classify and locate mining property and prospects, together with maps of the same provided, of course, that there are appropriations for such work.

The Bureau of Mines has in its custody one of the very finest mineral collections in existence. In addition to the specimens from all over the world, one of the most unusual features of this collection is the fact that it contains specimens of ore from all of the great mines of Colorado. While the collection is visited annually by thousands of tourists, it continues to be of much interest and concern to prospectors, miners, engineers, geologists and persons genuinely interested in Colorado's mineral industry. Foreign engineers and geologists have been most enthusiastic about the Colorado collection. Many new specimens from Colorado mines were added to the collection during 1958.

The first and foremost function of the Colorado Bureau of Mines is Safety Inspection. By inspections and investigations consistent efforts are made to see that safe methods and safe practices are used to protect the health, life, safety and welfare of all persons employed in the mineral and other industries under the jurisdiction of the Bureau. In addition to their regular duties of inspection and investigations, the four District Inspectors and the two Deputy Inspectors for the Bureau of Mines are qualified First-Aid Instructors. They teach the standard United States Bureau of Mines course and many classes are taught by them each year. Colorado Bureau of Mines inspectors are also qualified to give instruction in the emergency use of the Chemox Breathing apparatus along with instruction as to rescue operations in toxic mine atmosphere. Preliminary ventilation surveys are made by the department and advice and assistance are given to the operator relative to safety of operation.

Advice and information are freely given to prospectors and small operators in order to further the State's mineral development but no written reports on mines are made and care is taken not to encroach on the proper field of consulting engineers and geologists.

Much of the work of the Bureau of Mines, including this report, would not be possible if it were not for the generous cooperation of other departments and agencies. It is impossible for us to thank individually the persons to whom we are indebted, but we are most grateful to all who have been helpful.

The compiling and preparations of this report have been the work of the entire staff of the Bureau, including the inspectors who furnished much of the data concerning their districts. Each and every member of the staff is to be congratulated and thanked for his most generous cooperation and help.

Every effort has been made to assure accuracy and completeness of the data used in the report but changes, due to removal and altered mining conditions, are constantly taking place which may cause some omissions or mistakes to appear in the publication. It will be most appreciated if any additions, corrections or errors are brought to the attention of the Colorado Bureau of Mines.

The publication of this report is authorized by Chapter 92, Article 32, Section 11, of the Colorado Revised Statutes, 1953.

### Minerals in 1958

For the first time in eleven years Colorado's mineral production was less than the preceding year, due to falling metal prices which were responsible for a halt in many mining operations. A decrease in the demand for petroleum products resulted in a lower oil production in the State although exploration and development activity was nearly equal to 1957. This year's total mineral production of \$313,965,710 was \$41,346,416 less than in 1957 or a decrease of 11%. Decreased production was noted in beryllium, copper, feldspar, gold, lime, manganese, silver and petroleum while increases were noted in clays, natural gas, sand and gravel, uranium and vanadium. Gold production was lower than at any time in the last eighty years. Tungsten production in Boulder County was at a standstill due to the termination of the General Services Administration purchase program and low tungsten prices. Molybdenum production was lower due to a shut-down of the properties of the Climax Molybdeum Company, a division of American Metals Climax, in Lake County pending settlement of a strike between the union and the company. Uranium and vanadium development work continued and many new discoveries were recorded in Colorado during 1958. Increased beryllium activity was noted in Larimer County with the construction of two concentrating plants in the Loveland area and increased development and exploration work in the Crystal Mountain area near Estes Park.

In addition to the four Union Carbide Nuclear Corporation plants located at Rifle, Uravan, Slick Rock and Maybell, the Vanadium Corporation of America plant at Durango, the Gunnison Mining Company plant at Gunnison, and the Climax Uranium Company plant at Grand Junction, a new uranium reduction plant using the carbonate leach process was erected at Canon City by the Cotter Corporation. The Vanadium Corporation of America closed their Naturita plant at the end of 1957 and moved part of the equipment from that mill to their Durango plant which was operated on an increased tonnage during 1958. With this new milling capacity in Colorado and additional ore bodies discovered and developed on the Colorado Plateau, as well as new ore bodies opened on the Front Range, Colorado will continue to hold its place in the production of uranium. Significant new uranium deposits were developed in the Tallahassee district west of Canon City and ore from these deposits was shipped to the Gunnison mill.

Declining base metal prices were responsible for keeping several of the State's former large base metal operations closed during the year. For a time during 1958 there were no metal mines operating in the Leadville district, a condition which has not existed since mining operations started in that area. Only two of the State's larger base and precious metal mining properties remained open the entire year and these were the New Jersey Zinc Company's Eagle operations and the Idarado Mining Company's Pandora property. Both of these companies deserve considerable credit for the efficiency of their operations in being able to maintain an operating schedule under adverse conditions. Likewise, the Golden Cycle properties in the Victor-Cripple Creek area have operated with an efficiency that enables them to continue production in the face of mounting costs with a stationary gold price.

American Metal Climax's Climax Molybdenum operations at Climax, Colorado, the largest producers of molybdenum in the world from the largest underground mine in the world, succeeded in developing molybdenum deposits at greater depth during the year. They have started sinking an eighteen-foot circular shaft below the Storke level from which further development work will be done. Their by-products plant has been replaced with a new installation and, after their two and one-half months' strike, operations were resumed and brought up to a normal daily capacity by the end of the year.

The principal producing districts in the State of gold, silver, copper, lead and zinc were:

Eagle County San Miguel County Mineral County Teller County

The leading producers of gold, silver, copper, lead, zinc and molybdenum were:

GOLD	Golden Cycle Corporation Cripple Creek, Colorado
SILVER	Idarado Mining Company, Ouray and San Miguel Counties, Ouray, Colorado
COPPER	Idarado Mining Company, Ouray and San Miguel Counties, Ouray, Colorado
LEAD	Idarado Mining Company, Ouray and San Miguel Counties, Ouray, Colorado
ZINC	Empire Zinc Company, Eagle County Gilman, Colorado
MOLYBDENUM	Climax Molybdenum Division, American Metals Climax, Climax, Colorado

The average prices of the above mentioned metals were: Gold, \$35.00 per ounce; silver, \$0.89044 per ounce; copper, \$0.25164 per pound; molybdenum, \$1.215 per pound; lead, \$0.12109 per pound; zinc, \$0.10309 per pound. Employment in the mineral industry in Colorado in 1958, although lower than the previous year, did not reflect the widespread inactivity in base and precious metals. This was due to the fact that miners who were laid off by the closing of some of the larger operations were immediately absorbed by small leases and by reclamation tunnel contractors who were active during the year. Blue River Constructors, contractors on the Harold D. Roberts Tunnel between Dillon and Grant, Colorado Constructors, contractors on the Moffat Water Tunnel, Michigan Sewer Constructors, contractors on the Vasquez and Jones Pass Water Tunnels, and the Mountain States Constructors, contractors on the Williams Fork Dam, were responsible for the employment of many miners during the year.

Production of crude oil in Colorado for 1958 was 48,736,368 barrels, a drop of 6,245,932 barrels from 1957. Gas production showed an increase in 1958 with a total production of 134.-208,520 thousand cubic feet. The drop in oil production was due to a reduced demand for crude oil during the last half of the year. Petroleum production continued to hold first place in Colorado mineral output and Rio Blanco County remained the largest producer in the State, despite a 10% production drop. Morgan County remained second place and Washington County dropped to third place with a production of 6,852,619 barrels of oil. Rangely Weber field was first in State production with the Adena field in Morgan County second. Exploration work continued in all four corners of the State and the success ratio was about one in ten. New discoveries were made in the Paradox basin in Montezuma County and in southeastern Colorado along the Las Animas arch. Many new wells were completed in northeastern and northwestern Colorado and new fields were discovered.

The Union Oil Company completed their experimental work on their oil shale property on Parachute Creek in Garfield County. Oil shale mining procedures were developed and successful retort methods were improved. Both the Union Oil Company plant and the United States Bureau of Mines property in Garfield County are on a standby basis for future petroleum production from oil shale.

Production figures given in this report are as accurate as possible at this early date. They have been compared with the preliminary report of the United States Bureau of Mines and although some variations appear we believe that there will be no material change in the final figures. The figures quoted are based on total gross production multiplied by the average price of the mineral during the year. They are intended to show an indication of the production in the various counties and in the State and cannot be used as a guide for taxation or as final production figures. Petroleum and gas production is received from the annual report of the Colorado Oil and Gas Conservation Commission and the dollar value is calculated by this office. Metallic and non-metallic mineral production figures are received directly from the operator and in some cases where these reports are incomplete an estimate from the inspector's report is used.

# Production of Metals, Non-Metallics, Petroleum, 1958

Uranium Molybdenum Vanadium Zinc Lead Gold Copper Tungsten Pyrite Silver Beryllium Tin	$\begin{array}{c} 30,472,019\\ 12,019,557\\ 9,948,453\\ 3,568,174\\ 2,584,546\\ 1,673,196\\ 1,648,251\\ 1,186,498\\ 1,140,136\\ 59,748\\ 1,748,59,768\\ 1,748,59,768\\ 1,748,59,768\\ 1,748,59,768\\ 1,748,59,768\\ 1,748,59,768\\ 1,748,59,768\\ 1,748,59,768\\ 1,748,59,768\\ 1,748,59,768\\ 1,748,59,768\\ 1,748,59,788$
Total	\$109,086,318
Cement Sand and Gravel Fluorspar Limestone Clay Miscellaneous (Minerals which cannot be separated for production value) Stone Feldspar Gypsum Pumicite, Scoria, etc. Bog Iron Gem Stones Rare Earths Perlite, Sulphur, etc.	
Total	\$ 42,707,973
Crude Oil Gas (All classes, well head value) Total	Petroleum \$144,747,010 17,424,409 \$162,171,419

Metals	Recapitulation \$109,086,318
Non-Metallics Oil and Gas	
TOTAL MINERAL PRODUCTION	\$313,965,710

# **County Activity and Production**

#### ADAMS (1)

Oil production in Adams County was steady during 1958 with an average number of completions and dry holes. Sand and gravel production in the county came principally from the Brannan Sand & Gravel Company's three pits and from the Cooley Sand & Gravel Company's pits on Lowell Boulevard and in Arapahoe County. Some gold and silver production was reported from gravel pit operations.

#### **ARCHULETA** (4)

Oil production in Archuleta County remained steady in 1958 with little change from 1957. The Oriental Refining Company, operators of Gramps Field in the southern part of the county, sold their interests to the Flank Oil Company of Billings, Montana, in June of 1958. The Flank Oil Company is a subsidiary of Asmara Oil Corporation, Ltd., of Calgary, Canada. Some new wells were completed and some others were abandoned with a normal amount of wildcat activity.

#### BACA (2)

Garrizo Enterprises Incorporated are moving a mill from Gilpin County to their Locklin copper property located on Garrizo Creek in southwest Baca County. The mine is developed through an 850-foot tunnel which penetrates copper ores.

#### BENT (2)

Continued oil exploration and drilling in Bent County were responsible for a slight increase in production during 1958. Several new wells were completed, which indicates that production will continue to advance in the county.

#### **BOULDER** (1)

Boulder County's mining activity practically ceased in 1958 as far as metallic mineral production was concerned. With the expiration of the government tungsten-buying program late in 1956, most of the county's tungsten mines were closed. Some activity was noted in gold and silver exploration and several properties were active in development of uranium ore. Fluorspar production remained steady in General Chemical Division's Burlington Mine, and in Harry M. Williamson's Emmett Mine. Fluorspar mills were operated by Ozark-Mahoning Company at Jamestown and by General Chemical Division at Valmont. The LaSalle Mining Company, under the direction of Mat Rowe and Cliff Doyle, succeeded in developing a producing uranium property near Jamestown. All stone quarries in the county were active during the year and these properties maintained steady production of cut stone and flagstone for building purposes. The Wah Chang Corporation operated the Marion Mill on Sugar Loaf Road, processing thorite ore from the Canon City area.

#### CHAFFEE (3)

In 1954, 1955 and 1956 the Colorado Bureau of Mines reported gypsum production from Chaffee County. This was in error as the reported production came from Fremont County. During 1958 Chaffee County continued to produce small amounts of a wide variety of minerals. The Monarch Lime Quarry, operated by the Colorado Fuel & Iron Corporation, was active all year and some improvements were installed. The Antero Refining Company developed their beryllium and rare earth properties. The M & S and the Homestake Mines shipped feldspar ore to the Western Feldspar Mill near Salida. The Salida Granite Company produced granite blocks for the building and memorial trades. Feldspar production remained steady from the Western Feldspar Milling Company.

#### CLEAR CREEK (1)

Significant events in Clear Creek County's mining activities during 1958 were the holing through or completion of the Vasquez Water Tunnel on February 26, and the completion on September 16 of the 1,600-foot ventilation hole from the surface to underground workings of the Big Five Tunnel. Completion of the Vasquez Tunnel will insure more water for the Denver area; and the ventilation hole to the Big Five Tunnel will open the way for further development of reported mineral deposits in Clear Creek County. The Jackpot Oil Company purchased a controlling interest in the Bald Eagle Mine and the development work which followed was promising. Some work was done on the Lucania Tunnel located on Fall River. The Bride and Fourth of July Tunnels were operated by Komo Mines, Inc. Activity in the county was steady on development work, although production was not equal to 1957 because of lower base-metal prices. Forty-four separate mining, milling and placer operations were reported in Clear Creek County during 1958, most of which were doing development and exploration work. Placers were operated by Steve Papp and Alvin C. Amrheim on the Frank's Placer and Texaco Placer respectively.

#### CONEJOS (3)

Some turquoise from the King Turquoise Dump was pro-

duced and used in the manufacture of costume jewelry. Steady production from the Great Lakes Carbon Company's perlite plant at Antonito was reported. Perlite ore for processing was shipped in from New Mexico.

#### **COSTILLA** (3)

The Mesita Hill quarry and crushing plant, operated by the Colorado Aggregate Company, Inc., was active all year, producing volcanic scoria for the manufacture of cinder block and roofing. There was no other mining activity reported in Costilla County.

#### CUSTER (2)

Activities at the Great Lakes Carbon Corporation were suspended during the year on their Rosita perlite property, and late in 1958 Persolite Products, Inc., took over the quarry. They planned to resume operations and process the perlite ore at the former Great Lakes Carbon Corporation's plant located at Florence. Flexmore, Inc., have started construction of a perlite plant near Silver Cliff and some production was reported. The Crestone Company has been conducting development operations on a reported uranium deposit in the Crestone Needles area at an altitude above 11,000 feet. Thorium development and production were reported from the Westcliffe area at the Anna Lee property operated by the Gendev Corporation.

#### **DENVER** (1)

Three mineral processing plants operated in Denver County during 1958. They were the International Minerals & Chemical Corporation's feldspar processing plant, the General Chemical Division of the Allied Chemical & Dye Corporation's sulphuric acid plant, and the Globe Smelter operated by the American Smelting & Refining Company. Although some gold was recovered from gravel plant excavations, the amount was not recorded. Many mining and oil companies operating in Colorado have their offices in Denver.

#### **DOLORES** (4)

Because of the low base metal prices and an unsteady metal market, operations at the Rico Argentine properties were confined to the production of iron pyrites for their sulphuric acid plant. There was no lead, zinc, copper, silver, or gold production reported in 1958 from this property. Some small leases were active on development and assessment work. However, production for Dolores County in base and precious metals was lower than it has been for many years. Some uranium production was recorded from mines along the Dolores River and in the Dunton area, and uranium development was generally active. Some small gold production was reported from the St. Louis claim operated by Myron Jones. It is reported that Rico Argentine will start lead-zinc milling operations early in January of 1959 on ore from the Mountain Springs and St. Louis Tunnels.

#### DOUGLAS (2)

Limestone, silica sand, and clay were the major products from the mining industry in Douglas County. All three minerals were produced from the Helmer pits. Clay was produced from the Hogback, Ringenberg, and Stevens Ranch clay mines. These properties are located in the Castle Rock and Littleton areas. Some uranium development work was done in the county.

#### EAGLE (3)

The Empire Zinc Company maintained a steady operation at their Eagle Mine and Mill located at Gilman, Colorado, in spite of declining lead, zinc and copper prices during most of the year. This company remained one of the largest producers of zinc in the State and development work was continued throughout the year. Pumice and volcanic cinders were produced at the Roaring Fork Quarry and the Dotsero Quarry by the Ideal Lava Products Company and E. H. Bone, respectively. Some uranium exploration work was conducted in the Vail Pass area.

#### EL PASO (2)

The Castle Concrete Company operated their Castle Quarry, located five miles west of Colorado Springs, and produced concrete aggregate all during the year. The Lennox Breed Quarry, operated by Colorado Materials Company, continued their record production of concrete aggregate. The Atomic Minerals Corporation reported a small production of thorium ore from the Twenty-One Mine on the Corley Mountain Highway.

#### FREMONT (2)

Cotter Corporation's mill, located three and a half miles south of Canon City, started processing uranium ores from the Front Range in April of 1958. The mill has a reported capacity of seventy-two tons per day and application has been made to the Atomic Energy Commission to increase this tonnage to two hundred tons per day. Limestone and cement, produced at the Portland Quarry, operated by the Ideal Cement Company, was the major mineral product of the county in 1958. Other county products include dolomite, travertine, feldspar, mica, beryl, quartz, marble, sand, and gravel. The Empire Zinc Company's sintering plant was closed for a time during the year but resumed operations during the latter part of 1958. Gypsum was mined at the Coaldale Quarry by Fibreboard Paper Products Company and the product was used in the manufacture of wallboard. Dolomite was mined by the Colorado Fuel & Iron Works and shipped to their Pueblo plant

for flux. Uranium exploration and development continued in the Tallahassee district and considerable production was reported. Hi-Lo Minerals Corporation are constructing a mica processing plant near Howard, Colorado, and will start operations in May of 1959. Colonna & Company of Colorado, Inc., operated several small quarries in the county, as well as their crushing plant located in Canon City. Ganister was produced for Colorado Fuel & Iron Corporation by Sturbaum & Company and Laclede-Christy produced silica rock for their firebrick plant at Canon City.

#### **GARFIELD** (3)

Considerable exploration, development, and experimental work was done by the Union Oil Company at their oil shale property located on Parachute Creek. Mine methods and retort procedures were tested until August of this year when operations were temporarily closed down. The new uranium and vanadium reduction plant of the Union Carbide Nuclear Company started operations in January of 1958 on a reported tonnage in excess of 1,000 tons per day. Many plant problems were overcome during the year and eventually this plant will be one of the largest uranium mills in the State. Frank H. Norberg operated the Glenwood Springs Lime Quarry and Crushing Plant intermittently during the year on a reduced tonnage basis. The United States Bureau of Mines' Oil Shale Mine and Plant were maintained on a standby basis for future development work. Oil activity in the county continued steady and mineral prospecting indicated increased future mining activity in the county.

#### GILPIN (1)

Although Gilpin County's mineral production fell off during the year, many small properties were active on exploration and development work. The production loss this year can be traced directly to low metal prices and decreased interest in mining activity is also due to the lower base metal prices. Operations at the Glory Hole and Glory Hole Mill were steady during the year on gold development and processing. The Pittsburgh Mine, operated by Pittsburgh-Notaway Mines, Inc., performed development and rehabilitation work. Some development work was done at the Boodle property by William K. Guthrie. Work on the Moffat Water Tunnel was completed early in the year when slabbing and concreting were finished and the tunnel made ready for use. Several tourist mines in the county were open during the summer months, and weekend placer mining was evident along Clear Creek when weather permitted.

#### GRAND (3)

The Williams Fork Dam being constructed for the Denver

Water Board by the Mountain States Construction Company reportedly will be completed by the end of 1958. The dam was raised an additional one hundred feet to accommodate much larger water storage behind the dam. The Vasquez Tunnel was completed during the year and lining it with concrete should be completed by January 1, 1959. The Amis Construction Company worked during the summer months on road construction over Rabbit Ears Pass. Some manganese development was reported in the northwestern part of the county.

#### **GUNNISON** (3 & 4)

Base metal mining in Gunnison County was confined to exploration and development work due to a continual fall in base metal prices in 1958. The Keystone property, operated by the American Smelting and Refining Company, remained closed except for development work. Other properties in the Crested Butte area did some development, but no production was recorded. The Pinnacle Exploration Company located new uranium bodies in the Marshall Pass area on Indian Creek. Some beryl was produced by Hancock & Arendell from their Green Hawk Mine on Alder Creek. Development continued for most of the year on the United States Lithium Company's Lepidolite No. 2 Claim. The Gunnison Mining Company operated their new mill, which is located at Gunnison, all year on uranium ores from their Los Ochos property in Saguache County, and on ores from the Tallahassee district in Fremont County. Some uranium prospecting and developing were done in Gunnison County in 1958.

#### HINSDALE (4)

Prospecting and exploration work for uranium ore was conducted by the Gunnison Mining Company on their Nellie Creek property. Other development operations were conducted by K. C. Knapp on the Pride of America vein and by Williams and Long on the Resorgimento property. There was no production listed from Hinsdale County. Low metal prices and high cost of transportation have a direct effect on Hinsdale County's mining activity.

#### **JACKSON** (3)

The fluorspar operation of Ozark-Mahoning Company at their 200-level at Northgate No. 2 Mine was steady in 1958 with production ranging from 6,000 to 9,000 tons per month. Ore was treated and refined into acid and metallurgical grade fluorspar at their mill located three miles north of Cowdrey. Oil activity and production from the Battleship field, north and south McCallum fields, and the Canadian River field remained steady during the year. Some copper exploration work was done during the summer months.

#### **JEFFERSON** (1)

Mineral production in Jefferson County was strong during 1958 in both metallic and non-metallic production. Sand and gravel continued to be the largest product in dollar value, with clay, uranium, stone, and feldspar following in order. The Brannan Sand & Gravel Company and the Rio Grande Sand & Gravel Company continued to supply building aggregate for construction and highway surfacing. The Robinson Brick & Tile Company, Denver Fire Clay Company, George W. Parfet Estate, and the Lakewood Brick & Tile Company were the predominate clay producers from their mines along the hogback. The Denver-Golden Oil & Uranium Company operated their Schwartzwalder Mine steadily all year on increased uranium tonnage, which they shipped to the new Cotter Corporation mill at Canon City. Feldspar production from the South Platte River Canyon fell off materially toward the end of the year. Beryl Ores, Inc., processed beryl and mica ores at their plant near Arvada, and filter rock was mined at the Table Mountain pit by the Sterling Contracting Company.

#### LAKE (3)

Mineral production in Lake County was materially hampered by falling metal prices, which virtually closed all base metal mines in the county during the year, and by a strike at the Climax Molybdenum Company which closed their mining property from July 21 to October 9. However, Climax was back into full production by the end of the year and they are continuing the sinking of their eighteen-foot circular shaft from the Storke Level. Their new by-products plant, which will materially aid by-product recovery of pyrites, tin and tungsten, was completed during the year. The Arkansas Valley plant of the American Smelting & Refining Company operated on reduced tonnage all year from mines in the Rocky Mountain area, as well as on ore from foreign countries. Considerable headway was made in cleaning up caves in the Busk-Ivanhoe Water Tunnel, and this project should be completed early in 1959. C. Ryan & Son operated the gravel plant for the Climax Molybdenum Company all year. For a time during the year there were no mines operating in the Leadville district, a condition which has not been recorded since mining began in the area.

#### LA PLATA (4)

Mineral activity in La Plata County during 1958 has increased over 1957. With the closing of the Vanadium Corporation of America's plant at Naturita, additional tonnage has been added to the Durango plant and new installations of equipment were made. Stewart Brothers conducted development and exploration work on the Brawner Tunnel. E. M. Myers developed silver-gold ore at the Lady Eleanor Mine. Some activity was reported at the Mary Alice, Muldoon, and Rosnite Mines where development was conducted for base metals and gold and silver ores. Considerable oil and gas activity prevailed in the Red Mesa, Ignacio and Bayfield areas with additional drilling by Consolidated Oil & Gas, Inc., and Occidental Petroleum Corporation. Many new gas wells were completed with some increase in oil production. The Kennecott Copper Corporation filed claims covering nearly 600 acres of possible copper-producing ground and this transaction could well be the beginning of a new industry in the county.

#### LARIMER (1)

Sixteen stone guarries were active in Larimer County in 1958, producing flagstone, cut stone, and crushed stone which are used in the building trade in the Rocky Mountain area. In addition to this activity, beryllium development and production in the Crystal Mountain area were greatly increased. The American Beryllium Company's mill located near Masonville was completed and some beryl concentrate was produced. One other beryllium mill was under construction and slated for completion by the end of the year. This was the Mineral Concentrates Mill and Chemical Plant at Loveland. Norberg Construction Company operated the Rex Limestone Quarry for the Holly Sugar Company all year. The Ideal Cement Company operated the Boettcher Quarry on an increased tonnage during the year. Uranium development and prospecting were steady with a reported shipment from the Copper King Mine in the Prairie Divide region. In general, mining activity in Larimer County was on the increase. Oil production and development continued to expand in the eastern part of the county. Sand and gravel production remained steady.

#### LAS ANIMAS (2)

Clay mining in the Santa Fe Mine was in progress all year on a restricted tonnage basis. The clay was shipped to the Pueblo plant of the Standard Fire Brick Company. Oil well drilling and exploration were continued in the western part of the county.

#### LOGAN (1)

For the second consecutive year Logan County showed a decline in oil production with 771,509 barrels less than in 1957. With a production of 5,746,294 barrels in 1958 the county maintained fourth place in State petroleum production. Natural gas production also declined from the previous year.

#### MESA (4)

Mesa County continued to hold third place in the production of uranium in 1958 in spite of the tonnage cutback at the Climax Uranium plant located in Grand Junction. Many small lessors were required to locate other buyers for their ore as the Climax mill, after the cutback, processed mostly its own ore. Activity in this county, as well as other Colorado counties, was curtailed due to the Atomic Energy Commission's announcement in October of 1957 that cutbacks would be in effect and few new mills would be constructed. Prospecting leveled off some but production continued to rise above the 1957 production figures. The Atomic Energy Commission and its subcontractors were active all year in exploration and ore-purchasing programs. There was considerable access road construction in the county and oil well activity reported a measure of success. Work progressed on the Vega Dam and Water Tunnel east of Colbran under contract to C. F. Lytle, Inc. Access roads and small earthen dams were constructed east of Colbran by Wallace Beard.

#### **MINERAL (3)**

Production of rare and base metals in Mineral County dropped considerably in 1958 when the Emperius Mining Company at Creede suspended operations in June due to falling metal prices. This property, including the Commodore and Amethyst Mines and the Creede Mill, started operations again late in the year and were nearing normal production by January of 1959. Other active properties were the Holy Moses Mine operated by the Sublet Mining Company, the Monon Mine operated by the Monon Mining & Leasing Company, the Outlet Tunnel operated by the Outlet Mining Company, and the S & S Mill operated by the S & S Milling Company. Low metal prices have created operating hardships in this county.

#### **MOFFAT** (3)

Petroleum from the Hiawatha Dome, Powder Wash, Isles Dome, Maudlin Gulch, Thornburg, and the Elk Springs fields was the major commodity produced in Moffat County during 1958. New petroleum exploration and development continued and several new wildcat wells were completed. Of importance to the county was uranium production from the Trace Elements Corporation's Marge Pit. This production was in excess of 1,000 tons per day and was treated at the Maybell Mill. Trace Elements Corporation is a subsidiary of the Union Carbide Nuclear Company. Considerable prospecting and development work on uranium ore was done by the Pioneer Exploration Company and the Buffalo Mining Company of Craig. The Maybell uranium deposits are mined by the open pit method and are reported to be the largest in the State.

#### **MONTEZUMA** (4)

Petroleum activity in Montezuma County reached a new high in 1958 with increased exploration and production from the Aneth field, across the border in Utah. Many exploration wells were drilled with a fair ratio of completions. A large number of gas wells were brought in and many drilling companies maintained offices and warehouses in Cortez. A favorable oil showing was encountered at the Ellis No. 1, south of Mancos, and some petroleum production was reported from this area. Moderate uranium exploration and development continued south of Dove Creek in Cross Canyon with some uranium production reported. Development activity continued at the Gold Dollar and Red Arrow properties on the East Mancos River.

#### **MONTROSE** (4)

In excess of 215 separate uranium operations were inspected in Montrose County in 1958. The larger part of these mines was in production, which justified the county's claim of "first in uranium production." In spite of uncertain future government support, many new deposits were opened and considerable exploration work was accomplished with encouraging results. Some deposits were worked out, including the Shattuck-Denn Mine on Club Mesa. The Vanadium Corporation of America's Naturita plant was closed on January 1, and local ores were shipped to their Durango mill and other plants in the area. The Union Carbide Nuclear Corporation mill at Uravan made continued improvement in their flowsheet and milling processes, and tonnage treated during the year was at an all-time high. New deposits were opened in Monogram Mesa, Bull Canyon, and Gypsum Valley, and in general throughout the entire uranium belt. Most uranium development in Montrose County has centered around deeper-lying deposits located under the numerous mesas in the area.

#### MORGAN (1)

Morgan County climbed to second place in petroleum production in 1958 with a reported 7,305,334 barrels. There was an increase over last year in the number of active fields with a total of thirty-seven, Adena field remaining the second largest producer in the State. Gas production was up over last year with a dollar value production of \$1,421,991 and exploration activity was steady with an average number of completions.

#### OURAY (4)

With twenty-three operations listed in 1958, Ouray County showed an increase in activity over 1957. Many of these operations were former producers before they were closed due to falling metal prices. The resumption of mining activity indicates more confidence in the area. The Treasury Tunnel, operated by the Idarado Mining Company, was active all year. However, all ore from the Ouray County side was milled at their Pandora Mill located near Telluride. The Diamond Jack Mining Company was active in development work at the Greyhound Group. The Mayflower Mining Company did development work on the Mountain King property, and milling operations continued at the Rolling J Mill south of Ouray.

#### PARK (2)

Many of Park County's producing mines were idle in 1958 due to low base metal prices. The Hilltop, operated by the Leadville Lead Corporation, worked all year and produced shipments of gold-silver-lead-zinc ores. Although slightly less than was produced in 1957, beryllium production from the Boomer Mine, located in Badger Flats, was none the less significant. The Alma Placer, located at Alma, operated during the summer months. New uranium claims were located in the county in 1958, which indicates an increase of activity in the exploration of this mineral. Blue River Constructors advanced the heading of the Harold D. Roberts Water Tunnel beyond the 40,000-foot station. This tunnel, when completed, will bring water from the Blue River at Dillon to the South Platte at Grant, Colorado.

#### PITKIN (3)

This once highly productive county in precious and base metals reported little or no activity in 1958. A small shipment of uranium ore was made from the Lookout Mountain area just above Lenado by James S. Dodge. Other uranium prospecting and development was noted, with some manganese exploration in the Snowmass area.

#### **PUEBLO** (2)

The Meadow No. 5 and Stone City Nos. 1, 2, 3, 5, and 6 operated by General Refractories Company, the Nellie Helen Clay Mine operated by Arthur Wands, and the Rock Creek Clay Mines operated by the Freeman Fire Brick Company, were active in 1958. The Pueblo Mica Grinding Plant, operated by International Minerals & Chemical Company, was in operation all year as were several sand and gravel plants in Pueblo County. General Refractories operated the Chamblin Clay Mine as well as their properties in the Rock Creek district. Cliff & Creek Uranium Company conducted development and exploration work on their Kathryn property south of Fort Carson.

#### **RIO BLANCO (3)**

Rio Blanco County maintained its first place in oil production in Colorado from Rangely Field which has been unitized and is operated by the California Company. New wells were drilled in the Meeker area, which added production to the county, and a considerable number of wildcat wells were completed. Four uranium properties, the Butterfly Pit, Burrell No. 3, Coal Creek No. 1, and the Last Day Mines, were active. Some uranium production was listed from Rio Blanco County in 1958.

#### **RIO GRANDE (3)**

Considerable oil exploration was evident in Rio Grande County during 1958 with several crews doing seismograph work. Oil leases were being secured by the Tennessee Gas Transmission Company, the Texas Company, Phillips Petroleum Company, Skelly Oil Company, and others, which indicated expanded future exploration. General Minerals Corporation continued its diamond drilling program for minerals in the Summitville area.

#### ROUTT (3)

A new oil discovery on Trout Creek by the Tennessee Gas Transmission Company stimulated oil activity in this county during the year. Cabeen Exploration Company, located fourteen miles west of Steamboat Springs, had several producing wells, and a success ratio of 75% has been reported on their new wells. The McCoy Aggregate Company produced steady amounts of volcanic ash at their McCoy Cinder Pit which is located four miles northeast of McCoy.

#### SAN JUAN (4)

Rehabilitation of the 750-ton Central Mill (formerly the Shenandoah-Dives Mill) owned by Marcy-Shenandoah Mining Company, continued throughout the year. This plant will handle custom ores from the district as well as ore from the company-owned mines. The Pride Mill, owned by the Argyle Mining & Milling Corporation, operated at various times during the year on custom ores and on ores from their own mines. Several other companies, including the Denver-Golden Oil & Uranium Company, the Gaddis Mining Company, Frank Richardson, and others were active on development work at their properties in the county. Some work was done on a new portal for the Mighty Monarch Mine by the Silverton Mining Company. Continued development activity promises increased production from this one-time large producing county.

#### SAN MIGUEL (4)

San Miguel County's mineral activity was steady during the year with continued production in uranium, precious metals, and base metals. The Idarado Mining Company operated their Pandora mining property and mill located near Telluride all year. In spite of falling metal prices, development work was maintained and property improvements made, which will insure maximum production on short notice. The Union Carbide Nuclear Company started the operation of their upgrading plant at Slick Rock which materially increased tonnages in the area. New uranium discoveries were developed in the Slick Rock and Horseshoe Bend areas. Additional claims were located in the county in spite of the Atomic Energy Commission's announcement of a cutback in their purchase program. Some bog iron was produced for paint pigment from Harry K. Williamson's pit at Ophir which was operated by Boyd Robinson. Oil drilling activity increased in the southern and western ends of the county with drilling operations being conducted by Continental Oil Company and the Union Oil Company.

#### SUMMIT (3)

The Knight Mining Corporation, operators of the New York Mine, was granted a loan from Defense Minerals Exploration Administration for exploration work on lead and zinc ores. Exploration work was done at other mines which include the Wellington, Shoe Basin, St. John, Jumbo, Big 4, and Alliance. This exploration work was reported as successful. Blue River Constructors, contractors for the Denver Water Board, pushed tunneling work both east and west from the bottom of the Montezuma Shaft, and also made record progress on the Dillon entry of the Harold D. Roberts Tunnel. This tunneling project should be completed before the end of 1959, and when lined with concrete, will deliver water from the Blue River to the South Platte River. C. Ryan & Son operated the aggregate pit for the Climax Molybdenum Company.

#### TELLER (2)

Mining properties of the Golden Cycle Corporation, United Gold Mines, and the Cresson Consolidated Gold Mining & Milling Company which operated and produced during the year were the Ajax, Cameron, Cresson, and Deadwood Mines. The Strong Mine, operated by Front Range Mines, Inc., closed in August of this year. The Carlton Mill, operated by the Golden Cycle Corporation, received gold ores from mines and dumps in the Cripple Creek-Victor district. Operations were conducted on a reduced tonnage throughout the year. Other mining operations were the Iron Clad Mine, operated by the Rampart Mines Company, the Henry Adney, operated by John Robush & Company, and the El Paso, operated by Beacon Hill Mines, Inc. Some monumental stone was shipped from the Pikes Peak Quarry, and peat moss was mined at the Alpen Meadow Bog. Doepke Mining Company, owners and operators of the International Shaft, conducted development work and produced some gold from their property during the year.

#### WASHINGTON (1)

Washington County maintained third place in petroleum production with 6,852,619 barrels of oil. Although this was a

drop from 1957 production, fifty-five fields were reported active. This was an increase of eight fields over last year. Gas production showed a slight increase during 1958 and exploration activity continued with a fair ratio of success.

# **Production by Counties, 1958**

ADAMS COUNTY Area 1250 square miles	* BR	IGHTON
4 plants, oil wells—90 men Gold Silver	.\$	11,500 42
Total	\$	11,542
Sand and gravel	\$	388,923
Petroleum Gas		$2,315,448 \\ 134,959$
Total	\$	2,450,407
TOTAL PRODUCTION FOR COUNTY	Y\$	2,850,872
ARCHULETA COUNTY * H Area 1364 square miles Gravel plant, oil wells—60 men	PAGOSA S	PRINGS
Sand and gravel	\$	71,875
Petroleum Gas		351,167 41
Total	\$	351,208
TOTAL PRODUCTION FOR COUNTY	Y\$	423,083
<b>BACA COUNTY</b> Area 2565 square miles 1 mine, 1 plant, oil wells—58 men	* SPRIN	
Sand and gravel Petroleum		82,937 588
Gas		51,362
Total	\$	51,950
TOTAL PRODUCTION FOR COUNTY	Y\$	134,887
<b>BENT COUNTY</b> Area 1543 square miles Gravel plant, oil wells—40 men	* LAS .	ANIMAS
Sand and gravel	\$	36,457
Petroleum Gas		$3,362 \\ 4,591$
Total		7,953
TOTAL PRODUCTION FOR COUNTY	Y\$	44,410

BOULDER	* B(	DULDER
Area 758 square miles 16 mines, 15 quarries, plants, oil wells—318 men Gold Silver Lead		$200 \\ 3,465 \\ 1,177$
Total Sand and gravel Fluorspar Building and other stone Clays		4,842 1,133,019 1,409,102 75,134 37,500
Total	\$	2,654,755
Petroleum	\$	7,455
TOTAL PRODUCTION FOR COUNTY	\$	2,667,052
CHAFFEE COUNTY	*	SALIDA
Area 1040 square miles 7 mines, 3 quarries, 4 plants—100 men Silver Lead Manganese		$1,000 \\ 5,000 \\ 160$
Total	\$	6,160
Sand and gravel Limestone Feldspar, mica, etc.		82,966 921,711 271,261
Total	\$	1,275,938
TOTAL PRODUCTION FOR COUNTY	\$	1,282,098
CLEAR CREEK COUNTY * C Area 395 square miles 34 mines, 4 plants, projects—478 men	GEORC	ETOWN
Gold Silver Copper Lead Beryllium		37,067 15,226 5,390 34,925 88
Total	\$	92,696
Sand and gravel Feldspar, mica, etc.		291,629 183
Total		291,812
TOTAL PRODUCTION FOR COUNTY	\$	384,508

COSTILLA COUNTY Area 1220 square miles	* SA	AN LUIS
1 quarry, gravel plant—13 men Sand and gravel Scoria		85,214 23,350
TOTAL PRODUCTION FOR COUNTY.	\$	108,564
CUSTER COUNTY Area 738 square miles 8 mines, 1 plant—34 men	* WESI	CLIFFE
Clays Perlite Thorium		5,329 2,851 5,313
TOTAL PRODUCTION FOR COUNTY.	\$	13,493
<b>DOLORES COUNTY</b> Area 1029 square miles 4 mines, 1 plant, oil wells—146 men	* DOVE	CREEK
Pyrite	\$ \$	914,078 297,679
TOTAL PRODUCTION FOR COUNTY.	\$	1,211,757
DOUGLAS COUNTY Area 844 square miles 6 quarries & clay mines, gravel—34 men Sand and gravel Limestone Clays Silica rock		
TOTAL PRODUCTION FOR COUNTY.	\$	201,437
EAGLE COUNTY Area 1686 square miles 1 mine, 2 quarries, 1 plant—520 men		EAGLE
Silver Copper Lead Zinc Pyrite	· · · · · · · · · · · · · · · · · · ·	$\begin{array}{r} 400,000\\ 300,000\\ 1,078,089\\ 6,888,969\\ 49,800\end{array}$
Total	\$	8,716,858
Sand and gravel Scoria		$246,006 \\ 5,656$
Total	\$	251,662
TOTAL PRODUCTION FOR COUNTY	\$	8,968,520

<b>EL PASO COUNTY</b> * COL Area 2159 square miles	ORADO SPRINGS
2 mines, 2 quarries, gravel plant, oil wells—9 Sand and gravel Limestone Silica rock	\$ 1,122,066
TOTAL PRODUCTION FOR COUNTY	\$ 1,454,735
FREMONT COUNTY Area 1562 square miles 3 mines, 12 clay mines & quarries, 1 plant, or Uranium	
Cement Sand and gravel Limestone Gypsum Building and other stone	97,253 730,597 68,000
Total	\$12,726,226
Petroleum	\$ 80,852
TOTAL PRODUCTION FOR COUNTY	\$12,807,078
GARFIELD COUNTY * GLEI Area 3000 square miles 1 mine, 1 quarry, 2 plants, oil wells—267 me Sand and gravel Limestone Oil shale	NWOOD SPRINGS n \$ 49,421 36,133 1,081,500
Total	\$ 1,167,054
Gas	\$ 115,822
TOTAL PRODUCTION FOR COUNTY	\$ 1,282,876
<b>GILPIN COUNTY</b> Area 149 square miles 26 mines, 3 plants, projects—219 men	* CENTRAL CITY
Gold Silver Copper	\$ 1,478 1,490 327
Total	\$ 3,295
Sand and gravel Peat	6,744 6,260
Total	\$ 13,004
TOTAL PRODUCTION FOR COUNTY	\$ 16,299

GUNNISON COUNTY Area 3243 square miles 19 mines, 2 plants, projects—232 men		NNISON
Uranium Sand and gravel	\$	124,294
TOTAL PRODUCTION FOR COUNTY	\$	124,294
JACKSON COUNTY Area 1628 square miles 4 mines, 1 plant, oil wells—181 men		VALDEN
Sand and gravel Fluorspar		11,919 1,717,336
Total	\$	1,729,255
Petroleum Gas		2,770,493 4,023,694
Total	\$	6,794,187
TOTAL PRODUCTION FOR COUNTY	\$	8,523,442
JEFFERSON COUNTY Area 791 square miles 13 mines, 18 quarries, 4 plants—204 men Uranium Sand and gravel Building and other stones Clays	\$	GOLDEN 2,392,241 18,140 631,892
Feldspar, mica, etc		1,315
Total	\$	3,043,588
Petroleum	\$	7,181
TOTAL PRODUCTION FOR COUNTY	\$	3,050,769
LAKE COUNTY Area 384 square miles 6 mines, 3 plants, projects—1742 men	* LEA	DVILLE
Gold Silver Lead Zinc	· · · · · · · · · · · · · · · · · · ·	100 12 78 4
Molybdenum Tungsten Pyrite Tin		30,472,019 1,648,251 222,620 16,567
TOTAL PRODUCTION FOR COUNTY	\$;	32,359,651

LA PLATA COUNTY	* DU	RANGO
Area 1691 square miles 5 mines, 1 plant, projects, oil wells—408 men Sand and gravel		223,584
Petroleum Gas		57,027 2,332,845
Total	\$	2,389,872
TOTAL PRODUCTION FOR COUNTY.	\$	2,613,456
LARIMER COUNTY * FC	ORT C	COLLINS
Area 2640 square miles 9 mines, 18 quarries, 6 plants, oil wells—170 men Beryllium	\$	6,160
Cement Sand and gravel Gypsum Building and other stones Mica		7,343,164 248,808 117,000 117,349 360
Total	\$	7,826,681
Petroleum Gas		618,520 5,029
Total	\$	623,549
TOTAL PRODUCTION FOR COUNTY.	. \$	8,456,390
LAS ANIMAS COUNTY Area 4798 square miles Projects, oil wells—50 men	* TF	RINIDAD
Sand and gravel	\$	181,371
TOTAL PRODUCTION FOR COUNTY	\$	181,371
LOGAN COUNTY Area 1849 square miles	* ST	ERLING
Projects, oil wells—320 men Sand and gravel	\$	200,000
Petroleum Gas		17,066,493 1,317,061
Total	\$	18,383,554
TOTAL PRODUCTION FOR COUNTY	\$	18,583,554

MESA COUNTY Area 3334 square miles	* GRAND JU	NCTION
69 mines, 5 plants, projects, oil wells—19 Sand and gravel Gas	\$	1,188,869 86,875
TOTAL PRODUCTION FOR COU		
MINERAL COUNTY		
Area 923 square miles	·	CREEDE
5 mines, 2 plants, projects—91 men Gold Silver Copper Lead Zinc		30,430 104,420 616 352,893 316,393
Total		804,752
Sand and gravel	\$	67,222
TOTAL PRODUCTION FOR COUL	NTY\$	871,974
MOFFAT COUNTY	,	* CRAIG
Area 4761 square miles 3 mines, 1 plant, oil wells—311 men		
Uranium Sand and gravel	\$	206,478
Petroleum Gas		3,475,515 985,888
Total	\$	4,461,403
TOTAL PRODUCTION FOR COUL	NTY\$	4,667,881
MONTEZUMA COUNTY Area 2097 square miles 5 mines, projects, oil wells—232 men	* .	CORTEZ
GoldSilver		2,870 $212$
Total	\$	3,082
Sand and gravel	\$	340,037
Petroleum Gas		10,941 11,150
Total		22,091
TOTAL PRODUCTION FOR COUL	NTY\$	365,210

MONTROSE COUNTY	* MOI	NTROSE
Area 2240 square miles 212 mines, 2 plants, projects, oil wells—1156 me Uranium		
Sand and gravel Building and other stones	\$	
TOTAL PRODUCTION FOR COUNTY	\$	475,860
MORGAN COUNTY * F	ORT M	ORGAN
Area 1300 square miles 2 plants, oil wells—320 men Sand and gravel	\$	50,335
Petroleum Gas		21,696,842 1,421,991
Total		23,118,833
TOTAL PRODUCTION FOR COUNTY	\$2	23,169,168
OURAY COUNTY	*	OURAY
Area 504 square miles 22 mines, 1 plant, projects, oil wells—212 men Gold		235,250
Silver Copper	•	164,348 334,062
Lead		440,437 647,500
Zinc		
Total		
Sand and gravel	\$	12,495
TOTAL PRODUCTION FOR COUNTY	\$	1,834,092
PARK COUNTY	* FA	IRPLAY
Area 2178 square miles 8 mines, 1 plant, projects—154 men		
Silver Lead Beryllium		$32,148 \\ 168,504 \\ 37,500$
Total	\$	238,152
Sand and gravel	\$	124,108
TOTAL PRODUCTION FOR COUNTY	\$	362,260

PUEBLO COUNTY	* F	PUEBLO
Area 2414 square miles		
6 clay mines, 1 plant, projects, oil wells-72 men		1 1 1 0 0 0 0
Sand and gravel		1,118,039 217,108
Clays		
TOTAL PRODUCTION FOR COUNTY	\$	1,335,147
RIO BLANCO COUNTY	* N	IEEKER
Area 3264 square miles 4 mines, projects, oil wells—574 men Uranium		
Vanadium Sand and gravel		
Petroleum		
Gas		
Total		
TOTAL PRODUCTION FOR COUNTY	\$7	5,595,304
ROUTT COUNTY * STEAMBO	DAT SI	PRINGS
Area 2231 square miles		
1 quarry, projects, oil wells—208 men Scoria	¢	34,475
Petroleum Gas		483,914 3,269
Total	\$	487,183
TOTAL PRODUCTION FOR COUNTY	\$	521,658
SAGUACHE COUNTY	* SAG	UACHE
Area 3146 square miles		
12 mines, 1 quarry, 3 plants, projects—185 men		
Gold		8,400
Silver		14,283 21,099
Copper Lead		109,621
Zinc		117,231
Uranium		
Total	\$	270,634
Turquoise	\$	15,600
TOTAL PRODUCTION FOR COUNTY	\$	286,234

### SAN JUAN COUNTY

### \* SILVERTON

Area 392 square miles	
13 mines, 2 plants, projects—87 men	
Gold\$	26,623
Silver	12,332
Copper	8,513
Lead	56,017
Zinc	35,856
TOTAL PRODUCTION FOR COUNTY	139,341

### SAN MIGUEL COUNTY

\* TELLURIDE

103	mines, 3 plants, projects—1243 men		
	Gold	.\$	705,429
	Silver		490,563
	Copper		1,002,189
	Lead		1,321,315
	Zinc		2,142,500
	Uranium	-	
	Vanadium		
	Total	\$	5,661,996
	Sand and gravel		31,942
	Bog iron		30,000
	Total	\$	61,942
	TOTAL PRODUCTION FOR COUNTY	\$	5,723,938

### SUMMIT COUNTY

### \* BRECKENRIDGE

Area 616 square miles 6 mines, 2 plants, projects—563 men Gold Silver	 7
Lead	118
Total	\$ 140
Sand and gravel	\$ 384,870
TOTAL PRODUCTION FOR COUNTY	\$ 385.010

TELLER COUNTY	* CRIPPLE CREEK
Area 555 square miles 11 mines, 1 plant, 2 quarries, projects—199 Gold Silver	\$ 1,525,192
Total	\$ 1,530,192
Building and other stones Peat	
Total	\$ 22,770
TOTAL PRODUCTION FOR COUNT	Y\$ 1,552,962
WASHINGTON COUNTY	* AKRON
Area 2530 square miles Oil wells—230 men Sand and gravel Petroleum Gas	20,352,278
Total	\$20,807,857
TOTAL PRODUCTION FOR COUNT	CY\$20,963,459
WELD COUNTY	* GREELEY
Area 4033 square miles Projects, oil wells—115 men Sand and gravel	\$ 252,052
Petroleum Gas	
Total	\$ 6,535,777
TOTAL PRODUCTION FOR COUNT	FY\$ 6,787,829
* County Seats	

### Safety Awards

The following list of operators employing ten or more men have completed the entire year of 1958 without a lost-time accident and have been issued Safety Awards. Considerable improvement in safety has been shown by many of the larger operators and a great number of operations employing less than ten men completed the entire year without a lost-time accident. To the operators who did not receive an award we wish to extend our sincere appreciation for their untiring cooperation.

- American Smelting & Refining Company, Globe Plant, Denver
- The California Company, Rangely Gas Plant, Rangely
- Climax Uranium Company, Grand Junction
- Colorado Limestone Company, Howard
- Colorado Materials Company, Colorado Springs
- Booth Eckman, Nucla
- General Chemical Division, Allied Chemical & Dye Corporation, Burlington Mine, Boulder
- General Chemical Division, Allied Chemical & Dye Corporation, Valmont Plant, Boulder
- Hess Drilling Company, Paradox
- Ideal Cement Company, Boettcher Quarry, Fort Collins
- Ideal Cement Company, Portland Quarry, Portland

International Minerals & Chemical Corporation, Pueblo

McPherson Drilling Company, Montrose

Model Mining Company, Grand Junction

New Jersey Zinc Company, Canon City

George W. Parfet Estate, Golden

Lucius Pitkin Incorporated, Grand Junction

Verne Ray, Uravan

DeVar Shumway, Grand Junction

The Texas Company, Craig

United States Atomic Energy Commission, Denver

United States Gypsum Company, Loveland

Western Feldspar Milling Company, Salida

### Accidents

Fatal accidents in the mineral industry and construction projects in Colorado were reduced from twenty-two in 1957 to fourteen in 1958. Ten fatals occurred in the mining industry, four of which were on the surface and six underground. One fatal occurred in the sand and gravel industry and three fatals occurred in the oil well industry. Of these fatal accidents seven were caused by falling objects and ground, which has been the number one cause of accidents in the industry for several years. Three were caused by fall of man which has ranked second over the years. One was caused by asphyxiation, one by burns at a rig fire, one by electrocution underground and one by improper blasting procedure. The average age of the men killed in the mining industry was forty-three years, the average age in the oil industry was forty-two. The gravel pit fatality victim was fifty-three years old.

All of the fatal accidents in 1958 were avoidable and their cause was traced directly to carelessness of the individual or management along with infractions of safety rules by all parties concerned. All of these fatal accidents as well as all serious accidents were investigated by the inspectors in the various districts and complete written reports were submitted to the operators and the Bureau of Mines. Recommendations in writing were made to the operators for the correction of any condition or procedure which contributed to the accident. Accident information was compiled and distributed to all inspectors as an aid to preventing occurrence of similar accidents.

A total of 35,395,200 man-hours was worked in the industry in 1958, with a total of 1,101 lost-time accidents which resulted in the loss of 98,278 days. This includes the loss of 88,040 days due to fatal accidents and permanent partial disabilities.

The fatal accident rate per 1,000 men in the entire industry was .95 while the fatal accident rate per 1,000 men in the mining industry was 1.17, oil industry 1.07, and the sand and gravel industry 1.4. There was one lost-time accident for every 13.3 men employed in the entire minerals industry with the same ratio in the mining industry, 13.1 in the oil industry, and 13.4 in State and Federal projects.

	Per One Million Man-Hours 5,473. 5,473. 334. 334. 3,326.	2,777. lities.	$\rm ys \ \times \ 1,000,000$	Exposure		Jeath	bucket of waste e c sedure und nan ollapse	
	Frequency rate Frequency rate Man-Hours 29.1 29.1 12.0 11.9 31.4 30.5	$\frac{35,395,200}{35,4000}$ as of 84,000 days due to 14 fatalities and 4,040 days due to 11 permanent partial disabilities.	Total Time Charges in Days $\times$ 1,000,000	Number of Man-Hours of Exposure		Cause of Death	Crushed under dumped bucket of waste Crushed by fall of rock Fall of man down raise Crushed by fall of rock Crushed by fall of rock Crushed by fall of rock Improper blasting procedure Blectrocution underground Asphyxiation. Fall of man Hit by collapsing boom Fall of man. Derrick collapse	Hit by falling object Burns from rig fire
CCIDENTS-19	Number of Days Lost 53,2947 53,2947 53,2947 155 155 155 2,152 2,126	98,278 4,040 days due to 1	Vavarity Rate		DENTS-1958	by	MINES (U.C.N.C.) ompany ompany x U.) x U.) ERS Company ELLS	g Company Company
SUMMARY OF ACCIDENTS-1958	Lost - Time Injuries 87 87 87 495 21 202 203	rs due to 14 fatalities and	es $\times$ 1,000,000	Number of Man-Hours of Exposure	FATAL ACCIDENTS-1958	Employed by	METAL MINESI.aSalle Mining Company (U.C.N.C.)Shattuck Denn Mining CompanyIdarado Mining CompanyIdarado Mining CompanyRece & Austin LesseesRece & Austin LesseesRece & Austin LesseesRece & Austin LesseesRita Mines, Inc.Orbie Oliver WarrenLowell Thompson (Climax U.)Idarado Mining CompanyBrannan Sand & Gravel CompanyBrannan Sand & Gravel CompanyOIL WELLSAce Well Service	Honaker & Davis Drilling Company White River Exploration Company
	Total Mines, Surface 2,985,600 Mines, Underground 2,985,600 0,000 Minus - Clay Pits 1,740,000 Minus - Plants - Smeleers 5,434,400 State & Federal Projects 6,434,400 Oil Wells	includes the loss of \$4,000 day	Number of Injuries × 1,000,000	Frequency Mate Number of Man-F		Name	Levi Kilgore Casey Ralph Sheridan Aaron M. Shideler Aron M. Shideler Richard Reece George Austin Thomas O. Maxey Henry Marino Orbie Oliver Warren Donald Eugene Bartlett David Krill Bavid Krill Elmer H. Tuttle	
	Mines, Surface Mines, Underground Quarries - Clay Pit Mills - Plants - Smo State & Federal Pro Oil Wells	Totals This table includes	Theorem	r requ		Date	$\begin{array}{c} 1 & 1 & 7 & -5 \\ 3 & -7 & -5 & -5 \\ 5 & -7 & -5 & -5 & -5 \\ 7 & -8 & -5 & -5 & -5 & -5 & -5 \\ 8 & -11 & -5 & 8 & -5 & -5 & -5 & -5 \\ 9 & -11 & -5 & -5 & 8 & -11 & -5 & -5 & -5 & -5 & -5 & -5 & -$	11 - 27 - 58 12 - 13 - 58

ANNUAL REPORT

### AGENCY CAUSING ACCIDENT

AGENCY CAUSING A	CUDE		
		Temporary Inju	ries
	Fatals	Loss of one da	i y
MINES, SURFACE	ratals	or more	
MINES, SURFACE			
Atmosphere		1	
Cables - Hose - Ropes		2	
Cars - Motors - Vehicles		2	
Containers		1	
Chemicals	-	2	
Doors - Windows - Gates		1	
Drills - Drilling Equipment	-	7	
Electricity - Elec. Equipment	-	2	
Falls - Floor - Ice - Snow		7	
Flames - Fire - Hot Substances	-	2	
Ladders - Manways		. 1	
Machinery - Tools		15	
Materials		1	
		26	
Metal Objects Rock - Ore - Ground	. 1		
Rock - Ore - Ground	. 1	12	
Timber - Lumber - Poles		2	
Tracks		1	
Unclassified - Insufficient Data		1	
Totals	. 2	86	88
MINES, UNDERGROUND			
	-		
Atmosphere	. 2	9	
Bars - Bins - Chutes	-	8	
Cables - Hose - Ropes	-	17	
Cars - Motors - Vehicles	_	92	
Containers		2	
Drills - Drilling Equipment		28	
Dust and Particles	-	4	
Explosives, Loading or Firing	. 1	2	
		4	
Electricity - Elec. Equipment	. 1	00	
Falls - Floor - Ice - Snow		22	
Falling or Flying Objects		2	
Hoists - Hoisting Apparatus		2	
Ladders - Manways		6	
Machinery - Tools	-	64	
Metal Objects		40	
Platforms - Staging - Scaffolds		6	
Premature or Delayed Blasts		$\tilde{2}$	
Rock - Ore - Ground		138	
Timber - Lumber - Poles		40	
		40	
Tracks		4	
Tatala	. 9	488	497
Totals	. 9	400	131

### AGENCY CAUSING ACCIDENT—Continued

	Fatals	Temporary Injuries Loss of one day or more
QUARRIES	I uturb	or more
Belts - Conveyors - Pulleys Cables - Hose - Ropes Cars - Motors - Vehicles Explosives, Loading or Firing Falls - Floor - Ice - Snow Machinery - Tools Metal Objects Rock - Ore - Ground	- - - -	$ \begin{array}{c} 1\\ 2\\ 1\\ 1\\ 3\\ 1\\ 11\\\\\\\\\\\\\\\\\\$
Total	-	21
MILLS, PLANTS, SMELTERS		
Atmosphere Belts - Conveyors - Pulleys Cables - Hose - Ropes Cars - Motors - Vehicles Containers Chemicals Doors - Windows - Gates Drills - Drilling Equipment Dust and Particles Electricity - Elec. Equipment Falls - Floor - Ice - Snow Flames - Fire - Hot Substances Machinery - Tools Materials Metal Objects Rock - Ore - Ground	· · · · · · · · · · · · · · · · · · ·	$ \begin{array}{c} 3\\3\\2\\6\\5\\4\\1\\1\\2\\1\\15\\8\\9\\4\\18\\11\\-\\9\end{array} $
Total		90
OIL WELLS Belts - Conveyors - Pulleys Cables - Hose - Ropes Cars - Motors - Vehicles Chains - Gears - Sprockets Containers Chemicals Drills - Drilling Equipment Electricity - Elec. Equipment Falls - Floor - Ice - Snow Flames - Fire - Hot Substances	· · · ·	$     \begin{array}{c}       1 \\       5 \\       6 \\       7 \\       1 \\       2 \\       37 \\       4 \\       27 \\       3     \end{array} $

### AGENCY CAUSING ACCIDENT—Continued

Fat	tals	Temporary Injuries Loss of one day or more
Machinery - Tools		16
Metal Objects		60
Platforms - Staging - Scaffolds		4
Rock - Ore - Ground		3
Timber - Lumber - Poles		3
Tongs		20
Unclassified - Insufficient Data		1
·		
Totals	3	200 203

### STATE AND FEDERAL PROJECTS

Atmosphere	1
Bars - Bins - Chutes	2
Belts - Conveyors - Pulleys	2
Cables - Hose - Ropes	7
Cars - Motors - Vehicles	28
Chains - Gears - Sprockets	2
Containers	2
Chemicals	3
Doors - Windows - Gates	1
Drills - Drilling Equipment	5
Dust and Particles	2
Falls - Floor - Ice - Snow	9
Flames - Fire - Hot Substances	3
Ladders - Manways	5
Machinery - Tools	23
Materials	7
Metal Objects	37
Platforms - Staging - Scaffolds	1
Premature or Delayed Blasts	3
Rock - Ore - Ground	39
Timber - Lumber - Poles	11
Tracks	9
Total	202

### TYPE, NATURE AND SITE OF INJURY

Temporary Injuries Loss of one day Fatals or more

### **MINES, SURFACE**

### **Type of Injury**

Burns - Shock	5	
Caught in or between	9	
Fall on same level	1	
Fall on different level	8	
Handling	16	
Inhalation - Suffocation	1	
Striking against - Struck by	41	
Slip - Stepping on	7	
_		
Totals	88	91

### Nature of Injury

Foreign Bodies		7	
Cuts - Bruises - Lacerations - Punctures		39	
Strains - Sprains - Dislocations		21	
Hernia		2	
Respiratory		1	
Fractures	2	15	
Burns - Scalds - Shock		6	
Totals	3	91 9	94

Eyes		13	
Head - Face - Neck	1	7	
Trunk		24	
Upper Extremities		16	
Lower Extremities		32	
General	2	1	
			_
Totals	3	93 9	6

### TYPE, NATURE AND SITE OF INJURY—Continued

	<b>Temporary Injuries</b>
	Loss of one day
Fatals	or more

### MINES, UNDERGROUND

### **Type of Injury**

Burns - Shock	1		
Caught in or between		56	
Fall on same level		12	
Fall on different level	1	24	
Handling		96	
Inhalation - Suffocation	2	7	
Striking against - Struck by	4	214	
Slip - Stepping on		32	
Totals	8	441	449

### Nature of Injury

Foreign Bodies		28	
Cuts - Bruises - Lacerations - Punctures		243	
Strains - Sprains - Dislocations		131	
Hernia		14	
Respiratory	2	10	
Fractures	5	74	
Amputations		5	
Burns - Scalds - Shock			
Occupational Diseases		1	
Totals	8	506	514

Eyes Head - Face - Neck Trunk Upper Extremities Lower Extremities General Insufficient data	1	39 35 163 127 153 9 1	
Totals	8	527	535

### TYPE, NATURE AND SITE OF INJURY-Continued

	<b>Temporary Injuries</b>
	Loss of one day
Fatals	or more

### QUARRIES

### **Type of Injury**

Caught in or between	4
Fall on different level	1
Handling	3
Striking against - Struck by	10
Slip - Stepping on	3
	_
Total	21

### Nature of Injury

Foreign Bodies	1
Cuts - Bruises - Lacerations - Punctures	10
Strains - Sprains - Dislocations	6
Fractures	4

Total		21
-------	--	----

Eyes	1
Head - Face - Neck	1
Trunk	4
Upper Extremities	7
Lower Extremities	8

	<b>Temporary Injuries</b>
	Loss of one day
Fatals	or more

### MILLS, SMELTERS, PLANTS

### Type of Injury

Burns - Shock	7
Caught in or between	8
Fall on same level	2
Fall on different level	5
Handling	17
Inhalation - Suffocation	4
Striking against - Struck by	35
Slip - Stepping on	15
Total	93

### Nature of Injury

Foreign Bodies	8
Cuts - Bruises - Lacerations - Punctures	26
Strains - Sprains - Dislocations	25
Hernia	4
Respiratory	4
Fractures	14
Amputations	1
Burns - Scalds - Shock	11
	_
Total	93

Eyes	12
Head - Face - Neck	9
Trunk	26
Upper Extremities	21
Lower Extremities	29
General	3
Total	100

### TYPE, NATURE AND SITE OF INJURY—Continued

OIL WELLS	Fatals	Temporary Injuries Loss of one day or more
Type of Injury		
Burns - Shock	1	11
Caught in or between		50
Fall on same level		6
Fall on different level	1	10
Handling		17
Striking against - Struck by		88
Slip - Stepping on		16
Unclassified - Insufficient data		2
	_	
Totals	3	200 203

### Nature of Injury

Foreign Bodies		2	
Cuts - Bruises - Lacerations - Punctures		104	
Strains - Sprains - Dislocations		40	
Hernia		1	
Fractures	2	49	
Amputations		6	
Burns - Scalds - Shock	1	11	
Nature Unknown		2	
Totals	3	215	218

Eyes		11	
Head - Face - Neck	2	27	
Trunk		35	
Upper Extremities		77	
Lower Extremities	1	53	
General		2	
Totals	3	205	208

### TYPE, NATURE AND SITE OF INJURY-Continued

Temporary InjuriesLoss of one dayFatalsor more

### STATE AND FEDERAL PROJECTS

### **Type of Injury**

Burns - Shock	19
Caught in or between	24
Fall on same level	2
Fall on different level	5
Handling	28
Inhalation - Suffocation	1
Striking against - Struck by	114
Slip - Stepping on	10
Total	202

### Nature of Injury

Foreign Bodies	7
Cuts - Bruises - Lacerations - Punctures	109
Strains - Sprains - Dislocations	40
Hernia	2
Respiratory	1
Fractures	34
Amputations	1
Burns - Scalds - Shock	11
Occupational diseases	1
-	
Total	206

Eyes	9
Head - Face - Neck	15
Trunk	50
Upper Extremities	57
Lower Extremities	80
General	2
Insufficient data	2

Total	 215

### Men Employed—1958

Suspension of operations by several of the larger mining properties was responsible for a decrease in the number of men employed in the industry in 1958. Most of the men laid off from the larger operations remained in the industry by starting small leases, a fact which is evidenced by the increase in mining operations over 1957. In 1958 there were 961 less men employed in the industry while the number of mining operations increased by sixty-eight over 1957.

Mines	Mills, Quarries, Plants, Clay Mines Smelters & Pits Placers	Oil Projects Wells Totals
	No. Men No. Men No. Men	
District 1 98 425 District 2 33 244 District 3 46 1,485 District 4459 3,086	410429193271191,418965461	96 280 988 1,052 840 4,921
Totals	71 3.269 91 476 12 310	2,681 2,772 14,748

### TOTAL MEN EMPLOYED

	Underground	Surface	Oil Wells	Totals
District 1 District 2 District 3 District 4		$1,171 \\ 441 \\ 2,428 \\ 3,206$	1,277 280 840 375	2,968 988 4,921 5,871
Totals	4.730	7,246	2,772	14,748

### MEN EMPLOYED IN

Copper, Lead, Zinc	Molybdenum	Uranium	Oil Wells	Other	Total
1,000	1,900	5,000	2,772	4,076	14,748

### Inspections

A total of 1,158 complete safety inspections was made during the year by the six inspectors of the department. Although many base metal and tungsten properties were idle, an increase in other mining activities kept the average number of operations about equal to 1957. More frequent and thorough inspections were possible in Districts 1, 2 and 3, due to fewer operations in these districts. Each operation in these districts was inspected several times during the year and in District 4 each operation was inspected at least once and as many more times as time permitted and necessity required.

### **1958 INSPECTIONS**

### Made By

1958	District 1 Blake	District 2 Theobald	District 3 Doyle & Keating	District 4 Ray & Pakka	Totals
January	. 36	0	23	56	115
February	. 11	16	21	24	72
March		8	20	43	77
April	. 20	9	32	58	119
May	. 20	0	25	34	79
June	. 25	0	47	42	114
July	. 33	7	30	74	144
August		7	26	28	90
September	. 17	3	20	28	68
October	. 28	6	35	33	102
November	. 25	8	20	33	86
December	. 27	2	26	37	92
Totals	. 277	66	325	490	1,158

	Quarrie	es Mills,				
	&	Plants				
	Clay				Oil	
Mines	Mines	Smelters	Placers	Projects	s Wells	Totals
District 1 95	53	42	1	18	66	275
District 2 33	21	4	1	1	13	73
District 3 76	20	56	0	75	96	323
District 4420	0	17	0	18	32	487
Totals624	94	119	2	112	207	1,158

### **Information Reports**

In addition to the regular inspection reports filed with this office, 670 complete Information Reports were received from the inspectors during 1958. These Information Reports give pertinent information on individual operating properties which is compiled during the year from one or more visitations at the property. This information is on file at the Bureau of Mines office and can be reviewed by the interested public.

	Distaint 2	D:	
	District 3 Doyle & Keating	District 4 Ray & Pakka	Totals
0	23	47	72
0	3	48	56
0	0	41	42
0	4	43	47
0	1	19	29
13	7	51	94
29	6	33	78
2	3	14	31
12	16	31	64
3	4	24	40
2	2	18	38
9	4	48	79
70	73	417	670
	29 2 12 3 2 9	$\begin{array}{cccc} \text{District 2} & \text{Doyle \&} \\ \text{heobald} & \text{Keating} \\ 0 & 23 \\ 0 & 3 \\ 0 & 0 \\ 0 & 4 \\ 0 & 1 \\ 13 & 7 \\ 29 & 6 \\ 2 & 3 \\ 12 & 16 \\ 3 & 4 \\ 2 & 2 \\ 9 & 4 \\ & \end{array}$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$

### 1958 INFORMATION REPORTS Made By

		Quarrie &					
	2.41	Clay	Plants &			Oil	<b>m</b> ( )
	Mines	Mines	Smelters	Placers	Projects	Wells	Totals
District 1	63	17	10	7	6	7	110
District 2	34	27	5	2	2	0	70
District 3		2	8	2	5	11	73
District 4		0	11	6	8	3	417
	<u> </u>	—		_			
Total	531	46	34	17	21	21	670

### TOTAL INSPECTIONS, PARTIAL INSPECTIONS AND INFORMATION DATA

District 1	District 2	District 3	District 4	Total
385	143	396	904	1,828

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### **OPERATING MINES IN BACA COUNTY**

Operator	
Location	
of Mine	
Name c	

P. O. Address

Product

-Copper -Utleyville ------Baca Mining & Milling, Inc. ----716 Main St., Springfield ---Locklin \_\_\_

## **OPERATING MINES IN BOULDER COUNTY**

Copper Lead				l.ead,	
		Gold Gold, Silver	Flourspar Uranium vood-Silver, Lead		derGold, Silver /oodGold Tungsten Silver, Lead
Box 397, Nederland 3120 W. Arizona, Denver 1 4882 Elm Court, Denver 21 Moab, Utah	10101 W. 9th Dr., Lakewood Box 431, Boulder	Omaha, Nebr Jamestown Star Route, Boulder	Box 228, Boulder Box 171, Jamestown 10001 W. 9th Dr. Lakewood Box 1550 Grand Junction	Box 43, Boulder	Salina star Route, Boulder
Box 3           Stephenson_3120           4882           Moab			D		00.
Blue Bird Mines Box 397, Nederland Blue Bird Mines B. Clarida & W. L. Stephenson al 2120 W. Arizona, Denver 19. H. W. Low Estate 4882 Elm Court, Denver 21. Utex Exploration Co. Moab, Utah	Chase & Ross Harry M. Williamson & Son	Mountain Top Mining Co Ceneral Chemical Division		-WardColorado Minerals, Inc. Jamestown AJoel Cornish	William B. Brewster Chase & Ross Tungsten Mining Co.
	Ward	Rowena		WardJamestown	Summerville
Blue Bird Blue Stone Lode Boulder County Tunnel Cash	Dail Owen Emmett Golden Age	Golden PrincessRowena Jamestown (Burlington) Tamestown	La Salle No. 1 (Fair Day) Jamestown Moon	Occidental Pine Shade	Rex Sun Tungsten White Raven

### **OPERATING MINES IN CHAFFEE COUNTY**

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CYAC(Antero)Antero MtnCYACMining & Development	Co, IncBox 681, SalidaBoxry1		laims Ute Trail	Red Mtn.		1		Bldg., Tulsa, OklaCopper	
A C (Antero)	$10 \sim 1 \sim$	violu bagic	ey Group of	Slim's Chance	ewall	ey View Nos.	Wapaca		
K C	61017	nion	Shirl	Slim	Ston	Valle	Wap		

### COLORADO BUREAU OF MINES

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Product	Tourist Gold, Silver, Lead Gold, Silver, Lead Gold, Silver, Lead Beryl	Silver, Lead Silver, Lead Gold, Silver	Silver, Lead Gold, Silver, Lead Gold, Silver, Lead	Gold, Silver, Lead Gold Feldspar	Gold, Silver, Lead Gold, Silver, Lead	Beryl 1Tourist Gold, Silver, Lead	Gold, Silver, Lead Gold, Silver, Lead, Copper	- (jold, Silver, Lead Tourist and Health Gold, Silver, Lead Instruction	Gold, Silver, Lead Uranium Rare Earths Gold, Silver Gold, Silver, Lead Gold, Silver, Lead
P. O. Address		llox 15, Idaho Springs 2550 Varrow, Denver 15 1353 Mesita Rd., Colorado Springs	Lawson Box 283, Idaho Springs o. c/o frank Prince, Wilson, Kans.		Box 32, Idaho Springs 	Route 1, Evergreen	Boulder St, Denver 11Box 312, Idaho Springs	Box 14, Lawson Box 6, Idaho Springs Box 312, Idaho Springs Golden	Idaho Springs Box 873, Idaho Springs Box 15, Idaho Springs Box 6, Idaho Springs 10x 6, Idaho Springs 9106 Providust, Denver 6
Location Operator	Spanish Bar Alma Lincoln Mining Co. Virginia Canyon Latson, Young & Kingery Virginia Canyon Lackpot Oil Co	Dumont The Success Mining & Exploration Co. Spring Gulch Rhine Mackey Mines	-Lawson J. B. Traynor Virginia Canyon -Komo Mines, Inc. Gilson GulchPranklin Silver Age Mining Co.	Gilson GulchG. B. L. Mining Co AliceGold Anchor Minerals, IncBeaver Brook	-Virginia Canyon Fall River Exploration & Mining Co. Trail Creek Gilpin Uranium, Inc.	Bergen ParkKeith Echinger		Gulch Creek h Bar Springs	
Name of Mine	Alma Lincoln Ashland Bald Eagle Bellvue Hudson Brandt Ranch	Capitol Crazy Girl Tunnel Dixie	Drumond No. 4 Fourth of July Franklin	Preighter's Friend Gold Anchor Grover	Hot Pot Keast Tunnel	Keith King Cyrus Nos. 1 & 2 Kitty Clyde	Lake Central Project (Big 5 Tunnel) Lafayette	Little Flla Lone Star No. 6 Mayflower Miami Tunnel (Edgar)	Park Side Roote Ranch Silver Age Sky Rocket Stanley Tunnel

ANNUAL REPORT

Anna Lee       Brush Hollow      Gendev Corp.      Independence Bldg.,      Thorium         Big Bounie       Rosita       S. N. Mining Co., Inc.       Box 732, Cheyenne, Wyo.      Silver         Buckeye-Holt       Ophir Creek       Decker & Eisenhour       Wetmore      Uranium         Gold Nugget       Ophir Creek       Decker & Eisenhour       Box 87, Westcliffe      Uranium         Mary Christine Shaft       Rosita       Ceali Pherosus       Box 66, Silver Cliff        Exploration         Mary Christine Shaft       Rosita       Calico Minerals, Inc.       Box 66, Silver Cliff        Thorium         Opisch       Dr. (I. J. Budd & Associates       1004 Maren St., Vallejo, Calif. Thorium	Iron CladIron CladRicoJones BrothersBrothersMining Co.RicoSilver, Lead, ZincMountain SpringsRicoRicoRicoRicoSilver, Lead, ZincSt. Louis MineRicoIndiaRicoRicoSilver, ZincSt. Louis TunnelRicoRicoRicoRicoSilver, ZincSt. Louis TunnelRicoRicoRicoRicoSilver, ZincSt. Louis TunnelRicoRicoRicoRicoPayrites	OPERATING MINES IN EAGLE COUNTY agleGilmanThe New Jersey Zine CoGilmanSilver, Lead, Zine CoGilmanCopper	Coperating       Mines IN EL PASO COUNTY         Kathryn       S.B. Fort Carson Cliff & Creek Uranium Co.         Corley Mtn.       Colorado Springs         Twenty-One       Colorado Springs         Highway       Inland Empire Corp.	Joan       Tallahassee Area V & V Construction Co.       FREMONT COUNTY         Joan       Tallahassee Area V & V Construction Co.       Florence         Oilver       Tallahassee Area Shaller Mining Co.       Hotel Canon, Canon City	OPERATING MINES IN GARFIELD COUNTY
Ann. Big Cres Gold Mary Tom	Iron Mou St. I St. 1	Eagle	Katl Twe	Joan Olive Smal	

### COLORADO BUREAU OF MINES

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**OPERATING MINES IN CUSTER COUNTY** 

\_Oil Shale

100 Bush St., San Francisco, Calif.

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Product Gold, Silver Fourist Fourist Gold, Silver, Lead Gold, Lead, Zine Gold, Silver, Lead Gold, Silver, Lead Gold, Silver, Lead	FF0000000	Gold, Silver, Copper Gold, Copper Tourist Silver, Lead Gold, Silver, Goldper Molybdenum	Lead Silver, Lead Gold, Silver, Lead Beryl Gold, Silver, Lead Gold, Silver, Lead Gold, Silver, Lead Zinc
P. O. Address 2021 West St., Pueblo 2021 West St., Pueblo Black Hawk Box 662, Central City 2423 W. Evans, Denver 23 Central City 5551 N. Precos, Denver 11 6551 N. Precos, Denver 11 6555 Newton, Denver 11 Central City	Black Hawk Box 201, Central City Box 2201, Central City Box 209, Route 1, Morrison Idaho Springs Black Hawk Route 2, Box 413, Arvada Box 67, Central City Black Hawk	- Box 395, Central City c/o Dowell Blake, Black Hawk Black Hawk Black Hawk Black Hawk Central City 7820 Niagara St., Derby Black Hawk	Jour 2000 Journison Box 315, Ciunnison Box 15, Ohio City Pitkin Box 576, Grested Butte Tincup -Tincup Loute 1, Box 186, Montrose -Crested Butte -312 Walker Bank Bldg., Salt Lake City, Utah
Location Operator Black Hawk Silver Lane Mining Co. Black Hawk Gus Patkos & Robert Hollenback Central City William K. Guthrie, Jr. Perigo Road J. R. Clemons Central City Milliam C. Russell, Jr. Central City Milliam C. Russell, Jr. Contral City Hages-Wheeler Syndicate Keynolaville Glory Hole, Inc.	Hack Hawk Black Hawk Trading Post Central City Faye M. Clapham Contral City Moritan & Skinner Lake Gutch George W. Gabriel, Jr. Elk Horn Gutch Portenier, Kelly & Miller Freeman Gutch Portenier, Kelly & Miller Freeman Gutch Charles A. Slusher Lake Gulch Miller Dittsburgh-Notaway Mines Ingheswille Miller Dittsburgh-Notaway Mines	GuichSpring Day Mining CoBox 395, Centra Silver CreekBlake Brothersc/o Dowell Blad Black HawkMike McNultyBlack HawkBlack HawkBlack HawkBlack HawkBlack HawkBlack HawkBlack HawkBlack Lowell Blad HughesvilleGurrick & BillisonCo Dowell Blad Angentio Gulch Artic E, Winn7820 Niagara St Jenny LindNye-Mathews Mining, IncBlack Hawk	Cumberland Pass Ernest E. Miller Taylor Park Roy Carpenter Gold GreekH. L. Bird East Elder Creek H. E. Hancock & Leonard Paldy Mtn. G. H. Bennett Tincup Hall Creek K. & Mining Co. Hall Creek & K. Mining Co. Crested Butte - American Smelting & Refining Co.
Name of Mine Accelerical Dated Tanad Dated Nus Las 2 Chemens Different Diffe	Muthe Colonted Lost Gold Mine Manuneth Mecker-Su cess Morning Star No Name Planer Philadelphia Philadelphia Philadelphia Staten to Ote Suite Date Pather	Three B's Group Toll Gute Tungsten King Wegetum Willen Willen	Albardura No. 2 Enterprise Gold Links Gren Hawk Hot Ruok Group June Bug Keystone Lepidolite No. 2

ANNUAL REPORT

-Uranium --Uranium --Gold, Silver, Lead, Zinc

Indian Creek ----Pinnacle Exploration, Inc. Taylor Park -----Stendard Uranium Corp. -----

Little Indian & Pitch Tunnel Matchless Micawber

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l'iranium Gold, Silver, Lead, Zine Silver, Lead, Copper Gold, Silver, Lead Vermiculite	Uranium Gold, Silver, Lead, Gold, Silver Lead, Zinc	Gopper Fluorspar		l'ranium	Molybdenum Gold, Silver, Lead Gold, Silver, Lead Gold, Silver, Lead Gold, Silver, Lead, Zinc Gold, Silver, Lead
Box 22, Nucla Box 515, Paonia Box 148, Gunnison 	Box 539, Gunnison Lake City Lake City SON COUNTY	JEFFERSON COUNTY	3240 6th St., Boulder Morrison 310 S. 4uth St., Boulder 4925 Montview Blvd., Denver 7 800 Bonnie Brae Blvd., Denver 9 Mile High Center, Denver 2 1820 First Nat'l Bank Bldg	CE COUNTY	Climax Twin Lakes Box 662, Climax Box 662, Climax D. 11th St., Leadville Twin Lakes Twin Lakes
<ul> <li><sup>1</sup> Gulch Templeton &amp; Campbell</li> <li>Park Silver Chief Co.</li> <li>Mtn. Mike Hilbreth, Inc.</li> <li>Mtn. Prank Hodgson &amp; Harry</li> <li><sup>100</sup> Prank P</li></ul>	ek Gunnison Mining Co. Box 539, Gun reek K. C. Knapp reek Wellman & Long Lake City	yOzark-Mahoning CoOPERATING MINES IN JEFFE	Poothills Mining Co. Grapevine Mining Co., Inc. Uranium Bnterprises, Inc. Joseph W. Walsh 	OPERATING MINES IN LAKE COUNTY	Climax Molybdenum Co. Saturday Night Mining Co. Rollo W. Shaffer, Jr. Chrlis Kastrinos Denzel A. Hatch Denzel A. Hatch
Dutchman Gulch Templeton & Ca Schoffeld Park Silver Chief Co. Bellview Mtn. Mike Hilbreth, L Washington Frank Hodgson ( Julch Downing Downing Italian Mtn. John Lambertson Powderhorn Titan Mines	Nellie Creek	ines Cowdrey OPERAT	e reek ate creek	OPEI OPEI	rlimax Independence Pass English Guleh Mt. Elbert -Mt. Elbert
North Star Silver Chief Silver Spruce Skyline No. 1 Star Titan	Nellie Creek Pride of America Resorgimento	Barbara Ann Ozark-Mahoning M	Foothills Grapevine Mann No. 1 Mena Narø Pallaro Lease Schwartzwalder	Seven Devils	Climax Mines Bureka Giant Lode Mine Gordon Tiger No. 4 M. R. Claims Tom Thumb

Product Gold, Silver, Lead, Zinc Gold, Silver, Lead, Copper Gold, Silver, Copper Gold, Silver, Copper Gold, Silver, Copper	Beryl Beryl Beryl - Beryl - Beryl 2 Beryl Beryl Beryl	Uranium, Vanadium -Uranium, Vanadium -Uranium, Vanadium -Uranium, Vanadium Uranium, Vanadium -Uranium, Vanadium -Uranium, Vanadium Uranium, Vanadium Uranium, Vanadium Uranium, Vanadium
<ul> <li>P. O. Address Box 1303, Durango</li> <li>Box 1303, Durango</li> <li>Box 3151, Durango</li> <li>508 E. Main, Farmington, New Mexico</li> <li>Area Area, Durango</li> <li>Box 56, Hesperus</li> <li>MER COUNTY</li> </ul>	it., Denver 4 s St., Fort Collim reveal St., Fort stes Park St., Loveland revod, Fort rer Bidg., Denver r Route)	Box 1901, Grand Junction 404 Sherman Dr., Grand Junction Route 5, Grand Junction Box 1901, Grand Junction 404 Sherman Dr., Grand Junction 2940½ F Road, Grand Junction American Bidg., Fort Collins Gateway Box 1901, Grand Junction Box 1801, Grand Junction Box 1803, Grand Junction Box 1804, Grand Junction
Location       Operator       P. O. Addres         La Plata Canyon       Steward Brothers       Box 1303, Dur         La Plata Canyon       E. M. Myers       Box 3151, Dur         La Plata Canyon       E. M. Myers       Box 3151, Dur         La Plata Canyon       E. M. Myers       Box 8151, Dur         La Plata Canyon       Cummings & Browning       Ave.         Mildoon       Mtn.       Mt. E. Knudsen       Ave.         Ja Plata Canyon       Oregon Mining Co.       Box 56, Hespe         OPERATING MINES IN LARIMER COUNTY	Buckhorn Gulch Allphin Mining Co. Buckhorn Canyon Consolidated Gold & 1187 Stout 5 Buckhorn Canyon Cornsolidated Gold & 1187 Stout 5 Buckhorn Canyon Arthur Johnson Storm Mtn. American Beryl Corp. 625 Mathew Storm Mtn. American Beryl Corp. 1259, N. Shi Masonville National Beryl & Mining Corp. 1308 1349, E Masonville Wild & Frandson Baer Gulch American Beryl Corp. 7 Mining Corp. 7 Buckhorn Canyon Keystone Beryl Lorp. 7 Collins - Collins - Collins - Collins - Junction Arthur Colard & Shaw Bellvue (Sta Junction OPERATING MINES IN MESA COUNTY	<ul> <li>Jalamity Mesa Norman Wellman</li> <li>Calamity Mesa A. C. Rinderle</li> <li>Arrowhead Mesa Sterry Brothers</li> <li>Calamity Mesa Norman Wellman</li> <li>Calamity Mesa A. C. Rinderle</li> <li>Calamity Mesa A. C. Rinderle</li> <li>Calamity Mesa A. C. Rinderle</li> <li>Calamity Mesa Jack Montgomery</li> <li>Bue Mesa Jack Montgomery</li> <li>Bue Mesa Vorman Wellman</li> <li>Calamity Mesa Jack Montgomery</li> <li>Bue Mesa Jack Montgomery</li> <li>Calamity Mesa Jork Montgomery</li> <li>Calamity Mesa John Rickin</li> </ul>
Location La Plata Canyon La Plata Canyon La Plata Canyon 	Buckhorn G Buckhorn Ca Buckhorn Ca Storm Mtn. Masonville Masonville Bear Gulch Buckhorn Ca Junction	c1 (C)
Name of Mine Brawner Tunnel Lady Eleanore Mary Allee Muldoon Rosnite	Bir Boulder Prospect Consolidated Corral Pole Nos. 1 & 2 Donell Group	Arrowhead No. 21 Arrowhead No. 22 Arrowhead Nos. 23 & 24 Arrowhead Incline No. 1 Belmont No. 3 Black Jumbo Black Mama Black Streak Blue Ribbon No. 2 Blue Ribbon No. 2 Blue Ribbon Incline No. Blue Ribbon Incline No.

**OPERATING MINES IN LA PLATA COUNTY** 

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### ANNUAL REPORT

Vanadium Vanadium Vanadium Vanadium Vanadium Vanadium Vanadium Vanadium	Vanadium Vanadium Vanadium Vanadium Vanadium	Vanadium Vanadium Vanadium Vanadium	Vanadium Vanadium Vanadium Vanadium	Vanadium Vanadium Vanadium Vanadium Vanadium	Vanadium Vanadium Vanadium Vanadium	Vanadium Vanadium Vanadium Vanadium Vanadium Vanadium Vanadium
<ul> <li>Junction Junction Uranium, Junction Grand Junction Uranium, Junction Junction Uranium, Box 561, Fruita Junction Uranium, Uravan Junction Uranium, on 1698, Grand Junction Uranium, American Bldc., Fort Collins Uranium, Junction Junction Uranium, Junction Junction Uranium, Junction Uranium,</li> </ul>	Box 1550, Grand Junction Uranium, 294012, F Road, Grand JunctionUranium, 2236 Orchard, Grand Junction Uranium, Ouray Box 1901, Grand JunctionUranium, Route 4, Grand Junction	Box 1481, Grand Junction Route 5, Grand Junction Uranium, Day 1901, Grand Junction Uranium, 119 White Ave., Grand Junction Uranium, 204 Railroad Ave., Rifle Uranium,	ction	1335, Grand Junction 201, Uravan 27 Road, Grand Junction 287, Montrose 561, Grand Junction 01 S. Highway 50,	Rifle Junction Grand Junction Rifle	
Gardner & Son Mining Co. Ben Zinmerman Ace Turner Mining Co. Gardner & Son Mining Co. Workman Brothers Argo Mining Co. Beaver Mesa Uranium Co. Deal Mining Co.	Lodestar Uranium, Inc. Ben Zimmerman					Thatput Foster & L. L. Arbogast Vanadium Corp. Thomas W. Holl Reaver Mesa Ur Model Mining Co Beaver Mesa Ur Cleo Fears
Calamity No. 6Calamity Mesa (`alamity No. 10Calamity Mesa Calamity Nos. 11 & 17Calamity Mesa Calamity Nos. 21 & 27Calamity Mesa Calamity Nos. 20 & 20Calamity Mesa	Depression No. 6 Flat Top Mesa Bast Queen of Hills Calamity Mesa Blizabeth Nos. 3 & 17 Blue Mesa Flizabeth No. 18 Blue Mesa Government 1 Outlaw Mesa	Government 20"tlaw Mesa0 Government 30"tlaw Mesa0 Government 40"tlaw Mesa0"tlawten Mesa0"the for the for		Jupundary Drut Deaver Mesa	os. 2 & 6 Inclines 1 & 2	Mineral Channel No. 12Outlaw Mesa New Verde (Horn Group). Calamity Mesa October AditJohn Brown Mesa Packrat GroupBeaver Mesa Rajah No. 68Beaver Mesa Rajah No. 68Outlaw Mesa

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Product	14	Uranium, Vanadium	Boston Bldg., Denver 2 Uranium, Vanadium Box 1901, Grand Junction Uranium, Vanadium	226 29 Road, Grand Junction Uranium, Vanadium
P. O. Address	-Box 743, Rifle Route 4, Grand Junction Box 743, Rifle Y 215 Lands Down Rd			
Operator	Beaver Mesa Edward Horn Calamity Mesa John W. Ricks Beaver Mesa Edward Horn Outlaw Mesa DeVar Shunway	White, Green & Addison	Outlaw Mesa Associates, Inc -Calamity Mesa Norman Wellman	Calamity Mesa Ira Adamson
Location	Beaver Mesa Calamity Mesa Beaver Mesa Outlaw Mesa	on		-
Name of Mine	Sun Spot Sunflower Thundereloud Trojan No. 20	White, Green & Addison	Associates, Inc. Yellow Jacket No. 16 Yellow Jacket Incline	No. 15

### **OPERATING MINES IN MINERAL COUNTY**

Silver, Lead, Zinc	Silver, Lead, Zine	Silver, Lead, Zinc Silver, Lead, Zinc	Silver, Lead, Zine
AmethystEast Willow CreekEntperius Mining CoCreede CommodoreEast Willow	Holy Moses Creek Willow Creede	Monon CreekSublet Mining Co. Creede Outlet TunnelBast Willow Monon Leasing CoCreede	CreekOutlet Mining Co.

## **OPERATING MINES IN MOFFAT COUNTY**

1, Craig Uranium Jor St., Craig Uranium Uranium
Box 964 700 Tay Maybell
Buffalo Head Mining Co. Pioneer Exploration Co. Trace Elements Corp.
Buffalo HeadMaybell Butler LeaseCraig Trace Elements PitsMaybell

# **OPERATING MINES IN MONTEZUMA COUNTY**

Blue EagleSage Route, Dove CreekSage Route, Dove CreekSade DollarSage Route, Dove CreekSade DollarSalt LakeRiverRiverRinerals Consolidated, Inc403 Felt Bidg., Salt Lake Red Arrow GroupRatoFirst National Oil & Minerals Co. Box 205, MancosRiverSage Route, Dove CreekSage Route, Dove Creek	Cross Canyon -Elree YoungSage Route, Dove Creek Uranium, Vanadium East Mancos Minerals Consolidated, Inc. 403 Felt Bldg., Salt Lake	City, Utah Gold, Silver	RiverFirst National Oil & Minerals Co. Box 205, Mancos Gold, Silver, Copper Cross Canyon Elree Young Sage Route. Dove Creek Uranium Vanadium
lue EagleCross CanyonElree 7 old DollarEast Mancos Mineral River Mineral ed Arrow GroupEast MancosFrirst N ellow LizzardCross CanyonElree 7	foung s Consolidated, Inc		ational Oil & Miners Foung
ule Eagle Cross old Dollar Iliv ed Arrow Group East Rive ellow Lizzard Cross	CanyonElree 7 MancosMineral erMineral	Mancos	erFirst N CanyonElree
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Rex Uranium CoFarmington, New Mexico DeVar ShumwayGrand Junction American Bagle LeaseNorwood Stanley Oliver
Rex Uranium Co. DeVar Shumway American Baghe Lease Stanleer Fish Stanleer Pish Can Anney Can Anney Carl Albano Silver Lane Mining Co. Silver Lane Mining Co. Silver Lane Mining Co. C. C. Sanders Carl Albano Silver Lane Mining Co. C. C. Sanders Cordon Reed & Edward Rassell Mayfield Russell Mayfield Carlon Reed & Edward Cordon Reed &
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Product	Uranium, Uranium, Uranium, Uranium,	Uranium, Uranium,	Uranium, Uranium,	Uranium,		n Uranium, - Uranium, Uranium.			Uranium,	Uranium,		Uranium, IIranium	Uranium,	Uranium, Uranium,	Uranium,	Uranium,	Uranium,	Uranium, Uranium	Uranium,	Ifranium	Uranlum,	Uranium, Uranium	Uranium,	Uranium, Uranium, Uranium,
P. O. Address	Box 324, Naturita Box 156, Naturita Box 177, Naturita Box 325, Naturita	-Bedrock Box 591, Nucla		Durango	Box 337, Uravan Box 187, Nucla	831 24 Road, Grand Junction Box 1901, Grand Junction Boy 850 Urayan	C 1		808	Box 850, Uravan	Naturita Box 165, Dove Creek	Nucla		Box 350, Uravan Box 297, Uravan	Nucla Box 850 Fravan	217,	JSOX 609, Provo, Utan	Durango	Box 187, Nucla		Box 298, Naturita	Box 218, Paradox	Tth.	Box 54%, travan Box 195, Naturita Box 584, Nucla
Operator	Harold Kincade C. N. Athey Marion Crandell 2 Reed, Belisle & Reed	Charles E. Davis	Oral Clark & Art Harris Frank Power	Brickey & Alexander Vanadium Corp. of America Levi Barnes	Neilson & Klingensmith Delbert Burbridge	Glenn W. Berry Climax Uranium Co.	Glenn W. Berry	Drekey & Alexanuer Da Verne Ray	Vanadium Corp. of America	Frank Elder Lark Washburn	Tomny Thompson Carl Holder	Lowell Staats		Lark Washburn Donald Young	Ted Stone & Sage Brothers		North Standard Mining Co.	Vanadium Corp. of America	Delbert Burbridge	Anschutz Drilling Co.	Reed & Zufelt	Bill Snyder & Don Carlin Clinton Oliver	L. P. Development Co.	William K. Pierce
Location	Dolores Rim "Monogram Mesa "Carpenter Flats "Dolores Rim	1 Lion Creek Bull Canyon		Long Park Long Park Long Park	Long Park Dolores Rim	Eagle Basin Bull Canyon			Long Fark	[sull Canyon ['ravan	Bull Canyon Wedding Bell	Monogram Mesa		Club Mesa -Dolores Rim	-Monogram Mesa	Club Mesa	Bull Canyon	Canyon	Underes Bench	Little Gypsum Valley	Bull Canyon	Carpenter Ridge Carnenter Ridge	Bull Canyon	Long Park
Name of Mine	East Dolores East Opera Box Eclipse Foundar	Evening Star Incline No. (Soldier Boy No. 1) Fawn Springs No. 7	Fawn Springs Nos. 9, 11, 12, 13, 21 Fawn Springs No. 15	Firebird Fireracker First National Bank	Florence Nellie East	Good Hope Nos. 1 & 2 Greagor Group	Grey Fox	Groundhog	Hidden Basin	High Ball Group	Horsehair No. 1	Hummer	J. J. Mine	J. M. Mine	Joe Dandy	La Salle	Little Alice	Tittle Dasin	little Dick	Little Gyp Group	Log Cabin	Lone Pine No 9	Park	Long Fark No. 1 Long Park No. 3 Long Park No. 4

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Box 473, Uravan Box 45, Uravan Box 45, Uravan 215 Lands Down Rd., Grand Junction		-Box 357, Naturita Uravan Box 284 Uravan	$\frac{161}{401}$ ,	Box 484, Uravan Box 1901, Grand Junction	Box 1901, Grand Junction Rox 64 Naturita	Box 261, Uravan Bruita.	Box 395, Uravan	Nucla	3500 Main St., Durango		Box 27, Nucla	Nucla	co Unavan co Union Carbide Nuclear	U., Utavall	404 Sherman Dr., Grand	Junction Grand Innetion	Box 376, Uravan	850,	Box 368, Norwood Box 97 Placerville	an,	Box 294, Uravan	Box 296 Uravan	243,	ng.o		427, Uravan	- Box 376, Uravan	3500 Main St., Durange 831 24 Road, Grand Junction	Durango Box 386, Nucla
-Frank Fedel Leonard J. Hurt Leonard J. Hurt DeVar Shumway	-Blake, Powers & Stocklasa Lowell Staats - Russell Mayfield - Phinis Cole & Jack Bond	R. R. WolfRaymond KingRaymond KingRaymond KingRaymond KingRaymon	James Emmons O'Bryant & Powell	Joe & Matt Javernick Climax Uranium Co.	-rred & Sam Alcharus - Climax Uranium Co.	Omni-Metals, Inc.	Frank Power	I. C. WIIIIams	F. V. Binder	-K. C. Williams	Cecil Bunker		-Rex Uranum Corp.	C D Mining Co	A. C. Rinderle	I, P Gaggini	_Marion Trone	Lark Washburn		Neptune Uranium Corp.	Labrum, Labrum and Palmer	- Workman Brothers	Rex Holland	Vanadium Corp. of America	Llark Washburn Glenn W Berry	James Patterson	-Marion Trone	•	Vanadium Corp. of America Walter F. Burnett
	Monogram Mesa Monogram Mesa ('lnb Mesa Shaft Dolores Rim	Long Park	Club Mesa	Club Mesa Monogram	I MONOGTAIN MESA Monogram Mesa	['lub] Mesa	Bull Canyon	Mongram	Dolores Rim	Long Park	Dolores Rim	Monogram Mesa	Nonogram Mesa	Months Mraa	Bull Canyon	Rull Canvon	Club Mesa	Long Park	Bull Canyon	Carpenter Flats	Martin Mesa	Bull Canvon	Carpenter Flats	Rock Creek	Eagle Basin	Long Park	Iub_Mesa	Valley Eagle Basin	Polores Rim Faradox Valley
Long Park No. 6 Long Park Nos. 9 & 10 Long Park No. 11 Long Park No. 12	r No. 13 prsite ulder f Incline &	Maggie C. Dump	Media	oe No. 11	Mineral Joe Incline No. Mineral Joe Shaft Mineral Park No. 4	Monster	New Campbird	New Happy North Hummer	Nucla	Old Salt Lick	Ophir	Oversite	Paradox D	Door Door	Peanut Nos. 1 & 3	Deanut Incline No. 9		1	Pickett Corral No. 4 Die Face Nos 1 & 9		Point Empire	Erouwenon	Radium Queen	Rajah	Rattlesnake	Rattlesnake	raven Kaven		Redbed No. 2

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Product	Uranium, Uranium, Uranium, Uranium, Uranium, Uranium,	Uranium, Uranium, Uranium, Uranium, Uranium, Uranium,	Uranium, Uranium, Uranium, Uranium, Uranium, Uranium, Uranium, Uranium, Uranium,	Uranium, Uranium, Uranium, Uranium, MexicoUranium, MexicoUranium,	enver 12 ('ranium, -y Uranium, Uranium, Uranium,
P. O. Address	Naturita Box 324, Paradox Box 237, Naturita Durango Box 74, Nucla Box 74, Nucla Box F45, Blanding, U Box F4, Naturita Box F1, Naturita Box 206, Naturita	Naturita Box 337, Uravan Box 502, Uravan Naturita Uravan Box 850, Uravan Box 858, Uravan Box 393, Nucla	Box 235, Naturita Uravan Pox 276, Ouray Pox 173, Naturita Naturita Box 298, Naturita Box 298, Naturita Box 773, Naturita Box 773, Naturita Box 773, Naturita Box 773, Naturita Box 274, Naturita	Jenwood Ave and Junction 386, Nucla 850, Uravan 5, Uravan 3, G. Uravan 1, Tah 1, Tah 1, Tah 1, Tah 1, Tavan 1, Tah 1, Tah	4230 Tennyson St., Denver Box 461, Grand Valley Paradox Durango Box 371, Paradox
1	America	Burnett Jorp.	America		uldson Co n America Corp
Operator	Vern L. Bagby C. W. Snyder Denest Berry Yanadium Corp. of Phillip W. Bunker Harold Price - Adolphus Moore Carleton Bishop	Jess Campbell Neilson & Klingensmith Douglas Cleghorn Robert Wolney & Huey Bur Frank Stocklasa Lark Washburn Shattuck Denn Mining Corp Joe Weaver	-Eurene Barnes G. H. Estes G. H. Estes R. O. Grina London & Johnson Lee Elder Reed & Zufelt Miton Carina Lark Washburn Lark Washburn Lark Washburn Vanadium Corp. of Joe Cole	-Hess Drilling Co. Walter Burnett Ronald Hutton Lark Washburn Roy Shumway Marion Trone -Ikex Uranium Corp Jess Campbell	-Ray, Webb & Donaldson ('o. Carl Tucker Snyder & Livingston Vanadium Corp. of America Basin Excavating Corp.
Location	Sylvia's Pocket arpenter Ridge Martin Mesa Long Park (Jub Mesa Wedding Bell Wedding Bell Wedding Bell Bull Canyon Bull Canyon	Little (sypsum Valley Long Park Atking Park Long Park (jub Mesa (jub Mesa Vild Steer	Shring Creek Mesa Bull Canyon Julong Park Long Park Long Park Lugel Basin Long Park Long Park Long Park Long Park Long Park	- Yellow Bird Bench Monogram Mesa - Dolores Rim -saucer Basin -tong Park Saucer Basin - Long Park Saucer Basin - Jolores Rim Little Gypsum	Vellow Bird Bench
Name of Mine	Redbird Redbird Redrock No. 5 Republican Reserve Rlock No. 1 Rimrock No. 3 Rimrock No. 3 Rimrock Blues No. 5 Rimrock Blues No. 6	Roosevelt St. Patrick Sandy Seamo Sharrrock Sharrrock Sharrey Sharrey Sharrey Sharrey	Star No. 3 North Starlite No. 7 Steer No. 8 Strateht Arrow Sunbeam Sunrise No. 2 Sunrise No. 4 Sunrise No. 4 Sunrise No. 4 Sunrise No. 4 Sunrise No. 3 T. N. T. No. 3 Teapot Done	Three Jacks Thunderbolt Townhouse Tramp Group Triangulation C. S. Grant Uncle Sam Upter Raven	<pre>['ranium Girl No. 1 ['ranus ['reka Yaden View Valley View (Lower Workings)</pre>

### ANNUAL REPORT

Paradox Cranium, Vanadium Durango Uranium, Vanadium Naturia Nucla Nucla Durango Uranium, Vanadium Jif Land Junction Durango Uranium, Vanadium Canad Junction Durango Uranium, Vanadium Farmington, New Mexico Uranium, Vanadium Iravan Junction Junction Junction Duranga Vanadium Farmington, New Mexico Uranium, Vanadium Junction Duranga Vanadium Duranga Vanadium Duranga Vanadium Duranga Vanadium Vanadium Vanadium	n Ave., Montrose Go	Box 418, Santa Fe, New Mexico Allank Bldg., Cold, Silver First Nat'l Bank Bldg., Gold, Silver, Lead, Denver 2	Zinc, Copper Ouray	.625 N. 7th, Grand Junction	[625 N. 7th, Grand JunctionGold. Silver, Lead. Zinc. Conner. Lead. 264 S. 4th E., Moab, UtahGold. Silver, Lead. Zinc. Conner.	OuraySilver, Lead, Zinc _OuraySilver, Lead, Zinc 3040 E. 60th Place, Calif Lead, Zinc Huntington Park, Calif Lead, Zinc	Utah
Carpenter Ridge Fred Snyder Long Park in Ross Long Park i. Bass Long Park i. Ross Monogram Mesa _C. S. Bunker Long Park De Van Shumway Little Gypsum Valles Rim randium Corp. of America Valles Rim rev Uranium Co. Martin Mesa noe Cole Martin Mesa noe Cole Martin Mesa noe Cole Martin Mesa noe Cole Dolores Rim Nax Wainsott Dolores Rim Naver Mines Dolores Rim Naver Mines Dolores Rim Naver Mines Dolores Rim Naver Mines Dolores Rim Norcester Mines Dolores Rim Norcester Mines	OPERATING MINES IN OURAY COUNTY Cold Hill W. R. Nichols and O. C. Baker	spsie0. K. Camp			lronton Hoffy Mining Co. Poughleepsie Standard Uranium Corp.	Red Mtn. Mayflower Mining Co. Lake Lenore Arthur Alschbach Poughkeepsie George E. Wing	Pouchkeepsie Gulch Brown MtnInland Empire Uranium Corp. 
Valley View Vorkings)	Manager Manager	American your Big Andy Camp Bird	Edna Frank Hough	tireynoundHoffy HoffyMaenet	Martin Monarch	Mountain King Nasby North Star	Old Lout Patsy Helen Group Premier

Product	Gold, Silver, Lead, Zine, Copper	Lead Gold, Silver, Lead Gold, Silver, Lead, Zine, Conner, Lead,
P. O. Address		Silverton tining Co. Box 402, Ouray Ouray
Operator	-Stoney MtnPolus & Lawson	Red MtnRouville Mining CoSneffels District Francis Consolidated A OurayOurayIdarado Mining Co.
Location	Stoney Mtn.	_Red Mtn. _Sneffels Distr Ouray
Name of Mine	Revenue Group	Rouville Ruby Trust Treasury Tunnel
Na	Reve	Ruby Trea:

## **OPERATING MINES IN PARK COUNTY**

## **OPERATING MINES IN PITKIN COUNTY**

Big Buck

Tanner & Prisley

Manganese

Uranium, Vanadium -Uranium, Vanadium -Uranium, Vanadium Uranium, Vanadium

Box 783, Meeker --215 Lands Down Rd., Grand Junction

-- Moab, Utah

Meeker

John & Robert Dade Ivor Adair

--Meeker

Coal Creek No. 1 Last Day Butterfly Pits Burrell No. 3

McAlester Fuel Co. DeVar Shumway

--l'ranium Peak

**OPERATING MINES IN RIO BLANCO COUNTY** 

\_Basalt

\_Snowmass

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Zinc \_\_\_\_\_Silver, Lead, Zinc, Copper Zinc Gold, Silver, Lead. Zinc, Copper Copper Gold, Silver, Lead, Copper Gold, Silver, Lead, Gold, Silver, Lead, 1714 S. 6th St., Ironton, Ohio \_Silver, Lead Silverton Box 476, Silverton Silverton Box 492, Silverton Box 366, Silverton \_Silverton Argyle Mining & Milling Corp.-.Silverton Argyle Mining & Milling Corp. --Silverton Marcy-Shenandoah Corp. \_\_\_\_ Gold King Development Co. Charles R. Hall Olsen & Martz ---Grant Gifford Tom Gilliland -Dan Tipton Georgia Gulch Maggie Gulch Cunningham Maggie Creek Eureka Creek Bonita Creek Gulch \_\_\_\_ Gulch ----Mill Creek Gulch Pride of the West Terry Tunnel Milke's Strike Silver Cloud Kansas City **Bold King** Osceola

	Silver, Lead,	Vanadium Vanadium Vanadium Vanadium Vanadium	Vanadium Vanadium Vanadium Vanadium Vanadium	Vanadium Vanadium Vanadium Vanadium		Vanadium Vanadium	Vanadium Vanadium Vanadium Vanadium Vanadium Vanadium	Vanadium Vanadium	Vanadium Vanadium Vanadium Vanadium	Vanadium Vanadium Vanadium	Vanadium
Product	Gold, Silv	Zinc Uranium, Uranium, Uranium, Uranium,	Uranium, Uranium, Uranium, Uranium,	Uranium, Va Gold, Silver Uranium, Va Uranium, Va Uranium, Va		Uranium, Uranium,	Uranium, Uranium, Uranium, Uranium, Uranium,	Uranium,	Uranium, Uranium, Uranium,	Uranium, Uranium, Uranium,	Uranium,
P. O. Address	Box 559, Ouray	Bgnar Selick Rock Dove Creek Dove Creek Box 575, Nucla Route 3, Montrose First Narl Bank Bldg.	Grand Junction Egrar Dove Creek Mancos, Travan 180x 296, Uravan 1905 Burns Vault Bldg.,	Denver 2 Box 196, Telluride Box 196, Telluride Box 503, Nucla 	Box 223, Naturita 	City, Utah ne_Dove Creek		Box 186, Montrose Box 101, Naturita Box 1478, Cortez		(frand Junction 	Box 42, Egnar
Location Operator	lugram Basin East Ridge Co.	Slick Rock Burwell Mining Co. Slick Rock C. P. Snyder & Son Slick Rock Fritz & Brickson Bachelor Draw Bachelor Mines Gypsum Valley Pun Rice Patch Slick Rock Dulaney Mining Co.	-Slick Rock	Bridal Veil Oscar Blixt Slick Rock LaSalle Mining Co. Wedding Bell John Foy Spud Patch Elwood Kelly Slick Rock Merle D. Lloyd	Wedding BellJim Goforth McIntyre Canyon-G. W. King Slick RockJell Foster Slick Rock Merle D. Lloyd Summit CanyonBoyles Brothers Drilling Co.	Slick RockE. J. Johannsen & W. E. Haldane. Dove Creck Big Gypsum Dott Double Dove Creck	ley	Rock	Slick Hock	Old OphirBoyd Robinson Wedding BellFred Morlang SawpitClarence Neilson	Randolph
Name of Mine	Andrus	Ann No. 2 April No. 1 Ava Jay Bachelor Shaft Laid Eagle Bean No. 3 and Bean Pa	Black Jack Black Spider Blue Clay Broadway Bull Snake Group	Burro No. 1	Chipmonk Civet Cat Cougar Drift Cougar Incline Deremo	Dolores No. 2Early Morn Group	Ely Falcon No. 1 Fire Fly Full Moon Group Gold King	Groundhog	Hawk No. 1 Hazel Group Hogback No. 7 Horseshoe No. 4 Ilve No. 5, Incline No. 4	Iron Springs Placer Jack Knife Joe Dandy Group	I ON GINN

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**OPERATING MINES IN SAN MIGUEL COUNTY** 

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Uranium, Uranium, Uranium,	Uranium, Vanadiu Uranium, Vanadiu Uranium, Vanadiu Uranium, Vanadiu 	Uranium, Gold, Silv	Zinc Uranium, Vanadiu Uranium, Vanadiu Gold, Silver, Lead Zinc, Copper	Uranium, Uranium, Uranium, Uranium,			1-Uranium, Uranium, Uranium, Uranium, Uranium,
1433, Cre 1481, hkiss Minin lorad	Box 204, Naturita Box 186, Montrose Box 296, Uravan Delta Box 575, Nucla Box 295, Dove Creek	Hotchkiss	– Slick Rock – – – – – – – – – – – – – – – – – – –	Dove Creek Dove Creek Redvale Redvale Grand Juncion	Box 141, Nucla Box 558, Dolores Box 558, Dolores Box 412, Dove Creek Box 989, Cripple Creek Box 989, Cripple Creek Box 980, Cripple Creek Box 673, Ophir	First Nar'l Bank Bldg., Grand Junction Box 308, Dove Creek Dove Creek Mancos Rancos Slick Rock Naturita Nucla Box 1901 Grand Junction Slick Co Climar Uranium Co., Box 1901 Grand Junction	
M. K. DoyleOrtmayer Mining CoOrtmayer Mining CoOhn Neal Mining CoPikes Peak Uranium Corp		John Neal Mining Co. Tex Cross E. J. Johannsen Herbert Williams		Mario Dalpez	F. L. Green and I. L. Jackson	Dulaney Mining CoHarold Ernst T. B. & S. R. Thompson T. B. & S. R. Thompson 	Canyon-G. W. King k York Minerals, Inc. Hill — Woodrow Gripe Zalley – Frank Chesney Canyon–White, Green & Addison, Inc. Canyon–Reed, Belisle & Reed
	Wedding Bell	Spud Patch Spud Patch Mt. Hayden	Slick Rock	1 - Slick Rock	Gypsum Valley Horseshoe Bend Horseshoe Bend Generation Canyon Matterhorn	Summit Point 	McIntyre Canyon Slick Rock Joe Davis Hill Gypsum Valley McIntyre Canyon McIntyre Canyon
Latricia Legin Group	Mainstreet	Norma Jean No. 1 Norma Jean No. 2 North Slope	Northern No. 6 Northern Light Ocumpaugh Pandora	Penigal & Penigal No. Penigal No. 2 Pitch Fork No. 1 Pond Incline Radium Group	River View	San Miguel	Vanadium Queen Veta Mad & Veta Glad Wally Claims Windswept Yellow Girl

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Product Jold, Silver, Lead,	Zinc Gold, Silver, Lead,	ad, Zinc lver, Lead, old, Silver,	Zinc Silver, Lead, Zinc
0	)	2432 Grove St., Denver 11 Lead, Zinc Box 1700, Grand Junction Silver, Lead, Zinc 6363 E. Evans Ave, Denver 22 Gold, Silver, Lead,	e Si
P. O. Address Box 338, Breckenridge	Breckenridge	2432 Grove Box 1700, G 6363 E. Evan	Breckenridg
	Co.		arold Horn _
Location Operator Gibson Hill	Green Mtn. Dam Silver Bull Mining Co.	PreckenridgeKnight Mining Corp. MontezumaNorbute Corp. Shoe BasinBasin Mining Co.	-Breckenridge
Location Gibson Hill	Green Mtn. I	Preckenridge Montezuma -Shoe Basin	Breckenridge
Name of Mine Alliance	Elt Four	Now Yerk St John Shue Basin	Wellington

## **OPERATING MINES IN TELLER COUNTY**

# **OPERATING QUARRIES IN BOULDER COUNTY**

Product	Stone	Stone	Stone Stone		oulderStone BoulderStone
P. O. Address	ain Quarries Box 325, Lyons acting Co. Box 124, Lyons	1.1	1.1.1	1.1	kins
	Brodie's St. Vrain Quarries			John D. May	. Stockton & Per
Name of Quarry Location	Brodie's St. VrainLyons Knowland	Loukénen BrothersLyons	PfieferLyons		Stockton & Ferkinsllyons United Building Stone Lyons

# **OPERATING QUARRIES IN CHAFFEE COUNTY**

Mica, Feldspar, Bery --Granite --Feldspar --Limestone Silver Rocker M. & D. Co. — Salida -Salida Granite Co. — Salida The M & Si Inc. — Box 671, Salida - The Colorado Fuel & Iron Corp. Box 316, Pueblo Coffee Pot Claim - Ute Trail Crystal Placer - Ute Trail Homestake (Soda Spar) - Ute Trail Monarch Lime Quarry - - Monarch Pass

<b>OPERATING QUARRIES IN CLEAR CREEK COUNTY</b> Beaver Brook Mica LodeBergen ParkCharles M. Winn, Jr., et al925 E. Otis St., LakewoodFeldspar Paradise Mountain LodeBergen ParkCarl E. BallastRoute 1, EvergreenFeldspar	OPERATING QUARRIES IN COSTILLA COUNTY         Mesita Hill Quarry &         Crusher      Oolorado Aggregate, Inc.        Oolorado Aggregate, Inc.      Noicanic Scoria		Doty Quarry	OPERATING QUARRIES IN EAGLE COUNTY         Dotsero       Dotsero         Dotsero       Doterso         Dotsero       Doterso         Ideal Lava Products       Box 390, Glenwood SpringsPumice         Roaring Fork	OPERATING QUARRIES IN EL PASO COUNTY         Castle       Colorado Springs Castle Concrete Co.         Lennox Breed       Colorado Springs Concrete Aggregate	OPERATING QUARRIES IN FREMONT COUNTY         American Crystal Taylor Guleh Frank H. Norberg Co
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OPERATING QUARRIES IN GARFIELD COUNTY	Location Operator P. O. Address Product Glenwood Springs Frank H. Norberg Co. Box 150, Glenwood Springs Limestone	OPERATING QUARRIES IN JEFFERSON COUNTY         South Platte       Leonard Hollingsworth         Canyon       Leonard Hollingsworth         Box 187A, Star Route,       Feldspar         Bergen Park       B & H Minerals         S80 S. Garrison St., Denver 15, Feldspar	South Platte CanyonLeonard HollingsworthBox 187A, Star Route,Feldspar GoldenSterling Contracting CoBox 759, Fort CollinsFilter Rock Platte CanyonAlbert Miller3155 Walsh St, WestwoodFeldspar	OPERATING QUARRIES IN LARIMER COUNTY Carter Lake Colorado Stone Co. 1335 N. Main St. Lonemont. Stone	te Ideal Cement Co. Box 579, Fort Collins ille Buckhorn Stone Quarry Masonville Ranch Ernest W. Munroe 2, Box 273, Fort Collins and Sterling Contracting Co. Box 124, Lyons and Colorado Stone Co. Inc. Box C, Izyons I. Jake Colorado Stone Co. Inc. Box C, Izyons nd U. S. Gypsum Co. Info? Hill Arthur Ohline 1535 N. Main St., Longmont 163 Hill Colorado Stone Co. 1635 N. Main St., Longmont 163 Hill Colorado Stone Co. 1635 N. Main St., Longmont 163 Hill Colorado Stone Co. 1635 N. Main St., Longmont 163 Hill Parank H. Norberg Co. 703 Guaranty Bank Bldg.	Masonville Weaver Stone Co. T59 S. York St., Denver 9Stone Masonville Sterling Contracting Co. Box 759, Fort CollinsStone MasonvilleGeorge Wild	OPERATING QUARRIES IN ROUTT COUNTY McCoy Aggregate CoSteamboat SpringsVolcanic Scoria	OPERATING QUARRIES IN SAGUACHE COUNTY Villa GroveVilla Grove Turquoise CoBox 171, Villa GroveTurquoise	OPERATING QUARRIES IN TELLER COUNTY           Divide
	Name of Quarry Glenwood Springs Lime Quarry	Catherine No. 1 Hi Wan	Madonna No. 1 Tatle Mountain White Cloud .	Berthoud Onarries		Weaver Wild North Quarry Wild South Quarry	McCoy Cinder Pit	Villa Grove Turquoise Lode	Black Cloud Pikes Peak

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<b>OPERATING PEAT BOGS IN BOULDER COUNTY</b>	P. O. Address Product P. O. Address Product D. Zo	OPERATING PEAT BOGS IN GILPIN COUNTY Hawk Colorado Peat, Inc Route 2, Box 79, Golden Peat Hawk Gus Rudolph	<b>OPERATING PEAT BOGS IN LAKE COUNTY</b> Hayden RanchMt. Elbert Peat Moss Co., IncBox 969, LeadvillePeat	OPERATING PEAT BOGS IN TELLER COUNTY	OPERATING CLAY MINES AND PITS IN BOULDER COUNTY         Location       Operator       P. O. Address       Product        Rocky Flats      Colorado Brick Co.      Box 727, LongmontClay	OPERATING CLAY MINES AND PITS IN CUSTER COUNTY -WetmoreLaclede-Christy CoBox 110, Canon CityClay	<b>OPERATING CLAY MINES AND PITS IN DOUGLAS COUNTY</b> Littleton T. L. Helmer Route Tile Co. Route 1, Box 94, Littleton Clay Watterton Robinson Brick & Tile Co. 500 Santa Fe Dr., Denver 4. Clay Castle Rock The Denver Brick & Pipe Co. 4501 Fox St., Denver 16. 7137 Castle Rock Stroud-Whisenhunt Castle Rock Plastic Clay	OPERATING CLAY MINES AND PITS IN FREMONT COUNTY
OPERATING PEAT	Name of BogLocationOperatorCaribouW. H. KeaslerCaribouGreen ThumbNederlandMilen Trucking Co.Harms Peat BogWadMilen Trucking NossMud LakeScrugs Peat Moss	<b>OPERATING PEAT BOC</b> Braecher RanchBlack HawkColorado Peat, Inc. Rudolph RanchBlack HawkCGus Rudolph	OPERATING PEA Mt. Elbert Peat MossHayden RanchMt. Elbert P	<b>OPERATING PEAT BOG</b> Alpen Meadows BogGilletteAlpen Meadows, Inc.	OPERATING CLAY MINES AN           Name of Mine         Location         Operator           Spicer         Colorado Brick Co.	OPERATING CLAY MINES AN LawsonWetmoreLaclede-Christy Co.	OPERATING CLAY MINES ANI           Helmer         Littleton         T. L. Helmer           Hogback         Littleton         T. L. Helmer           Ringback         Castle Rock         The Denver Brick & T           Ringenberg         Castle Rock         The Denver Brick & T           Stevens Ranch         Castle Rock         Stroud-Whisenhunt	OPERATING CLAY MINE

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.Plastic Fire Clay

-324 S. Cottonwood St., Canon City -------

--- Canon City ---- William R. Irvin ---

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Name of Mine	location	Operator	P. O. Address Product	
Church Green Mountain Harvey Lakewood Clay Quarry Layden ML. Carbon Clay Pht Leyden ML. Carbon Clay Pht North Golden Pht No. 71 Pht No. 71 Pht No. 71 Rockwell Statte Quarry Statte Quarry Statte Quarry Statte Quarry Statte Quarry Statte Quarry Statte Quarry Statte Quarry Statte Quarry Statte Quarry	Rocky Flats Golden Rocky Flats Golden Waterton Golden Golden Denver Golden Golden Golden Golden Golden Golden Golden Golden Golden Golden Golden Golden	Wesley D. Conda George W. Partet Estate, Inc. Box 226, Golden John L. Harvey I. Alarvey & Tile Co. 1400 Jay St., Lakewood Robinson Brick & Tile Co. 1400 Jay St., Lakewood Robinson Brick & Tile Co. 1400 Jay St., Lakewood G. C. Bennetts G. C. Bennetts Duane J. Burno Purane J. Burno Purane J. Burno Hansen & Weil Construction Co. 739 S. Ogden, Denver 9 The Denver Fire Clay Co. 333 Blake St., Denver 1 Lakewood Brick & Tile Co. 1400 Jay St., Lakewood George W. Parfet Estate Box 226, Golden H. M. Rubey Clay Co. 1339 S. Ogden St., Wheat Hansen & Weil Construction Co. 739 S. Ogden Denver 1 George W. Parfet Estate Box 226, Golden H. M. Rubey Clay Co. 1303 Blake St., Denver 5 George W. Parfet Estate Box 226, Golden H. M. Rubey Clay Co. 1808 226, Golden H. Denver Fire Clay Co. 1808 226, Golden H. Denver Fire Clay Co. 1808 226, Golden The Denver Fire Clay Co. 1808 226, Golden The Denver Fire Clay Co. 1808 206, Golden Wesley D. Conda	Route 1, BoulderClay Box 226, GoldenClay 2970 Zenobia St., Denver 12. Clay 1400 Jay St., LakewoodClay 500 S. Santa Fe Dr., Denver 23 Clay Foute 1, Box 390, Goldenlay 7929 E. Pillsworth, Denver 23 Clay 929 E. Pillsworth, Denver 2 Clay 3033 Blake St., Denver 9Clay 3033 Blake St., Denver 5Clay 6829 W. 68th St., Wheatridge Clay 1400 Jay St., LakewoodClay Box 226, GoldenClay Box 226, GoldenClay 3033 Blake St., Denver 9Clay Box 226, GoldenClay Box 226, GoldenClay Box 226, GoldenClay Box 226, GoldenClay Houte 1, Box 390, GoldenClay Houte 1, BoulderClay Houte 1, BoulderClay	
	OPERATING	OPERATING CLAY MINES AND PITS IN PUEBLO COUNTY	N PUEBLO COUNTY	
Chamblin	Mustang Good Pasture	The Standard Fire Brick Co Harhison-Walker Refractories	24th & Albany St., Pueblo Clay Box 150, Canon City	

<ul> <li>Harbison-Walker Refractories</li> <li>Co.</li> </ul>	11	5, 6 _Stone City
Good Pasture	Nellie Helen	Rock Creek Stone City Nos. 1, 2, 3,

# **OPERATING MILLS, PLANTS AND SMELTERS IN ADAMS COUNTY**

Product	LSand, Gravel	Sand, Gravel	Sand, Gravel
P. O. Address	Brannan Sand & Gravel Co. 6101 Lowell Blvd., Denver 21Sand, Gravel	& Gravel Co. 4800 Brighton Blvd.	
on Operator		Brannan Sand	
Locatio	I)enver	T)enver	
Name of Mill or Plant Location	North Plant	Plant Nos. 8 & 10I)enverBrannan Sand & Gravel Co.	

# **OPERATING MILLS, PLANTS AND SMELTERS IN ARAPAHOE COUNTY**

-Englewood Cooley Gravel Co.

South Plant

6101 Lowell Blvd., Denver 21 Sand, Gravel

OPERATING MILLS, PLANTS AND SMELTERS IN BOULDER COUNTY	Burlington	OPERATING MILLS, PLANTS AND SMELTERS IN CHAFFEE COUNTY         Beryl Pilot Plant       Salida       Beryl         Monarch Crushing Plant       Soluarch Pass       The Colorado Puel & Iron Corp., Box 550, Salida       Beryl         Monarch Crushing Plant       Monarch Pass       The Colorado Puel & Iron Corp., Box 316, Pueblo       Pueblo       Beryl         Manarch Crushing Plant       Monarch Pass       The Colorado Puel & Iron Corp., Box 316, Pueblo       Pueblo       Mangatone         Manarth Rinking Co.       Monarch Puel & Iron Corp., Box 561, Motel, Salida       Manganese         Western Feldspar Mill       Salida       Manganese	OPERATING MILLS, PLANTS AND SMELTERS IN CLEAR CREEK COUNTY           Black Bagle Mill         Idaho Springs         Dowelopment           Dumont Mill         Idaho Springs         Dumont Milling Co.         Dox 717, Idaho Springs         Development           Front Range Mill         Dumont Milling Co.         Box 717, Idaho Springs         Development         Ead,           Front Range Mill         Dumont Milling Co.         Box 704, Idaho Springs         Copper         Zinc, Copper           Silver Spruce Mill         Dumont         Dumont Mines, Inc.         Box 481, Idaho Springs         Zinc, Copper           Silver Spruce Mill         Idaho Springs         Michigan Chemical Corp.         Box 481, Idaho Springs         Zinc, Copper           Washing & Crushing Plant Empire         Herron & Strong         Data         Sand, Gravel         Sand, Gravel	OPERATING MILLS, PLANTS AND SMELTERS IN DENVER COUNTY         Denver       Denver       General Chemical Division.         10enver       Denver       General Chemical & Dye Corp. Box 4040 S. Denver Station, Sulphuric Acid         (10be Plant       Globeville       Anerican Smelting & Refining         Plant No. 6251       Denver       10enver 16       Cadmiun	Pico Sulphuric Acid Plant Rico Argentine Mining Co. Rico Sulphuric Acid Plant Rico Argentine Mining Co. Rico OPERATING MILLS, PLANTS AND SMELTERS IN EAGLE COUNTY OPERATING MILLS, PLANTS AND SMELTERS IN EAGLE COUNTY Lead, Zinc,	REMONT COUNTY in St., Canon City 1, Florence
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<b>VITY</b>	Product Uranium, Vanadium	<b>JUNTY</b> Gold, Silver, Lead, Zinc, Copper Gold, Silver, Copper Gold, Silver, Copper	CUNTY Crushed Marble Uranium	UNTY Fluorspar	daBeryl, Mica daBeryl, Mica .ver 23 Sand, Gravel ver 16 Filter Rock	NTY Gold, Silver, Lead, Copper Molybdenum	COUNTY Uranium, Vanadium	<b>UNTY</b> dg., Beryl Gollins-Gypsum Sand, Gravel
<b>OPERATING MILLS, PLANTS AND SMELTERS IN GARFIELD COUNTY</b>	P. O. Address Co. Rifle	SMELTERS IN GILPIN COUNTY Central City County and County and County and County and County Cou	ERS	OPERATING MILLS, PLANTS AND SMELTERS IN JACKSON COUNTY CowdreyOzark-Mahoning CoCowdrey F	OPERATING MILLS, PLANTS AND SMELTERS IN JEFFERSON COUNTY         Plant	OPERATING MILLS, PLANTS AND SMELTERS IN LAKE COUNTY t LeadvilleAmerican Smelting & Refining CoClimax Molybdenum CoClimax	<b>OPERATING MILLS, PLANTS AND SMELTERS IN LA PLATA COUNTY</b> JantDurangoVanadium Corp. of America Durango	OPERATING MILLS, PLANTS AND SMELTERS IN LARIMER COUNTY         Masonville       Jast CoUNTY         Masonville       American Beryl Corp.       Fort Collins       Beryl         Masonville       Maneral Concentrates &       Benver 2       Inimesto         Loveland       Chemical Concentrates &       Box 185, Loveland       Inimesto         Loveland       Ernest W. Munroe       Route 2, Box 273, Fort Collins Gypsum         avel       Fort Collins       Sand & Gravel Co.       Box 759, Fort Collins       Sand, G
ILLS, PLANTS AND SMI	Operator Union Carbide Nuclear Co.	ILLS, PLANTS AND Glory Hole, Inc. Royal Mining & Milli CSoda Lakes Mining C	LS, PLANTS AND SMI	ILLS, PLANTS AND SM	S, PLANTS AND SMELT Beryl Ores Co. Brannan Sand & Gravel Co. Figure Grande Gravel Co. Sterling Contracting Co. a Table Mountain Crushed Stone Co.	MILLS, PLANTS AND SMEL' American Smelting & Refining CoClimax Molybdenum Co.	LLS, PLANTS AND SMELTERS IN LA	ILLS, PLANTS AND SMEL American Beryl Corp. Frank H. Norberg Co. Mineral Concentrates & Chemical Co. Inc. hErnest W. Munroe Sterling Sand & Gravel Co.
OPERATING M	Name of Mill or Plant Location Rifle PlantRifle	OPERATING M Glory Hole MillCentral City Golden Gilpin MillBlack Hawk Soda Lake Mill (Margie) Black Hawk	<b>OPERATING MII</b> Basic Chemical Crushing PlantMarble Gunnison Mining Co. Mill_Gunnison	OPERATING M Northgate MillOwdrey	<b>OPERATING MILL</b> Beryl Ores Co. PlantArvada Plant at Pit No. 11Arvada Rio Grande PlantWheatridge Sterling Contracting CoTable Mtn.	OPERATING Arkansas Valley Plant Leadville Climax MillClimax	<b>OPERATING MII</b> V.C.A. Durango PlantDurango	OPERATING MI         American Beryl       Masonville         Holly       Masonville         Mincon Mill       Loveland         Mincon Mill       Loveland         Munroe Plant       Plant         Plant       Plant

M H	National Lead Co. Pilot Mill	OPERATING MILLS, PLANTS AND SMELTERS IN MINERAL COUNTY Creede MillCreedeEmperius Mining CoCreedeGold, Silver, Lead, S. & S. Milling CoCreedeS. & S. Milling CoCreedeGold, Silver, Lead, Zinc	OPERATING MILLS, PLANTS AND SMELTERS IN MOFFAT COUNTY Maybell MillMaybellTrace Elements CorpMaybellUranium	OPERATING MILLS, PLANTS AND SMELTERS IN MONTROSE COUNTY         Union Carbide Nuclear Co.       Uravan         Uravan Plant       Uravan	<b>OPERATING MILLS, PLANTS AND SMELTERS IN OURAY COUNTY</b> Rolling JOurayBay City Mining & Milling         Rolling JOurayOurayBay City Mining & Milling      Box 161, OurayGold, Silver, Lead.         Rolling JOurayOuray	OPERATING MILLS, PLANTS AND SMELTERS IN PARK COUNTY Blue River Gravel PitJeffersonBlue River ConstructorsGrantGrantSand, Gravel	<b>OPERATING MILLS, PLANTS AND SMELTERS IN PUEBLO COUNTY</b> Mica Grinding PlantPuebloInternational Minerals & Chemical Corp330 West D St., PuebloGround Mica	OPERATING MILLS, PLANTS AND SMELTERS IN SAGUACHE COUNTY         Pershing Mill         Villa Grove         James McRee         Superior Mill         Corp.         Superior Mill         Corp.         Superior Mill         Corp.         Bonanza Route, Villa Grove         Manganese         Superior Mill         Corp.         Bonanza         Porte, Villa Grove         Manganese         Superior Mill         Corp.         Box 127, Salida         Corp.         Fead, Zinc         Theodore V. Kehr         Dianza	OPERATING MILLS, PLANTS AND SMELTERS IN SAN JUAN COUNTY         Pride Mill       Howardsville       Argyle Mining & Milling Corp.       Silverton       Gold, Silver, Lead,         Silverton       Central Mill       Silverton       Long, Silver, Lead,       Lead,         Silverton       Central Mill       Silverton       Lead,       Lead,
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OPERATING MILLS, PLANTS AND SMELTERS IN SAN MIGUEL COUNTY       Plant     Location     Operator       Plant     Location     Operator       Plant     Oid Ophir     Belisle & Reed       Plant     Oid Ophir     Belisle & Reed       Product     Ouray     Ophir       Plant     Outory     Ophir       Plant     Ophir     Ophir       Plante     Ophir     Plante	OPERATING MILLS, PLANTS AND SMELTERS IN SUMMIT COUNTY         c Plant Dillon       Blue River Constructors       Dillon       Sand, Gravel         c Plant Dillon       C. Ryan & Son	OPERATING MILLS, PLANTS AND SMELTERS IN TELLER COUNTY Victor Golden Cyle Corp. Box 47, Victor Gold	OPERATING PLACERS IN CLEAR CREEK COUNTY           Location         P. O. Address           Location         P. O. Address           Idaho Springs         Stephen J. Papp           Lostin         10040 W. Colfax Ave.,           Lostin         Lakewood           Floyd Hill         Box 566, Idaho Springs           Station         Alvin C. Amrhein	OPERATING PLACERS IN GILPIN COUNTYGilpin— Durand BrothersStart Clear Creek William C. Spitts935 S. Patton Court, Denver 19North Clear Creek Floyd Hayes- 0329 S. Pearl St., Denver 9North Clear Creek Floyd Hayes- 0601d & TouristShack HawkR. P. F. ZackerBlack Hawk- R. F. ZackerBlack Hawk- 001d	OPERATING PLACERS IN LAKE COUNTY           anite         M. E. Williams         Box 33, Palmer Lake         Gold	OPERATING PLACERS IN PARK COUNTY Ima Alma Placer Mining Co. Alma	OPERATING PLACERS IN SAN JUAN COUNTY me Creek Sungren & Garwood Box 715, Cortez Gold	OPERATING PLACERS IN SUMMIT COUNTY Gold Run Gulch Marriott-Moore Co. Breckenridge
RATING MII t Location . Telluride . Slick Rock	ERATING M ant Dillon Climax	ERATING M	OPER. Location Idaho Sprin Ployd Hill Station	Gilpin 	O Granite	0 Alma	<b>OPE</b> Lime Creek	OP.
<b>OPER</b> Name of Mill or Plant New Dominion Mill Pandora Mill Shick Rowk Mill	<b>OPERATIN</b> Blu Bryer Crushing Plant Dillon Ryan Crushing & Climar Wushing Plant Climar	OP Varltón Mill	Name of Placer Franks Placer Texaro	lunand Brothers Placer Gold Nugget Hayes Placer Zacker Flacer	Luna Placer	Alma	Wild Goose	Jumbo

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## CLEAR CREEK COUNTY

	Water Tunnel
P. O. Address	Michigan Sewer ConstructorsBox 217, Empire Michigan Sewer ConstructorsBox 217, Empire
Operator	
Location	Jones Pass
Name of Operation	Jones Pass Tunnel Vasquez Tunnel

### DELTA COUNTY

\_Dam -1340 S. Lipan St., Denver 23-Hopkins Construction Co. --Paonia Beaver Reservoir

### GILPIN COUNTY

--Tunnel ---East Portal -----Denver Tunnel Constructors -----725 W. 39th Ave., Denver 5 Moffat Water Tunnel

### **GRAND COUNTY**

	Dam
	Springs
	Sulphur
	Hot S
	116,
	Box
Construction	
States	
Mountain	Co.
Parshall	
Dam	
Fork	
Williams	

## HINSDALE COUNTY

--1340 S. Lipan St., Denver 23 Dam ---Williams Creek --Hopkins Construction Co. Williams Creek Dam

### LAKE COUNTY

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Busk Ivanhoe TunnelLeadvilleBoyles Brothers Drilling Co1321 S. Main St., Salt Lake City, UtahWater Tunnel	Homestake Water Tunnel Turquoise Lake Metropolitan Suburban Water Users AssnColorado SpringsWater Tunnel	Zinc MinesBox 921, Leadville	MESA COUNTY

Dam Construction Water Tunnel Theo Wood Construction Co. ....Monticello, Utah C. F. Lytle, Inc. .........Box 260, Colbran Vega Dam Water Tunnel Colbran Vega Dam

### PARK COUNTY

Water Tunnel Grant Blue River Constructors ---Harold D. Roberts Tunnel .(Frant

Main St., Salt Lake 1321 S. Main City, Utah PITKIN COUNTY

Busk Ivanhoe Tunnel

Boyles Brothers Drilling Co.

Montezuma Shaft \_\_Montezuma Ten Mile Diversion Tunnel-Kokomo \_\_\_\_

Harold D. Roberts Tunnel\_Dillon

Water Tunnel

SUMMIT COUNTY

Water Tunnel Shaft

Water Tunnel

Operations	
$\bigcirc$	
Drilling 0	
Wagon	
and	
Core	

Boyles Brothers Drilling Co. 1321 S. Main St., Salt Lake City, Utah	-Colorado Plateau
Bureau of Reclamation Box 360, Salt Lake City, Utah	-Colorado Plateau
Franklin & Perry Drilling Co. Box 546, Ozona, Texas	Colorado Plateau
Fritz-Erickson Mining CoBox 365, Dove Creek	-Colorado Plateau
Johnson & Youvan	. Colorado Plateau
Lippoth & Wein Drilling Co. Box 502, Grand Junction	-Colorado Plateau
MacPherson Drilling Co. 324 N. Townsend Ave., Montrose	-Colorado Plateau
	-Colorado Plateau
Mitchell Drilling Co. 516 Lilac Lane, Grand Jurction	-Colorado Plateau
Sexton BrothersBox 506, Cortez	-Colorado Plateau
Sprague & Henwood, Inc. Box 1446, Grand Junction	-Colorado Plateau





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