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# BUREAU OF MINES

MUSEUM BUILDING

14TH AVENUE AND SHERMAN STREET

DENVER 2, COLORADO

# ANNUAL REPORT

for the year 1953



WALTER E. SCOTT, JR.

Commissioner of Mines

Publication approved by James A. Noonan, State Controller



BRADFORD-ROBINSON PTD. CO., DENVER



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## LETTER OF TRANSMITTAL

June 15, 1954

Honorable Dan Thornton  
Governor of Colorado  
State Capitol Building  
Denver 2, Colorado

Dear Governor Thornton:

In compliance with the requirements of the law, Chapter 110, Section 285 of the Colorado Statutes Annotated 1935, I have the honor to transmit herewith the Report of the State Bureau of Mines for the year 1953.

Respectfully submitted,

WALTER E. SCOTT, JR.  
Commissioner of Mines

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**PERSONNEL OF  
THE COLORADO BUREAU OF MINES  
1953**

WALTER E. SCOTT, JR., Commissioner of Mines.....Central City  
WM. HARVEY CHAPMAN, Inspector, District No. 1..Wheatridge  
FRED E. THEOBALD, Inspector, District No. 2.....Canon City  
JOHN W. DOYLE, Inspector, District No. 3.....Leadville  
G. A. FRANZ, JR., Inspector, District No. 4.....Ouray  
RICHARD C. GROOM, Associate Mineral Curator.....Denver  
KAYE M. B. SULLIVAN, Secretary.....Denver  
JOSEPHINE M. IPSEN, Statistician.....Denver  
DONNA L. SAMUELSON, Receptionist (to 9-12-53).....Denver





## COMMISSIONERS OF MINES

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

## 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. Out of print, now embraced in Bulletin 11.
- 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.

## 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.
- 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.

## FOREWORD

The Bureau of Mines of the State of Colorado was established by an Act of the Tenth General Assembly, approved March 30, 1895. This Act repealed the previous Act creating an "Inspector of Metalliferous Mines" which was passed in 1889. The Bureau of Mines law established the office of the Commissioner of Mines, 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 relating 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, 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 inspections of all oil wells and all 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 at such wells or other property.

The Commissioner of Mines was charged, in the Act of 1895, "as he has opportunity and means" to collect and preserve mineral specimens, to accumulate technical and scientific and other data relating to mining, metallurgy and geology, to examine, report and record the geological formation of important mining districts or of any mine. "As he has opportunity and means," 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 develop the mineral resources of Colorado. He is charged with the responsibility of making investigations regarding prospecting, buying, selling, transporting, treating and reducing metalliferous ores and minerals and to record the progress of the mineral industry.

The Commissioner may, from time to time, with the consent of the Governor, and as appropriations may be made therefor, compile, publish and distribute bulletins on subjects, districts and counties; such bulletins when treating of a district or a county shall give in detail the history, the geology, the record of mines and mills, the process of treatment and results, together with a classification and location of mining property and prospects, together with maps of the same. However, a lack of funds over the years has greatly limited these duties of the Commissioner of Mines and many functions of the office have been greatly curtailed and others omitted. In consequence, for many years the first and foremost function of the Colorado Bureau of Mines

under the direction of the Commissioner of Mines has been safety inspection. By inspection and investigations, consistent efforts are made to see that safe practices are used to protect the health, safety and welfare of all men employed in the mineral and other industries inspected by the Bureau of Mines. Records of all accidents are received and recorded, and complete statistics concerning accidents are available for those interested.

More than 600 requests for specific information regarding mines, mining areas, geology, mineralogy and other items are received each year and have been answered by the office of the Commissioner of Mines. While advice and information is freely given to prospectors and small operators in order to further the State's mineral development, no written reports on mines are made and care is taken not to encroach on the proper field of consulting engineers and geologists.

The office of the Colorado Bureau of Mines has a vast store of information and reference material, including complete files of the United States Geological Survey and most bulletins issued by the United States Bureau of Mines. This reference material contains bulletins, monographs, mineral resources of the United States and professional papers. A complete file of geological material published by the Colorado Geological Survey is on file, as is much historical material pertaining to mining in Colorado. In the files of the Bureau of Mines are more than sixteen thousand reports on individual mines in Colorado.

This report would not be possible, nor would some of the work done by the Bureau of Mines, if it were not for the full cooperation of other State departments and Federal agencies. The State and Federal agencies and the persons therein to whom we are indebted has become too large for us to thank each one individually, but we are most grateful to all who have been so helpful.

For their excellent work in the field, the district inspectors are to be congratulated. They have at all times worked long hours under trying conditions and have been most cooperative and loyal.

The compilation and preparation of this report is the work of the office staff and they, also, are to be congratulated for a very fine job.

The publication of this report is authorized by Section 285, Volume 4, Chapter 110, 1935 Colorado Statutes Annotated.

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.

## MINERAL COLLECTION

The mineral exhibit of the Colorado Bureau of Mines occupies three large rooms on the second floor of the State Museum Building. The Mineral Room (main entrance) contains cases showing agate, native gold, silver and copper, and copper, fluorspar, gold, iron, lead, molybdenum, uranium, vanadium and zinc ores.

The East Room contains collections from James Dollison, Florence Hotchkiss, W. L. Leonard and Robert D. Roots, with many cases of non-metallic minerals.

The West Room, among other items, contains a large collection donated by the Colorado Scientific Society and the John G. Morgan and Harry A. Lee collections, besides other cases of rare minerals and ores.

In all rooms are cases which contain specimens from practically every mine of any consequence which was operated in the State from the very early days on. All specimens, except a very few loans, have been donated to the State by persons interested in Colorado mining. The Bureau of Mines has no funds with which to purchase specimens and still must depend upon the generosity of mining people and others to maintain the collection at its high standard.

Each year many very fine specimens are added to the exhibit.

While thousands of tourists visit the mineral exhibit each year, it continues to be of much concern to prospectors, miners, engineers, geologists and persons generally interested in Colorado's mineral industry.

During the year 1953 more than 250 boxes of mineral specimens were sent to schools, school teachers and children who were making collections of minerals for study. Each box contained specimens of the principal metallics and non-metallic ores being produced in the State. Every effort is made to fulfill all requests that are received but a scarcity of some specimens and the cost of mailing has somewhat limited the number of boxes which can be sent. Frequently, a large number of requests come from one school or one locality and, in such instances, we send a number of boxes and hope that the persons fortunate enough to receive the collection will show it to their classmates and neighbors.

## MINING IN 1953

Production of gold, silver, lead, zinc and copper decreased heavily in both quantity and value in 1953, according to information furnished to the Colorado Bureau of Mines by the Mineral Industry Division, Region IV, United States Bureau of Mines. The total value of these five metals was \$13,778,357.00 less than the total production of 1952 and was the lowest since 1946.

The price of lead and zinc started to drop about the middle of 1952 and this decline continued until the end of 1953, causing the price of lead to be the lowest since 1946, and that of zinc since 1943. A large number of mines whose principal value was in lead and zinc were forced to close, including two of the State's large producers. One other large mine, near the end of the year, lowered its production of lead and zinc ores and increased its operations in mining pyritic ores containing gold and copper. The lead, zinc mines which continued to operate were either those mines with low costs or those mines which had a high enough value in gold or silver to keep their operations profitable.

A very serious problem confronts many base and precious metal mines not only in Colorado but in all western States. Since the end of World War II all operating costs have continued to rise and the lead and zinc market has weakened to a point of causing many former profitable mines to now be unprofitable. When such conditions exist, every advantage is in favor of foreign mines. They can produce more cheaply than ours because of much lower labor costs, currency depreciation and even financial assistance from the American government under several existing foreign aid programs. The gold miner apparently gets nothing but sympathy from our government and the plight of the domestic gold miner is too well known to go into it in detail. Many of the most famous gold mines of the United States are in Colorado and if they are forced into continued inactivity for many more years, they will become relegated to the legends of the west.

The bright side of Colorado's mining future appears to be in the mining of uranium and other fissionable ores, molybdenum and non-metallic minerals. While no figures are released on the production of uranium as this is restricted by the Atomic Energy Commission, it is evident that the production is large and it probably has an annual value to the State greater than the combined value of gold, silver, lead, zinc and copper produced for any year in the State's history. The principal uranium producing area in Colorado at this time is in the southwestern part of the State and includes the counties of Mesa, Montrose, San Miguel, Dolores and Montezuma. Small amounts of high grade pitchblende have been discovered and produced in the Front Range area, and in the near future, the counties of Boulder, Clear Creek, Gilpin and Jefferson may become the location of many new and extensive uranium ore deposits. The beryllium production for 1953 was double that of 1952, and the production of tungsten and pyrites



both increased in value, and a small production of manganese was recorded. The State has shown a marked increase in the production of non-metallic minerals in the past few years and this increased production should continue into 1954. Climax Mining Company had practically completed their expansion program at the year's end and early in 1954 will be on their new production schedule of 28,000 tons per day. When this new production level is reached, the Climax Mine will become one of the world's largest underground mines.

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

1. Telluride
2. Gilman
3. Leadville
4. Cripple Creek
5. Rico
6. Ouray
7. Creede
8. Silverton

The leading producers of gold, silver, lead, zinc and copper in order of output were —

- |        |  |
|--------|--|
| GOLD   | Golden Cycle Corporation<br>Cripple Creek<br>Idarado Mining Company<br>Ouray<br>Telluride Mines, Inc.<br>Telluride   |
| SILVER | Idarado Mining Company<br>Ouray<br>Empire Zinc Division<br>Gilman<br>Resurrection Mining Company<br>Leadville<br>Emperius Mining Company<br>Creede<br>Telluride Mines, Inc.<br>Telluride     |
| LEAD   | Idarado Mining Company<br>Ouray<br>Resurrection Mining Company<br>Leadville<br>Telluride Mines, Inc.<br>Telluride<br>Empire Zinc Division<br>Gilman<br>Rico Argentine Mining Company<br>Rico |

- ZINC Empire Zinc Division  
 Gilman  
 Idarado Mining Company  
 Ouray  
 Telluride Mines, Inc.  
 Telluride  
 Rico Argentine Mining Company  
 Rico
- COPPER The only substantial producer of copper in the State was the Idarado Mining Company at Ouray.

Among the principal producers of uranium ore were —  
 Skidmore Mining Company  
 Dove Creek  
 United States Vanadium Company  
 Grand Junction  
 La Salle Mining Company  
 Grand Junction  
 J. R. Simplot Company  
 Norwood  
 Climax Uranium Company  
 Grand Junction  
 Consolidated Uranium Mines, Inc.  
 Bull Canyon  
 Vanadium Corporation of America  
 Durango

This list is far from being complete and none of the companies are listed in any order of output or production.

All molybdenum production in Colorado is from the Climax Mining Company at Climax and the principal tungsten production came from the mines of Boulder County and the Climax Mine, although some small producers are scattered in other sections of the State.

Beryllium ores come from widespread sections of the State but most of the ore produced is processed by the Beryllium Ores Company at Arvada.

The principal producers of fluorspar in Colorado are the Ozark Mahoning Company, the General Chemical Division of the Allied Chemical and Dye Corporation and the Reynolds Mining Company. Feldspars and micas are produced in various sections of the State, with the principal processor of both being the International Minerals and Chemical Corporation.

Colorado's mineral production, except oil, came from 411 metal mines, 72 quarries, 32 clay mines and pits and 19 placers. The processing of ores was done in 62 mills, plants and smelters. Of the 411 metal mines, of which we have complete record, 178 are uranium producers. However, we do know that we were unable to contact all of the mines with our limited field staff. In the uranium area there are many small mines that are so inaccess-

sible that we have reason to believe that we were able to visit and make inspections of probably not more than one-half of these mines.

### **Adams County**

Several sand and gravel producers with washing plants along Clear Creek produced gold as a by-product. Among these sand and gravel firms are Brannan Sand and Gravel, Metropolitan Sand and Gravel and the Cooley Gravel Company. Most of the gold recovered from these sand and gravel placers was sluiced and processed by Kerkling and Slensker.

### **Boulder County**

The Caribou Mine at Caribou, near Nederland, produced some rich silver concentrate during the early part of 1953. However, most of the year was devoted to development work, and the sinking of the main shaft was one of the larger projects. The operating company was reorganized late in the year and the new company, Nederland Mines, Inc., hopes to do further exploration on the pitchblende possibilities of the mine. Fire partially destroyed the Wolf Tongue Tungsten Mill at Nederland early in the year but fire damage was repaired by Hietzer Mines Company and the mill was in operation most of the year processing tungsten ores of the district. Cobb and Weldon treated some twelve thousand tons of low grade ore at their Lakewood Mill on North Boulder Creek. Cold Spring Tungsten, Inc. developed an entirely new ore body in the old Cold Springs Mine which they have under lease. Only a small amount of gold was produced in Boulder County in 1953 and this came from two or three small properties. The Ozark Mahoning Company, the General Chemical Division and H. M. Williamson & Son produced fluorspar throughout the year from their mines. As a by-product from the milling of fluorspar ores the Ozark Mahoning Company and the General Chemical Division shipped lead-silver-gold-copper concentrates.

### **Chaffee County**

The Reynolds Mining Company kept their mill at Poncha Springs in full operation with fluorspar produced from their open-cut and underground mines. S. E. and W. E. Burleson shipped zinc-lead-silver-gold ores from the Mary Murphy Mine at Romley. The Monarch Quarry continued to ship large tonnages of limestone to the Colorado Fuel and Iron Corporation at Pueblo. Several feldspar quarries in the county were active during the year and increased the production over the 1952 figures. It was reported that zirconium ore was discovered east of Salida in Chaffee County.

### **Clear Creek County**

Production of gold ore from the Dixie Mine increased over 1952. This ore was concentrated at the company's mill east of Idaho Springs. The Mendota Mine at Silver Plume operated the first four months of the year producing lead and silver and most

of the county's zinc production. A limited amount of silver-lead ore was produced at the Smuggler Mine in the same area. The Grizzly Mine near Bakersville produced throughout the year with most of its lead-zinc ores being treated at the Lupton Mining Company's Commonwealth Mill at Georgetown. Some placer gold was produced from the Cooper Placer at the west city limits of Idaho Springs. The Golconda Mine at Fall River worked part of the year exploring for pitchblende and some small amounts were found.

### **Costilla County**

In Costilla County, near the town of Mesita, production of scoria continued throughout the year. This porous lava material makes very fine building blocks and a ready market was found for all that was produced.

### **Custer County**

The Defender and other mines in the Silver Cliff area made small shipments of lead-zinc-silver ores and lead ores. Several mines were doing exploration and probably could have gone into production if it had not been for the drop in lead and zinc prices. The Great Lakes Carbon Corporation purchased the Perlite Quarries of the Alexite Engineering Division of the Alexander Film Company at Rosita early in the year. Some exploratory diamond drilling was done in Custer County during the year and is rumored that some holes showed possibilities of thorium or other radio-active minerals.

### **Dolores County**

The Rico Argentine Mining Company operated their Argentine, Mountain Springs, Silver Swan and other mines, milling all ores at their 150-ton flotation plant. Despite the decline in metal prices, crude ore produced was about equal in tonnage to that produced in 1952 and, in addition to maintaining production, the company carried on extensive exploration and development campaign which added materially to the underground ore reserves. The company constructed more housing units for employees and made other improvements that will be of future benefit. Some good uranium strikes were reported in Dolores County during the year and it was reported that some samples assayed as high as 2% uranium.

### **Douglas County**

Douglas County produced silica rock and sand, clay and limestone northwest of Littleton, fire clay at the Hogback Mine, and plastic clays were mined in the Castle Rock area. Total dollar value of production was considerably higher than in 1952.

### **Eagle County**

Total production from the Eagle Mine of the Empire Zinc Division of the New Jersey Zinc Company at Gilman was only about one-half as much as for 1952. This was caused partly by a strike which closed the mine and mill for over two months, and

the decline of lead and zinc prices. During the period of low metal prices, less zinc and lead milling ores are mined and more production is coming from the iron-gold-silver pyritic ores which are shipped directly to the smelter.

### **El Paso County**

The Lennox Breed Quarry of the Golden Cycle Corporation operated all year, furnishing limestone for the plant at Pikeview. Other quarries and pits in El Paso County produced stone and clays with a total production slightly higher than in 1952.

### **Fremont County**

Fremont County continued to be Colorado's most diversified non-metallic mineral producing county. Clays, limestones, marbles, gypsum, feldspar, mica and silica rock were mined. Crushed marble of various colors produced by Colonna and Company, Canon City, go all over the United States for use in terrazzo decorative flooring. The second oldest oil field in the United States is in Fremont County and prospecting which is now under way may develop additional sources of crude oil at depth. Some possibilities of radio-active materials have been discovered in various places in the county and it is possible that in the near future commercial deposits of thorium or uranium may be located.

### **Garfield County**

Production of limestone from the Glenwood Springs Quarry, owned by Frank H. Norberg Company, was slightly less than in 1952. The Rifle Mine of the United States Vanadium Company worked all year and the uranium-vanadium processing plant at Rifle operated at full capacity all year. New processing equipment was put in, considerable new construction and improvements were made at the plant. The United States Bureau of Mines operated their Oil Shale Mine and Experimental Shale Oil Plant all year, and several large independent oil companies are said to be considering the possibilities of producing shale and experimenting with processes of their own.

### **Gilpin County**

Small tonnages of gold, silver and gold-silver-lead-copper ores were produced during the year and while production was small, it was still considerably higher than the amounts produced in 1952. Near the end of the year a number of mines were being opened in the search for uranium. On the Queen Mineral Range were three properties which give evidence of containing pitchblende and one, the Cherokee Shaft, was being explored on the bottom level. The Calhoun Mine which found pitchblende in the Wood Vein on the 600-foot level closed down December 15th before all of their exploration work was completed. Finds of torbernite and secondary uraninite were reported at the Carroll, the Two Sisters and other mines at the west city limits of Central City. Most discoveries were made on old mine dumps but plans were made to re-open some of the properties to investigate the possibilities of

uranium ores underground. With this new uranium excitement, prospects for mining in Gilpin County are better than for many years.

### **Gunnison County**

The Akron-Erie Mines of Callahan Zinc-Lead Company produced no ore during 1953 but for several months had a small crew doing exploration and development. However, all work was finally stopped and the mine completely closed in October. A company headed by Allyn Cole, a Glenwood Springs attorney, purchased the holdings of the Colorado Yule Marble Company at Marble and expect to produce limestone from the property and will build lime-burning kilns as soon as the weather will permit in the spring. The Micawber Mine of the Slate River Mining Company reported a strike of silver-lead-zinc-copper ore which they felt might develop into an ore body of consequence. The Lilly Belle Mining Company announced the discovery of tungsten at their Annebelle Mine. Development work was stopped at the Keystone Mine by the American Smelting and Refining Company at Crested Butte early in the summer and all work was devoted to the construction of the new 200-ton flotation mill. Most of the equipment for this mill came from the Mike Horse Mine in Montana. Production from the Keystone Mine will probably not start until the prices of lead and zinc become more favorable than at present. The Carter Mine and Mill of the Kanarado Mining and Development Company at Ohio City produced most of Gunnison County's gold, along with some silver and lead. The production of gold, silver, lead, zinc and copper in Gunnison County dropped from over \$800,000.00 in 1952 to \$8,350.00 in 1953. The Brown Derby Mine of the Poston Mining Company produced beryllium ores and lepidolite.

### **Hinsdale County**

Only one load of ore was shipped from Hinsdale County in 1953, amounting to \$585.00. While the metal production for 1952 amounted to over \$327,000.00, the principal loss in production was caused by the closing of the Ute and Ulay Mine in Lake City. This property was purchased from the Colorado Standard Lead, Zinc Company in May by the Idarado Mining Company which had been operating the property on option.

### **Huerfano County**

No mineral production reported for this year although the K. S. Mittry Construction Company, which has been doing exploratory work in the La Veta area, announced that some discoveries of uranium ores had been made.

### **Jackson County**

The Ozark Mahoning Company operated their fluorspar mines and mill all year. Ore came from both open pit and underground mines and the 1953 production was almost double that of 1952. Several reported discoveries of pitchblende were made in Jackson county but there were no mining operations reported.

### **Jefferson County**

Pitchblende and torbernite ores were produced and sold to the Atomic Energy Commission from Schwartzwalder Mine on Ralston Creek and plans were made for future development of the property. Several other properties in the same area reported uranium minerals but no other ores were shipped from the area. The old Malachite Mine west of Golden, shipped one truck load of copper-silver-gold ores. W. B. Kerkling produced much of the county's gold from his placer on Clear Creek, and other placer gold was produced as a by-product from the sand and gravel washing plants of the Brannan Sand and Gravel Company and the Rio Grande Sand and Gravel Company. Some beryllium was produced in various parts of the county and sold to the Beryllium Ores Company at Arvada. Only a very small amount of mica was produced during the year. Jefferson county was the State's largest producer of clay. Crushed stone from the quarries along Clear Creek had been a source of stone riprap for many earth-filled dams and canals, but litigation closed the quarries and there was no production of crushed stone in 1953 compared to production of more than one-half million dollars in 1952.

### **Lake County**

A press announcement on May 27th stated the Resurrection Mining Company was out of ore; was going to curtail operations and probably would completely close down. On July 3rd, the Company stopped all work. This Company had been a large producer since 1942 and the closing of their mine left Leadville without a major producer of gold, silver, lead, zinc and copper. Soon after closing down, the Resurrection No. 2 shaft was leased to Robert L. Jones and in September, the Resurrection Company decided to do some limited exploration and to operate part of their mill for custom ore. The Company unwatered the Helena Mine in Iowa Gulch and started some exploration work. Newmont Mining Corporation, one of the owners of the Resurrection Mining Company, purchased the interest of the Hecla Mining Company and the United States Smelting, Refining & Mining Company and, in consequence, became sole owner of the Resurrection Mining Company. The American Smelting and Refining Company completed sinking the new Irene shaft to the Eclipse workings but after cutting the main station, shut the entire property down on account of the low metal prices. The Caldwell Mining Company operating the Hayden Mine, worked all year on development and shipped some ore to custom mills. The Arkansas Valley Smelter operated all year except for minor repair shutdowns, with tonnage smelted lower than 1952. Total production of gold, silver, lead, zinc and copper for 1953 was only about one-half of the amount produced in 1952.

### **La Plata County**

The Vanadium Corporation of America exercised its option to purchase the Durango Plant from the Atomic Energy Commission and obtained permission to install a new roaster. It is re-

ported that after the roaster was installed, the Vanadium Corporation of America at the Durango Plant produced more uranium concentrates in a 30-day period than any other uranium-vanadium mill in the United States for a like period. Vanadium Corporation, in addition to producing uranium, is considered the largest single producer of vanadium in the world. The Bessie "G" Mine in the La Plata mountains, northwest of Durango, shipped some high grade ore to the Leadville Smelter.

### **Larimer County**

Larimer county continues to be one of the larger producers of limestone and gypsum but had no reported metal production for 1953. The Copper King Mine in Cherokee Park developed some small amounts of pitchblende but stopped exploratory work at the mine and put it in condition to be used as a Tourist attraction.

### **Las Animas County**

Clay was produced by the Trinidad Brick & Tile Company from their New Mary Mine and the only alabaster for the year came from Las Animas county. Several wildcat oil rigs were reported to be ready for exploratory drilling east of Trinidad.

### **Mesa County**

The Atomic Energy Commission constructed a new repair and maintenance job and made other improvements at the Grand Junction headquarters. The number of men employed by the Atomic Energy Commission in 1953 materially increased over the number employed in 1952. Several important uranium finds were reported from diamond drilling exploration in the county.

### **Mineral County**

The Emperius Mining Company operating many of the early day Creede mines, including the Amethyst, Commodore, Wedge, New York, Volunteer, Del Monte, Aspen and Equinox, was the principal producer in the county. Most of the ore mined was treated in the Company's 100-ton flotation plant but some high grade ores were shipped direct to the Leadville smelter. The Outlet Mining Company operating the Phoenix, also shipped ore to the Leadville smelter. Several other mines were reopened and explored and those which have high silver values probably can operate in spite of the low lead and zinc prices. While the Mineral county production, as a whole, was below the 1952 level, the decline was not nearly as severe as in some other sections of the State.

### **Montrose County**

Montrose county was the most active county in Colorado in 1953 in uranium production. Two large processing plants in the county are that of the United States Vanadium Company at Uranvan, and that of Vanadium Corporation of America at Naturita. Several large companies sank deep shafts on Atomic Energy Commission leases and there were purchases of large blocks of privately owned claims. The Golden Cycle Corporation completed a



new shaft 635 feet deep on Atkinson Mesa and were ready to go into production at the end of the year. The Shattuck-Denn Company is also sinking a deep vertical shaft in the same area. J. R. Sinplot sank an 800 foot incline shaft in the Bull Canyon area and the Consolidated Uranium Company was developing large groups in the same area. The Four Corner Uranium Corporation purchased large holdings from State Senator D. Lew Williams and Associates and began production from the property. At Uravan, the United States Vanadium Company put in a new milling process and doubled their plant capacity. At their Naturita Plant, the Vanadium Corporation of America added a new roaster and increased production by 80%.

### **Ouray County**

The Colvin Mining and Milling Company operated the Silver Shield Mill for part of the year and shipped some lead, silver concentrates. The Camp Bird, King Lease, Inc., operated continuously throughout the year, with the metal production equal with that of 1952. The Idarado Mining Company had a disastrous fire on June 7th which destroyed all surface buildings at the portal of the Treasury Tunnel. The fire caused a shutdown of the Idarado Mill for about three weeks. New buildings to replace the ones destroyed by fire, are modern fire-proof structures.

### **Park County**

The Phillips Mine of the Buckskin Joe Mines Limited, continued to be the only steady producer of metals in Park County. The Ling Mine of the Cordillera Corporation produced a small tonnage of high grade gold ore and the Alma Syndicate shipped small amounts of gold and silver ores. A small amount of gold was taken from placers near Alma. The Notamas Company of California purchased all the assets of the South Park Dredging Company at Fairplay. The large dredge of the South Park Company has not been operated since the end of 1951.

### **Pitkin County**

A number of percussion and diamond drill holes were completed in some of the Aspen mines under the direction of the Atomic Energy Commission. The mines which were explored are under lease to the Herron Bros., of Aspen and no definite reports were released on the results of the exploratory drilling. Small amounts of silver ore were produced from the Nelson and Wichita Egg Mine.

### **Pueblo County**

The only mineral production in Pueblo was from clay but the Mica Grinding Plant of the International Mineral and Chemical Corporation processed mica that was produced in other counties and was in operation all year.

### **Rio Blanco County**

Rio Blanco county at Rangely, is Colorado's largest oil producing area, accounting for about one-half of all oil produced in the State. Several companies were exploring for uranium in the

county and new discoveries were reported, in addition to those already known. Several small mines near Meeker shipped some uranium ores during the year.

### **Rio Grande County**

The Newmont Mining Corporation took a long term lease of some 2,000 acres of mining property owned by George Garry and B. T. Poxton at Summitville. During the summer months, Newmont diamond drilled on the Summitville mines property and did other geological and exploratory work. John Livermore, Geologist of the Newmont Exploration Department, was in charge of the work. It is expected more work will be done as soon as the weather will permit, this coming spring or summer.

### **Routt County**

The Midwest Uranium Corporation of Salt Lake City leased a number of claims about four miles from Steamboat Springs. These claims were located by the Hoskinson Brothers and are said to contain a very good showing of uranium.

### **Saguache County**

William J. Costello leased the Rawley Mine at Bonanza and continued to ship smelting ores which contained lead, silver, gold and copper to the smelter at Leadville. La Garita Mines, Inc., operated the Crystal Hill and Esperanza Mines and milled the ore at their own mill nearby. Concentrates containing gold and silver were shipped to Leadville and gold retorts to the Mint in Denver. Bear Creek Mining Company, Exploration Subsidiary of Kennicott Copper Corporation, did considerable exploratory diamond drilling in the Bonanza area. The Wannamaker Mining and Milling Company carried on development work at their Sky City Mine in the Big Park District and reported finds of copper-silver-lead ore. The Saguache Smelting Company completed buildings for a new smelter which is being constructed near the town of Saguache. The only reported production of turquoise for the year came from the Villa Grove Turquoise Lode near Villa Grove.

### **San Juan County**

The Shenandoah-Dives Company ceased operation March 14, 1953, and closed down their 700-ton mill. This company was the largest metal producer in San Juan county and the shutdown reduced the county's production to the lowest level since 1922. In July, the company received a \$210,900 grant from the Defense Minerals Exploration Administration for exploration of the Letter "G" vein and for the balance of the year continued only on this exploration. The Pride of the West was a substantial producer in 1953, shipping to the Shenandoah-Dives Mill until the shutdown, and after that time sending their ore to the West Mill at Howardsville owned by Falk Metals Corporation. The United States Metals Company continued development work on the Henrietta Group and shipped some ore, and the company also continued exploratory and development work at several other properties owned by them. The Lead Carbonate Mine shipped some ore during the year to

custom mills and later decided to stockpile their production. Other producing mines were: Bonita, Columbus, Great Eastern, Green Mountain and others. The Dawn of Day Mine in Dry Creek produced tungsten during the year.

### **San Miguel County**

Boyd Robinson shipped iron oxide (bog-iron) from his property at Ophir. This ore is considered an excellent base for paint making. The Consolidated Uranium Mines, Inc., started exploratory and development work on their holdings in the Mineral Mountain and Bold Canyon areas. Idarado Mining Company was the principal producer during 1953 with ores coming from the Ajax, Black Bear and other properties. While the company's mill at the portal of Treasury Tunnel is in Ouray county, all ores came from San Miguel county. In May 1953, the Idarado Mining Company purchased the Telluride Mine, which operated the Smuggler Union, Montana and Tom-Boy Mines. The Silver Bell Mines Company operated their 175-ton flotation mill at Ophir, producing lead-silver-gold-copper concentrate and some tungsten. Most of the ore came from the Carbonero Mine at old Ophir although ores containing tungsten came from the Silver Bell Mine.

### **Summit County**

W. L. Davenport, operating the Wellington Mine at Breckenridge, was the largest producer in the county and the tonnage produced was double that of 1952. After the Resurrection Mining Company closed their custom mill at Leadville, Davenport shipped his ore to the United States Smelting and Refining Company at Midvale, Utah. The Monte Cristo Mine worked by Gerald Galloway, shipped some silver-lead-zinc-gold ore. The Juniata Mining and Milling Company shipped small amounts of manganese from their Ceciel and Betty Jean Mines. Elvin Oelrich worked the Sts. John Mine at Montezuma all year on a small scale. Other producers were the Chatauqua, Ida Belle, Silver King, Pennsylvania and others. Some lead, silver and gold concentrates were shipped from the Queen of the West Mill at Kokomo. The Big Four near Green Mountain Dam was leased to Kyle and Thomas and they were preparing the mine for production. Tungsten was reported near Blue Lakes and the Silicate Reduction Company was expected to build a mill to handle tungsten ores.

### **Teller County**

Gold production in Teller county increased from 48,257 ounces in 1952 to 50,500 ounces in 1953. The Carlton Mill operated all year with an average mill tonnage of about 16,000 tons per month. 70% of the ore milled came from dumps with mine ore coming from the company's Ajax and Cresson Mines. The Ajax continued to be the largest gold mine in the State and some high grade ore from the 3100-foot level was as high as \$5.50 per pound in gold. The Ajax also made a discovery of ore on the Black Diamond vein in an area previously considered to be out of the general ore zone. The Free Coinage, Dr. Jack Pot, El Paso, Gold King and Tenderfoot were substantial producers. The Globe Hill Mining Company,

operating the Chicago Tunnel, shipped considerable ore during the year and also became active in the hunt for uranium in the Colorado Plateau area. The Front Range Mines Company deepened their main winze to a point 687 feet below the bottom of the Strong Shaft. The Front Range Company leased the Mary Cashen Mine to the Golden Cycle so that it could be worked through the Ajax Mine. The La Clair Mining Company put a new steel head-frame and hoisting equipment on the Grace Greenwood Mine in preparation to reopening. Blevins Davis, with John W. Star, formed the Gold Sovereign Leasing Company and started work on the Gold Sovereign Mine. The same interests have taken leases on Dante, Trilby, Trail, Wildhorse and Ramona.

## PRODUCTION BY COUNTIES

### 1953

#### Adams County

Area, 1,247 Square Miles

Gold .....	\$	42,630.00
Silver .....		158.00
TOTAL.....		\$ 42,788.00

#### Boulder County

Area, 753 Square Miles

Gold .....	\$	4,585.00
Silver .....		22,022.00
Copper .....		4,592.00
Lead .....		26,200.00
TOTAL.....		\$ 57,399.00
Clay .....	\$	2,483.00
Fluorspar .....		1,394,580.00
Peat .....		23,100.00
Building Stone .....		386,807.00
Crushed Stone .....		14,447.00
Tungsten .....		1,139,555.00
TOTAL.....		\$ 2,960,972.00
Total Production for County.....		\$ 3,018,371.00

#### Chaffee County

Area, 1,039 Square Miles

Gold .....	\$	9,940.00
Silver .....		601.00
Copper .....		574.00

Lead .....	2,882.00
Zinc .....	3,680.00

TOTAL.....	\$ 17,677.00
Calcium Phosphate .....	\$ 1,709.00
Feldspar .....	302,370.00
Fluorspar .....	269,290.00
Crushed Stone .....	1,873.00
Limestone .....	620,431.00
Monumental Stone .....	5,800.00

TOTAL.....	\$ 1,201,473.00
Total Production for County.....	\$ 1,219,150.00

**Clear Creek County**

Area, 394 Square Miles

Gold .....	\$ 80,710.00
Silver .....	46,930.00
Copper .....	13,776.00
Lead .....	115,280.00
Zinc .....	21,390.00

TOTAL.....	\$ 278,086.00
Beryl .....	\$ 1,875.00
Feldspar .....	700.00

TOTAL.....	\$ 2,575.00
Total Production for County.....	\$ 280,661.00

**Costilla County**

Area, 1,215 Square Miles

Volcanic Cinder .....	\$ 74,700.00
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**Custer County**

Area, 737 Square Miles

Gold .....	\$ 105.00
Silver .....	305.00
Lead .....	2,620.00
Zinc .....	1,380.00

TOTAL.....	\$ 4,410.00
Monumental Stone .....	\$ 12,000.00
Perlite .....	52,792.00

TOTAL.....	\$ 64,792.00
Total Production for County.....	\$ 69,202.00

**Dolores County**

Area, 1,028 Square Miles

Gold .....	\$ 3,325.00
Silver .....	94,042.00

Copper .....	10,332.00
Lead .....	490,202.00
Zinc .....	605,820.00
<b>TOTAL</b> .....	<b>\$ 1,203,721.00</b>

**Douglas County**

Area, 843 Square Miles

Clay .....	\$ 150,536.00
Limestone .....	488.00
Silica Rock .....	977.00
<b>TOTAL</b> .....	<b>\$ 152,001.00</b>

**Eagle County**

Area, 1,685 Square Miles

Gold .....	\$ 131,250.00
Silver .....	525,925.00
Copper .....	252,560.00
Lead .....	655,000.00
Zinc .....	3,875,500.00
<b>TOTAL</b> .....	<b>\$ 5,440,235.00</b>
Volcanic Cinder .....	\$ 800.00
<b>Total Production for County</b> .....	<b>\$ 5,441,035.00</b>

**El Paso County**

Area, 2,158 Square Miles

Clay .....	\$ 27,652.00
Crushed Stone .....	12,000.00
Limestone .....	120,000.00
<b>TOTAL</b> .....	<b>\$ 159,652.00</b>

**Fremont County**

Area, 1,562 Square Miles

Beryl .....	\$ 4,135.00
Clay .....	32,484.00
Dolomite .....	127,344.00
Feldspar .....	9,137.00
Gypsum .....	235,714.00
Limestone .....	1,491,313.00
Mica .....	9,366.00
Monumental Stone .....	2,222.00
Silica Rock .....	45,532.00
Terrazzo Chips (Marble).....	21,837.00
Travertine (Building Stone).....	13,748.00
<b>TOTAL</b> .....	<b>\$ 1,992,832.00</b>

**Garfield County**

Area, 2,994 Square Miles

Limestone .....\$ 30,565.00

**Gilpin County**

Area, 149 Square Miles

Gold .....\$ 5,530.00  
 Silver ..... 882.00  
 Copper ..... 574.00  
 Lead ..... 524.00

TOTAL.....\$ 7,510.00  
 Peat Moss .....\$ 1,050.00  
 Total Production for County.....\$ 8,560.00

**Gunnison County**

Area, 3,242 Square Miles

Gold .....\$ 4,340.00  
 Silver ..... 800.00  
 Lead ..... 2,620.00

TOTAL.....\$ 7,760.00  
 Beryllium .....\$ 21,000.00  
 Lepidolite ..... 27,000.00

TOTAL.....\$ 48,000.00  
 Total Production for County.....\$ 55,760.00

**Hinsdale County**

Area, 1,057 Square Miles

Gold .....\$ 35.00  
 Silver ..... 58.00  
 Lead ..... 262.00  
 Zinc ..... 230.00

TOTAL.....\$ 585.00

**Jackson County**

Area, 1,623 Square Miles

Fluorspar .....\$ 1,126,276.00

**Jefferson County**

Area, 786 Square Miles

Gold .....\$ 11,165.00  
 Silver ..... 119.00  
 Copper ..... 1,722.00

TOTAL.....\$ 13,006.00  
 Beryl .....\$ 1,821.00  
 Clay ..... 401,088.00

Feldspar .....	28,857.00
Mica .....	97.00

TOTAL.....	\$ 431,863.00
Total Production for County.....	\$ 444,869.00

**Lake County**

Area, 380 Square Miles

Gold .....	\$ 327,075.00
Silver .....	177,628.00
Copper .....	33,866.00
Lead .....	804,864.00
Tin .....	14,707.00
Zinc .....	907,350.00

TOTAL.....	\$ 2,265,490.00
Manganese .....	\$ 1,350.00
Molybdenum .....	37,306,341.00
Monazite .....	3,307.00
Peat Moss .....	3,750.00
Silica Rock .....	28,000.00
Tungsten .....	1,651,986.00
TOTAL.....	\$38,994,734.00
Total Production for County.....	\$41,260,224.00

**La Plata County**

Area, 1,689 Square Miles

Gold .....	\$ 7,070.00
Silver .....	148.00

TOTAL.....	\$ 7,218.00
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**Larimer County**

Area, 2,619 Square Miles

Gypsum .....	\$ 130,742.00
Limestone .....	808,811.00
Sandstone (Building Stone).....	48,810.00

TOTAL.....	\$ 988,363.00
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**Las Animas County**

Area, 4,794 Square Miles

Alabaster (Estimate) .....	\$ 7,000.00
Clay .....	31,250.00

TOTAL.....	\$ 38,250.00
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**Mineral County**

Area, 921 Square Miles

Gold .....	\$ 43,995.00
Silver .....	157,448.00



Copper .....	6,888.00
Lead .....	444,352.00
Zinc .....	197,340.00
<b>TOTAL</b> .....	<b>\$ 850,023.00</b>

**Ouray County**

Area, 540 Square Miles

Gold .....	\$ 112,840.00
Silver .....	83,242.00
Copper .....	145,796.00
Lead .....	356,320.00
Zinc .....	198,720.00
<b>TOTAL</b> .....	<b>\$ 896,918.00</b>
Tungsten .....	\$ 830.00
<b>Total Production for County</b> .....	<b>\$ 897,748.00</b>

**Park County**

Area, 2,166 Square Miles

Gold .....	\$ 51,450.00
Silver .....	6,932.00
Copper .....	7,462.00
Lead .....	8,646.00
Zinc .....	63,250.00
<b>TOTAL</b> .....	<b>\$ 137,740.00</b>

**Pitkin County**

Area, 974 Square Miles

Gold .....	\$ 35.00
Silver .....	3,975.00
Lead .....	2,358.00
Zinc .....	460.00
<b>TOTAL</b> .....	<b>\$ 6,828.00</b>

**Pueblo County**

Area, 2,401 Square Miles

Clay .....	\$ 244,888.00
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**Saguache County**

Area, 3,144 Square Miles

Gold .....	\$ 4,760.00
Silver .....	4,223.00
Copper .....	3,444.00
Lead .....	9,432.00
<b>TOTAL</b> .....	<b>\$ 21,859.00</b>
Turquoise (Estimate) .....	\$ 4,500.00
<b>Total Production for County</b> .....	<b>\$ 26,359.00</b>

**San Juan County**

Area, 392 Square Miles

Gold .....	\$ 94,150.00
Silver .....	107,050.00
Copper .....	77,490.00
Lead .....	374,660.00
Zinc .....	133,860.00
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TOTAL .....	\$ 787,210.00
Tungsten .....	\$ 12,000.00
Total Production for County .....	\$ 799,210.00

**San Miguel County**

Area, 1,283 Square Miles

Gold .....	\$ 1,414,560.00
Silver .....	702,759.00
Copper .....	1,119,300.00
Lead .....	2,076,088.00
Zinc .....	2,399,590.00
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TOTAL .....	\$ 7,712,297.00
Tungsten .....	\$ 6,693.00
Total Production for County .....	\$ 7,718,990.00

**Summit County**

Area, 615 Square Miles

Gold .....	\$ 18,305.00
Silver .....	43,285.00
Copper .....	9,184.00
Lead .....	314,400.00
Zinc .....	276,000.00
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TOTAL .....	\$ 661,174.00
Manganese .....	\$ 3,500.00
Total Production for County .....	\$ 664,674.00

**Teller County**

Area, 554 Square Miles

Gold .....	\$ 1,804,565.00
Silver .....	9,082.00
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TOTAL .....	\$ 1,813,647.00
Feldspar .....	\$ 9,800.00
Monumental Stone .....	22,680.00
Peat .....	3,171.00
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TOTAL .....	\$ 35,651.00
Total Production for County .....	\$ 1,849,298.00

## PRODUCTION IN 1953

Production figures given are as accurate as we believe possible to get under existing conditions. No actual or accurate production of uranium produced within the State can be given as such information is restricted and not released by the Atomic Energy Commission.

Production in value of gold, silver, lead, zinc and copper were provided by the Mineral Industry Division of the United States Bureau of Mines, Region IV, and crude oil production figures were provided by the Colorado Oil and Gas Conservation Commission. All other production figures are from the records of the Colorado Bureau of Mines and have been obtained from the mining operators of the State.

In spite of the very serious drop in the production of lead and zinc, the mineral production of the State continued to increase. The accelerated mining program at the Climax Mine alone made up for more than two-thirds of the production loss caused by the drop of lead and zinc mining.

The increase in the production of tungsten and other metals, plus the general increase of the non-metallic minerals produced took up most of the loss suffered by the decline as noted above.

The oil industry continued its upward surge and the increase in petroleum products in 1953 amounted to more than \$17,000,000. Approximately 750 wells were drilled in 1953, with 366 of them being wildcats. One new major oil pool was discovered in the Denver-Julesburg Basin and a new gas field in southeastern Colorado. Of the 366 wildcats drilled, 28 discovered oil, 13 gas and the balance were dry holes. The percentage of successful wildcat holes was 11.2 of the total drilled. At the end of the year it was reported that Colorado had a total of 1,225 producing wells in 76 different oil fields. Rangely, Rio Blanco County, in northwestern Colorado, continues to be the most productive oil field in the State.

The following table shows the steady increase of all mineral production for the past four years.

Year	Metals	Non-Metallics	Oil & Gas	Total
1950	\$ 43,619,318	\$ 3,930,578	\$58,382,500	\$105,932,396
1951	63,312,690	4,823,869	70,453,050	138,589,609
1952	117,039,055	12,681,789	80,563,705	210,284,549
1953	138,765,509	14,027,866	97,287,265	250,080,640

### METAL PRODUCTION

1953

Uranium (Mining and processing with Vanadium by-products—Value to State).....	\$ 75,000,000.00
Molybdenum .....	37,306,341.00
Zinc .....	8,684,570.00
Lead .....	5,686,710.00

Gold .....	4,172,420.00
Tungsten .....	2,811,064.00
Silver .....	1,987,614.00
Copper .....	1,687,560.00
Miscellaneous (Metals which cannot be separated for Production Value).....	1,103,750.00
Pyrite .....	207,148.00
Beryllium .....	98,775.00
Tin .....	14,707.00
Manganese .....	4,850.00
<b>TOTAL</b> .....	<b>\$138,765,509.00</b>

### NON-METALLIC PRODUCTION

1953

Alabaster .....	\$ 7,000.00
Calcium Phosphate .....	1,709.00
Cement .....	5,198,703.00
Clays .....	890,381.00
Dolomite .....	127,344.00
Feldspar .....	663,901.00
Fluorspar .....	2,790,146.00
Gypsum .....	366,456.00
Lepidolite .....	27,000.00
Limestone .....	3,071,608.00
Marble .....	21,837.00
Mica .....	99,715.00
Monazite .....	3,307.00
Peat .....	31,071.00
Perlite .....	52,792.00
Silica Rock .....	74,509.00
Stone, Building .....	449,365.00
Stone, Crushed .....	28,320.00
Stone, Monumental .....	42,702.00
Turquoise .....	4,500.00
Volcanic Cinders .....	75,500.00
<b>TOTAL</b> .....	<b>\$ 14,027,866.00</b>

### OIL AND GAS PRODUCTION

1953

Crude Oil .....	\$ 91,697,265.00
Gas, all classes (well-head value).....	5,590,000.00
<b>TOTAL</b> .....	<b>\$ 97,287,265.00</b>
Metals .....	\$138,765,509.00
Oil and Gas .....	97,287,265.00
Non-Metallics .....	14,027,866.00
<b>TOTAL MINERAL PRODUCTION</b> .....	<b>\$250,080,640.00</b>

## ACCIDENTS

There were eight mining fatalities in 1953 which establishes a record of safety for the past fifteen years, as the average rate of metal mine fatalities for the fifteen year period, 1939-1953, has been sixteen per year. Oil well fatalities for the year were four and there was one fatality chargeable to construction.

As the records of oil and construction fatalities were not always considered under the jurisdiction of the Bureau of Mines, there is no basis of comparison between the fifteen year period and the year 1953. However, other records indicate that oil well fatalities have been about the same and the previous fatality rate in the construction industry considerably higher.

Of the eight metal mining fatalities, four were caused by falling rock, three were caused by falls into open holes and one caused by a premature blast.

Three of the four oil well fatalities were caused by falling objects and one was caused by an entanglement in a hoisting line.

The one construction accident was caused by falling bricks while tearing down part of an old building.

Both the frequency and severity rates were lowered during the year and indicate better mine inspection, plus more interest in the safety by management and by men employed in the mineral industries. Frequency rate of accidents decreased in all mineral industries except underground metal mines and quarries during the year and the severity rate decreased by a considerable amount in all operations except rock quarries. Both the frequency and severity rates based upon those of the past years show a remarkable drop and it is the hope of the Bureau of Mines that these rates can continue to decrease.

The number of man-hours worked in all mineral industries was about the same as 1952, yet the average total frequency rate for 1953 was only 42 and the severity rate 4.27, this compares with 54 and 6.61 for 1952.

## SUMMARY OF ACCIDENTS—1953

Total man hours	Lost time injuries	Number of days lost	Frequency rate per one million man hours	Severity rate per one million man hours
Mines, Surface	56	655	16	.19
Mines, Underground	3,491,056	65,942	99	9.98
Quarries	6,607,264	314	31	.36
Mills, Smelters, Plants, etc.	881,408	8,646	16	.99
State and Federal Projects	8,736,960	274	25	.31
Oil Wells	887,936	27,320	52	7.70
Total	3,550,000	103,151	45	4.27

This table includes the loss of 78,000 days due to 13 fatalities and 12,425 days due to 31 permanent partial disabilities.

Frequency rate=  $\frac{\text{No. of injuries} \times 1,000,000}{\text{No. of man-hours of exposure}}$       Severity rate=  $\frac{\text{Total time charges in days} \times 1,000}{\text{No. of man-hours of exposure}}$

## FATAL ACCIDENTS—1953

## Metal Mining

Date	Name of Person	Employed By	Cause of Death
3-23-53	Herbert Dale, Jr.	Telluride Mines, Inc.	Fell down ore pass
4-17-53	William M. Lewis	Cresson Consolidated Gold Mining Company	Crushed by falling rock.
4-26-53	George M. Thomas	Ozark-Mahoning Company	Crushed by falling rock.
7-17-53	Leo Whittaker	Idarado Mining Company	Crushed by falling rock.
7-30-53	J. R. Medina	Idarado Mining Company	Fell down raise
9-16-53	William N. Bersonnet, III	William N. Bersonnet, Jr. (Father)	Fell from ladder into shaft
11-15-53	Ben Padilla	Telluride Mines, Inc.	Premature blast
12-11-53	Thomas O. Porter	Mile High Mining Company	Crushed by falling rock
<b>Oil Wells</b>			
2-16-53	LeRoy Helms	Mountain States Drilling Company	Crushed by falling elevator guard
9- 8-53	Amos A. Carson	Twin T. Drilling Company	Crushed by falling drill pipe
12-16-53	Harold F. Belroy	Arapahoe Drilling Company	Crushed by fall of pull-back weight
12-16-53	Robert G. Patrick	S. D. Johnson Drilling Company	Caught in hoisting line
<b>Construction</b>			
6-28-53	C. C. Abbott	Rocky Mountain Oil & Paving Company	Crushed by falling bricks

**AGENCY CAUSING ACCIDENT**

		Temporary Injuries Loss of one day or more
<b>Mines, Surface</b>		
Cable - Hose - Ropes .....		1
Cars - Motors - Vehicles .....		5
Chemicals .....		1
Drills - Drilling Equipment .....		17
Dust and Particles .....		1
Falls .....		10
Falling or Flying Objects .....		5
Flames - Fire - Hot Substances .....		3
Hoists - Hoisting Apparatus .....		1
Machinery .....		2
Materials .....		3
Metal Objects .....		3
Timber - Lumber - Poles .....		4
	Total .....	56
<b>Quarries</b>		
Bars - Bins - Chutes .....		2
Cars - Motors - Vehicles .....		4
Dust and Particles .....		2
Falls .....		4
Falling or Flying Objects .....		7
Flames - Fire - Hot Substances .....		1
Machinery .....		2
Materials .....		3
Rock - Ore - Ground .....		2
	Total .....	27

**AGENCY CAUSING ACCIDENT**

		Temporary Injuries Loss of one day or more
<b>Mines, Underground</b>		
	Fatales	
Bars - Bins - Chutes .....		12
Cables - Hose - Ropes .....		9
Cars - Motors - Vehicles .....		108
Chains - Gears -Sprockets .....		2
Belts - Conveyors - Pulleys .....		1
Containers .....		3
Chemicals .....		10
Doors - Windows - Gates.....		2
Drills - Drilling Equipment .....		45
Dust and Particles .....		33
Explosives - Loading, Firing .....		1
Electricity - Elec. Equipment .....		2
Falls .....	4	64
Falling or Flying Objects .....	3	168

<b>Mines, Underground—Continued</b>	Fatalis	Temporary Injuries	
		Loss of one day or more	
Flames - Fire-Hot Substances .....		9	
Hoists - Hoisting Apparatus .....		19	
Ladders - Manways .....		2	
Machinery .....		43	
Materials .....		20	
Metal Objects .....		38	
Platforms - Staging - Scaffolds .....		1	
Premature or delayed blasts .....	1	11	
Rock - Ore - Ground .....		18	
Shovels, power .....		1	
Timber - Lumber - Poles .....		22	
Unclassified - Insufficient Data .....		3	
		<hr/>	<hr/>
Total.....	8	647	655

### AGENCY CAUSING ACCIDENT

<b>Mills, Smelters, Plants, etc.</b>	Fatalis	Temporary Injuries	
		Loss of one day or more	
Bars - Bins - Chutes .....		1	
Cables - Hose - Ropes .....		1	
Cars - Motors - Vehicles .....		6	
Chains - Gears - Sprockets .....		1	
Belts - Conveyors - Pulleys .....		5	
Containers .....		11	
Chemicals .....		13	
Doors - Windows - Gates .....		3	
Drills - Drilling Equipment .....		2	
Dust and Particles .....		2	
Electricity - Elec. Equipment .....		1	
Falls .....		27	
Falling or Flying Objects .....	1	13	
Flames - Fire - Hot Substances .....		7	
Hoists - Hoisting Apparatus .....		2	
Ladders - Manways .....		5	
Machinery .....		15	
Materials .....		15	
Metal Objects .....		3	
Platforms - Staging - Scaffolds .....		2	
Rock - Ore - Ground .....		3	
Screens .....		2	
Timber - Lumber - Poles .....		1	
		<hr/>	<hr/>
Total.....	1	141	142



**AGENCY CAUSING ACCIDENT**

<b>State and Federal Projects</b>	Temporary Injuries Loss of one day or more
Bars - Bins - Chutes .....	1
Cables - Hose - Ropes .....	1
Cars - Motors - Vehicles .....	1
Containers .....	1
Dust and Particles .....	2
Falls .....	4
Falling or Flying Objects .....	3
Machinery .....	3
Materials .....	4
Metal Objects .....	2
Total .....	22

**AGENCY CAUSING ACCIDENT**

<b>Oil Wells</b>	Fatales	Temporary Injuries Loss of one day or more
Cables - Hose - Ropes .....		4
Cars - Motors - Vehicles .....		2
Chains - Gears - Sprockets .....		10
Belts - Conveyors - Pulleys .....		2
Containers .....		2
Chemicals .....		2
Derricks - Headframes .....	1	21
Drills - Drilling Equipment .....		43
Dust and Particles .....		5
Electricity - Elec. Equipment .....		1
Falls .....		14
Falling or Flying Objects .....	2	29
Flames - Fire - Hot Substances .....		10
Machinery .....	1	18
Materials .....		12
Metal Objects .....		4
Timber - Lumber - Poles .....		2
Totals .....	4	181
		185

**MINES, SURFACE**

<b>Type of Injury</b>	Temporary Injuries Loss of one day or more
Burns .....	3
Caught in or between .....	10
Fall on the same level.....	8
Fall on different level .....	2

**Type of Injury—Continued**

Handling .....	9
Striking against - Struck by .....	22
Slip - Stepping on .....	2
	<hr/>
Total .....	56

**Nature of Injury**

Foreign Bodies .....	3
Cuts - Bruises - Lacerations - Punctures.....	25
Strains - Sprains - Dislocation .....	11
Hernia .....	4
Fractures .....	9
Burns - Scalds .....	3
Occupational Disease .....	1
	<hr/>
Total .....	56

**Site of Injury**

Eye .....	2
Head - Face - Neck .....	2
Trunk .....	14
Upper Extremities .....	17
Lower Extremities .....	19
General .....	2
	<hr/>
Total .....	56

**MINES, UNDERGROUND**

Type of Injury	Fatals	Temporary Injuries	
		Loss of one day or more	
Burns .....		12	
Caught in or between.....		101	
Fall on the same Level .....		42	
Fall on different Level .....	3	25	
Handling .....		92	
Inhalation - Suffocation .....		10	
Striking against - Struck by .....	5	329	
Slip - Stepping on .....		36	
	<hr/>	<hr/>	<hr/>
Totals .....	8	647	655

**Nature of Injury**

Foreign Bodies .....		44
Cuts - Bruises - Laceration - Punctures	1	338
Strains - Sprains - Dislocation .....		122

**Nature of Injury—Continued**

Hernia .....		14	
Fractures .....	7	83	
Amputation .....		21	
Burns - Scalds .....		12	
Occupational Disease .....		11	
Nature Unknown .....		2	
		<hr/>	<hr/>
Totals .....	8	647	655

**Site of Injury**

Eye .....		53	
Head - Face - Neck .....	2	41	
Trunk .....		183	
Upper Extremities .....		153	
Lower Extremities .....		187	
General .....	6	30	
		<hr/>	<hr/>
Totals .....	8	647	655

**QUARRIES**

	Temporary Injuries Loss of one day or more
<b>Type of Injury</b>	
Burns .....	1
Caught in or between .....	2
Fall on the same Level .....	3
Fall on different Level .....	1
Handling .....	6
Striking against - Struck by .....	13
Slip - Stepping on .....	1
	<hr/>
Total .....	27

**Nature of Injury**

Foreign Bodies .....	3
Cuts - Bruises - Laceration - Punctures.....	8
Strains - Sprains - Dislocation .....	7
Fractures .....	8
Burns - Scalds .....	1
	<hr/>
Total .....	27

**Site of Injury**

Eye .....	2
Head - Face - Neck .....	2
Trunk .....	9
Upper Extremities .....	6
Lower Extremities .....	8
	<hr/>
Total .....	27

**MILLS AND SMELTERS**

Type of Injury	Fatalis	Temporary Injuries	
		Loss of one day or more	
Burns .....		18	
Caught in or between .....		17	
Fall on same Level .....		25	
Fall on different Level .....		2	
Handling .....		28	
Inhalation - Suffocation .....		1	
Striking against - Struck by .....	1	38	
Slip - Stepping on .....		12	
		<hr/>	<hr/>
Totals .....	1	141	142
<b>Nature of Injury</b>			
Foreign Bodies .....		4	
Cuts - Bruises - Laceration - Punctures .....		41	
Strains - Sprains - Dislocation .....		50	
Hernia .....		6	
Fractures .....	1	19	
Amputation .....		2	
Burns - Scalds .....		18	
Occupational Disease .....		1	
		<hr/>	<hr/>
Totals .....	1	141	142
<b>Site of Injury</b>			
Eye .....		10	
Head - Face - Neck .....		11	
Trunk .....		58	
Upper Extremities .....		23	
Lower Extremities .....		36	
General .....	1	3	
		<hr/>	<hr/>
Totals .....	1	141	142

**STATE AND FEDERAL PROJECTS**

Type of Injury	Temporary Injuries	
	Loss of one day or more	
Caught in or between .....		2
Fall on the same Level .....		2
Handling .....		4
Striking against - Struck by .....		11
Slip - Stepping on .....		3
		<hr/>
Total .....		22
<b>Nature of Injury</b>		
Foreign Bodies .....		2
Cuts - Bruises - Laceration - Punctures .....		9

**Nature of Injury—Continued**

Strains - Sprains - Dislocation .....	8
Fractures .....	3
<b>Total</b> .....	<b>22</b>

**Site of Injury**

Eye .....	3
Head - Face - Neck .....	1
Trunk .....	8
Upper Extremities .....	2
Lower Extremities .....	8
<b>Total</b> .....	<b>22</b>

**OIL WELLS**

Type of Injury	Fatales	Temporary Injuries	
		Loss of one day	or more
Burns .....		12	
Caught in or between .....		42	
Fall on the same Level .....		17	
Handling .....		15	
Inhalation - Suffocation .....		1	
Striking against - Struck by.....	4	92	
Slip - Stepping on .....		2	
<b>Totals</b> .....	<b>4</b>	<b>181</b>	<b>185</b>

**Nature of Injury**

Foreign Bodies .....		9	
Cuts - Bruises - Laceration - Punctures .....		78	
Strains - Sprains - Dislocation .....		27	
Fractures .....	4	49	
Amputation .....		7	
Burns - Scalds .....		11	
<b>Totals</b> .....	<b>4</b>	<b>181</b>	<b>185</b>

**Site of Injury**

Eye .....		11	
Head - Face - Neck .....	3	21	
Trunk .....		29	
Upper Extremities .....		64	
Lower Extremities .....		55	
General .....	1	1	
<b>Totals</b> .....	<b>4</b>	<b>181</b>	<b>185</b>

## MEN EMPLOYED—1953

Total number of men employed in the mineral industries which are inspected by the Colorado Bureau of Mines is the largest since the year 1938.

Due to greater mechanization in some of the larger metal mines and due to the completion of several large surface and milling plants and, further, due to the uncertainty of the precious and base metal prices and other handicaps, the total number of men employed in the mineral industry probably will begin to decline within the coming year.

	Mines		Mills Smelters		Quarries Clay Mines		Placers		Proj- ects	Oil Wells
	No.	Men	No.	Men	No.	Men	No.	Men	Men	Men
District 1 . . . .	107	468	22	313	37	217	9	20	199	1200
District 2 . . . .	33	278	6	90	54	223	1	2	167	100
District 3 . . . .	56	2476	16	1116	12	73	3	6	107	650
District 4 . . . .	215	1905	18	2178	..	..	..	..	279	175
TOTAL . . . .	411	5127	62	3697	103	513	13	28	752	2125

### TOTAL MEN EMPLOYED

District No. One.....	2,417
District No. Two .....	860
District No. Three .....	4,428
District No. Four.....	4,537
TOTAL .....	12,242

## INSPECTIONS

During the year 1953 the district mine inspectors made 850 full inspections with written reports. In addition to this, there were 250 partial written reports which required a return to some property previously inspected to determine whether or not safety recommendations that had been made were carried out and completed.

This is an increase of approximately 65 inspections over the year before and really establishes an unusual record when it is considered that some of the mines inspected by the inspectors require from three to five days to completely go over the property and that other small mines are so widely scattered that frequently an inspector has to drive as much as one hundred miles to make an inspection of what is considered an adjoining property.

For the work days during the year each inspector averages approximately one complete written inspection per day.

In addition to inspections, the mine inspectors gave short talks on accident prevention and mine safety in various sections of the state and also taught several mine first aid classes.

### 1953 INSPECTIONS

#### MADE BY

#### MINE INSPECTORS, DISTRICTS Nos. 1, 2, 3, 4

	District 1	District 2	District 3	District 4	
	Chapman	Theobald	Doyle	Franz	Total
1953					
January .....	15	15	2	38	70
February .....	11	5	14	24	54
March .....	25	15	19	21	80
April .....	28	10	22	33	93
May .....	29	4	18	46	97
June .....	31	5	22	25	83
July .....	18	7	16	20	61
August .....	33	12	15	21	81
September .....	11	8	29	27	75
October .....	21	7	13	26	67
November .....	14	7	7	22	50
December .....	18	2	10	9	39
	254	97	187	312	850

### INSPECTIONS IN 1953

	Mines	Quarries Clay Mines	Mills Smelters	Placers	Projects	Oil Wells	Total
District 1.....	117	33	21	10	4	69	254
District 2.....	24	50	5	3	4	11	97
District 3.....	80	18	36	6	16	31	187
District 4.....	264	....	28	....	9	11	312
	485	101	90	19	33	122	850

LIST OF OPERATING MINES IN VARIOUS COUNTIES IN COLORADO—1953  
OPERATING MINES IN BOULDER COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
After Thought	Jamestown	Williamson & Son	728 U. S. Nat'l. Bank Bldg., Denver	Fluorspar
Argo	Jamestown	Williamson & Son	728 U. S. Nat'l. Bank Bldg., Denver	Fluorspar
Blue Jay	Jamestown	Williamson & Son	728 U. S. Nat'l. Bank Bldg., Denver	Fluorspar
Boulder County Tunnel	Cardinal	H. W. Low	244 Lakeside Drive, Oakland, California	Fluorspar
Bonanza No. 2 & No. 6	Nederland	Bodner Bros.	500 Grand Avenue, Louisville	Exploration
Burlington (m)	Jamestown	Allied Chemical & Dye Co.	Box 228, Boulder	Tungsten
Caribou	Caribou	Nederland Mines, Inc.	1406 Pearl St., Boulder	Fluorspar
Cold Springs	Nederland	Cold Spring Tungsten, Inc.	405 Interstate Trust Bldg., Denver	Silver, Lead, Uranium
Comstock	Caribou	Pandora Metals, Inc.	1555 Dayton St., Aurora	Tungsten
Comstock	Ward	Gold Range, Inc.	Ward	Development
Conger	Nederland	Smith & Rugg	Nederland	Exploration
Copeland	Boulder Canyon	O. P. Pherson	1743 Mapleton Street, Boulder	Tungsten
Cross (m)	Nederland	Thomas Linder	Nederland	Tungsten
Emmett	Jamestown	Williamson & Son	728 U. S. Nat'l. Bank Bldg., Denver	Tungsten
Eureka	Boulder Canyon	Eureka Tungsten	3255 So. Cherokee St., Englewood	Fluorspar
Forest Home	Nederland	Erickson & Pastore	1946 Walnut Street, Boulder	Tungsten
Fraction	Sugarloaf	Fraction Mining Co.	319 Platte Street, Longmont	Tungsten
Gold Coin & Princess Group	Sugarloaf	Boulder Tungsten Mines, Inc.	Box 441, Boulder	Tungsten
Good Friday-April Fool	Sugarloaf	Jump Mining	916-14th Street, Boulder	Tungsten
Hallie A	Nederland	James L. McBroom & L. R. Allen	Box 372A-RR, 2 Boulder	Exploration
Hillside	Sugarloaf	Stoehly & Overly	Rt. 2, Box 444, Boulder	Tungsten
Hoosier	Nederland	Geo. Prime & Johnson Bros.	Nederland	Tungsten
Idaho Tunnel	Nederland	Nederland Mines, Inc.	1406 Pearl Street, Boulder	Silver, Lead, Uranium
Katie & Dorothy Group (m)	Sugarloaf	Boulder Tungsten Mines, Inc.	Box 441, Boulder	Tungsten
Lone Pine	N. W. Nederland	Vanadium Corp. of America	420 Lexington Ave., New York 17, N. Y.	Tungsten
Lucky Lady	Sugarloaf	Al Rogers	Box 150, Boulder	Tungsten
Nation Treasure	Jamestown	Williamson & Son	728 U. S. Nat'l. Bank Bldg., Denver	Tungsten
1905 Mine	Nederland	Jack Payne	Nederland	Fluorspar
Ohio (m)	Sugarloaf	Harrison Cobb & A. B. Weldon	401 Pine Street, Boulder	Tungsten
Philadelphia	Nederland	G. Bremmer Adolph Dinkel, E. R. Sena & R. H. Davis	2475 Ames Street, Denver	Tungsten
Poorman	Caribou	Gibson Investment, Inc.	RR. 2, Box 443A, Boulder	Development
Quaker	Sugarloaf	C. H. Smith & Co.	2000 Marine Street, Boulder	Tungsten
Rambler	Nederland	Smith & Rugg	Nederland	Tungsten



Rafter Lease	Sugarloaf	Paul Ruhter	1734 Walnut St., Boulder	Tungsten
Spartan	Jamestown	Rocky Mtn. Mng. & M. Co.	Box 214, Jamestown	Fluorspar
Surprise	Ward	Albert Rasler	517-15th St., Boulder	Exploration
Tenderfoot	Nederland	Langley & Rugs	Nederland	Tungsten
Tungsten	Nederland	Tungsten Mining Co.	420 Pine St., Boulder	Tungsten
Vasco No. 1	Tungsten	P. H. Bennett	1825 Marine St., Boulder	Tungsten
Vasco No. 5	Tungsten	L. & P. Mining Co.	% Robt. Plummer	Tungsten
Victor	Nederland	Barker & Jackson	630 Spruce St., Boulder	Tungsten
World Shaft	Nederland	P. H. Bennett	Box 150, Boulder	Exploration
				Tungsten

OPERATING MINES IN CHAFFEE COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
American	Brown Canyon	Gen'l. Chem. & Dye Corp.	Box 550, Salida	Fluorspar
Josephine Lode	Buena Vista	Josephine Lode & Dev. Co.	Box 392, Buena Vista	Exploration
MacKeen Claim	Taylor Mtn.	Harold MacKeen	542 G. Street, Salida	Development
Madonna	Monarch	Utze Lode Company	Box 500, Salida	Exploration
Mary Murphy	St. Elmo	S. E. & W. E. Burleson	Box 209, Salida	Gold, Silver, Lead, Zinc
Poncha Springs Fluorspar (m)	Poncha	Reynolds Mining Company	Box 169, Salida	Fluorspar
St. Anne & St. Joseph	McGee	John Klaes	340 Grove St., San Francisco, Calif.	Development
Sedalia	Salida	New Jersey Zinc Co.	Gilman	Exploration
U. S. Fluorspar	Brown Canon	Seymour Mining Company	Vancouver, B. C.	Exploration

OPERATING MINES IN CLEAR CREEK COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Alma Lincoln	Spanish Bar	C. M. Lyon	Wideacres, Golden	Tourist
Diamond Joe	Virginia Canon	{ Wm. Kirschmer Carl J. Crockett	Idaho Springs	{ Gold, Silver, Lead
Dixie (m)	Ute Creek	LeRoy Giles & Co.	Colorado Springs	Gold
Forgehill Tunnel	Virginia Canon	C. E. Morrison	Idaho Springs	Gold
Freighter's Friend	Gilson Gulch	Hafen Leavitt	Rt. 3, Box 367, Golden	Gold, Silver, Lead, Zinc
Goconda Tunnel	Fall River	Henry De Linde	3704 Fenton St., Wheatridge	Gold, Silver, Lead, Zinc
Grizzly Mine (m)	Bakerville	Lupton Mining Co.	Idaho Springs	Lead, Zinc
Grover, Joe	Beaverbrook Canon	Joe Grover	Georgetown	Gold, Silver, Lead, Zinc
Headlight	Empire	Erne Cotton & Jim Ritchie	Evergreen	Feldspar
Lake West	Virginia Canon	Wm. Kirschmer	Empire	Gold, Silver, Lead, Zinc
Lamertine (m)	Lamertine	Montana Mining & Dev. Co.	Idaho Springs	Lead, Zinc
			Manhattan, Montana	Exploration

## OPERATING MINES IN CLEAR CREEK COUNTY, 1953—Continued

Name of Mine	Location	Operator	P. O. Address	Product
Lombard	Lombard	Lombard Mines Co.	Idaho Springs	Development
Lone Star	Clear Creek Canon	R. W. Carroll	395 Allison St., Lakewood	Exploration, Gold, and Tourist
Mattie Jack	Dumont	Monarch Mining Trust	416 Cooper Bldg., Denver	Development
Mendota Tunnel	Silver Plume	Mendota-Frostburg Mining Co.	455 Brighton Blvd., Denver	Silver, Lead, Zinc
Miami (Wilcox Level (Big 5))	Idaho Springs	Colo. School of Mines	Golden	Experimental
Nabob	Lawson	Nabob Mining Co.	% C. R. Froman, Majestic Bldg., Denver	Silver, Lead, Zinc
Oregon	Freeland	Geo. Trader	Idaho Springs	Development
Silver Cloud	Lawson	Andy Riebel	Silver Plume	Exploration
Smuggler	Silver Plume	Mile High Mining	10000 W. 38th Ave., Denver	Silver, Lead, Zinc
Snider, Chas. R.	Beaverbrook Canon	Chas. R. Snider	Evergreen	Feldspar
Stanley	Idaho Springs	Wm. Kirschner	Idaho Springs	Lead, Zinc, Gold
Trisha Lee	Spring Gulch	Gold Bar Mines, Inc.	Idaho Springs	Uranium
Urad	Empire	Molybdenum Corp. of America	500-5th Ave., New York 18, N. Y.	Molybdenum
Zero	Silver Plume	John A. Smith	Silver Plume	Exploration

## OPERATING MINES IN CUSTER COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Buckeye	Westcliffe	Buckeye Mining Co.	Westcliffe	Development
Defender	White Hills	Defender Mining Co.	Silver Cliff	Development
Passiflora (Herman Shaft)	Westcliffe	Passiflora Mining Co.	Box 749, Canon City	Exploration
Tantalizer	Spruce Creek	Tantalizer Mining Co.	Box 184, Westcliffe	Development
Tom Boy	Ophir Creek	Chas. & Lyman Akin	2133 W. 11th Street, Pueblo	Development

## OPERATING MINES IN DELTA COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Doty	Delta	Atlas Mining & Mfg. Co.	410 Main Street, Delta	Sulphur

## OPERATING MINES IN DOLORES COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Argentine (m)	Rico	Rico Argentine Mining Co.	Rico	Silver, Lead, Zinc
Mountain Springs	Rico	Rico Argentine Mining Co.	Rico	Silver, Lead, Zinc
Silver Swan	Rico	Rico Argentine Mining Co.	Rico	Silver, Lead, Zinc
St. Louis Claim	Rico	Myron Jones & Associates	Rico	Exploration
St. Louis Tunnel	Rico	Rico Argentine Mining Co.	Rico	Silver, Lead, Zinc

OPERATING MINES IN EAGLE COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Eagle (m)	.....Gilman	New Jersey Zinc Co., Empire Zinc Division	.....Gilman	Lead, Zinc, Silver, Copper
Morning	.....Gold Park	Swigert & Randall	Box 901, Leadville	.....Exploration

OPERATING MINES IN FREMONT COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Cotopaxi	.....Cotopaxi	Roy Knowles	.....Cotopaxi	Development
Jack of Diamonds	.....Copper Gulch	Robert E. Harris	1928 E. Orman St., Pueblo	.....Exploration

OPERATING MINES IN GARFIELD COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
End of the Trail	.....New Castle	W. L. Weaver	.....Silt	Uranium
Oil Shale (Plant)	.....Rifle	U. S. Bureau of Mines	.....Rifle	Oil Shale

OPERATING MINES IN GILPIN COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Alps	.....Quartz Hill	Atomic Uranium Corp.	% G. C. Ridland, 405 Inter- state Trust Bldg., Denver	Uranium Exploration
Calhoun	.....Quartz Hill	Moreno Cripple Creek Corp.	1099-17th Street, Denver	Gold, Lead, Uranium
Canandaigua (Mae West Tunnel)	.....Central City	Wm. C. Russell, Jr.	.....Central City	Gold, Lead Development
Carroll	.....Central City	United Mining & Leasing	.....Central City	Uranium Development
Cherokee	.....Queen Ranch	Moreno Cripple Creek Corp.	1009-17th Street, Denver	Uranium Development
Eureka, Essex	.....Central City	United Mining & Leasing	.....Central City	Lead, Silver, Zinc
German	.....Quartz Hill	Intercounty Corp.	405 Interstate Trust Bldg., Denver	Uranium Development
Gold Rock (Springdale)	.....Russell Gulch	Sandy-Frank Mining Co.	D. J. Young, 810-10th Street, Golden	Uranium Exploration
Indianola	.....Hawkeye Dist.	Mae Woods	.....Black Hawk	Development
Lamberson & Warren	.....Nevadaville	Wm. C. Russell, Jr.	.....Central City	Development
Little Colonel	.....Black Hawk	Jack Turner	.....Black Hawk	Tourist
Lone Star Lode	.....North Clear Creek	Roy H. Addyman	.....Black Hawk	Development
Lost Gold Mine	.....Central City	Faye Shobert	.....Central City	Tourist
Mackey	.....Tolland	Richard V. Macekey	Box 269, Boulder	Gold, Silver, Copper
Mammoth 114	.....Central City	Wm. Fackler	.....Central City	Development
Toll Gate Tunnel	.....Black Hawk	Mike McNulty	.....Black Hawk	Tourist
Twin Butte No. 2	.....Missouri Gulch	Geo. F. Rubicco	629 S. 6th Ave., Mt. Vernon, N. Y.	Development
We-Got-Em	.....Silver Creek	Gold Chief Mining Co.	% L. E. Toney, Central City	.....Exploration

## OPERATING MINES IN GUNNISON COUNTY, 1953

Name of Mine	Location	Operator	P. O. Address	Product
Aaberite	Powderhorn	Titanium Actynite Corp.	% H. O. Aabert, Powderhorn	Iron with Titanium
Akron	Sargents	Callahan Zinc-Lead Co.	% R. F. Mahoney, Box 299, Wallace, Idaho	Lead, Zinc
Brown Derby	Parlin	Adolph Poston	4th & Macon, Canon City	Michrolite, Lepidolite, Beryllium
Carter (m)	Ohio City	Kanarado Mng. & Dev. Co.	500 Summer Avenue, Littleton	Gold, Silver, Lead
Hot Rock Group	Tincup	Hugh Corrigan	Almont	Development
Huberite	Top Cumber- land Pass	U. S. Tungsten Co.	Box 910, Salida	Exploration
Keystone	Crested Butte	American Smelting & Ref. Co.	Crested Butte	Lead, Zinc
Little Johnny Group	Powderhorn	Rare Earth Mining Co.	320 Equitable Bldg., Denver	Development

## OPERATING MINES IN HINSDALE COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Hoosier Boy	Lake City	C. J. Van Buskirk	Lake City	Development
Ute & Ulay	Hensen Creek	Idarado Mining Co.	Ouray	Development

## OPERATING MINES IN JACKSON COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Northgate (Q) (M)	North Gate	Ozark Mahoning Mining Co.	Cowdery	Fluorspar

## OPERATING MINES IN JEFFERSON COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Leyden Shaft	Leyden	Moreno Cripple Creek Corp.	1009-17th Street, Denver	Development
Oregon Pit	Buffalo	Kirkland Mines Co.	357 So. Perry, Denver	Feldspar
Schwartzwalder	Ralston Creek	Fred Schwartzwalder	207 Boyd Street, Golden	Uranium
Tall Timber	Indian Hills	Tall Timber Mining Co.	Morrison	Beryl-Mica, Feldspar

## OPERATING MINES IN LAKE COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Antioch Claim	Johnny Hill	Froelich C. Kaiser	106 Harrison Ave., Leadville	Gold
Betty Fraction Lode	Printer Boy Hill	A. M. Gross	6399 Wilshire Blvd., Los Angeles, California	Development
Climax (m)	Climax	Climax Molybdenum Co.	Climax	Molybdenum, etc.
Climax (Glory Hole)	Climax	C. Ryan & Son	Box 7828, Lakewood	Molybdenum, etc.

Dolly B.....	Big Evans Gulch..John Roberts & Co.....	218 E. 10th St., Leadville.....	Gold, Silver, Lead, Zinc	
Eclipse (Ibex Area).....	Leadville .....	Leadville .....	Gold, Silver, Lead, Zinc	
Fannie Rawlins.....	Johnny Hill.....	W. D. Nelson.....	Development	
Fortune .....	Big Evans Gulch..J. L. Adams.....	328 W. 7th St., Leadville.....	Gold, Silver, Lead, Zinc	
Garibaldi Tunnel.....	California Gulch..Robert L. Jones.....	131 W. 9th St., Leadville.....	Gold, Silver, Lead, Zinc	
Hayden Shaft.....	Fryer Hill.....	Caldwell Mining Co.....	2475 Gray Street, Denver.....	Gold, Silver, Lead, Zinc
Helena .....	Iowa Gulch.....	Resurrection Mining Co.....	Leadville .....	Development
Ibex No. 4.....	Johnny Hill.....	Ellis Webster.....	400 E. 4th St., Leadville.....	Gold, Silver, Lead, Zinc
Irene No. 2.....	Johnny Hill.....	American Smelting & Ref. Co.....	Leadville .....	Gold, Silver, Lead, Zinc
Little Alice.....	Long & Derry Hill..Louis Kostelic.....	203 W. 3rd St., Leadville.....	Gold, Silver, Lead, Zinc	
Millie G. No. 1.....	Granite .....	Sidney & Gilbert Green.....	Granite .....	Gold, Silver, Lead, Zinc
Nisi Pruis Claim.....	Iowa Gulch.....	Geo. Davis & John Larsh.....	300 Spruce St., Leadville.....	Manganese
Resurrection No. 1 Dump.....	Big Evans Gulch..Albert Foxall & Co.....	415 E. 17th St., Leadville.....	Gold, Silver, Lead, Zinc	
Resurrection No. 2 (m).....	Big Evans Gulch. { Resurrection Mining Co.....	P. O. Box 936, Leadville.....	} Gold, Silver, Lead, Zinc	
Revenue Cutter Tunnel.....	Little Evans Gulch .....	Robert L. Jones.....		131 W. 9th St., Leadville.....
Robert Emmett .....	Stumptown .....	Edward Mayerle.....	219 E. 8th St., Leadville.....	Gold, Silver, Lead, Zinc
Storke Tunnel.....	Climax .....	American Smelting & Ref. Co.....	Leadville .....	Exploration
Yak Tunnel.....	California Gulch..Resurrection Mining Co.....	Gibbons & Reed Boyle Bros.....	Climax .....	Development
			Box 936, Leadville.....	Gold, Silver, Lead, Zinc

OPERATING MINES IN LA PLATA COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Bessie G.....	La Plata Mtn.....	Zodomok Mines, Inc.....	Box 452, Durango.....	Gold, Silver

OPERATING MINES IN LARIMER COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Black Hawk.....	Cherokee Park.....	Cherokee Mine Co.....	231 So. Grant St., Ft. Collins.....	Uranium, Tourist

## OPERATING MINES IN MESA COUNTY, 1953

Name of Mine	Location	Operator	P. O. Address	Product
Arrowhead No. 1	Calamity Mesa	Warren E. Wright and A. C. Rinderle and T. J. Warner and J. D. McCormack	438 Sherman, Grand Junction.	Uranium, Vanadium
Arrowhead No. 10 & 11	Calamity Mesa	Norman & Geo. Wellman	Rt. 3, Grand Junction. Grand Junction	Uranium, Vanadium
Arrowhead 34—Incline 5 Arrowhead 34—Incline 6	Calamity Mesa	Al Rinderle	438 Sherman Drive, Grand Junction	Uranium, Vanadium
Arrowhead 34—Incline 7 Arrowhead Incline No. 12	Calamity Mesa Arrowhead Camp	Tex Hughes & Associates Fred Zanett Lease	Montrose 1312 Bunting Avenue, Grand Junction	Uranium, Vanadium
Arrowhead Incline No. 13	Outlaw Mesa	Al C. Rinderle	438 Sherman Drive, Grand Junction	Uranium, Vanadium
Arrowhead Incline No. 14	Outlaw Mesa	Al C. Rinderle	438 Sherman Drive, Grand Junction	Uranium, Vanadium
Belmont	Arrowhead Camp	Ben Zimmerman	Rt. 2940 Patterson Rd., Grand Junction	Uranium, Vanadium
Black Mammy	Tenderfoot Mesa	Tenderfoot Mining Co.	Gateway	Uranium, Vanadium
Blair	Outlaw Mesa	E. N. Jones	% Leo Mullins, Rt. 1, Fruitvale	Uranium, Vanadium
Blue Bird	Outlaw Mesa	Sutherland & Roper	% Dick Roper, Rt. 3, Grand Junction	Uranium, Vanadium
Blue Ribbon	Calamity Mesa	Joe E. Brown	Montrose	Uranium, Vanadium
Calamity 2 Incline No. 21 and 27	Calamity Mesa	Vernon L. Lehr	Gateway	Uranium, Vanadium
Calamity No. 17	Calamity Mesa	De Bar Shumway	Gen'l. Del., Grand Junction	Uranium, Vanadium
Calamity No. 20	Calamity Mesa	R. C. Bishop	Uvayan	Uranium, Vanadium
Emerson	Outlaw Mesa	E. N. Jones & Associates	% Leo Mullins, Rt. 1, Fruitvale	Uranium, Vanadium
G-1 Incline	Outlaw Mesa	Climax Uranium Co.	Grand Junction	Uranium, Vanadium
G-2 Incline	Outlaw Mesa	Climax Uranium Co.	Grand Junction	Uranium, Vanadium
Hansen Incline	Outlaw Mesa	Eugene Bonner	Box 566, Palisade	Uranium, Vanadium
Hidden Treasure	Calamity Mesa	Carl Tucker	Grand Valley	Uranium, Vanadium
July Lease	N.W. Outlaw Mesa	Eugene T. Bonner	Palisade	Uranium, Vanadium
Jumbo No. 2	Outlaw Mesa	Sutherland & Roper	% Dick Roper, Rt. 3, Grand Junction	Uranium, Vanadium
June Claim	N.W. Outlaw Mesa	H. L. Arbogast	Orchard Mesa	Uranium, Vanadium
La Sal No. 1	John Brown Hill	Lee Hetzel & Associates	Clifton	Uranium, Vanadium
La Salle (La Sal) No. 2	John Brown Hill	Geranium Mining Co.	Box 1211, Gateway	Uranium, Vanadium
Little Johnnie	Gateway	Amco Uranium Co.	317 Main St., Grand Junction	Uranium, Vanadium
Lumsden No. 2	John Brown Hill (Gateway)	R. D. Hickman { I. W. Hall	Rt. 1, Grand Junction Gateway	Uranium, Vanadium
Mammoth	Gateway	Loren Jewell	Rifle	Uranium, Vanadium

M. C. No. 10.....	Outlaw Mesa	J. Hicks & Robt. Hanes.....	Rt. 2, Grand Junction.....	Uranium, Vanadium
Mesa No. 5—	Incline 1 & 2.....	Herbert Foster.....	1217 Colo. Avenue, Grand Junction.....	Uranium, Vanadium
Raemarie No. 3.....	Blue Mesa.....	Lee Hetzel.....	Clifton.....	Uranium, Vanadium
Neglected (Calamity 14)	Incline 2 & 3.....			
Negus.....	Outlaw Mesa	Dan Kelly.....	Rt. 4, Grand Junction.....	Uranium, Vanadium
Pack Rat.....	Outlaw Mesa	Elmer Neilson.....	Ridgway.....	Uranium, Vanadium
Pay Rock No. 14.....	John Brown Hill	J. B. Crowley & Co.....	850 1/2 N. 1st, Grand Junction.....	Uranium, Vanadium
Queen of the Hills.....	Tenderfoot Mesa	Clyde & Roy Address.....	Placerville.....	Uranium, Vanadium
Ronnie No. 1.....	Calamity Mesa	Wm. Meese & Associates.....	Box 185, Rifle.....	Uranium, Vanadium
	Outlaw Mesa	Otis Fincher.....	924 Pine Street, Grand Junction.....	Uranium, Vanadium
Ronnie No. 2.....	Outlaw Mesa	Barnett Bros.....	550 Grand Mesa Avenue, Grand Junction.....	Uranium, Vanadium
Small Spot Drift.....	Calamity Mesa	Pete Besman & Floyd Ruby.....	487 Spurn Rd., Fruitvale.....	Uranium, Vanadium
Snowshoe.....	N.E. Outlaw Mesa	Herbert Foster.....	1217 Colorado Avenue, Grand Junction.....	Uranium, Vanadium
Sunflower.....	Outlaw Mesa	Herbert Foster.....	1217 Colorado Avenue, Grand Junction.....	Uranium, Vanadium
Yellowjacket No. 2 (Shaft 8).....	Arrowhead	Camp-L. O. Wattenbarger.....	741 Colorado Avenue, Grand Junction.....	Uranium, Vanadium
Yellowjacket No. 9 Incline.....	Arrowhead	Camp, Elmer Neilson & Associates.....	Ridgway.....	Uranium, Vanadium

OPERATING MINES IN MINERAL COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Amethyst.....	W. Willow Creek	B. P. L. Lease.....	Creede.....	Silver, Lead
Empirius (m).....	W. Willow Creek	Empirius Mining Co.....	Creede.....	Silver, Lead, Zinc
Equity.....	W. Willow Creek	Gavin W. Skinner & Assoc.....	Creede.....	Exploration
Holy Moses.....	E. Willow Creek	Jackson Mining Co.....	Creede.....	Exploration
Monon.....	Sunnyside Creek	Monon Leasing Co.....	Creede.....	Development
Phoenix.....	E. Willow Creek	Outlet Mining Co.....	Creede.....	Lead, Zinc

OPERATING MINES IN MOFFAT COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Blue Mtn. No. 4.....	Skull Creek.....	Blue Mtn. Uranium Co.....	% C. E. Hettis, Artesia.....	Exploration, Uranium

OPERATING MINES IN MONTROSE COUNTY, 1953

Name of Mine	Location	Operator	P. O. Address	Product
A.E.C. Reserve Block No. 1.....	Club Mesa.....	Bunkler & Co.....	Box 62, Nucla.....	Uranium, Vanadium
Anna May.....	Monogram Mesa	A. S. Skalla.....	Nucla.....	Uranium, Vanadium
April No. 1.....	N.W. Bull Canyon	C. W. Burbridge.....	Naturaia.....	Uranium, Vanadium

## OPERATING MINES IN MONTROSE COUNTY, 1953—Continued

Name of Mine	Location	Operator	P. O. Address	Product
Atkinson Shaft.....	Uravan	Golden Cycle Corp.,	Uranium Div. Box 86, Colo. Springs.	Development
Baby Fawn.....	So. Rim Bull Canyon	Mark Paulsen.....	Nucla	Uranium, Vanadium
Bitter Creek.....	East Long Park.	Booth Eckman.....	Naturita	Uranium, Vanadium
Buckhorn No. 1.....	Carpenter Ridge.	Clyde Wright.....	Paradox	Uranium, Vanadium
C.F.C. & Moonbeam.....	N.C. Long Park	Joseph C. Pitt.....	Uravan	Uranium, Vanadium
Dolores.....	Uravan	Van Arsdale & Templeton.	Nucla	Uranium, Vanadium
Donaid L.....	Long Park	Milton Castor.....	Naturita	Uranium, Vanadium
Dusty.....	N.E. Rim Long Park	E. R. Frazier.....	Naturita	Uranium, Vanadium
East Opera Box.....	Monogram Mesa.	Rexroad & Athey.....	Naturita	Uranium, Vanadium
Evening Star.....	S.W. Paradox.	Four Corners Uranium Corp.	434 U. S. Nat'l. Bank Bldg., Denver	Uranium, Vanadium
Fawn Spring No. 7.....	S.E. Bull Canyon.	W. R. Hall.....	Box 214, Naturita	Uranium, Vanadium
Fawn Spring No. 9.....	S.E. Bull Canyon.	A. F. Skalla.....	Uravan	Uranium, Vanadium
Fawn Spring No. 12.....	S.E. Bull Canyon.	Glenn Neesham.....	Nucla	Uranium, Vanadium
First National Shaft.....	Central Long Park	L. B. Eugene & Geo. Barnes.	Box 235, Naturita	Uranium, Vanadium
Fox.....	Uravan	Sturtevant & Williams.	Box 274, Naturita	Uranium, Vanadium
Gov't Block No. 6.....	Uravan	M. A. Barkley & Co.....	Box 94, Uravan	Uranium, Vanadium
Greager.....	N.E. Bull Canyon.	J. R. Simplot & Co.....	Norwood	Uranium, Vanadium
Great Western.....	N.W. Long Park.	R. C. Bishop.....	Uravan	Uranium, Vanadium
Henry Clay No. 2.....	Central Long Park	John Morrill.....	Uravan	Uranium, Vanadium
Hidden Basin.....	Long Park.	Vanadium Corp. of America.	Durango	Uranium, Vanadium
Honeymoon.....	N.W. Rim Long Park.	R. C. Bishop.....	Box 424, Uravan	Uranium, Vanadium
Horse Hair Group.....	Central Bull Canyon	Consolidated Uran. Mines, Inc.	307 Darling Bldg., Salt Lake City, Utah	Uranium, Vanadium
Hummer.....	Monogram Mesa.	Lowell Staats.....	Nucla	Uranium, Vanadium
J. J.....	Monogram Mesa.	Henry O. Lehr.....	Rt. 1, Grand Junction.	Uranium, Vanadium
Joe Dandy.....	Monogram Mesa.	I. R. Ford.....	Naturita	Uranium, Vanadium
Joe Junior.....	Club Mesa.	Frank Fodel.....	Box 473, Uravan	Uranium, Vanadium
La Salle.....	Uravan	La Salle Mining Co.....	1st Nat'l. Bank Bldg., Grand Junction	Uranium, Vanadium
Little Basin.....	Uravan	Harold Kincade.....	Box 74, Uravan	Uranium, Vanadium
Little Dick.....	Uravan	Frank Elder.....	Telluride	Uranium, Vanadium
Log Cabin.....	Central Bull Canyon	Glenn Gregor.....	Naturita	Uranium, Vanadium
Long Park No. 1.....	So. Long Park	R. D. Johnson.....	Naturita	Uranium, Vanadium
Long Park No. 6.....	Central Long Park	E. T. Holdeman.....	Uravan	Uranium, Vanadium
Maggie C.....	N.C. Long Park	G. E. Castor & Assoc.....	Nucla	Uranium, Vanadium
Mill No. 2.....	Club Mesa.	J. & M. Jabernick & Assoc.	Box 484, Uravan	Uranium, Vanadium



Mineral Joe Incline.....	E. Rim Mono-gram Mesa.....	Fred Richard & Paul Willoby.....	Nucula.....	Uranium, Vanadium
North Hummer.....	Monogram Mesa.....	Clarence Fay & Assoc.....	Naturita.....	Uranium, Vanadium
Ophir No. 1 & 2.....	Uravan.....	R. L. Sage.....	Box 156, Nucula.....	Uranium, Vanadium
Oversight.....	Monogram Mesa.....	William Barnett.....	Uravan.....	Uranium, Vanadium
Patty No. 5.....	Central Bull Canyon.....	Consolidated Uranium Mines, Inc.....	307 Darling Bldg., Salt Lake City, Utah.....	Uranium, Vanadium
Peanut.....	S.E. Bull Canyon.....	J. R. Simplot Co.....	Norwood.....	Development
Production.....	N.C. Long Park.....	H. W. Johnson.....	Nucula.....	Development
Red Bldf.....	Carpenter Ridge.....	A. E. & L. G. David.....	Silverton.....	Uranium, Vanadium
Red Flash No. 6 Incline.....	N.W. Bull Canyon.....	R. S. Dunn & Assoc.....	Ouray.....	Uranium, Vanadium
Republican.....	N.C. Long Park.....	Vanadium Corp. of America.....	Durango.....	Uranium, Vanadium
Rim Rock.....	S.E. Bull Canyon.....	W. P. Jones & C. L. Mikesell.....	Blanding, Utah.....	Uranium, Vanadium
Rim Rock Blues No. 2.....	N.W. Bull Canyon.....	Keith Andrews & Son.....	Nucula.....	Uranium, Vanadium
Rim Rock Blues No. 5.....	N.W. Bull Canyon.....	Bob Ebbes.....	Box 236, Naturita.....	Uranium, Vanadium
Rock Creek.....	Rock Creek.....	Vanadium Corp. of America.....	Durango.....	Uranium, Vanadium
St. Patrick.....	N.C. Long Park.....	Clarence Neilsen.....	Uravan.....	Uranium, Vanadium
Sandy.....	Uravan.....	Douglas Smith & D. Cleghorn.....	Box 502, Uravan.....	Uranium, Vanadium
Shattuck Denn Shaft.....	Uravan.....	Shattuck Denn Mng. Corp.....	Uravan, Colo., and 120 Broadway, N. Y.....	Development
Starlight No. 7.....	N.W. Bull Canyon.....	Jeff Brumley & Assoc.....	Box 781, Cortez.....	Uranium, Vanadium
Starlight No. 8.....	N.W. Bull Canyon.....	Glenn Gregor.....	Naturita.....	Uranium, Vanadium
Sunrise No. 3.....	Central Bull Canyon.....	Lee Elder.....	Box 76, Uravan.....	Uranium, Vanadium
Sunrise No. 4.....	Central Bull Canyon.....	Wm. Moore.....	Naturita.....	Uranium, Vanadium
Teapot Dome.....	S.W. Bull Canyon.....	Carl Mangum & Assoc.....	Blanding, Utah.....	Uranium, Vanadium
Thunderbolt.....	N.E. end of Monogram Mesa.....	Henry O. Lehr.....	Rt. 1, Grand Junction.....	Uranium, Vanadium
T.N.T. No. 1.....	N.C. Long Park.....	J. L. Bran.....	Blanding, Utah.....	Uranium, Vanadium
T.N.T. No. 3.....	N.C. Long Park.....	Tim Fisher.....	Nucula.....	Uranium, Vanadium
Triangulation.....	Uravan.....	E. E. Walker.....	Box 36, Uravan.....	Uranium, Vanadium
Tripod.....	S.E. Long Park.....	D. C. Bunker & Assoc.....	Nucula.....	Uranium, Vanadium
Vanadium King.....	N.W. Long Park.....	Chas. & Elwin Flowelling.....	Box 905, Uravan.....	Uranium, Vanadium
Virgin Shaft.....	Central Long Park.....	O. E. Smart & C. Crandall.....	Naturita.....	Uranium, Vanadium
Wedge.....	E.C. Long Park.....	O. L. Cerney.....	Uravan.....	Uranium, Vanadium
West Opera Box.....	Monogram Mesa.....	Clark, Harrison & Higgins.....	Paradox.....	Uranium, Vanadium
Whitney Shaft.....	S.E. Long Park.....	Bielz & Snodgrass.....	Naturita.....	Uranium, Vanadium
Wild Steer.....	Monogram Mesa.....	Roy Andress & Assoc.....	Norwood.....	Uranium, Vanadium
Worcester Shaft.....	Uravan.....	Harold Worcester & Assoc.....	625 N. 3rd, Montrose.....	Development
Yellow Bird.....	La Salle Creek.....	Vanadium Corp. of America.....	Durango.....	Uranium, Vanadium
Zebra.....	S.E. Bull Canyon.....	W. P. Jones & C. L. Maxwell.....	Blanding, Utah.....	Uranium, Vanadium

## ADDENDUM—MONTROSE COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Elva M. No. 2		Herman Conrow	Rt. 3, Grand Junction	Uranium, Vanadium
		Harold A. Dull	Box 446, Moab, Utah	
		O. R. Hurst	Blanding, Utah	
Captain Jack		K. M. Wright	Moab, Utah	Uranium, Vanadium
Matchless	Gateway	E. E. Horn & R. C. Simms	Box 743, Rifle	
		Jack Richard	Gateway	Uranium, Vanadium

## OPERATING MINES IN OURAY COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Altoona Group (m)	Sneffels	T. Colvin Mining Co.	Ouray	Silver, Lead, Zinc
Camp Bird (m)	S. E. of Ouray	King Lease, Inc.	Ouray	Lead, Zinc, Copper
Dunmore	So. of Ouray	W. E. Brewster & Albert Robitsch	Ouray	Exploration
Edna No. 1	Ironton Park	St. Germain Foundation	Box 545, Ouray	Exploration
Idarado (m)	So. of Ouray	Idarado Mining Co.	14 Wall Street, New York, N. Y., and Ouray, Colo.	Gold, Silver, Copper
Magnet	Ironton Park	Gail Moore & Dan Briggs	Ouray	Silver, Lead, Zinc
Patsy	W. of Ironton Park	Earl Alexander	Ouray	Lead, Zinc, Copper
Revenue	Sneffels	Revenue Mines Co.	Box 545, Ouray	Exploration

## OPERATING MINES IN PARK COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Buckskin Joe	Buckskin Gulch	Buckskin Joe Mines, Ltd.	Alma	Silver, Gold
Hilltop (Dauntless Tunnel)	Horseshoe	Leadville Lead Corp.	2812 E. 6th Ave., Denver	Copper, Lead, Zinc
Ling Group	North Star Mtn.	Cordillera Corp.	Fairplay	Exploration Gold

## OPERATING MINES IN RIO BLANCO COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Brown Claim, Marvino No. 10 & Shylo	N. E. of Meeker	Devereaux Bros.	Meeker	Uranium, Vanadium
Burrell No. 1	N. E. of Meeker	Tungsten Uranium, Inc.	1301 S. W. 5th Ave., Portland, Oregon	
Midnight (North Block)	E. of Meeker	Ray Hasselbush & Henry Ziesenheim	Box 149, Rifle	Uranium, Vanadium
Midnight (South Block)	E. of Meeker	Carl H. Klinglesmith	Box 424, Rifle	Uranium, Vanadium
Windy Point No. 1	Uranium Peak	Jim La Donne	Rifle	Uranium, Vanadium

OPERATING MINES IN RIO GRANDE COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Summitville	Summitville	Resurrection Mining Co.	Leadville	Exploration

OPERATING MINES IN SAGUACHE COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Bear Creek Mining Co.	Greenback Mtn.	Bear Creek Mining Co.	1219 California St., Denver	Exploration
California Mine (Twins)	Flagsstaff Mtn.	W. J. Timney & Joe G. O'Brien	811 Shetland Road, Las Vegas, Nevada	Exploration
Cocomongo	Bonanza	Leonard Deay-Reusch	Box 854, Salida	Exploration
Cora Claim	Rawley Gulch	Walter Timney	811 Shetland Road, Las Vegas, Nevada	Development
La Garita (m)	Crystal Hill	La Garita Mines	Box 61, La Garita	Gold
Rawley	Rawley Gulch	Wm. J. Costello	Villa Grove, Bonanza Route	Silver, Copper, Lead, Zinc
Sky City	Big Park	Wannamaker Mng. & Milling Company	Box 246, Saguache	Development
Vallejo	Sosthenes Gulch	Johnston Mining Co.	Bonanza	Exploration
Villa Grove Turquoise	Villa Grove	Villa Grove Turquoise Lode	Villa Grove	Turquoise

OPERATING MINES IN SAN JUAN COUNTY, 1953

Name of Mine	Location	Operator	P. O. Address	Product
Black Hawk	Gladstone	Henry P. Ehrlinger	Silverton	Silver, Lead, Zinc
Garry Owen	Cunningham Gulch			
Gold Prince (m)	Silverton	Old Hundred Gold Mng. Co.	Box 448, Silverton	Development
Graysill Group	Hermosa Creek	Venture Leasing Co.	Silverton	Silver, Lead, Zinc
Great Eastern	Eureka	Vanadium Corp. of America	Durango	Uranium, Vanadium
Henrietta	Silverton	Great Eastern Mng. Co.	Silverton	Silver, Lead, Zinc
Hercules	Silverton	United States Metals Co.	Silverton	Silver, Lead, Zinc
		Galite Boy Mine, Inc.	Silverton	Gold, Silver, Copper, Zinc, Lead
Kansas City	Gladstone	Graham Mines Co.	Silverton	Exploration
Lark	N. of Silverton	Columbine Leasing Co.	Silverton	Silver, Lead, Zinc
Lead Carbonate	Gladstone	Lead Carbonate Mines, Inc.	Silverton	Silver, Lead, Zinc
London	Above Animas Forks	William Erickson	Silverton	Gold, Silver, Lead, Zinc
Lower Kochler Tunnel	Red Mtn. Pass	Eastridge Mng. Co.	Ouray	Exploration
May Day	Silverton	Ennis Cole & Assoc.	Box 561, Silverton	Silver, Lead, Zinc
Ohio (Dump) (m)	Gladstone Road	Williams & Walby	Silverton	Tungsten
Osceola	Cunningham Gulch	T. S. Hadden & Assoc.	Silverton	Gold, Silver, Lead

## OPERATING MINES IN SAN JUAN COUNTY, 1953—Continued

Name of Mine	Location	Operator	P. O. Address	Product
Pride of the West.....	Cunningham Gulch.....	Pride of the West, Inc.	Frank Hitti, Agent, Silverton.	Gold, Silver, Lead
Shenandoah Dives (m).....	Silverton.....	Shenandoah Dives Mng. Co.	Silverton.....	Gold, Silver, Copper, Lead
Thelma.....	Silver Ledge.....	Paul Hoffman & Assoc.	Silverton.....	Silver, Lead, Zinc
Treasure Mountain.....	N.E. of Silverton.....	Treasure Mtn. Gold Mng. Co.	801 Midland Savings Bldg., Denver.....	Exploration

## OPERATING MINES IN SAN MIGUEL COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
American Eagle.....	Little Gypsum Valley.....	Oliver Brothers.....	Naturita.....	Uranium, Vanadium
Andrus.....	S.W. of Ouray.....	The Eagle Rock Co.	Ouray.....	Exploration
Ann No. 1 Incline.....	Slick Rock Hill.....	Wm. J. Burwell.....	Egnar.....	Uranium, Vanadium
Bald Eagle.....	Gypsum Valley.....	J. L. McCullah.....	Redvale.....	Uranium, Vanadium
Bean Patch.....	O'Neill Group.....	C. L. Lewis, Contractor for.....	Dove Creek.....	Uranium, Vanadium
Black Jack (Legion Group) Slick Rock.....		{ Parker Mining & Dev. Co. Dulaney Mng. Co.}	{ 629 N. Ave., Grand Junction... 312 1st Nat'l. Bank Bldg., Grand Junction.....}	{ Uranium, Vanadium Uranium, Vanadium
Bob Tail.....	Telluride.....	Idarado Mining Co.	Ouray.....	Gold, Silver, Lead, Zinc
Brighton.....	O'Neill Group.....	Joseph Barnes.....	Uravan.....	Uranium, Vanadium
Butterfly (m).....	Ophir Loop.....	Delbert McClusky & Assoc.	Telluride.....	Silver, Lead, Zinc
Canfield, A. H.....	Slick Rock Hill.....	A. H. Canfield & Assoc.	Dove Creek.....	Uranium, Vanadium
Carbenero.....	Ophir.....	Silver Bell Mines Co.	Ophir.....	Gold, Silver, Lead, Zinc
Couger Lower Shaft.....	Couger Group.....	E. J. Robinett.....	Egnar.....	Uranium, Vanadium
Couger Group.....	Slick Rock.....	Henry Holling.....	Egnar.....	Uranium, Vanadium
Early Morn.....	Upper Gypsum Valley.....	Frank Myddelton.....	Nucla.....	Uranium, Vanadium
Ellison.....	Slick Rock Bridge.....	Blue Creek Mining Co.	618 Rood Ave., Grand Junction.	Uranium, Vanadium
Elouisa Incline.....	Slick Rock Hill.....	W. R. McCormick.....	Dove Creek.....	Uranium, Vanadium
Falcon (Legion Group).....	Slick Rock.....	Uranium Metals, Inc.	Dove Creek.....	Uranium, Vanadium
Full Moon.....	2 mi. S. Slick Rock.....	Geo. Hazen.....	Box 18, Egnar.....	Uranium, Vanadium
Golden Rod No. 4.....	Egnar.....	Johnson & Hargrove.....	Dove Creek.....	Uranium, Vanadium
Gorgeto.....	Slick Rock Hill.....	Jack C. Turner.....	Moab, Utah.....	Uranium, Vanadium
Hawk.....	Slick Rock Hill.....	Wm. J. Burwell.....	Egnar.....	Uranium, Vanadium
Hawkeye.....	Dolores Riv. at Slick Rock.....	Duncan & Sanchez.....	Dove Creek.....	Uranium, Vanadium
Helen Claim Incline No. 1.....	Slick Rock.....	San Juan Leasing Co.	Uravan.....	Uranium, Vanadium
Hot Shot.....	Bull Canyon.....	Homer Rosenquist.....	Box 223, Naturita.....	Uranium, Vanadium
Jack Knife No. 3.....	Bull Canyon.....	Robert Williams.....	Norwood.....	Uranium, Vanadium

Japan Flora.....	Telluride.....	F. George & F. Zanett.....	Ouray.....	Uranium, Vanadium
Joker.....	Little Gypsum Valley.....	Albert A. Short.....	Placerville.....	Uranium, Vanadium
Jupiter.....	Egnar.....	John Ledlow.....	Naturita.....	Uranium, Vanadium
King No. 2 Incline 3 & 4.....	Slick Rock Hill.....	Tom Skidmore.....	Box 311, Dove Creek.....	Uranium, Vanadium
King No. 3 & 4 Incline (Frenchie).....	Slick Rock Hill.....	Ortmayer Mining Co.....	1037 Ouray Ave., Grand Junction.....	Uranium, Vanadium
Leopard Creek Group.....	Leopard Creek.....	Vanadium Corp. of America.....	Naturita.....	Uranium, Vanadium
Lone Ridge.....	Gypsum Valley.....	J. L. McCullah.....	Redvale.....	Uranium, Vanadium
Lookout.....	Han Canyon.....	H. A. Hollen & Assoc.....	Pleasant View.....	Uranium, Vanadium
Lost Claim.....	Little Gypsum Valley.....	William Story, Jr.....	Naturita.....	Development
Main Street.....	Bull Canyon.....	M. R. Conley & Melvin Rogers.....	Box 84, Norwood.....	Uranium, Vanadium
Meldrum Tunnel.....	Telluride.....	Idarado Mining Co.....	Ouray.....	Gold, Silver, Lead, Zinc
Middle Group.....	Dolores Riv. at Slick Rock.....	M. R. Watters.....	Dolores.....	Uranium, Vanadium
Nelson & Larson.....	Egnar.....	G. W. Nelson & J. L. Larson.....	Egnar.....	Uranium, Vanadium
Norma Jean No. 1.....	Egnar.....	George Hazen.....	Egnar.....	Uranium, Vanadium
O'Neil Radium Group.....	Slick Rock Hill.....	Dulaney Mining Co.....	1st Nat'l Bank Bldg., Grand Junction.....	Uranium, Vanadium
Otero Incline.....	Slick Rock Hill.....	W. R. McCormick.....	Dove Creek.....	Uranium, Vanadium
Parrot.....	8 mi. S.E. Slick Rock.....	Consolidated Uranium Mines, Inc.....	307 Darling Bldg., Salt Lake City, Utah.....	Uranium, Vanadium
Radium 7.....	O'Neill Group.....	Fitz Wright.....	Box 249, Naturita.....	Uranium, Vanadium
Silver Bell (m).....	Ophir Loop.....	Silver Bell Mines Co.....	Ophir.....	Lead, Zinc, Gold, Silver, Tungsten
Sky Lark.....	Little Gypsum Valley.....	Melvin Brewer.....	Dove Creek.....	Uranium, Vanadium
Tail Hold.....	6 mi. above Slick Rock.....	Skidmore Mining Co.....	Box 311, Dove Creek.....	Uranium, Vanadium
Telluride (m).....	Telluride.....	Telluride Mines, Inc.....	Telluride.....	Gold, Silver, Lead, Zinc
Tom Boy.....	O'Neill Group.....	Fitz Wright.....	Box 249, Naturita.....	Uranium, Vanadium
Veta Wad.....	Slick Rock Hill.....	Allen Hopkins.....	Egnar.....	Uranium, Vanadium
Veta Wad No. 2.....	Slick Rock.....	Gayno Mining Co.....	730 N. 3rd St., Montrose.....	Uranium, Vanadium

OPERATING MINES IN SUMMIT COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Alice Blue Gown.....	Breckenridge	Wm. Nelson Bersonnet, Jr.....	Breckenridge	Exploration
Cecil & Betty Jean Lode.....	Montezuma	Ralph Terrill & Assoc.....	Montezuma	Manganese
Chataqua (m).....	Montezuma	Sally Eubar Mining Co.....	Box 158, Breckenridge.....	Lead, Zinc
Big Four (Kyle & Thomas).....	Heeney	Kyle & Thomas.....	Box 8, Heeney.....	Development
				Lead, Zinc

## OPERATING MINES IN SUMMIT COUNTY—Continued

Name of Mine	Location	Operator	P. O. Address	Product
Little Hope.....	South Swan	A. R. Wright & Son.....	Jefferson	Development
New Recruit.....	Montezuma	Elmer Josephson.....	Evergreen	Development
Owl Tunnel.....	Breckenridge	Jim B. Pearce	69 So. Pearl St., Denver	Development
Paymaster.....	Montezuma	Fred Harris & Pat & Mike Vinson	Breckenridge	Lead, Zinc
Pittsburgh.....	Breckenridge	M. K. Gaymon & James P. Webb	2550 Yarrow St., Denver	Development
Preston Tunnel.....	Montezuma	A. R. Rhine	Montezuma	Silver-Moly.
Pride of the Mountain.....	Georgia Pass	Horn Brothers		Development
Queen of the West.....	Kokomo	Ivanhoe Trust	Kokomo	Development
St. John.....	Montezuma	Elvin Oelrich	Montezuma	Silver, Lead, Zinc
Silver King (m).....	Montezuma	John M. Jeffery	Montezuma	Silver, Lead, Zinc
Wellington.....	Breckenridge	W. L. Davenport	Box 192, Breckenridge	Gold, Silver, Lead, Zinc

## OPERATING MINES IN TELLER COUNTY, 1953

Name of Mine	Location	Operator	P. O. Address	Product
Ajax (m).....	Battle Mtn.	Golden Cycle Corp.	P. O. Box 127, Cripple Creek	Gold
Ajax Lease.....	Battle Mtn.	Gold Coin Leasing Co.	Cripple Creek	Gold
Annaconda Tunnel.....	Annaconda	Gulch-LeClair Con. Mines Co.	Box 127, Cripple Creek	Exploration
Carbonate Queen.....	Battle Mtn.	Acme Mining Co.	156 Montgomery Street, San Francisco, Calif.	Gold
Chicago Tunnel.....	Globe Hill	Globe Hill Min. Co.	333 Independence Bldg., Colorado Springs	Development
Cresson.....	Raven Hill	Cresson Cons. Gold Mining Co.	Box 127, Cripple Creek	Gold
Cresson Lease.....	Raven Hill	Trail Creek Mines, Inc.	Cripple Creek	Gold
Deadwood.....	Bull Hill	Deadwood Leasing Co.	Cripple Creek	Gold
E. Porter Gold King.....	Gold Hill	Doepke Mining Co.	2431 N. Nevada, Colorado Springs	Development
Gold King.....	Cripple Creek	Cripple Creek M. & M. Co.	Box 247, Cripple Creek	Gold-Tourist
Gold Sovereign.....	Bull Hill	Gold Sovereign Mng. Co.	Cripple Creek	Development
Independence.....	Battle Mtn.	United Gold Mines	Box 127, Cripple Creek	Exploration
Isabella.....	Bull Hill	Isabella Mines, Inc.	Cripple Creek	Development
Isabella Dump.....	Bull Hill	Carl E. Zaring	948 E. Las Animas St., Colorado Springs	Gold
King Solomon.....	Cripple Creek	Merritt K. Ruddock	Box 1, Florissant, Colorado Springs	Development
Little May Tunnel.....	Beacon Hill	John Robush & Co.	Box 205, Cripple Creek	Gold
Mary McKinney Dump.....	Gold Hill	Le Clair Consolidated Mines Co.	Box 127, Cripple Creek	Gold
Molly Kathleen.....	Tenderfoot Hill	Markley M. & Expl. Co.	Cripple Creek	Gold-Tourist
Portland Surface Shaft.....	Battle Mtn.	Isabella Mines, Inc.	Cripple Creek	Development
Portland No. 1 Shaft.....	Battle Mtn.	United Gold Mines	Box 127, Cripple Creek	Gold
Strong.....	Victor	Front Range Mines	1536 Welton St., Denver	Gold
Tilden.....	Straub Mtn.	F. & F. Mining Co.	Victor	Gold
Vindicator Group.....	Battle Mtn.	United Gold Mines	Box 127, Cripple Creek	Gold

(m) Denotes Mill operating in connection with Mine.

OPERATING QUARRIES IN BOULDER COUNTY, 1953

Name of Quarry	Location	Operator	P. O. Address	Product
Clemen's	Left Hand Creek	Conda & Bingeman	Lyons	Sandstone
Comstock Peat Lode	Nederland	McCoy & Jensen	Morrison	Peat
Hall	Lyons	University of Colo.	% R. W. Lind, Bldg. 208, Boulder	
Jacobson-Evans Stone Co.	Lyons	Jacobson-Evans Stone Co.	P. O. Box C, Lyons	Sandstone
Left Hand Peat Co.	Ward	Left Hand Peat Co.	Box 336, Boulder	Sandstone
Pickett	N. Left Hand Crk.	University of Colo.	U. G. C., Bldg. 220, Boulder	Peat
Red Stone	Lyons	Colorado Stone Co.	1645 Main St., Loveland	Sandstone
St. Vrain	Lyons	K. C. Brodie	Box 325, Lyons	Sandstone
Summers	Lyons	Dewey H. Summers	Box 124, Lyons	Sandstone
White Stone	Lyons	Jess A. Vickery	Lyons	Sandstone

OPERATING QUARRIES IN CHIAFFEE COUNTY

Name of Quarry	Location	Operator	P. O. Address	Product
Calcium	Ute Trail Salida	Calcium Company	Box 910, Salida	Calcium
Crystal Stone Placer	Ute Trail	Colo. Granite Co.	348 West 5th St., Salida	Granite
Monarch Lime	Salida	Colorado Fuel & Iron Co.	Garfield	Limestone
Mt. Princeton Granite	Mt. Princeton			
Soda Spar (Homestake)	Salida	Calcium Company	Box 910, Salida	Granite
Warner's	Cameron Mt. Dist.	M. & S. Inc.	Box 671, Salida	Feldspar
		James Warner	Rainbow Bldg., Salida	Granite

OPERATING QUARRIES IN COSTILLA COUNTY, 1953

Name of Quarry	Location	Operator	P. O. Address	Product
Colo. Aggregate Co.	Mesita	Colo. Aggregate Co., Inc.	Mesita	Volcanic Cinder

OPERATING QUARRIES IN CUSTER COUNTY

Name of Quarry	Location	Operator	P. O. Address	Product
Delano	Bel. Texas Creek & Hillside	Coleman Brothers	111 N. Farragat St., Colorado Springs	Monumental Granite
Greene	Rosita	Great Lakes Carbon Corp.	Box 291, Florence	Pelite
Wilfley	Rosita	Great Lakes Carbon Corp.	Box 291, Florence	Pelite

OPERATING QUARRIES IN DOUGLAS COUNTY

Name of Quarry	Location	Operator	P. O. Address	Product
Helmer Limestone	Littleton	Helmer Bros.	Box 94, Littleton	Limestone and Silica Sand

## OPERATING QUARRIES IN EAGLE COUNTY

Name of Quarry	Location	Operator	P. O. Address	Product
Colo. Lava Products.....	Dotsero .....	Colo. Lava Products.....	Box 128, Gypsum.....	Volcanic Cinder

## OPERATING QUARRIES IN EL PASO COUNTY

Name of Quarry	Location	Operator	P. O. Address	Product
Lennox Breed.....	Pikeview .....	Golden Cycle Corp.....	Carlton Bldg., Colorado Springs.....	Crushed Rock
Little Fountain Creek.....	Colo. Springs.....	Nixon Bros.....	2327 W. Kiowa, Colorado Springs.....	Crushed Rock and Fire Clay

## OPERATING QUARRIES IN FREMONT COUNTY

Name of Quarry	Location	Operator	P. O. Address	Product
American Crystal.....	Taylor Gulch.....	Frank H. Norberg Co.....	703 U. S. Nat'l. Bank Bldg., Denver.....	Limestone
Aspen Ridge.....	Whitehorn Dist.....	V. D. Coleman & Co.....	225 W. Cimarron, Colorado Springs.....	Monumental Granite
Burnito .....	Canon City.....	Ray Sturbaum & Son.....	Canon City.....	Silica Rock
Calcite .....	Howard .....	Colo. Limestone Co.....	Box 8, Howard.....	Limestone
Canon Dolomite.....	Canon City.....	Colo. Fuel & Iron Co.....	Pueblo.....	Dolomite
Coaldale .....	Coaldale .....	Nat. Senatore.....	Penrose.....	Gypsum
Colorado Springs.....	Salt Canyon.....	Nat. Senatore.....	Box 387, Canon City.....	Gypsum
Colorosa Travertine.....	Canon City.....	Colonna & Co. of Colo.....	227 Main St., Canon City.....	Marble
Dewal's Hole.....	Travertine.....	J. E. & David Cowan.....	Box 431, Canon City.....	Feldspar, Rose Quartz, Mica and Beryl
English (Wellsville).....	English Siding.....	Colonna & Co. of Colo.....	Box 387, Canon City.....	Marble
Freek Marble.....	Garden Park.....	Cowan Bros.....	227 Main St., Canon City.....	Monumental Stones
Ganister .....	Temple Canyon.....	Ralph Pierce.....	Canon City.....	Silica Rock
June Rose.....	Copper Gulch.....	Schmidt-Wedel.....	Westcliffe.....	Feldspar
Mica Lode.....	Canon City.....	Lockhart & Son.....	Box 521, Canon City.....	Mica, Feldspar
Oak Creek.....	Sand Gulch.....	V. D. Coleman & Co.....	225 W. Cimarron, Colorado Springs.....	Monumental Granite
Phanton Lode.....	Phanton Canyon.....	Phanton Lode Mng. Co., Inc.....	Box 209, Rt. 1, Canon City.....	Feldspar-Mica, Beryl
Penrose .....	Salt Canon.....	Dale Hoover.....	1015 Harrison St., Canon City.....	Silica Rock
Portland .....	Portland .....	Ideal Cement Co.....	Denver Nat'l. Bank Bldg., Denver.....	Sandstone, Shale, Limestone
Royal Gorge Granite.....	6 mi. W. Canon City.....	Cowan Bros.....	227 Main St., Canon City.....	Granite
Spikebuck .....	W. of Canon City.....	Louis Arko & R. C. Kennedy.....	Box 726, Canon City.....	Feldspar



Texas Creek View.....Texas Creek Station.....Isabell & Son.....1009 Elm St., Canon City.....Feldspar, Mica, Beryl  
 Trail Gulch.....Garden Park.....Colonna & Co.....Canon City.....Marble  
 Tumble Mountain.....Wellsville.....U. S. Soil Conditioning Co.....Rainbow Bldg., Salida.....Gypsum

OPERATING QUARRIES IN GARFIELD COUNTY

Name of Quarry	Location	Operator	P. O. Address	Product
Glenwood Lime.....	Glenwood Springs.....	Frank H. Norberg & Co.....	703 U. S. Nat'l. Bank Bldg., Denver.....	Limestone

OPERATING QUARRIES IN GILPIN COUNTY

Name of Quarry	Location	Operator	P. O. Address	Product
Rudolph Ranch.....	The Gap.....	Gus Rudolph.....	Black Hawk.....	Peat

OPERATING QUARRIES IN JEFFERSON COUNTY

Name of Quarry	Location	Operator	P. O. Address	Product
Big Bertha.....	Buffalo Creek.....	R. V. McGuire.....	Buffalo Creek.....	Feldspar
Bigger's Mica Mine Quar.....	Tiny Town.....	Waltz & Hewitt.....	Rt. 2, Morrison.....	Feldspar, Mica, Beryl
Ken-Caryl Lease.....	Tiny Town.....	Wilson, Prosser & Provo.....	Box 232, Rt. 1, Morrison.....	Beryl, Feldspar, Mica

OPERATING QUARRIES IN LAKE COUNTY

Name of Quarry	Location	Operator	P. O. Address	Product
Hayden Ranch.....	Hayden Ranch.....	Mt. Elbert Peat Moss Co.....	Leadville.....	Peat Moss
Pine View Placer.....	Leadville.....	Dale Hoover.....	Parkdale.....	Silica Rock
Silica Placer.....	Tennessee Gulch.....	Dale Hoover.....	Parkdale.....	Silica Rock

OPERATING QUARRIES IN LARIMER COUNTY, 1953

Name of Quarry	Location	Operator	P. O. Address	Product
Arkins.....	Masonville.....	Colo. Stone Co.....	Box 596, Longmont.....	Sandstone
Berthoud.....	W. of Berthoud.....	Colo. Stone Co.....	Box 596, Longmont.....	Sandstone
Clark's.....	Owl Canyon.....	Frank H. Norberg & Co.....	703 U. S. Nat'l. Bank Bldg., Denver.....	Limestone
Goodwin.....	Ft. Collins.....	Ernest W. Munroe.....	Rt. 2, Box 273, Ft. Collins.....	Gypsum
La Porte.....	La Porte.....	Ideal Cement Co.....	Denver Nat'l. Bank Bldg., Denver.....	Limestone
Loukonen.....	Lyons.....	Loukonen Bros.....	Rt. 2, Longmont.....	Sandstone
Masonville Gray.....	Masonville.....	C. W. Weaver.....	759 S. York Street, Denver.....	Sandstone
Ohline.....	Lyons.....	Arthur Ohline.....	Box 314, Lyons.....	Sandstone
U. S. Gypsum.....	W. of Loveland.....	U. S. Gypsum Co.....	300 W. Adams, Chicago, Ill.....	Gypsum

## OPERATING QUARRIES IN LAS ANIMAS COUNTY

Name of Quarry	Location	Operator	P. O. Address	Product
Red Rock	25 mi. SW Higbee, Colo.	Alabaster Lamp Mfg. Co.	901 W. 4th Street, La Junta	Alabaster

## OPERATING QUARRIES IN TELLER COUNTY

Name of Quarry	Location	Operator	P. O. Address	Product
Divide Peat Bog	Divide	Soll-N-Rich Co., M. B. Martin	2695 W. Colorado Avenue, Colorado Springs	Peat
Gillette Peat Bog	Gillette	Western States Peat & Fertilizer Co.	2108 W. Cucharras, Colorado Springs	Peat
Limber Pine	N.W. Woodland Park	Wes Earhart & Glenn Spelman	Woodland Park	Feldspar
Lost Dutchman	Rampart Range Rd.	Glenn Spelman	Woodland Park	Feldspar
Peat Bog	Divide	Western States Peat & Fertilizer Co.	2108 W. Cucharras, Colorado Springs	Peat
Pikes Peak	W. of Cripple Crk.	Pikes Peak Granite Co.	126½ E. Pikes Peak Ave., Colorado Springs	Building Stone

## OPERATING CLAY MINES AND PITS IN BOULDER COUNTY, 1953

Name of Mine	Location	Operator	P. O. Address	Product
Rocky Flats Clay Pit	Marshall	Longmont Brick & Tile Co.	Box 727, Longmont	Clay

## OPERATING CLAY MINES AND PITS IN DOUGLAS COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Helmer Clay	Littleton	Helmer Bros.	Box 94, Littleton	Fire Clay
Hillside	Waterton	W. H. Hedley	3726 Newton St., Denver	Clay
Hogback	Waterton	Robinson Brick & Tile Co.	500 So. Santa Fe, Denver	Clay and Fire Clay
Johnson Clay	Castle Rock	Stroud Wisenhunt	Castle Rock	Plastic Clay
Stevens Ranch Clay Pit	Castle Rock	Stroud Wisenhunt	Castle Rock	Plastic Clay

## OPERATING CLAY MINES AND PITS IN EL PASO COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Apache No. 5	Calhan	Robinson Brick & Tile Co.	500 So. Santa Fe, Denver	Clay
Hecla Clay Pit	Husted	Glen A. Scribner	Rt. 3, Box 116, Colorado Springs	Clay
Little Fountain Creek	Colo. Springs	Nixon Bros.	2327 W. Kiowa, Colorado Springs	Clay

OPERATING CLAY MINES AND PITS IN FREMONT COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Flint	Canon City	C. E. Goodale	2121 N. 9th Street, Canon City	Fire Clay

OPERATING CLAY MINES AND PITS IN JEFFERSON COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Chieftain	5 mi. W. Denver	Robinson Brick & Tile Co.	500 So. Santa Fe, Denver	Fire Clay
Cowan's Clay Pit	Morrison	Montgomery Bros.	1208 So. Mariposa, Denver	Clay
Denver Terra Cotta	Golden	Denver Terra Cotta Co.	135 Tejon Street, Denver	Plastic Clay
Golden Clay Mining Co.	Golden	Golden Clay Mining Co.	Box 292, Golden	Fire Clay
Johnson Clay Mine No. 1	Golden	Denver Sewer Pipe & Clay Co.	4501 Fox Street, Denver	Clay
Johnson Clay Mine No. 2	Golden	Denver Sewer Pipe & Clay Co.	4501 Fox Street, Denver	Clay
Lakewood Brick Co.	Golden	Lakewood Brick Co.	1325 Jay Street, Denver	Clay
Lindsey Clay Mine	Golden	Geo. W. Lindsey	1931 Forrest St., Denver	Clay
North Golden Clay	Golden	Denver Fire Brick Co.	2301 Blake St., Denver	Fire Clay
Geo. W. Parfet Est. Inc.	Golden	Geo. W. Parfet Estate, Inc.	Linder Block, P. O. Box 266, Golden	Clay
H. M. Rubey Clay Co.	Golden	Geo. W. Parfet Estate, Inc.	Linder Block, P. O. Box 266, Golden	Clay
South Golden Clay Mine	Golden	Denver Fire Brick Co.	2301 Blake St., Denver	Fire Clay
Strainland	Golden	Denver Sewer Pipe & Clay Co.	4501 Fox Street, Denver	Fire Clay

OPERATING CLAY MINES AND PITS IN LAS ANIMAS COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
New Mary	Trinidad	Trinidad Brick & Tile Co.	Trinidad	Clay

OPERATING CLAY MINES AND PITS IN PUEBLO COUNTY

Name of Mine	Location	Operator	P. O. Address	Product
Chamblin	Capers Spur	Standard Fire Brick Co.	24th & Albany, Pueblo	Fire Clay
Early Bird	Stone City	Coleman & Freeman	403 1/2 Main St., Canon City	Fire Clay
Nellie Helen	Stone City	Arthur L. Wands	Stone City	Clay
Pueblo Clay Products No. 1	Stone City	Pueblo Clay Products Co.	Box 1657, Pueblo	Clay
Pueblo Clay Products No. 2	Stone City	Pueblo Clay Products Co.	Box 1657, Pueblo	Clay
Pueblo Clay Products No. 3	Stone City	Pueblo Clay Products Co.	Box 1657, Pueblo	Clay
Pueblo Clay Products No. 4	Stone City	Pueblo Clay Products Co.	Box 1657, Pueblo	Clay
Rock Creek	Rock Creek	Standard Fire Brick Co.	24th & Albany, Pueblo	Fire Clay

## OPERATING MILLS, PLANTS AND SMELTERS BOULDER COUNTY, 1953

Name of Mill or Plant	Location	Operator	P. O. Address	Product
Clyde & Gale	5 mi. W. Nederland	Elmer Ford	Nederland	Tungsten
Cross Washer Plant	3 mi. NE Nederland	Tom Linger & Geo. A. Mengel	Nederland	Tungsten
Lakewood Mill	Lakewood	Cobb & Weldon	401 Pine St., Boulder	Tungsten
Lindsey Washer	Nederland	Geo. Lindsey	Boulder	Tungsten
Marion Mill	Sugarloaf	Boulder Tungsten Mines, Inc.	% Geo. Teal, Box 37, Boulder	Tungsten
Prospect Screening Plant	Nederland	W. G. Ford	Box 150, Boulder	Tungsten
Pastore Washer	Nederland	Pastore & Co.	1946 Walnut Street, Boulder	Tungsten
Valmont	Valmont	Gen I. Chemical & Dye Corp.	Box 228, Boulder	Fluorspar
Wano Mill	Jamestown	Ozark-Mahoning Co.	Jamestown	Fluorspar
Wolfstongue Mill	Nederland	Hetzer Mines Co., Inc.	Box 150, Boulder	Tungsten

## OPERATING MILLS, PLANTS AND SMELTERS CHIAFFEE COUNTY

Name of Mill or Plant	Location	Operator	P. O. Address	Product
Calcium Mill	Salida	Calcium Company	Box 910, Salida	Calcium
Granite Finishing Plant	Salida	Colorado Granite Co.	Salida	Granite
Monarch Crushing Plant	Monarch	Colorado Fuel & Iron Corp.	Garfield	Limestone
Reynolds Mill	Salida	Reynolds Mining Corp.	Box 169, Salida	Fluorspar
Western Feldspar Mill	Salida	Western Feldspar Milling Co.	Box 671, Salida	Feldspar

## OPERATING MILLS, PLANTS AND SMELTERS CLEAR CREEK COUNTY, 1953

Name of Mill or Plant	Location	Operator	P. O. Address	Product
Dixie Mill	Idaho Springs	LeRoy Giles & Co.	Idaho Springs	Gold
Front Range Mill	Dumont	Front Range Mg. Co., Inc.	Burns Vault Bldg, Denver	Lead, Zinc
Lamertine Mill	Idaho Springs	Lamertine Mines Co.	% Chas Anderson, Idaho Springs	Lead, Zinc
Lupton Mill	Georgetown	Lupton Mining Co.	Georgetown	Lead, Zinc
Silver Spruce Mill	Idaho Springs	Silver Spruce Gold Mg. Co.	Idaho Springs	Lead, Zinc

## OPERATING MILLS, PLANTS AND SMELTERS COSTILLA COUNTY

Name of Mill or Plant	Location	Operator	P. O. Address	Product
Mesita Hill Plant	2 mi. W. Mesita	Colorado Aggregate Co., Inc.	Mesita	Volcanic Cinder

OPERATING MILLS, PLANTS AND SMELTERS DENVER COUNTY

Name of Mill or Plant	Location	Operator	P. O. Address	Product
Chemical Plant.....	Denver	{ General Chem. Division	1271 W. Bayaud, Denver.....	Sulfuric Acid
Globeville Plant.....	Globeville	{ Allied Chemical & Dye Corp.....	40 Rector St., N. Y. 6, N. Y.	
International Mineral & Chemical Corp.....	Denver	American Smelting & Ref. Co.....	120 Broadway, New York 5, N. Y.	Cadmium, etc.
		International Mineral & Chemical Corp.....	1333 W. Maple, Denver.....	Feldspar

OPERATING MILLS, PLANTS AND SMELTERS DOLORES COUNTY

Name of Mill or Plant	Location	Operator	P. O. Address	Product
Rico Argentine Mill.....	Rico	Rico Argentine Mining Co.....	Rico	Lead, Zinc

OPERATING MILLS, PLANTS AND SMELTERS EAGLE COUNTY

Name of Mill or Plant	Location	Operator	P. O. Address	Product
Empire Zinc Mill.....	Gilman	{ New Jersey Zinc Co.....	Gilman	Lead, Zinc
		{ Empire Zinc Div.....	160 Front St., N. Y. 38, N. Y.	

OPERATING MILLS, PLANTS AND SMELTERS FREMONT COUNTY

Name of Mill or Plant	Location	Operator	P. O. Address	Product
Canon Crushing Plant.....	Canon City	Colonna & Co. of Colo.....	P. O. Box 387, Canon City.....	Terrazzo
Empire Zinc.....	Canon City	New Jersey Zinc Co.....		Zinc
Portland Cement Plant.....	Portland	Empire Zinc Div.....	Canon City.....	
		Ideal Cement Co.....	Portland, Colo., or Denver	
		Ideal Cement Co.....	Natl. Bank Bldg., Denver	
		Ideal Cement Co.....	Natl. Bank Bldg., Denver	Plaster

OPERATING MILLS, PLANTS AND SMELTERS GARFIELD COUNTY

Name of Mill or Plant	Location	Operator	P. O. Address	Product
Oil Shale Plant.....	Rifle	U. S. Bureau of Mines.....	New Customhouse, Denver.....	Oil Shale
U. S. Vanadium Rifle Mill.....	Rifle	U. S. Vanadium Co.....	Rifle	Uranium, Vanadium

OPERATING MILLS, PLANTS AND SMELTERS GUNNISON COUNTY

Name of Mill or Plant	Location	Operator	P. O. Address	Product
Carter Mill.....	Ohio City	Kanorado Mng. & Dev. Co.....	500 Summer Ave., Littleton.....	Lead, Zinc
Keystone Mill.....	Crested Butte	Western Knapp Engineering C.....	764 Folsom Street, San Francisco, Calif.....	Lead, Zinc

## OPERATING MILLS, PLANTS AND SMELTERS JACKSON COUNTY

Name of Mill or Plant	Location	Operator	P. O. Address	Product
Northgate	Northgate	Ozark-Mahoning Co.	Cowdery	Fluorspar

## OPERATING MILLS, PLANTS AND SMELTERS JEFFERSON COUNTY

Name of Mill or Plant	Location	Operator	P. O. Address	Product
Lyon's Plant	Arvada	Beryl Ores Co.	Arvada	Beryl

## OPERATING MILLS, PLANTS AND SMELTERS LAKE COUNTY

Name of Mill or Plant	Location	Operator	P. O. Address	Product
Arkansas Valley Smelter	Leadville	American Smelting & Ref. Co.	Leadville	Gold, Silver, Lead
Climax Mill	Climax	Climax Molybdenum Co.	Climax	Moly. Tin, Tungsten
Resurrection Mill	Calif. Gulch	Resurrection Mining Co.	Leadville	Lead, Zinc
Robert's Mill	Hamm Mill Site	J. H. Roberts	128 E. 9th St., Leadville	Lead, Zinc

## OPERATING MILLS, PLANTS AND SMELTERS LA PLATA COUNTY, 1953

Name of Mill or Plant	Location	Operator	P. O. Address	Product
V. C. A. Durango Plant	Durango	Vanadium Corp. of America	Durango	Uranium, Vanadium

## OPERATING MILLS, PLANTS AND SMELTERS LARIMER COUNTY

Name of Mill or Plant	Location	Operator	P. O. Address	Product
La Porte Plant	La Porte	Ideal Cement Co.	Denver Nat'l. Bank Bldg., Denver	Cement

## OPERATING MILLS, PLANTS AND SMELTERS MESA COUNTY

Name of Mill or Plant	Location	Operator	P. O. Address	Product
A. E. C. Plant	Grand Junction	Atomic Energy Commission	Grand Junction	Experimental
Climax Uranium Co. Plant	Grand Junction	Climax Uranium Co.	P. O. Box 867, Grand Junction	Uranium, Vanadium

## OPERATING MILLS, PLANTS AND SMELTERS MINERAL COUNTY

Name of Mill or Plant	Location	Operator	P. O. Address	Product
Emperius Mill	Creede	Emperius Mining Co.	Creede	Lead, Zinc

OPERATING MILLS, PLANTS AND SMELTERS MONTROSE COUNTY

Name of Mill or Plant	Location	Operator	P. O. Address	Product
U. S. V. Uravan Plant.....	Uravan	U. S. Vanadium Company.....	Uravan	Uranium, Vanadium
V. C. A. Naturita Plant.....	Naturita	Vanadium Corp. of America.....	Durango	Uranium, Vanadium

OPERATING MILLS, PLANTS AND SMELTERS OURAY COUNTY

Name of Mill or Plant	Location	Operator	P. O. Address	Product
Camp Bird Mill.....	Ouray	King Lease, Inc.....	Ouray	Lead, Zinc, Copper
Idarado Mill.....	Ouray	Idarado Mining Co.....	Ouray	Lead, Zinc, Copper
Silver Shield Mill.....	Ouray	Colvin Mining & Milling Co.....	Ouray	Lead, Zinc

OPERATING MILLS, PLANTS AND SMELTERS PUEBLO COUNTY

Name of Mill or Plant	Location	Operator	P. O. Address	Product
Mica Grinding.....	Coto, Springs	International Mineral & Chem. Corp.....	330 W. D St., Pueblo 20 N. Wacker Dr., Chicago, Ill. }	Mica

OPERATING MILLS, PLANTS AND SMELTERS SAGUACHE COUNTY, 1953

Name of Mill or Plant	Location	Operator	P. O. Address	Product
La Garita Mill.....	Crystal Hill	La Garita Mines.....	Box 61, La Garita	Gold
Saguache Smelting.....	Saguache	Saguache Smelting Co.....	Box 246, Saguache	Lead, Zinc Under Construction

OPERATING MILLS, PLANTS AND SMELTERS SAN JUAN COUNTY

Name of Mill or Plant	Location	Operator	P. O. Address	Product
Pride Mill.....	Silverton	Pride Mill Associates.....	Silverton	Lead, Zinc, Copper
Shenandoah Dives & Silver Lake Mill.....	Silverton	Shenandoah Dives Mining Co.....	Silverton	Lead, Zinc
Venture Mill.....	Silverton	Venture Leasing Co.....	Silverton	Lead, Zinc
Yukon Mill.....	N. of Silverton	Williams & Walby.....	Silverton	Tungsten

OPERATING MILLS, PLANTS AND SMELTERS SAN MIGUEL COUNTY

Name of Mill or Plant	Location	Operator	P. O. Address	Product
Bachelor Corp. Mill.....	Placeville	Monarch Mining Co.....	Telluride	Lead, Zinc
Silver Bell Mill.....	Ophir	Silver Bell Mining Co.....	Ophir	Lead, Zinc, Tungsten
Telluride Mines Mill.....	Telluride	Telluride Mines, Inc.....	Telluride	Lead, Zinc

## OPERATING MILLS, PLANTS AND SMELTERS SUMMIT COUNTY

Name of Mill or Plant	Location	Operator	P. O. Address	Product
Plymouth Mill.....	Montezuma	John M. Jeffery.....	Montezuma	Lead, Zinc
Chatauqua .....	Montezuma	Sally Barber Mng. Co.....	% Mike Vinson, Breckenridge.	Lead, Zinc, Gold, Silver

## OPERATING MILLS, PLANTS AND SMELTERS TELLER COUNTY

Name of Mill or Plant	Location	Operator	P. O. Address	Product
Carlton Mill.....	Victor	Golden Cycle Corp.....	Box 47, Victor.....	Gold

## OPERATING PLACERS IN ADAMS COUNTY, 1953

Name of Placer	Location	Operator	P. O. Address	Product
Plants 8, 10 & R.....	Denver	Brannan Sand & Gravel.....	4800 Brighton Blvd., Denver..	Gold
Cooley Gravel Co.....	Denver	Cooley Gravel Co.....	6101 Lowell Blvd., Denver 12..	Gold
Kerkling & Slensker.....	Denver	Kerkling & Slensker.....	101 Brentwood, Lakewood.....	Gold

## OPERATING PLACERS IN CHAFFEE COUNTY

Name of Placer	Location	Operator	P. O. Address	Product
Gold Bottom & Columbine.....	Lost Canon.....	La Plata Mng. & Dev. Co.....	1434 North Walnut, Colorado Springs.....	Gold
John Howard.....	Lost Canon.....	A. W. Platt.....	1216 Harrison Avenue, Leadville	Gold
Mamre Jewel.....	Little Lost Canon.....	Frank Dunvan.....	Walden	Gold

## OPERATING PLACERS IN CLEAR CREEK COUNTY

Name of Placer	Location	Operator	P. O. Address	Product
Cooper.....	W. Idaho Springs.....	Spanish Bar Mines Co.....	Central City.....	Gold
White Horse.....	Union Mining Dist. ....	Glen L. Fielker.....	Box 227-L, RR. 3, Denver 16....	Gold

## OPERATING PLACERS IN FREMONT COUNTY

Name of Placer	Location	Operator	P. O. Address	Product
Jay Hill.....	Wellsville	C. C. Galbraith.....	812 Jackson Street, Pueblo.....	Gold



OPERATING PLACERS IN JEFFERSON COUNTY

Name of Placer	Location	Operator	P. O. Address	Product
Plant 11.....	Wheatridge .....	Brannan Sand & Gravel.....	4800 Brighton Blvd., Denver..	Gold
Rio Grande Gravel Co.....	Denver .....	Rio Grande Gravel Co.....	44th & Eldridge Street, Golden .....	Gold

ROAD WORK, TUNNELS AND DAMS—1953

BOULDER COUNTY

Name of Operation	Location	Operator	P. O. Address	Project
Boulder Supply Canal.....	Boulder Lyons.....	Bales & Kite.....	Kansas City, Mo.....	Canal
Highway .....	Boulder Canon.....	Lowdermilk Bros.....	1950 W. Dartmouth Ave., Englewood .....	Highway
Highway .....	Lyons .....	Peter Kiewit Sons Co.....	1950 So. Colo. Blvd., Denver.....	Highway
Highway .....	Boulder & Jefferson Counties.....	Brown Construction Co.....	1530 E. Abriendo Ave., Pueblo .....	Highway

EL PASO COUNTY

Name of Operation	Location	Operator	P. O. Address	Project
Highway .....	Colo. Springs-Monument .....	Henry Shore Company.....	Littleton .....	Highway
So. Suburban Dam.....	Seven Falls Area.....	Douglas Jardine.....	121 E. Pikes Peak, Colorado Springs.....	Reservoir

FREMONT COUNTY

Name of Operation	Location	Operator	P. O. Address	Project
Highway .....	Canon City & Guffey .....	Fremont Co. Comm'r.....	Canon City.....	Highway
Highway .....	Sedalia to Woodland Park.....	Platt Rogers.....	Box 153, Pueblo.....	Highway

GARFIELD COUNTY

Name of Operation	Location	Operator	P. O. Address	Project
Rifle & Puleson.....	Rifle .....	E. G. Rippey & Sons.....	New Castle.....	Highway
Rifle Project.....	Rifle to Grand Valley .....	Schmidt Construction Co.....	Box 66, Grand Junction.....	Highway

GRAND COUNTY

Name of Operation	Location	Operator	P. O. Address	Project
St. Louis Water Tunnel.....	Fraser .....	Mattery Construction Co.....	Ft. Collins.....	Water Tunnel

## ROAD WORK, TUNNELS AND DAMS—1953—Continued

## LAKE COUNTY

Name of Operation	Location	Operator	P. O. Address	Project
Leadville Drainage Co.	Leadville	Davis & Webb	143 W. 8th St., Leadville	Tunnel

## LA PLATA COUNTY

Name of Operation	Location	Operator	P. O. Address	Project
Highway	Hesperus	Schmidt Construction Co.	Grand Junction	Highway
Highway	Bayfield	Brown Construction Co.	Pueblo	Highway

## MONTROSE COUNTY

Name of Operation	Location	Operator	P. O. Address	Project
Highway	Naturita	Peter Kiewit Sons Co.	1950 So. Colo. Blvd., Denver	Highway
Highway	Naturita to Uravan	Colo. Constructors, Inc.	725 W. 39th Avenue, Denver	Highway

## PARK COUNTY

Name of Operation	Location	Operator	P. O. Address	Project
Blue River Project	11 Mile Canyon	Beer Coal & Mazzocco Construction Co.	Florence	Dam & Pump Station
Blue River Tunnel	Grant	Denver Board of Water Comm'rs.	City & County Bldg., Denver	Water Diversion Tunnel

## SAN JUAN COUNTY

Name of Operation	Location	Operator	P. O. Address	Project
Highway	Top Red Mtn. Pass So.	Peter Kiewit Sons Co.	1950 So. Colo. Blvd., Denver	Highway

## SAN MIGUEL COUNTY

Name of Operation	Location	Operator	P. O. Address	Project
Highway	Slick Rock Hill	Lowdermilk Bros.	1950 W. Dartmouth Ave., Englewood	Highway
Highway	Placerville to Telluride	Colo. Constructors, Inc.	725 W. 39th Ave., Denver	Highway
Highway	Telluride	Peter Kiewit Sons Co.	1950 So. Colo. Blvd., Denver	Highway

## SUMMIT COUNTY

Name of Operation	Location	Operator	P. O. Address	Project
Highway	Dillon	Siegrist Construction Co.	7000 York Street, Denver	Highway



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