

STATE OF MONTANA  
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DIRECTORY OF KNOWN MINING ENTERPRISES, 1960

Compiled by  
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Montana Bureau of Mines and Geology

with  
LIST OF ACTIVE COAL MINES, 1960

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And Section on  
THE MINERAL INDUSTRY OF MONTANA IN 1960  
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U. S. Department of the Interior, Bureau of Mines



MONTANA SCHOOL OF MINES  
Butte, Montana  
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# DIRECTORY OF KNOWN MINING ENTERPRISES, 1960

Compiled by  
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## INTRODUCTION

To keep abreast of the mining activity in Montana during 1960, the Montana Bureau of Mines and Geology has once again compiled this list of known mining enterprises active during 1960. Those of you who received previous listings for the years 1953 through 1957 will note a change in the arrangement of listings. The mines are listed alphabetically under counties and the location by section, township, range, and mining district has been given for those mines whose exact location is known to us. A map of Montana showing the different mining districts is included which will facilitate finding the area of a mine location.

Every possible effort has been made to have the information exact and complete. The inclusion of a property in the directory, however, is in no sense an endorsement of it, and responsibility for statements made rests with the person who furnished the data, and not with the Bureau of Mines and Geology. Correspondingly, omission of a property is not to be construed as a reflection on the merits of the property itself. Such omissions as occur are traceable to the failure of the last known operator to respond to repeated requests for necessary information. Nevertheless, in almost all such cases the missing data has been supplied from the most reliable sources available.

A special list of companies, which are inactive, idle, or dormant, has been added. Needless to say, it would be impossible to list all such companies in Montana. Therefore, in this bulletin the list will include only those companies that have not returned our questionnaires. Hereafter, all companies inactive for three or more years will be placed on this special list.

If any of you can provide us with the necessary additional information, or note a change in status of a mine, please forward such information. We strive to keep this yearly publication as up to date as possible, but we need your help.

The abbreviations used throughout this directory are as follows:  
sec. - section; T. - township; R. - range; t/d - tons per day.

BEAVERHEAD  
County Seat: Dillon

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
<b>ARGENTA MINE</b> Operator: Robert Curry 524 N. Washington Dillon, Montana Owner: A. French Dillon, Montana Status: Inactive	Gold, silver, lead	Blue Wing district, SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 30, T. 6 S., R. 10 W.
<b>BANNACK MINE</b> Operator: Spokane National Mines, Inc., Field Office, Bannack, Montana Owner: Spokane National Mines, Inc., 414 Fernwell Bldg., Spokane, Washington Mill capacity: 100 t/d Employees: 16 Status: Producing	Gold	Bannack district, NW $\frac{1}{4}$ sec. 8, T. 8 S., R. 11 W.
<b>BLACKSTONE MINE</b> Operator: W. H. Olson Box 87, Melrose, Montana Owner: Same as operator Status: Inactive	Manganese oxide	Bryant district, sec. 29, T. 2 S., R. 9 W.
<b>BLUE ORE MINE</b> Operator: Angus A. McDonald Philipsburg, Montana Owner: Same as operator Status: Inactive	Manganese oxide	Axes Canyon district, SW $\frac{1}{4}$ sec. 7, T. 8 S., R. 7 W.
<b>CALVERT MINE</b> Operator: Minerals Engineering Co., Box 94, Glen, Montana Owner: Same as operator Mill capacity: 750 t/d Employees: 50 Status: Producing	Tungsten	Wise River district, sec. 12, T. 1 N., R. 12 W.
<b>CANYON CREEK PHOSPHATE MINE</b> Operator: Victor Chemical Co., Henry F. Johnson, Supt., Box 1966, Butte, Montana Owner: Victor Chemical Co., Rothe Weigel, Pres., 155 N. Wacker Dr., Chicago, Ill. Status: Producing and developing	Phosphate rock	Canyon Creek district, sec. 6, T. 2 S., R. 9 W.



BEAVERHEAD, Cont'd.

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
<p>CARTER CREEK MINE  Operator: North American  Utilities Corp., Suite 800,  1420 Sherbrooke St. West,  Montreal 25, Quebec, Canada  Owner: North American Utilities  Corp., et al, Dillon, Montana  Status: Inactive</p>	<p>Iron ore</p>	<p>Carter Creek district,  secs. 3, 9, 10,  T. 8 S., R. 7 W.</p>
<p>CHARTER OAK MINE  Operator: Kelly Herr,  Box 368, Dillon, Montana  Owner: F. E. Herr, Box 368,  Dillon, Montana  Status: Developing</p>	<p>Gold,  silver,  copper,  lead</p>	<p>Blue Wing district,  SW<math>\frac{1}{4}</math>NE<math>\frac{1}{4}</math> sec. 4,  T. 8 S., R. 11 W.</p>
<p>CLEVE MINE  Operator: Lively Mining Co.  Box 96, Melrose, Montana  Owner: Conway Estate, c/o  Mrs. A. French, 114 E. Reeder,  St., Dillon, Montana  Employees: 2  Status: Producing</p>	<p>Gold,  silver,  silica</p>	<p>Bryant (Hecla)  district, sec. 1,  T. 3 S., R. 11 W.</p>
<p>CROWN-SMITH-DILLON MINE  Operator: Tri-State Minerals  Dillon, Montana  Owner: Clyde Smith, Dillon,  Montana  Mill capacity: 24,000 t/yr.  Employees: 37  Status: Producing and  developing</p>	<p>Talc</p>	<p>Axes Creek district,  sec. 23, T. 8 S.,  R. 8 W.</p>
<p>GLADSTONE MINE  Operator: None  Owner: Mary W. French Estate,  Howard Morse, and Mr.  Farnsworth, c/o Anthony  French 114 E. Reeder, Dillon,  Montana  Status: Unknown</p>	<p>Gold,  silver,  lead</p>	<p>Blue Wing district,  SW<math>\frac{1}{4}</math>SW<math>\frac{1}{4}</math> sec. 18,  T. 6 S., R. 10 W.</p>
<p>GOB MINE  Operator: Sodak Uranium and  Mining Co., Inc., c/o Clyde  Boyle, 60 St. Charles,  Rapid City, South Dakota  Owner: Same as operator  Status: Inactive</p>	<p>Manganese  oxide</p>	<p>Apex unorganized  district, N<math>\frac{1}{2}</math> sec. 16,  T. 5 S., R. 10 W.</p>

BEAVERHEAD, Cont'd.

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
<p>GOLDSMITH MINE  Operator: Edward Ledebur  and Glen Shafer, 639  Kentucky, Dillon, Montana  Owner: Anaconda Mining Co.,  Jack Cohen, Butte, Montana  Status: Inactive</p>	<p>Gold,  silver,  copper,  lead,  zinc</p>	<p>Argenta district,  NW<math>\frac{1}{4}</math>NE<math>\frac{1}{4}</math> sec. 30,  T. 6 S., R. 10 W.</p>
<p>GOVERNOR TILDEN MINE  Operator: Rudy Nygren,  Argenta Star Route,  Dillon, Montana  Owner: Anaconda Mining Co.  and B. White Estate, Santa  Anita, California  Status: Inactive</p>	<p>Gold,  silver,  lead</p>	<p>Argenta district,  SW<math>\frac{1}{4}</math>NE<math>\frac{1}{4}</math> sec. 18,  T. 6 S., R. 10 W.</p>
<p>JACKSON MINE  Operator: Noel Jackson  Jackson, Montana  Owner: Same as operator  Status: Developing</p>	<p>Silver,  lead</p>	<p>Miner district</p>
<p>KEYSTONE MINE  Operator: Edward Lockett and  Son, 3002 Dixon St., Butte,  Montana  Owner: Same as operator  Status: Inactive</p>	<p>Gold,  silver</p>	<p>Dewey district,  T. 1 S., R. 11 W.</p>
<p>LAST CHANCE MINE  Operator: Sawyer Petroleum  Co., 650 S. Grand Ave.,  Los Angeles, California  Status: Developing</p>	<p>Thorium</p>	<p>Frying Pan Creek  district, secs.  20, 28, 29,  T. 10 S., R. 15 W.</p>
<p>LOG CABIN MINE  Operator: Arthur Semsak,  221 Leatherwood,  Meaderville, Montana  Owner: Same as operator  Status: Inactive</p>	<p>Silver,  lead,  copper,  zinc</p>	<p>Vipond district,  sec. 3, T. 2 S.,  R. 11 W.</p>
<p>MAULDEN MINE  Operator: Hand Mines,  330 E. Chapman St.,  Dillon, Montana  Owner: Ida B. Hand, Dillon,  Montana  Employees: 3  Status: Producing</p>	<p>Gold,  silver,  copper,  lead,  zinc</p>	<p>Argenta district,  NW<math>\frac{1}{4}</math>NW<math>\frac{1}{4}</math> sec. 29,  T. 6 S., R. 10 W.</p>

BEAVERHEAD, Cont'd.

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
<p>MOOSE HORN MINE</p> <p>Operator: Moose Horn Mining Co., c/o Arden Griffith, Franklin, Idaho</p> <p>Owner: Same as operator</p> <p>Status: Developing</p>	<p>Iron ore</p>	<p>Wisdom district, secs. 19, 20, T. 3 S., R. 17 W.</p>
<p>NEW DEPARTURE MINE</p> <p>Operator: Spokane National Mines, Inc. and Sunset Mines, Inc., 414 Fernwell Bldg., Spokane, Washington</p> <p>Owner: Spokane National Mines, Inc., 414 Fernwell Bldg., Spokane, Washington</p> <p>Mill capacity: 150 t/d</p> <p>Employees: 30</p> <p>Status: Producing</p>	<p>Gold, silver, lead, copper, zinc</p>	<p>Blue Wing district, NW<math>\frac{1}{4}</math>NW<math>\frac{1}{4}</math> sec. 26, T. 7 S., R. 11 W.</p>
<p>OLD FAITHFUL DUMP</p> <p>Operator: Lloyd Wilhelm and Harold Braham, 939 Waukesha, Butte, Montana</p> <p>Owner: Unknown</p> <p>Status: Inactive</p>	<p>Gold, silver, lead, silica</p>	<p>Vipond district, sec. 3, T. 2 S., R. 11 W.</p>
<p>PETE AMPO MINE</p> <p>Operator: Kenneth Reed, 328 East Galena, Butte, Montana</p> <p>Owner: Pete Ampo, Wise River, Montana</p> <p>Status: Developing</p>	<p>Gold, silver, silica</p>	<p>Dewey district</p>
<p>POLARIS MINE</p> <p>Operator: Hand Mines, 330 E. Chapman St., Dillon, Montana</p> <p>Owner: A. S. Hayes, Dillon, Montana</p> <p>Employees: 3</p> <p>Status: Producing</p>	<p>Silver</p>	<p>Polaris (Lost Cloud) district, sec. 28, T. 5 S., R. 12 W.</p>
<p>RUBY (CENTENNIAL) MINE</p> <p>Operator: J. R. Simplot, Minerals &amp; Chemical Division, Box 912, Pocatello, Idaho</p> <p>Owner: U. S. Government, Dept. of the Interior, Bureau of Land Management, Billings, Montana</p> <p>Status: Inactive</p>	<p>Phosphate rock</p>	<p>sec. 1, T. 15 S., R. 1 W.</p>



BEAVERHEAD, Cont'd.

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
S. S. & R. MINE Operator: Peter H. Sweeney, Townsend, Montana Owner: Same as operator Status: Inactive	Gold, lead, zinc	Medicine Lodge dis- trict, sec. 1, 2, T. 13 S., R. 12 W.
SIL-KING MINE Operator: None Owner: John Stephenson, Lima, and Wetmore Bros. and A. B. Fordyce, Monida, Montana Status: Inactive	Pumicite	sec. 7, 18, T. 15 S., R. 4 W.
SPARKLE MINE Operator: E. R. Sloan, 520 W. Silver, Butte, Montana Owner: Same as operator Status: Producing	Mica	11 miles SE of Dillon
YELLOW BAND (SHAFFER GROUP) MINE Operator: James B. Shaffer, 207 W. Center St., Dillon, Montana Owner: Same as operator Status: Developing	Gold, silver	Argenta district, SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 2, T. 6 S., R. 11 W.

BROADWATER COUNTY  
County Seat: Townsend

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
COPPER QUEEN MINE Operator: J. J. Rothfus, 2100 Oregon Ave., Butte, Montana Owner: John J., Elmer, and Louisa Rothfus, Butte, Montana Status: Inactive	Gold, silver, copper	Cedar Plains (Radersburg) dis- trict, sec. 9, T. 5 N., R. 1 W.
CUSTER HYANTHA MINE Operator: Custer Hyantha Mines, Box 194, Winston, Montana Owner: Unknown Status: Developing	Lead, zinc	2 miles south of Winston

BROADWATER, Cont'd.

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
EAST PACIFIC MINE Operator: East Pacific Co., Box 655, Helena, Montana Owner: Minmont Co., c/o R. Kurth, Great Falls, Montana Employees: 4 Status: Developing	Gold, silver, lead, zinc	Winston district, sec. 26, 27, T. 8 N., R. 1 W.
EDNA #2 MINE Operator: Robert C. Berndt and Ray W. Reynolds, Winston, Montana Owner: Emily Muffly Status: Inactive	Silver, copper	Beaver Creek un- organized district, sec. 13, T. 8 N., R. 1 W.
ERICKSON #1, 2, 3, MINE Operator: William Zimmerman, Townsend, Montana Owner: Same as operator Status: Developing	Gold, silver, lead	Hassel district
GOLD BUG & MARY ROSE MINE Operator: Multiform Mining & Exploration Co., 1847 Prince- ton Ave., St. Paul, Minnesota Owner: Same as operator, T. E. Carpentier, Pres. Status: Developing	Gold, silver, copper, lead, zinc	Cedar Plains district, sec. 18, T. 6 N., R. 1 E.
GREEN & WADDEL PLACER Operator: Indian Creek Mining Co., Pudget Sound Bank Bldg., Tacoma, Washington Owner: Green & Waddel, Town- send, Montana Status: Inactive	Gold	Indian Creek district, sec. 32, T. 7 N., R. 1 E.
IRON CROSS (IRON DUKE) MINE Operator: Ralls & Harris Bros., Box 114, Radersburg, Montana Owner: Same as operator Status: Producing	Iron ores	Cedar Plains (Raders- burg) district, sec. 12, T. 5 N., R. 1 W.
JANUARY MINE Operator: Little Scott Corp., Box 224, Helena, Montana Owner: G. E. O'Neill, Helena, Montana Status: Unknown	Gold, silver, copper, lead, zinc	Winston district, sec. 26, 27, T. 8 N., R. 1 W.



BROADWATER, Cont'd.

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
<p>KELLY NO. 1 MINE  Operator: K. H. Coursey and  A. W. King, 1000 W. Ewing,  Helena, Montana  Owner: George Rider, A. W.  King, and K. H. Coursey,  Townsend, Montana  Status: Unknown</p>	<p>Silver,  lead</p>	<p>Winston (Kelly's  Gulch) district,  sec. 19, T. 9 N.,  R. 1 E.</p>
<p>KLEINSCHMIDT MINE  Operator: George Relyea,  Box 85, Garrison, Montana  Owner: Minmont Mining Co.,  c/o R. Kurth, Great Falls,  Montana  Status: Unknown</p>	<p>Gold,  silver,  lead,  copper,  zinc</p>	<p>Beaver Creek (Winston)  district, NW<math>\frac{1}{4}</math>SE<math>\frac{1}{4}</math> sec.  3, T. 8 N., R. 1 W.</p>
<p>MARIETTA MINE  Operator: Northern Milling  Co., Box 361, Townsend,  Montana  Owner: Harry Anders and Al  Dance and Northern Milling  Co., Townsend, Montana  Mill capacity: 200 t/d  Employees: 25  Status: Producing and  developing</p>	<p>Gold,  silver,  copper,  lead,  zinc</p>	<p>Park (Indian Creek)  district, sec. 15,  T. 7 N., R. 1 W.</p>
<p>PALMER ENGH PLACER  Operator: A. J. Cheff,  10054 W. Marginal Way,  Seattle, Washington  Owner: Palmer Engh,  Townsend, Montana  Employees: 7  Status: Producing and  developing</p>	<p>Gold</p>	<p>Indian Creek dis-  trict, sec. 1,  T. 6 N., R. 1 W.,  and sec. 36, T. 7 N.,  R. 1 W.</p>
<p>SANTA ANITA MINE  Operator: Oscar Hoveland,  Townsend, Montana  Owner: Underseth and Hoveland,  Townsend, Montana  Status: Inactive</p>	<p>Gold,  silver,  lead,  zinc</p>	<p>Cedar Plains district,  sec. 28, 35, T. 5 N.,  R. 1 W.</p>

BROADWATER, Cont'd.

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
SILVER SADDLE MINE Operator: Harold R. Hogan, 1207 - 9th St., Winston, Montana Owner: Same as operator Status: Developing	Gold, lead, zinc	Beaver Creek (Winston) district
VALLEY VIEW MINE Operator: Warren Schreiner, Townsend, Montana Owner: Same as operator Status: Developing	Gold, silver, lead; zinc, copper	Park district, sec. 24, T. 7 N., R. 1 W.

CARBON COUNTY  
County Seat: Red Lodge

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
BICE MINE Operator: Hidden Splendor Mining Co., Box 487, Lovell, Wyoming Owner: Bice Mining Co., Loren Bice, Pres., Billings, Montana Employees: 6 Status: Developing	Uranium	Pryor Mountains district, secs. 4, 7, 8, 9, T. 8 S.,
EAST PRYOR (FRAN #3) MINE Operator: Planet Exploration Corp., Box 474, Lovell, Wyoming Owner: Same as operator Status: Developing	Uranium	Pryor Mountains district, sec. 7, T. 9 S., R. 28 E.
OLD GLORY MINE Operator: Pryor Mining Co., Corwin Rule, Pres., Box 301, Bridger, Montana Owner: Same as operator Status: Unknown	Uranium	Pryor Mountains district, NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 32, T. 8 S., R. 27 E.
PRYOR MOUNTAIN (DANDY) MINE Operator: Hidden Splendor Mining Co., A. P. Kibbe, Pres., 304 First Security Bldg., Salt Lake City, Utah Owner: Same as operator Status: Inactive	Uranium	Pryor Mountains district, sec. 7, T. 9 S., R. 27 E.

CARBON, Cont'd.

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
SANDRA MINE Operator: Midland Mining Co., C. M. Hauptman, Pres., 207 Hedden Bldg., Billings, Montana Owner: Same as operator Employees: 1 to 5 Status: Inactive	Uranium	Pryor Mountains district, NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 33, T. 9 S., R. 27 E.
SWAMP FROG MINE Operator: Prytana Mining Co., Walter Dean, Mgr., Box 775, Forsyth, Montana Owner: Dean-Stoick-Balboa Forsyth, Montana Status: Inactive	Uranium	Pryor Mountains district, sec. 21, T. 9 S., R. 27 E.
WARREN QUARRY Operator: Bighorn Limestone Co., Frannie, Montana Owner: Unknown Status: Producing	Limestone	Pryor Mountains district

CASCADE COUNTY  
County Seat: Great Falls

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
BIG BEN MINE Operator: American Metal Climax, Inc., Neihart, Montana Owner: Frank Mansikka and Dean V. Goings, Neihart, Montana Employees: 10 Status: Unknown	Molybdenum	Neihart district, T. 14 N., R. 8 E.
LEXINGTON MINE Operator: Lexington Silver Lead Mining Co., 621 Columbia Bldg., Spokane, Washington Owner: Same as operator Mill capacity: 125 t/d Employees: 5 Status: Developing	Gold, silver, lead, zinc	Montana (Neihart) district; sec. 28, T. 14 N., R. 8 E.
STAR MINES Operator: Lewis B. Stark, Neihart, Montana Owner: Same as operator Mill capacity: 50-75 t/d Status: Inactive	Silver, lead, zinc	Montana (Neihart) district, secs. 29, 30, T. 14 N., R. 8 E.



DEER LODGE COUNTY  
County Seat: Anaconda

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
BROWNS QUARRY Operator: The Anaconda Co., Butte, Montana Status: Producing	Limestone	sec. 23, T. 5 N., R. 12 W.
4-SOME MINE Operator: 4-Some Mining Co., Wm. J. Fenner, 1613 Ogden Ave., Anaconda, Montana Owner: Same as operator Status: Inactive	Tungsten	Olson Gulch district, sec. 15, T. 15 N., R. 12 W.
SILVER REEF MINE Operator: None Owner: Robert H. Montgomery, Box 432, Anaconda, Montana Status: Inactive	Gold, silver	Silver Lake district, sec. 22, T. 5 N., R. 13 W.

FERGUS COUNTY  
County Seat: Lewistown

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
BLACK BULL MINE Operator: Granville S. Abbott, Giltedge, Montana Owner: Same as operator Status: Inactive	Gold, silver, lead, copper, zinc	Warm Springs (Virgin Gulch) district, sec. 7, T. 16 N., R. 20 E.
HANOVER MINE Operator: Ideal Cement Co., 601 Denver National Bldg., Denver 2, Colorado Owner: Same as operator Employees: 12 Status: Producing	Gypsum	secs. 22, 27, T. 16 N., R. 17 E.
SHOEMAKER (HEATH) MINE Operator: U. S. Gypsum Co., W. E. Seeburger, Mgr., Heath, Montana Owner: U. S. Gypsum Co., 300 W. Adams, Chicago 6, Illinois Mill capacity: 400 t/d Employees: 10 Status: Producing	Gypsum	secs. 1, 2, T. 14 N., R. 19 E.

FLATHEAD COUNTY  
County Seat: Kalispell

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
<p>FLATHEAD MINE</p> <p>Operator: Waino Lindbom, 1545<math>\frac{1}{2}</math> - 7th Ave. West, Kalispell, Montana</p> <p>Owner: The Anaconda Co., Hennessy Bldg., Butte, Montana</p> <p>Employees: 4</p> <p>Status: Producing</p>	<p>Silver, lead</p>	<p>Hog Heaven district, sec. 17, T. 25 N., R. 23 W.</p>
<p>O. F. MARTIN MINE</p> <p>Operator: O. F. Martin, Box 514, Hot Springs, Montana</p> <p>Owner: Northern Pacific Rail- way Co., St. Paul, Minnesota</p> <p>Employees: 2</p> <p>Status: Developing</p>	<p>Gold, silver, lead, zinc, copper</p>	<p>Hog Heaven district, SE<math>\frac{1}{4}</math> sec. 20, T. 25 N., R. 23 W.</p>

GALLATIN COUNTY  
County Seat: Bozeman

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
<p>THUMPER LODGE #1</p> <p>Operator: Planet Exploration Co., Box 64, Bozeman, Montana</p> <p>Owner: Same as operator</p> <p>Status: Producing</p>	<p>Mica</p>	<p>Unorganized district, sec. 30, T. 4 S., R. 5 E.</p>
<p>TRIDENT QUARRY</p> <p>Operator: Ideal Cement Co., Three Forks Portland Cement Div., V. T. Williams, 620 Denver National Bank Bldg., Denver, Colorado</p> <p>Owner: Same as operator</p> <p>Status: Producing</p>	<p>Limestone</p>	<p>SW<math>\frac{1}{4}</math>SW<math>\frac{1}{4}</math> sec. 3, T. 3 N., R. 2 E.</p>

GRANITE COUNTY  
County Seat: Philipsburg

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
<p>BEARMOUTH PLACER (DEEP GULCH) MINE</p> <p>Operator: Johann Lauritson, 636 Brooks, Missoula, Montana</p> <p>Owner: Valley Mining Co., 3522 W. Linden Pl., Milwaukee, Wis.</p> <p>Status: Unknown</p>	<p>Gold</p>	<p>Bear Creek district</p>

# GRANITE, Cont'd.

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
<p>BI-METALLIC MINE</p> <p>Operator: Trout Mining Co., Philipsburg, Montana</p> <p>Owner: Contact Mining Co., 524 S. Washington, Butte, Montana</p> <p>Status: Developing</p>	<p>Manganese carbonate, silver, lead, zinc</p>	<p>Flint Creek district, SE<math>\frac{1}{4}</math>SE<math>\frac{1}{4}</math> sec. 32, T. 7 N., R. 13 W.</p>
<p>BROOKLYN MINE</p> <p>Operator: American Exploration &amp; Mining Co., 2300 Russ Bldg., San Francisco, California</p> <p>Owner: Black &amp; White Mining Co., c/o Roger Little, Pres., 331 North Ave. W., Missoula, Montana</p> <p>Status: Developing</p>	<p>Silver, copper, lead, zinc</p>	<p>Boulder (South Boulder) district, SW<math>\frac{1}{4}</math>NE<math>\frac{1}{4}</math> sec. 5, T. 7 N., R. 12 W.</p>
<p>CLIMAX (MARONEY) MINE</p> <p>Operator: Montana Climax Corp., Box 421, Philipsburg, Montana</p> <p>Owner: James A. Poore, Jr., 1200 W. Platinum, and August Buschman, Seattle, Washington</p> <p>Employees: 5</p> <p>Status: Producing and developing</p>	<p>Silver, copper, manganese oxide</p>	<p>Flint Creek (Philipsburg) SE<math>\frac{1}{4}</math>NE<math>\frac{1}{4}</math> sec. 30, T. 7 N., R. 11 W.</p>
<p>DANDY MINE</p> <p>Operator: J. D. Hollowell, Drummond, Montana</p> <p>Owner: Louis Imhof, 785 Park Ave., New York 21, New York</p> <p>Status: Inactive</p>	<p>Gold, silver, zinc</p>	<p>Garnet-Elk Creek (Philipsburg) district, secs. 1, 2, T. 12 N., R. 14 W.</p>
<p>GARRETT (MICKY) MINE</p> <p>Operator: Garrett Mining &amp; Milling Co., c/o Eugene Garrett, Box 324, Anaconda, Montana</p> <p>Owner: Eugene Garrett, Anaconda, Montana, and Violet O'Donnell, Spokane, Washington</p> <p>Mill capacity: 15 t/d</p> <p>Employees: 1</p> <p>Status: Developing</p>	<p>Gold, bismuth, manganese</p>	<p>Red Lion district, secs. 22, 27, 28, T. 6 N., R. 13 W.</p>



# GRANITE, Cont'd.

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
<p>GYPSY QUEEN MINE</p> <p>Operator: Gypsy Queen Mining Co., c/o Harley L. Pitman, Deer Lodge, Montana</p> <p>Owner: Same as operator</p> <p>Status: Inactive</p>	Tungsten	Unorganized district, secs. 1, 2, 11, 12, T. 7 N., R. 12 W.
<p>JACKIE MARIE (SPOKANE) MINE</p> <p>Operator: Jackie Marie Mining Co., Drummond, Montana</p> <p>Owner: Charles &amp; George Grant, 29 E. Powell, Gresham, Oregon</p> <p>Status: Developing</p>	Gold	
<p>LYON PLACER</p> <p>Operator: Lyon Construction Co., Clinton, Montana</p> <p>Status: Producing</p>	Gold	Princeton district, Maywood Gulch
<p>MAYWOOD PLACER (MONTANA TONAPAH)</p> <p>Operator: Treasure State Uranium Corp., 1301 Porphyry, Butte, Montana</p> <p>Owner: Mrs. Maywood</p> <p>Status: Producing</p>	Gold	Princeton district
<p>M. &amp; T. MINE</p> <p>Operator: Walter Benz, Philipsburg, Montana</p> <p>Owner: Lindquist and Lahood, Box 373, Whitehall, Montana</p> <p>Status: Developing</p>	Silver, lead, copper, zinc	Moose Lake district
<p>MYSTERY MINE</p> <p>Operator: Phil Salois, Box 812, Philipsburg, Montana</p> <p>Owner: Same as operator</p> <p>Status: Unknown</p>	Manganese oxide	Flint Creek (Philipsburg) district, NW $\frac{1}{4}$ sec. 30, T. 7 N., R. 13 W.
<p>NON-PAREIL MINE</p> <p>Operator: R. J. MacCalman, 1010 - 5th St., Deer Lodge, Montana</p> <p>Owner: Non-Pareil Mining Co., C. H. Bielenberg, Sec.-Treas., 801 Milwaukee, Deer Lodge, Montana</p> <p>Status: Developing</p>	Silver, lead	Boulder (South Boulder) district, SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 32, T. 8 N., R. 12 W.

GRANITE, Cont'd.

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
<p>SCRATCH ALL &amp; SILVER PRINCE MINES</p> <p>Operator: Contact Mining Co., Frank Antonioli, 505 S. Clark, Butte, Montana</p> <p>Owner: Same as operator</p> <p>Status: Inactive</p>	<p>Manganese oxide, gold, manganese carbonate, silver, lead, copper, zinc</p>	<p>Flint Creek (Philipsburg) district, NE<math>\frac{1}{4}</math>SW<math>\frac{1}{4}</math> sec. 30, T. 7 N., R. 13 W.</p>
<p>SUNDAY MINE</p> <p>Operator: R. J. MacCalman, 1010 - 5th St., Deer Lodge, Montana</p> <p>Owner: R. W. Marshall, New York, and A. V. Corry, Butte</p> <p>Status: Developing</p>	<p>Gold</p>	<p>Boulder district, SW<math>\frac{1}{4}</math> sec. 27, T. 8 N., R. 12 W.</p>
<p>SUNSET (PLACER) MINE</p> <p>Operator: Ben Walkup, Box 644, Philipsburg, Montana</p> <p>Owner: Same as operator</p> <p>Status: Developing</p>	<p>Gold</p>	<p>Maxville district, T. 8 N., R. 12 W.</p>
<p>TROUT ALGONQUIN MINE</p> <p>Operator: Trout Mining Co., Roy McLeod, Vice-Pres., Philipsburg, Montana</p> <p>Owner: Trout Mining Co., C. W. Anderson, Pres., 233 Broadway, New York 7, New York</p> <p>Status: Producing and developing</p>	<p>Manganese oxide, gold, manganese carbonate, silver, copper, lead, zinc</p>	<p>Flint Creek (Philipsburg) district, SE<math>\frac{1}{4}</math>SE<math>\frac{1}{4}</math> sec. 30, T. 7 N., R. 13 W.</p>
<p>TRUE FISSURE, DURANGO &amp; MOORLIGHT GROUP</p> <p>Operator: Taylor-Knapp Co., c/o Don Johnson, Box FF, Philipsburg, Montana</p> <p>Owner: Same as operator</p> <p>Mill capacity: 120 t/d</p> <p>Employees: 33</p> <p>Status: Producing</p>	<p>Gold, lead, silver, zinc, manganese oxide, manganese carbonate</p>	<p>Flint Creek (Philipsburg) district, W<math>\frac{1}{2}</math>NW<math>\frac{1}{4}</math> sec. 29, T. 7 N., R. 13 W.</p>

JEFFERSON COUNTY  
County Seat: Boulder

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
<p>AJAX MINE</p> <p>Operator: Delmas Brown, 1830 Banks, Butte, Montana</p> <p>Owner: Same as operator</p> <p>Mill capacity: 50 t/d</p> <p>Employees: 5</p> <p>Status: Developing</p>	<p>Gold, silver, lead, copper, silica</p>	<p>Homestake district, sec. 6, T. 3 N., R. 7 W.</p>



JEFFERSON, Cont'd.

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
<b>ALTA MINE</b> Operator: Lahey Leasing Co., 506 W. Aluminum, Butte, Montana Owner: Alta Mines Corp., c/o Fred Small, Helena, Montana Status: Producing	Gold, silver, copper, zinc, lead, silica	Colorado (Corbin- Wickes) district, sec. 10, T. 7 N., R. 4 W.
<b>BALTIMORE MINE</b> Operator: Baltimore Syndicate Ltd., c/o C. M. Wagner, Heppner, Oregon Owner: David Loughran, Portland, Oregon; Louis Peura, Helena, Montana; C. M. Wagner, Heppner, Oregon Status: Unknown	Lead, zinc, copper	sec. 7, T. 6 N., T. 4 W.
<b>BERNICE (SALVAIL) MINE</b> Operator: Bill Mason, 14 N. Wyoming, Butte, Montana Owner: Same as operator		
<b>BLUE BELL (MARSH) MINE</b> Operator: Ed Scheitlin, 1821 Lowell Ave., Butte, Montana Owner: Same as operator Status: Inactive	Lead, copper, zinc	Pipestone district, sec. 35, T. 3 N., R. 6 W.
<b>BOULDER MINE</b> Owner: James P. Bragg, 2327 Harrison Ave., Butte, Montana Status: Inactive	Gold, silver, zinc	Cataract district, NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 13, T. 6 N., R. 6 W.
<b>CRESCENT MINE</b> Operator: Montana Gold & Silver Co. Owner: Holter Estate, Helena, Montana Mill capacity: 100 t/d Employees: 6 Status: Unknown	Gold, silver, copper, lead, zinc	Cataract district, NE $\frac{1}{4}$ sec. 29, T. 8 N., R. 5 W.
<b>CRYSTAL MINE</b> Operator: M & T Mining Co., c/o Joe LaComb, Basin, Mont. Owner: Charles Bullock, Basin, Montana Status: Producing	Gold, silver, lead, zinc	Cataract district, sec. 18, T. 7 N., R. 5 W.

JEFFERSON, Cont'd.

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
<p>DAILEY (ATLAS) MINE            Operator: Uranium Corp. of America, 525 Failin Bldg., Portland, Oregon (or Steve Giulio, Wickes, Montana)            Owner: Daily Mines, Wickes, Montana            Status: Inactive</p>	<p>Gold,            silver,            copper,            lead,            zinc</p>	<p>Wickes district,            secs. 15, 16,            T. 7 N., R. 4 W.</p>
<p>DAILY WEST MINE            Operator: Charles E. Vann, Helena, Montana            Owner: Paul George, Basin, Montana            Status: Developing</p>	<p>Silver,            lead,            zinc</p>	<p>Cataract district,            SW<math>\frac{1}{4}</math>SW<math>\frac{1}{4}</math> sec. 1,            T. 6 N., R. 6 W.</p>
<p>FOURTH OF JULY &amp; FIFTH OF JULY MINE            Operator: William Mason, 2165 Center Dr., Butte, Montana            Owner: The Anaconda Co., Butte, Montana            Employees: 2            Status: Inactive</p>	<p>Gold,            silver</p>	<p>secs. 11, 12,            T. 3 N., R. 7 W.</p>
<p>GLOWING STAR PLACER            Operator: John A. Galasso, Nine Mile Rd., Butte, Montana            Owner: Delmas J. Brown, 1830 Banks Ave., Butte, Montana            Employees: 2            Status: Unknown</p>	<p>Gold</p>	<p>Homestake district</p>
<p>GOLDEN SUNLIGHT MINE            Operator: American Exploration &amp; Mining Co., c/o E. A. Scholz, Russ Bldg., San Francisco, California            Owner: A. O. Smith Corp., Milwaukee, Wisconsin            Mill capacity: 150 t/d            Employees: 3            Status: Inactive</p>	<p>Gold,            silver</p>	<p>Whitehall district,            sec. 19, T. 2 N.,            R. 3 W.</p>
<p>GOLDEN THREAD MINE            Operator: Gordon Giulio, Box 73, Boulder, Montana            Status: Inactive</p>	<p>Gold,            silver,            lead,            zinc</p>	<p>Cataract district,            sec. 36, T. 7 N.,            R. 5 W.</p>

JEFFERSON, Cont'd.

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
<p>KLONDYKE MINE  Operator: Klondyke Gold Mines,  Inc., c/o Wade V. Lewis,  Boulder, Montana  Owner: Charles and Lilah H.  Schreiner, 3011 Richardson,  Butte, Montana  Employees: 2  Status: Producing and  developing</p>	<p>Gold,  copper</p>	<p>Elkhorn district,  sec. 11, T. 6 N.,  R. 3 W.</p>
<p>LOEBER MINE  Operator: W. Beaver, 589  W. Main St., Helena, Montana  Owner: C. E. Pew, Helena,  Montana  Status: Unknown</p>	<p>Gold,  silver;  copper,  lead,  zinc</p>	<p>Clancy-Lump Gulch  district</p>
<p>MC CLELLAN QUARRY  Operator: Maronick Construction  Co., Inc., East Helena,  Montana  Owner: E. P. Maronick, East  Helena, Montana  Employees: 5  Status: Producing</p>	<p>Limestone</p>	<p>McClellan district,  sec. 7, T. 9 N.,  R. 3 W.</p>
<p>MONTANA METALS, INC. MINE  Operator: Montana Metals, Inc.,  c/o David E. Loughran, Vice-  Pres., 4044 SE Woodward,  Portland, Oregon  Owner: Same as operator  Status: Unknown</p>	<p>Garnet,  sericite</p>	<p>Montana City  district, SW<math>\frac{1}{4}</math>SE<math>\frac{1}{4}</math>  and SE<math>\frac{1}{4}</math>SW<math>\frac{1}{4}</math> sec. 13,  T. 9 N., R. 3 W.</p>
<p>MONTREAL STAR MINE  Operator: Lee, William, and  Jack Hicks, 1034 California,  Butte, Montana  Owner: Godfrey Gagnier, 515  E. 3rd, Anaconda, Montana  Status: Developing</p>	<p>Gold,  silver,  copper</p>	<p>Lowland district,  NW<math>\frac{1}{4}</math>NW<math>\frac{1}{4}</math> sec. 3,  T. 4 N., R. 7 W.</p>
<p>MORNING GLORY MINE  Operator: J. K. Curtiss,  Box 102, Basin, Montana  Owner: P. O. Dorweiller,  Algona, Iowa; and J. K.  Curtiss, Basin, Montana  Status: Developing</p>	<p>Gold,  silver,  lead,  zinc</p>	<p>Cataract district,  sec. 33, T. 7 N.,  R. 5 W.</p>



JEFFERSON, Cont'd.

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
MORNING GLORY PLACER MINE Operator: John A. Galasso, Nine Mile Rd., Butte, Montana Owner: Delmas J. Brown, 1830 Banks Ave., Butte, Montana Employees: 2 Status: Unknown	Gold	Homestake district.
NELLIE GRANT MINE Operator: Barmont Mines, Inc., 2624 Edwards St., Butte, Montana Owner: C. E. Pew, Helena, Montana Status: Producing	Gold, silver, lead, zinc	Clancy-Lump Gulch district, sec. 14, T. 8 N., R. 5 W.
NEW BALD EAGLE MINE Operator: William Mulcahy, Box 21, Butte, Montana Owner: Same as operator Status: Developing	Gold, silver, lead	Big Foot district, sec. 16, T. 4 N., R. 5 W.
OBELISK MINE Operator: Joseph LaComb & James Goodrich, Boulder, Montana Owner: E. F. Perkins, c/o John McGoff, Boulder, Montana Status: Unknown	Silver, lead, zinc	Cataract district, secs. 15, 16, T. 6 N., R. 5 W.
POTEE MINE Operator: R. D. Potee, Alhambra, Montana Owner: Same as operator Status: Unknown	Molybdenum	Warm Springs district, secs. 13, 24, T. 8 N., R. 3 W.
PRESIDENT GROUP MINE Operator: Bill Chebul, c/o Vance & Leaphart, Security Bldg., Helena, Montana Status: Inactive	Uranium	secs. 4, 5, T. 8 N., R. 3 W.
PRICKLY PEAR PLACER Operator: Lee and Ward, Jefferson City, Montana Status: Inactive	Gold	sec. 7, T. 7 N., R. 3 W.
SILVER HILL MINE Operator: Silver Hill Mining Co., c/o Gordon Giulio, Box 73, Boulder, Montana Status: Developing	Gold, silver, lead, zinc	Cataract district, sec. 36, T. 7 N., R. 5 W.

JEFFERSON, Cont'd.

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
SKOOKUM PLACER MINE Operator: Theodore Nyquest, Box 133, Boulder, Montana Owner: Same as operator Status: Inactive	Gold	Comet district, sec. 12, T. 5 N., R. 6 W.
SUNNYSIDE MINE Operator: Lester Lindquist, Box 373, Whitehall, Montana Owner: Same as operator Status: Developing	Gold, silver	Cardwell district, SE $\frac{1}{4}$ sec. 13, T. 2 N., R. 4 W.

JUDITH BASIN COUNTY  
County Seat: Stanford

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
BELL MINES Operator: Texmont Mines, Monarch, Montana Owner: Same as operator Status: Developing	Gold, silver, lead, zinc	Barker district, W $\frac{1}{2}$ sec. 18, T. 15 N., R. 9 E.
BLOCK P MINE Operator: Hughesville Lumber and Mining Co., Inc., Box 33, Monarch, Montana Owner: American Smelting and Refining Co., 120 Broadway, New York 5, New York Status: Developing	Gold, silver, lead, zinc	sec. 6, T. 15 N., R. 9 E.
DOCTOR KALLOCH MINE Operator: John Zupan, Box 64, Sand Coulee, Montana Owner: Same as operator Employees: 2 Status: Producing and developing	Silver, lead, zinc	Barker district, sec. 6, T. 15 N., R. 9 E.
GOLD BUG (WEATHERWAX) MINE Operator: W. Lehman, Box 780, Lewistown, Montana Owner: Same as operator Status: Developing	Gold, silver, copper	Yogo district, sec. 29, T. 14 N., R. 10 E.

JUDITH BASIN, Cont'd.

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
<p>TIGER MINE</p> <p>Operator: Croff and Montague, Box 69, Monarch, Montana</p> <p>Owner: Clendennin Mines, Inc., c/o John T. Nightengale, Boston, Massachusetts</p> <p>Employees: 2</p> <p>Status: Unknown</p>	<p>Gold, silver, lead, zinc</p>	<p>Barker district, secs. 5, 6, T. 15 N., R. 9 E.</p>
<p>WILLOW CREEK MINE</p> <p>Operator: Young-Montana Corp., 2223 - 1st Ave., Hibbing, Minnesota</p> <p>Owner: Same as operator</p> <p>Status: Producing</p>	<p>Iron ore</p>	<p>Running Wolf district, secs. 2, 4, T. 14 N., R. 11 E.</p>
<p>YOGO SAPPHIRE MINES</p> <p>Operator: Siskon Corp., H. B. Chessher, Pres., 889 Gazette Bldg., Reno, Nevada</p> <p>Owner: New Mine Sapphire Syndicate, Billings, Montana</p> <p>Mill capacity: 100 yards/day</p> <p>Employees: 5</p> <p>Status: Producing</p>	<p>Sapphires</p>	<p>Yogo district, secs. 19, 20, 21, 22, 23, 24, T. 13 N., R. 11 E.</p>

LEWIS & CLARK COUNTY  
County Seat: Helena

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
<p>BLACKWATCH MINE</p> <p>Operator: Rocky Mountain Exploration Co., Inc. c/o Pike Realty, 1308 - 10th Ave. South, Great Falls, Montana</p> <p>Owner: Same as operator</p> <p>Employees: 3</p> <p>Status: Developing</p>	<p>Gold</p>	<p>Poorman district, on Fields Gulch</p>
<p>CROSSFIRE MINE</p> <p>Operator: Albert Nyland and Neil Livingston, Jr., 204 Power Bldg., Helena, Montana</p> <p>Status: Inactive</p>	<p>Gold, silver, zinc</p>	<p>Scratch Gravel district</p>



LEWIS & CLARK, Cont'd.

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
<p>DISCOVERY &amp; MARGURETE MINE  Operator: Cyrus M. and Vance  Clinger, 1510 S. 5th St. West,  Missoula, Montana  Owner: Missoula Lincoln Mines  Co., Missoula, Montana  Status: Inactive</p>	<p>Gold,  silver;  copper,  lead,  zinc</p>	<p>Lincoln district,  sec. 8, T. 14 N.,  R. 9 W.</p>
<p>DRUMLUMMON MINE  Operator: Montana Rainbow  Mining Co., Marysville,  Montana  Owner: St. Louis-Drumlummon  Mines, Inc.  Status: Inactive</p>	<p>Gold,  silver</p>	<p>Marysville district,  S<math>\frac{1}{2}</math> sec. 36, T. 12 N.,  R. 6 W.</p>
<p>EMPIRE MINE  Operator: Montana Mining and  Milling Co., Jack Vandenberg,  Gen. Mgr., Box 601, Helena,  Montana  Owner: Same as operator  Mill capacity: 300 t/d  Employees: 4  Status: Developing</p>	<p>Gold,  silver;  copper,  lead</p>	<p>Marysville district,  secs. 33, 34, T. 12  N., R. 6 W.</p>
<p>FRANKLIN MINE  Operator: J. E. and E. J.  Stevens, 1459 Cannon St.,  Helena, Montana  Owner: Thomas Cruse Mining &amp;  Development Co., Box 137,  Helena, Montana  Status: Inactive</p>	<p>Lead,  zinc</p>	<p>Scratch Gravel  district, sec. 11,  T. 10 N., R. 4 W.</p>
<p>GOLD DOLLAR MINE  Operator: Jack Parks, Box 59,  Lincoln, Montana  Owner: Same as operator  Employees: 2  Status: Developing</p>	<p>Gold,  silver,  copper</p>	<p>Poorman district,  sec. 5, T. 13 N.,</p>
<p>HAPPY JACK MINE  Operator: H. E. Charles and  Jack Fletcher, 5 E. Woolman,  Butte, Montana  Owner: John C. Fletcher, Butte,  Montana  Status: Inactive</p>	<p>Barite</p>	<p>York district</p>

LEWIS & CLARK, Cont'd.

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
<p>HELENA MINE  Operator: E. J. Stevens,  1459 Cannon St., Helena,  Montana  Owner: Paul Smith, 26 W. 6th,  Helena, Montana  Status: Inactive</p>	<p>Gold,  silver,  lead</p>	<p>Grass Valley district,  NW<math>\frac{1}{4}</math>NW<math>\frac{1}{4}</math> sec. 16,  T. 10 N., R. 4 W.</p>
<p>HUMDINGER MINE  Operator: Ray W. Crumb,  Avon, Montana  Owner: Same as operator  Mill capacity: 4 t/d  Status: Producing and  developing</p>	<p>Gold,  silver,  copper</p>	<p>Madison Gulch  district, sec. 35,  T. 13 N., R. 9 W.</p>
<p>LITTLE SAMPSON MINE  Operator: C. A. Magnuson,  2530 Peasley Canyon Rd.,  Aburn, Washington  Owner: Art Benson, Butte  Montana  Status: Inactive</p>	<p>Gold,  silver,  copper,  lead,  zinc</p>	<p>Rimini district,  NW<math>\frac{1}{4}</math>SW<math>\frac{1}{4}</math> sec. 4,  T. 8 N., R. 5 W.</p>
<p>MIKE HORSE MINE  Operator: Norman Rogers  Mining Co., Box 1719,  Helena, Montana  Owner: American Smelting and  Refining Co., 120 Broadway,  New York 5, New York  Status: Developing</p>	<p>Gold,  silver,  copper,  lead,  zinc</p>	<p>Heddleston  district, SE<math>\frac{1}{4}</math>SE<math>\frac{1}{4}</math>  sec. 28, T. 15 N.,  R. 6 W.</p>
<p>MONTE CHRISTO MINE  Operator: Hans Mo, Box 284,  Helena, Montana  Owner: Same as operator  Status: Developing</p>	<p>Gold,  silver,  copper,  zinc,  lead</p>	<p>Rimini district,  sec. 8, T. 8 N.,  R. 5 W.</p>
<p>NICK AND DICK MINE  Operator: Percy Goodwin,  Route A, Helena, Montana  Owner: Percy Goodwin and  G. A. Parte  Employees: 2  Status: Producing</p>	<p>Lead</p>	<p>Canyon Ferry  district, secs. 32,  33, T. 11 N., R. 1  W.</p>
<p>PAYMASTER AND ANACONDA MINE  Operator: Paramount Estates,  432 Walton Rd., Maplewood  New Jersey  Status: Unknown</p>	<p>Silver,  lead,  zinc</p>	<p>Heddleston  district, T. 15 N.,  R. 6 W.</p>



LEWIS & CLARK, Cont'd.

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
PEARL MINE Operator: R. Isaak and E. W. Weston, Jr., Rimini Route, Helena, Montana Owner: Fred Palmer and Paul Ortel Status: Developing	Gold, silver	sec. 30, T. 10 N., R. 5 W.
SILVER CRESCENT MINE Operator: Montana Gold Silver, William Hall, Pres., Box 295, Helena, Montana Owner: Holter Estate, Helena, Montana Mill capacity: 100 t/d Employees: 5 Status: Producing	Gold, silver, lead, zinc, copper	Rimini district, NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 29, and SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 30, T. 8 N., R. 5 W.
STEMPLE GOLD MINE Operator: Vern C. Knof, Canyon Creek, Montana Owner: Same as operator Mill capacity: 50 t/d Employees: 1 Status: Developing	Gold, silver	Stemple district, sec. 10, T. 13 N., R. 7 W.
TRANSIT MINE Operator: Ray Jensen, Box 246, Fairfield, Montana Owner: H. G. Kleinschmidt, Box 145, Helena, Montana Status: Inactive	Gold, silver, lead, zinc	Rimini district, NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 8, T. 8 N., R. 5 W.
ROSETTA MINE Operator: Continental Rare Metals, 2005 S. 77th West, Missoula, Montana Status: Developing	Copper	Wolf Creek district

LIBERTY COUNTY  
County Seat: Chester

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
SWEETGRASS MINE Operator: V. Moulton, L. R. Hannah and Cedor Aronow, Box 378, Shelby, Montana Owner: Same as operator Status: Developing	Copper, gold	East Butte district, sec. 25, T. 36 N., R. 4 E.

LINCOLN COUNTY  
County Seat: Libby

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
BIG SKY MINE Operator: Blaze Echo, Box 283, Libby, Montana Owner: Blaze Echo, Clive Roark, and Iniz Herrig, Libby, Montana Status: Inactive	Tungsten, lead, copper, zinc	Libby district, sec. 36, T. 29 N., R. 32 W.
BLACK DIAMOND MINE Operator: W. E. Rankin, R.R. #3, Troy, Montana Owner: Same as operator Status: Unknown	Gold, silver, copper, lead, zinc	Pine Creek district, sec. 2, T. 33 N., R. 34 W.
COPPER MOUNTAIN MINE Operator: Dr. L. H. Kotschevar, 301 Woodward Ave., Missoula, Mont. Owner: Same as operator Status: Inactive	Barite	Troy district, NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 12, T. 30 N., R. 34 W.
ESTHER MAY MINE Operator: Henry Reinshagen Libby, Montana Owner: Roscoe Garrison, Yaak, Montana Status: Inactive	Asbestos	Yaak district, sec. 34, T. 36 N., R. 32 W.
HIGHLAND SILVER GROUP MINE Operator: R. L. Rittenhouse, Route 3, Troy, Montana Owner: Same as operator Employees: 3 Status: Developing	Gold, silver, lead	Unorganized district, sec. 36, T. 32 N., R. 35 W.
LARUE & CRIPE PROSPECT Operator: Jack Larue and Donald Cripe, Yaak, Montana Owner: Same as operator Status: Inactive	Asbestos	Yaak district, sec. 26, T. 35 N., R. 32 W.
MORNING GLORY & NEW MORNING GLORY MINE Operator: New Morning Glory Mines, Inc., 418 Maritime Bldg., Seattle 4, Washington Owner: Same as operator Mill capacity: 50 t/d Status: Inactive	Lead, silver, gold	Sylvanite district, sec. 34, T. 34 N., R. 33 W.

LINCOLN, Cont'd.

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
<p>NORTH STAR GROUP  Operator: North Star Mines,  c/o C. W. (Hoyt) Tallmadge,  Libby, Montana  Owner: C. W. (Hoyt) Tallmadge,  R. R. Box 68, Libby, Montana  Status: Inactive</p>	<p>Lead,  zinc</p>	<p>Warland district,  secs. 25, 26,  T. 32 N., R. 29 W.</p>
<p>SNOWSHOE MINE  Operator: St. Paul Lead Co.  and Merger Mines Corp.,  A. I. Osborn, Pres., 816 -  15th St., Coeur d'Alene,  Idaho  Owner: Keith, Foote, and Grubb,  Kalispell, Montana  Mill capacity: 100 t/d  Status: Inactive</p>	<p>Gold,  silver,  lead,  zinc</p>	<p>Libby district,  SE<math>\frac{1}{4}</math>SW<math>\frac{1}{4}</math> sec. 7,  T. 28 N., R. 31 W.</p>
<p>ST. PAUL MINE  Operator: St. Paul Lead Co.,  815 - 15th St., Coeur d'Alene,  Idaho  Owner: Walter Zollers, 217 W.  Lincoln, Libby, Montana  Mill capacity: 100 t/d  Employees: 7  Status: Producing and  developing</p>	<p>Silver,  lead,  zinc</p>	<p>Libby district,  NE<math>\frac{1}{4}</math>NE<math>\frac{1}{4}</math> sec. 9,  T. 28 N., R. 31 W.</p>
<p>VERMICULITE MOUNTAIN MINE  Operator: Zonolite Company,  135 S. La Salle St., Chicago  3, Illinois  Owner: Same as operator  Status: Producing</p>	<p>Vermiculite</p>	<p>Rainy Creek district,  secs. 14, 15, 22, 23,  T. 31 N., R. 30 W.</p>
<p>WAYLETT GROUP  Operator: H. K. Waylett and  Bob Jones, Libby, Montana  Status: Inactive</p>	<p>Tungsten</p>	<p>Fisher River  district; sec. 20,  T. 27 N., R. 30 W.</p>
<p>WEST FISHER AND MILLER PLACER  Operator: Oscar V. Miller,  Star Route, Libby, Montana  Owner: Same as operator  Status: Inactive</p>	<p>Gold</p>	<p>Libby district,  sec. 4, T. 27 N.,  R. 30 W.</p>



MADISON COUNTY  
County Seat: Virginia City

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
<p>ALDER MINE Operator: Alder Gulch Mining and Development Co., Virginia City, Montana Status: Unknown</p>		Alder Gulch district
<p>AMAZON MINE Operator: Wm. Cocanaugher, Twin Bridges, Montana Owner: Scott Mallich, Dillon, Montana Employees: 4 Status: Producing and developing</p>	Siliceous copper	Stone Creek district, sec. 20, T. 7 S., R. 6 W.
<p>APEX MINE Operator: American Chemet Corp., S. W. Stockdale, Sec., East Helena, Montana Owner: Same as operator Status: Inactive</p>	Talc	Sweetwater district, SE $\frac{1}{4}$ sec. 1 and NE $\frac{1}{4}$ sec. 12, T. 8 S., R. 7 W.
<p>BIG BERTHA MINE Operator: Fred R. Starnner, 711 Marshall, Missoula, Montana Owner: Same as operator Status: Producing</p>	Gold, silver	Tidal Wave dis- trict
<p>BOULDER COBALT MINE Operator: A. A. Moser, Box 516, Hardin, Montana Owner: Same as operator Status: Developing</p>	Cobalt	Sheridan district, sec. 5, T. 3 S., R. 4 W.
<p>CHEMET #1 MINE Operator: American Chemet Corp., East Helena, Montana Owner: Same as operator Status: Inactive</p>	Talc	Sweetwater district, NE $\frac{1}{4}$ sec. 12 and NW $\frac{1}{4}$ sec. 7, T. 8 S., R. 6-7 W.
<p>CLANCY MINE Operator: B. J. Rybin, Silver Star, Montana Owner: Same as operator Employees: 3 Status: Unknown</p>	Gold, silver, copper	Silver Star district, sec. 33, T. 1 S., R. 6 W.

## MADISON, Cont'd.

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
<p>COLORADO MINE</p> <p>Operator: Bill Pruett and Leland M. Warmoth, R.F.D. #1, Whitehall, Montana</p> <p>Owner: Lloyd Thompson and Myrtle Pruett Chapman, Whitehall, Montana</p> <p>Status: Producing and developing</p>	Gold, silver	Bone Basin district, NW $\frac{1}{4}$ sec. 3, T. 1 S., R. 4 W.
<p>CORN CRACKER MINE</p> <p>Operator: Ed Reindl, 1246 W. Silver, Butte, Montana</p> <p>Status: Unknown</p>	Gold	Tidal Wave district, sec. 34, T. 3 S., R. 5 W.
<p>Dictator &amp; Belle Union Mine</p> <p>Operator: John Donegan, Tom Moe, George Henderson, Box 1032, Anaconda, Montana</p> <p>Owner: Union Bank and Trust Co., Helena, Montana</p> <p>Employees: 6</p> <p>Status: Producing</p>	Siliceous copper	Ramshorn district, secs. 1, 12, T. 5 S., R. 4 W.
<p>EASTON PACIFIC &amp; RIVERSIDE MINE</p> <p>Operator: Easton Pacific &amp; Riverside Mining Corp., c/o Ed Scheitlen, Virginia City, Montana</p> <p>Status: Producing</p>	Gold	Virginia City T. 7 S., R. 3 W.
<p>EL FLEEDA MINE</p> <p>Operator: R. B. Farnsworth and Lloyd Brooks, 14 N. Tracy, Bozeman, Montana</p> <p>Owner: Union Bank and Trust Co., No. 4 Washington Pl., Helena, Montana</p> <p>Employees: 1</p> <p>Status: Developing</p>	Gold, silver, copper	Fairweather (Virginia City) district, sec. 26, T. 6 S., R. 3 W.
<p>FAIRVIEW MINE</p> <p>Operator: Harry E. Stine, Sheridan, Montana</p> <p>Owner: Mrs. Hall, Whitehall, Montana</p> <p>Status: Inactive</p>	Gold, silver, zinc	Sheridan district, secs. 31, 32, T. 3 S., R. 4 W.

MADISON, Cont'd.

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
FLORENCE (COOK) MINE Operator: Mike Dilulo, Whitehall, Montana Owner: Northern Pacific Railway, St. Paul, Minnesota Status: Developing	Copper, lead, gold, zinc, silver, iron ore, chromium	Bone Basin district, sec. 9, T. 1 S., R. 4 W.
GOLD PLATE MINE Owner: L. L. Locke, Norris, Montana Status: Inactive	Gold, silver	Cherry Creek district, secs. 25, 30, 31, T. 2 S., R. 2 E.
HIGH RIDGE MINE Owner: Lester Taylor and Rudolph Brooksle, Twin Bridges, Montana Status: Inactive	Gold, silver, copper, lead	Tidal Wave district, SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 27, T. 3 S., R. 5 W.
HIGH UP (OXIDENTAL) MINE Operator: Hi Up Mining Co., Sheridan, Montana, and Los Angeles, California Owner: Elling Estate Co., 1612 Alameda Ave., Alameda, California Status: Inactive	Gold, copper, silver, lead, zinc	Sheridan district, secs. 35, 36, T. 3 S., R. 4 W.
KEYSTONE MINE Operator: Tri-State Minerals Co., 2001 Lincoln St., Ogden, Utah Owner: W. K. Skloch, 320 Mission Rd., Los Angeles, California Status: Inactive	Talc	Blacktail district, N $\frac{1}{2}$ sec. 2, T. 8 S., R. 7 W.
LEODORA MINE Operator: Carl T. Carlson, Twin Bridges, Montana Owner: Same as operator Status: Developing	Gold, silver, lead	Rochester district, sec. 4, T. 3 S., R. 5 W.
LOST LODE MINES Operator: John T. Macale, Virginia City, Montana Owner: Mrs. William Anderson, Seattle, Washington Employees: 3 Status: Developing	Gold, silver, lead	Fairweather district, sec. 3, T. 7 S., R. 3 W.



## MADISON, Cont'd.

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
MERLIN MINE Operator: G. M. Flemming, Box 424, Dillon, Montana Owner: Same as operator Status: Producing	Mica	12 miles south of Ennis
MISSOURI-MC KEE MINE Operator: H. Denny, McAllister, Montana Owner: Same as operator Employees: 3 Status: Developing	Gold, silver	Washington (Meadow Creek) district, N $\frac{1}{2}$ sec. 30, T. 4 S., R. 2 W.
NICHOLS MINE Operator: Lyle Nichols, Cardwell, Montana Owner: Same as operator Employees: 1 Status: Developing	Gold, silver	East Fork of South Boulder
OLD JOE MINE Operator: Fred B. Box, Pony, Montana Owner: Same as operator Status: Inactive	Gold, silver, lead	Pony (South Boulder) district, T. 2 S., R. 2 W.
PAULINE MINE Operator: E. W. Greenwood, 940 North 24th, Billings, Montana Owner: Same as operator Status: Inactive	Gold, silver	Virginia City district
RAMSHORN MINE Operator: F. & S. Mining Co., 1300 Chicago, Butte, Montana Owner: F. & S. Contracting Co., Sheridan, Montana Status: Developing	Iron ore	Sheridan district, sec. 1, T. 5 S., R. 4 W.
RED PINE MINE Operator: Ruby Valley Development Co., 6216 S. Montgomery, Tacoma 9, Washington Owner: Same as operator Status: Inactive	Gold, silver	Sheridan district, sec. 5, T. 4 S., R. 4 W.

MADISON, Cont'd.

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
RUBY MINE Operator: American Chemet Corp., East Helena, Montana Owner: Same as operator Status: Unknown	Talc	Willow Creek district, secs. 20, 29, T. 8 S., R. 3 W.
RUBY VIEW TALC MINE Operator: Claude H. Brown, Box 102, Dillon, Montana Owner: Same as operator Status: Developing	Talc	Stone Creek district, sec. 13, T. 7 S., R. 6 W.
SAMPSON MINE Operator: Alder Gulch Mining and Development Co., Virginia City, Montana Status: Unknown	Gold, silver, lead	Virginia City district, sec. 29, T. 6 S., R. 3 W.
SHORT SHIFT MINE Operator: W. O. Larsen, Twin Bridges, Montana Owner: Same as operator Mill capacity: 300 t/d Employees: 1 Status: Producing and developing	Gold, silver	Jack Rabbit district
SILVER BELL MINE Operator: R. H. Rogers and J. C. Evans, Box 125, Virginia City, Montana Status: Inactive	Gold, silver	
SILVER BULLION MINE Operator: Horse Creek Development Co., 1327 W. Granite, Butte, Montana Owner: Mrs. Reba Storer, 1611 - 6th St., Walkerville, Montana Status: Developing	Silver	Horse Creek district, secs. 27, 28, T. 4 S., R. 4 W.
SNOW WHITE TALC MINE Operator: Claude H. Brown, Box 102, Dillon, Montana Owner: Same as operator Status: Developing	Talc	Stone Creek-Spring Creek district, sec. 3, T. 7 S., R. 6 W.



MADISON, Cont'd.

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
STRAWBERRY MINE Operator: Pony Tungsten Enterprises, c/o Fred Box, Pony, Montana Owner: Elling Estate Co., Alameda, California Mill capacity: 25 t/d Employees: 2 Status: Developing	Tungsten, gold, silver	Mineral Hill district, NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 14, T. 2 S., R. 3 W.
STRAWN MINE Operator: William Cocanaugher, Twin Bridges, Montana Owner: Julian Strawn, Twin Bridges, Montana Status: Inactive	Gold, silver, antimony	Beal Canyon district
TREASURE STATE MINE Operator: Tri-State Minerals Co., c/o John R. Pyner, Gen. Mgr., Box 227, Dillon, Montana Owner: Same as operator Status: Producing	Talc	Unorganized district, NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 15, T. 7 S., R. 6 W.
WEST MAYFLOWER MINE Operator: Frank Antonioli, 505 S. Clark, Butte, Montana Owner: The Anaconda Co., Butte, Montana Employees: 14 Status: Producing	Gold, silver	Cedar Hollow district, Center sec. 32, T. 1 N., R. 3 W.
YELLOWSTONE MINE Operator: Sierra Talc Co., E. W. Stevens, Supt., 1608 Huntington Dr., South Pasadena, California Owner: Same as operator Employees: 18 summer; 9 winter Status: Producing	Talc	Johnny Gulch district, sec. 4, T. 9 S., R. 1 W.

MEAGHER COUNTY

County Seat: White Sulphur Springs

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
COPPER DUKE MINE Operator: Ben Rux, Martinsdale, Montana Owner: N. Hardman, Glendale, California Employees: 2 Status: Producing	Gold, copper	Copperopolis district, SW $\frac{1}{4}$ sec. 29, T. 10 N., R. 9 E.

MEAGHER, Cont'd.

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
CUMBERLAND MINE Operator: Clarence Oliphant, c/o Truck Stop Cafe, White Sulphur Springs, Montana Owner: HOCO Inc., Lennep, Montana Employees: 3 to 10 Status: Producing and developing	Silver, copper	Castle Mountain district
EXCHANGE PLACER MINE Operator: W. G. Walsh, White Sulphur Springs, Montana Owner: Same as operator Status: Inactive	Gold	Thomas Creek district; sec. 36, T. 11 N., R. 3 E.
LAST CHANCE PLACER MINE Operator: Mrs. Valentine Wood, White Sulphur Springs, Montana Owner: Same, El Mirage, Arizona Status: Developing	Gold	Beaver district
MAXINE MINE Operator: John R. Knight, Box 236, White Sulphur Springs, Montana Owner: Same as operator Status: Inactive	Manganese oxide	Maxine district, sec. 21, T. 12 N., R. 4 E.
YELLOWSTONE MINE Operator: Hamilton Mines, Inc., Lennup, Montana Owner: Same as operator Status: Producing	Lead silver	Castle Mountain district, sec. 11, T. 8 N., R. 9 E.

MINERAL COUNTY  
County Seat: Superior

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
BOULDER GOLD PLACER Operator: Jonathan and Theresia Kiesling, Rivulet Star Route, Alberton, Montana Owner: Same as operator Employees: 1 Status: Unknown	Gold	Quartz Creek district, T. 19 N., R. 30 W. St. Pat's Gulch

MINERAL, Cont'd.

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
GILDERSLEEVE (BONANZA GROUP) MINE Operator: George Gildersleeve, Box 565, Superior, Montana Owner: Same as operator Status: Developing	Gold, silver; copper, lead, barite	Cedar Creek district, sec. 17, T. 15 N., R. 26 W.
GOLD BOND MINE Operator: George M. Gildersleeve, Box 565, Superior, Montana Owner: Same as operator Status: Developing		
KEYSTONE (PROSPERTY) Operator: Fred W. Wilson and M. E. Engdahl, 1716 S. 9th W., Missoula, Montana Owner: Prosperity Mines Co., Inc., 1716 S. 9th W., Missoula, Montana Employees: 2 Status: Producing and developing	Silver, lead, copper	Keystone district, T. 18 N., R. 26 W.
NANCY LEE MINE Operator: E. G. Smith, Box 505, Osburn, Idaho Owner: Nancy Lee Co., 410 Main St., Kellogg, Idaho Mill capacity: 100 t/d Employees: 6 Status: Producing and developing	Silver, copper, lead, zinc	Keystone district, secs. 31, 32, T. 18 N., R. 26 W.
SNOWBIRD MINING CLAIMS Operator: Joseph F. Rudys, #12 Berry's Trailer Court, Fairbanks, Alaska Owner: Joseph H. Farrington and Carl G. Reinhard, 1132 Longstaff St., Missoula, Montana Status: Inactive	Fluorspar	Cedar Creek district
STEMWINDER PLACER MINE Operator: George M. Gilder- sleeve, Box 565, Superior, Montana Owner: Same as operator Status: Developing	Gold	Cedar Creek (Trout Creek) district, sec. 17, T. 15 N., R. 26 W.



MINERAL, Cont'd.

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
TARBOX & MEADOW MOUNTAIN MINE Operator: Mineral King Mining Co., c/o C. F. Buls, 110 Van Buren St., Missoula, Montana Owner: Same as operator Status: Developing	Gold, silver, lead, copper	Saltese-St. Regis district; sec. 36, T. 20 N., R. 31 W.

MISSOULA COUNTY  
County Seat: Missoula

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
COLOMA & ELK CREEK MINE Operator: National Lead Co., Baroid Div., 2404 Danville, Houston, Texas Owner: Same as operator Mill capacity: 120 t/d Employees: 4 Status: Producing	Barite	Coloma district, sec. 32, T. 13 N., R. 14 W.
CRYSTAL SPRINGS MINE Operator: A. W. Pflug, Bonner, Montana Owner: S. P. Wilson, Deer Lodge, Montana Status: Inactive	Gold, silver	Coloma district, sec. 32, T. 13 N., R. 14 W.
EILEEN MARSHA PLACER MINE Operator: Earl A. Dotson, 2837 Hermosa Ave., Hermosa Beach, California Owner: Same as operator Status: Developing	Gold	Nine Mile district, sec. 2, T. 16 N., R. 23 W.
HIDDEN TREASURE MINE Operator: Clinton Mining and Milling Co., and Hera Explo- ration Co., Box 40, Missoula, Montana Owner: Same as operator Mill capacity: 50 t/d Employees: 6 Status: Developing	Copper, lead, silver, gold	Clinton (Wallace) district, S $\frac{1}{2}$ NW $\frac{1}{4}$ sec. 19, T. 12 N., R. 16 W.

# MISSOULA, Cont'd.

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
LA CHAMBRE PLACER MINE Operator: J. T. La Chambre, Huson, Montana Owner: Same as operator Status: Inactive	Gold, silver	Nine Mile district, sec. 22, T. 17 N., R. 24 W.
LYON QUARRY Operator: Lyon Construction Co., Clinton, Montana Owner: Same as operator Mill capacity: 1,500 t/d Employees: 20 Status: Producing	Railroad ballast, road metal	Clinton (Wallace Creek) district, sec. 17, T. 12 N., R. 17 W.
MONGAR MINE Operator: George Mongar, Jr., Box 31, Drummond, Montana Owner: George R. Mongar, 215 - 1st Ave. South, Shelby, Montana Status: Developing	Silver, copper, lead	Clinton district, sec. 11, T. 12 N., R. 16 W.
NINE MILE MINE Operator: William Lamon and Lloyd R. Allen, Huson, Montana Owner: Same as operator Mill capacity: 15 t/d Status: Developing	Gold	Nine Mile district, sec. 18, T. 17 N., R. 24 W.
TWIN CREEKS PLACER MINE Operator: Victor Demin, Route #4, Missoula, Montana Owner: Same as operator Status: Developing	Gold	Nine Mile district, sec. 26, T. 17 N., R. 24 W.

## PARK COUNTY

County Seat: Livingston

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
MOONLIGHT MINE Operator: Alder Gulch Mining and Development Co., Virginia City, Montana Status: Unknown	Gold, copper, silver	Gardiner district
SIN NOMBRE MINE Operator: T. H. Hallin and Donald Cameron, Jr., Box 314, Gardiner, Montana Owner: Same as operator Status: Unknown	Gold, tungsten	Crevasse district, sec. 22, T. 9 S., R. 9 E.

PHILLIPS COUNTY  
County Seat: Malta

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
<b>HAWKEYE MINE</b> Operator: Northern Mining and Milling Co., Paul I. Raber, Pres., Townsend, Montana Owner: Northern Mining Co., Zortman, Montana Mill capacity: 100 t/d Status: Developing	Gold, silver	Little Rockies district; sec. 7, T. 25 N., R. 25 E.
<b>INDEPENDENT MINE</b> Operator: Henry and Holger Heppner, Landusky, Montana Owner: Same as operator Status: Inactive	Gold, silver	Little Rockies district
<b>LITTLE BEN (GOLD BUG) MINE</b> Operator: Little Rockies Mining and Development Co., Cecil Flinders, Pres., Lewistown, Montana Owner: Same as operator Mill capacity: 50 t/d Status: Inactive	Gold, silver	Little Rockies district; sec. 15, T. 25 N., R. 24 E.
<b>LUCKY MAUD MINE</b> Operator: Louis Clark, Box 21, Zortman, Montana Owner: Same as operator Status: Inactive	Gold	Little Rockies district; sec. 18, T. 25 N., R. 25 E.
<b>RUBY GULCH MINE</b> Operator: Gold Reserve Mining Co., Zortman, Montana Owner: Same as operator, Don R. Bennett, Treasurer, Box 541, Bozeman, Montana Mill capacity: 500 t/d Status: Developing	Gold, silver; copper, lead	Little Rockies district; sec. 17, T. 25 N., R. 25 E.

POWELL COUNTY  
County Seat: Deer Lodge

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
<b>ALICE MARIE PLACER</b> Operator: Francis Slaughtner, 711 - 4th St., Deer Lodge, Montana Status: Inactive		



POWELL, Cont'd.

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
<p>ANDERSON MINE  Operator: Montana Phosphate  Products Co., Garrison,  Montana  Owner: Same as operator  Employees: 160  Status: Producing</p>	Phosphate rock	Garrison district, sec. 3, T. 10 N., R. 10 W.
<p>BLUEBELL MINE  Operator: Ralph Gleason,  Box 452, Deer Lodge, Montana  Status: Inactive</p>	Gold	
<p>BONANZA MINE  Operator: Ralph Gleason,  Box 542, Deer Lodge, Montana  Owner: The Zosil Family,  Deer Lodge, Montana  Status: Inactive</p>	Gold, silver, lead	Zosell (Emery) district, N $\frac{1}{2}$ sec. 11, T. 7 N., R. 8 W.
<p>BROCK MINE  Operator: Montana Phosphate  Products Co., Garrison,  Montana  Owner: Same as operator  Employees: 30  Status: Developing</p>	Phosphate rock	Garrison district, sec. 21, T. 10 N., R. 10 W.
<p>CHARTER OAK MINE  Operator: Charter Oak Mining  Co., c/o J. T. Bonner,  Box 566, Elliston, Montana  Owner: Same as operator  Mill capacity: 50 t/d  Status: Developing</p>	Gold, silver, lead, zinc	Nigger Hill district, NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 36, T. 9 N., R. 7 W.
<p>ELLISTON QUARRY  Operator: Elliston Lime Co.,  303 N. Ewing, Helena, Montana  Owner: Same as operator  Mill capacity: 200 t limestone; 40 t lime  Employees: 16  Status: Producing</p>	Limestone	secs. 5, 6, T. 9 N., R. 6 W.
<p>G. &amp; G. TOOLE PLACER  Operator: Louis Eich and  Elmer Waggner, Townsend, Mont.  Owner: Harry C. W. Richter and  Catherine Kieley, 314 Spruce  St., Townsend, Montana  Status: Producing</p>	Gold	Jefferson Gulch district; sec. 11, T. 12 N., R. 9 W.

POWELL, Cont'd.

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
GOLDEN ANCHOR (BIG DICK-BLACKJACK) MINE Operator: Golden Anchor Mining and Milling Co., Box 535, Elliston, Montana Owner: Same as operator, E. H. Konshuk, Secretary, S. 3018 Regal, Spokane, Washington Employees: 2 Status: Inactive	Gold, silver, lead	Nigger Hill district, sec. 6, T. 8 N., R. 6 W.
GRAVELEY MINE Operator: Montana Phosphate Products Co., Garrison, Montana Owner: Same as operator Status: Inactive	Phosphate rock	Garrison district, SW $\frac{1}{4}$ sec. 2, T. 10 N., R. 9 W.
HARD ROCK & PLACER MINE Operator: Pat T. Phalen, Helmville, Montana Owner: Same as operator Status: Developing	Gold	Ogden Mountain district, secs. 15, 16, 21, 22, T. 13 N., R. 10 W.
HIDDEN HAND MINE Operator: Howard C. Banks, Box 514, Deer Lodge, Montana Owner: Same as operator Status: Developing	Gold, silver, lead, zinc	Zosell (Emery) district, NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 2, T. 7 N., R. 8 W.
INDEPENDENCE MINE Operator: A. L. Rankin, 214 Hedden Bldg., Billings, Montana Owner: Same as operator Status: Inactive	Gold, silver	Upper Pikes Peak (Gold Creek) district, secs. 17, 18, T. 8 N., R. 11 W.
JACK PINE (TROUT CREEK) MINE Operator: Bunker Hill Co., c/o A. E. Nugent, Explo. Geol., Elliston, Montana Owner: Same as operator Status: Developing	Phosphate rock	Elliston district, SW $\frac{1}{4}$ sec. 35, T. 11 N., R. 7 W.
JEFFERSON GULCH (LUCKY ANDY) MINE Operator: Louis Eich and Elmer Waggner, Townsend, Montana Owner: Harry C. W. Richter and Catherine Kieley, 314 Spruce St., Townsend, Montana Status: Producing (?)	Gold	Jefferson Gulch district, sec. 11, T. 12 N., R. 9 W.

POWELL, Cont'd.

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
JULIA (COPPER KING OR SURE THING) MINE Operator: Elliston Consolidated Mining Co., Elliston, Montana Owner: Same as operator Status: Inactive	Gold, silver, lead, zinc, copper	Elliston district, SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 5, T. 8 N., R. 6 W.
L & M MINE Operator: C. E. Mitchell and Sons, 308 - 4th Ave. South, Great Falls, Montana Owner: Same as operator Employees: 4 Status: Producing	Gold	Washington Gulch (Finn) district
LUKE MINE Operator: Montana Phosphate Products Co., F. E. Burnet, Gen. Mgr., Garrison, Montana Owner: Same as operator Employees: 50 Status: Producing and developing	Phosphate rock	Garrison district, sec. 15, T. 10 N., R. 9 W.
MONARCH MINE Operator: Monarch Minerals, Inc., Box 33, Helena, Montana Owner: Same as operator Employees: 3 to 5 Status: Unknown	Gold, silver, lead, copper	Ontario district, secs. 30, 31, T. 8 N., R. 6 W.
NEGROS MINE Operator: John F. Hopkins, 401 N. Montana Ave., Helena, Montana Owner: Fred W. Hopkins, Box 375, Helena, Montana Status: Developing	Gold, silver, lead	Nigger Hill district, SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 36, T. 9 N., R. 7 W.
NORA MINE Operator: Henry Lauri, Elliston, Montana Owner: Same as operator Status: Inactive	Gold, silver, lead	Nigger Hill district
OLD SHOE #1 PLACER MINE Operator: Arthur H. Roat, Polson, Montana Owner: Same as operator Status: Unknown	Gold	Finn district, 1 mile north on North Fork of Washington Gulch



POWELL, Cont'd.

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
PINEAU PLACER MINE Operator: MacIntosh Master Mining Co., Gold, Montana Status: Unknown	Gold	T. 8 N., R. 11 W.
RELYEA MINE Operator: George Relyea, Box 85, Garrison, Montana Owner: Same as operator Mill capacity: 300 t/d Employees: 40 Status: Producing and developing	Phosphate rock	Garrison (Brock Creek) district, S $\frac{1}{2}$ sec. 12, T. 10 N., R. 10 W.
RESERVOIR AND OPHIR PATENTS Operator: Francis Slaughtner, 711 - 4th St., Deer Lodge, Montana Owner: Cliff Gravely, Avon, Montana Status: Unknown	Gold	Ophir district, sec. 25, T. 11 N., R. 8 W.
RESERVOIR PLACER MINE Operator: Montana Gold and Chemical Co., 325 - 2d. Ave., Edgemont, South Dakota Owner: Same as operator Status: Unknown	Gold, silver	Pioneer district
ROGERS HOMESTEAD PLACER MINE Operator: Montana Gold and Chemical Co., 325 - 2d. Ave., Edgemont, South Dakota Owner: Same as operator Status: Unknown	Gold, silver	Pioneer district
THIRD TERM MINE Operator: Northwestern Mining and Exploration Co., 12822 - 3d. So., Seattle, Washington Owner: Elmer Lince, Elliston, Montana Status: Developing	Gold, silver; copper, lead, zinc	Nigger Hill district, NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 28, T. 9 N., R. 6 W.
TREASURE MOUNTAIN MINE Operator: Golden Anchor Mining & Milling Co., Box 535, Ellison, Montana Owner: Same as operator, E. H. Konshuk, Secretary, S. 3018 Regal, Spokane, Washington Employees: 2 Status: Inactive	Gold, silver, copper, zinc, manganese, lead	Nigger Hill district, T. 8 N., R. 6-7 W.

RAVALLI COUNTY  
County Seat: Hamilton

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
<p>CRYSTAL MOUNTAIN MINE</p> <p>Operator: Cummings-Roberts, John Tabor, Gen. Mgr., 739 N. Highland, Los Angeles 38, California</p> <p>Owner: A. E. Cumley, L. I. Thompson, and R. D. Flightner, Darby, Montana</p> <p>Mill capacity: 1,200 t/d</p> <p>Employees: 45</p> <p>Status: Producing</p>	Fluorite	Crystal Mountain district, SW $\frac{1}{4}$ sec. 18, T. 3 N., R. 18 W.
<p>CURLEW MINE</p> <p>Operator: Curlew Mining and Development Co., c/o Harlan McFadgen, Box 248, Stevensville, Montana</p> <p>Owner: Norman Holter, Curlew, Montana</p> <p>Status: Unknown</p>	Silver, lead, copper, zinc	Curlew district, sec. 13, T. 8 N., R. 21 W.
<p>DARKSTAR MINE</p> <p>Owner: William Van Matre, 2624 Edwards St., Butte, Montana</p> <p>Status: Developing</p>	Columbium, rare earths	Mineral Point district, secs. 1, 3, 4, T. 4 S., R. 22 W.
<p>HUGHES CREEK PLACER</p> <p>Operator: Hughes Creek Dredging Co., Inc., Hamilton, Montana</p> <p>Owner: A. Smith, Hamilton, Montana</p> <p>Status: Producing</p>	Gold, silver	Overwhich district, N $\frac{1}{2}$ T. 3 S., R. 21 W.
<p>LARRIGON MINE</p> <p>Operator: Larrigon Mining Co., c/o G. W. Berggeren, 404 N. 2d. St., Hamilton, Montana</p> <p>Owner: Same as operator</p> <p>Status: Developing</p>	Gold	Hughes Creek district, sec. 34, T. 2 S., R. 21 W.
<p>RYE CREEK PROSPECT</p> <p>Operator: J. T. Abbey and M. Wilson, Box 105, Route 1, Hamilton, Montana</p> <p>Owner: J. T. Abbey, Box 617, Darby, Montana, and Milo E. Wilson, Connor, Montana</p> <p>Status: Unknown</p>	Columbium, rare earths	Rye Creek district, sec. 29, T. 3 N., R. 20 W.

RAVALLI, Cont'd.

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
SMITH MINE Operator: Curlew Mining and Development Co., c/o Harlan McFadgen, Box 248, Stevensville, Montana Owner: John Smith, Helena, Montana Status: Unknown	Silver, lead, copper, zinc	Curlew district, T. 8 N., R. 21 W.
WOODS CREEK IRON MINE Operator: Shoshone Ore Co., Duluth, Minnesota Owner: Copper Canyon Mining Corp., c/o Lee and Ernest Shook, Alta Route, Darby, Montana Employees: 12 Status: Developing	Iron ore	Mineral Point district, secs. 19, 20, T. 3 S., R. 22 W.

SANDERS COUNTY

County Seat: Thompson Falls

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
COEUR D'ALENE STAR MINE Owner: Nevada Rawhide Mining Co., c/o Clarence Davis, Pres., Cheney, Washington Status: Developing	Lead, silver	Eddy Creek district, secs. 12, 13, T. 20 N., R. 28 W.
HEIDELBERG MINE Operator: Heidelberg Mining Co. of Montana, c/o G. A. Myers, 1001 Court St., Pascoe, Washington Owner: Same as operator Employees: 5 Status: Developing	Gold	Noxon district, SW $\frac{1}{4}$ sec. 29, and NW $\frac{1}{4}$ sec. 32, T. 27 N., R. 31 W.
HOLLIDAY MINE Operator: Holliday Mines, Inc., Box 197, Noxon, Montana Owner: Same as operator Employees: 8 Status: Developing	Silver, lead, zinc, copper	Pilgrim Creek district, sec. 30, T. 26 N., R. 33 W.



SANDERS, Cont'd.

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
<p>JACK WAITE MINE</p> <p>Operator: American Smelting and Refining Co., C. H. Blackwell, Supt., Wallace, Idaho</p> <p>Owner: Jack Waite Mining Co., 170 Broadway, New York 38, New York</p> <p>Mill capacity: 300 t/d</p> <p>Employees: 23</p> <p>Status: Producing</p>	<p>Gold, silver, copper, lead,</p>	<p>Eagle (White Plains) district, W<math>\frac{1}{2}</math> sec. 17, T. 22 N., R. 32 W.</p>
<p>MONTANA STANDARD MINE</p> <p>Operator: Montana Standard Mining Co., Ltd., Loy L. Vose, Pres., 406 - 1st St., Wallace, Idaho</p> <p>Owner: Same as operator</p> <p>Status: Inactive</p>	<p>Gold, silver, copper, lead, zinc</p>	<p>Prospect Creek (Burns) district, NE<math>\frac{1}{4}</math> sec. 35, T. 21 N., R. 31 W.</p>
<p>RAVEN MINE</p> <p>Operator: Raven Mine, c/o Austin Monk, Thompson Falls, Montana</p> <p>Owner: Austin Monk and Ralph Provence, Thompson Falls, Montana</p> <p>Employees: 4</p> <p>Status: Developing</p>	<p>Copper</p>	<p>Thompson River district; sec. 33, T. 22 N., R. 28 W.</p>
<p>SALES MINE</p> <p>Owner: Mr. &amp; Mrs. Gordon Sales and Mrs. Ruth Sales, Box 464, Kalispell, Montana</p> <p>Status: Inactive</p>		<p>sec. 1, T. 25 N., R. 28 W.; sec. 6, T. 25 N., R. 27 W., and sec. 36, T. 26 N., R. 28 W.</p>
<p>STATE GROUP</p> <p>Owner: The State Mining Co., Box 68, E. 5219 Boone Ave., Yardly, Washington</p> <p>Status: Developing</p>	<p>Lead, silver</p>	<p>Eddy Creek district, secs. 16, 21, T. 20 N., R. 28 W.</p>

SILVER BOW COUNTY  
County Seat: Butte

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
<p>BADGER MINE</p> <p>Operator: The Anaconda Co., Hennessy Bldg., Butte, Mont.</p> <p>Owner: Same as operator</p> <p>Status: Developing</p>	<p>Sulfide ore</p>	<p>Summit Valley (Butte) district NE<math>\frac{1}{4}</math>NW<math>\frac{1}{4}</math> sec. 7, T. 3 N., R. 7 W.</p>

SILVER BOW, Cont'd.

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
BERKELEY PIT Operator: The Anaconda Co., Hennessy Bldg., Butte, Montana Owner: Same as operator Status: Producing	Gold, silver, copper	Summit Valley (Butte) district, NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 18, T. 3 N., R. 7 W.
BROWN NO. IX MINE Operator: Claude H. Brown, Box 102, Dillon, Montana Owner: Same as operator Status: Developing	Fluorspar, dolomite	Divide district, secs. 15, 22, 23, 24, T. 1 S., R. 9 W.
JEWEL MINE Operator: A. C. Fisher, 1520 Phillips, Butte, Montana Owner: Dale F. Galles and Ben Harwood, Billings, Montana Mill capacity: 20 t/d Status: Unknown	Gold, silver	Grove Creek district, sec. 22, T. 3 N., R. 8 W.
KELLEY MINE Operator: The Anaconda Co., Hennessy Bldg., Butte, Montana Owner: Same as operator Status: Producing	Gold, silver, copper	Summit Valley (Butte) district, SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 7, T. 3 N., R. 7 W.
MAIDEN ROCK MINE Operator: Victor Chemical Division of Stauffer Chemical Co., Butte, Montana Owner: Victor Chemical Co., 155 N. Wacker Dr., Chicago 6, Illinois Status: Producing	Phosphate rock	Maiden Rock district, NE $\frac{1}{4}$ sec. 5, T. 2 S., R. 9 W.
MAJOR BUDD (RAMPART) MINE Operator: United Idaho Mining Co., c/o Roger Pierce, 808 Newhouse Bldg., Salt Lake City, Utah Owner: Rampart Mountain Mining Co., St. Louis, Missouri Status: Inactive	Gold, silver, copper, lead	East Ridge (Summit Valley) district, SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 3, T. 3 N., R. 7 W.
MC PHAIL PROSPECT Operator: David Taggart, Box 1017, Butte, Montana Owner: Bill Franks, George Richardson and Jed Hoppes, Box 1017, Butte, Montana Status: Unknown	Gold	Highland district, sec. 32, T. 1 N.,

# SILVER BOW, Cont'd.

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
MOUNTAIN CON MINE Operator: The Anaconda Co., Hennessy Bldg., Butte, Montana Owner: Same as operator Status: Producing	Copper, silver	Summit Valley (Butte) district, NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 12, T. 3 N., R. 8 W.
STEWART MINE Operator: The Anaconda Co., Butte, Montana Owner: Same as operator Status: Producing and developing	Sulfide ores	Summit Valley district, NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 13, T. 3 N., R. 8 W.
TUXEDO MINE Operator: Ed Hughes, 1301 Porphyry, Butte, Montana Owner: Same as operator Status: Producing	Gold, silver	Summit Valley district, sec. 28, T. 4 N., R. 8 W.

## STILLWATER COUNTY County Seat: Columbus

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
MOUAT MINE Operator: American Chrome Co., 1 Montgomery St., Rm. 1201, San Francisco 4, California Owner: M. W. Mouat Estate, Nye, Montana Mill capacity: 1,000 t/d Employees: 170 Status: Producing	Chromite concentrates, ferrochrome	Nye district, secs. 20, 21, 28, 29, 30, T. 5 S., R. 15 E.

## SWEET GRASS COUNTY County Seat: Big Timber

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
HALF MOON MINE Operator: Half Moon Mining Co., George Guay, Pres., 207 Hedden Bldg., Billings, Montana Owner: Same as operator Status: Inactive	Gold, silver, lead	Independence district



TOOLE COUNTY  
County Seat: Shelby

<u>Name of Operation</u>	<u>Product</u>	<u>Property Location</u>
GOLD BUTTE MINE Operator: Donald Meech and Knobel, Whitlash, Montana Owner: Same as operator Status: Developing	Gold	T. 36 N., R. 3 E.

LIST OF MONTANA COAL MINES ACTIVE IN 1960

By Thomas Morgan  
State Coal Mine Inspector

BIG HORN COUNTY  
County Seat: Hardin

<u>Company</u>	<u>Operator</u>
Spring Creek Mine	Henry Yalowizer, Decker

BLAINE COUNTY  
County Seat: Chinook

<u>Company</u>	<u>Operator</u>
Milk River Coal Company	Lauren Sargent, Box 661, Havre

CARBON COUNTY  
County Seat: Red Lodge

<u>Company</u>	<u>Operator</u>
Brophy Coal Company	James R. Brophy, Red Lodge
Burns Coal Company	Patrick Barrett, Box 881, Red Lodge
Roadside Coal Company	Frank Janskovich, Box 673, Bearcreek
Smith Coal Docks	Samuel Carpenter, Box 332, Red Lodge

CASCADE COUNTY  
County Seat: Great Falls

<u>Company</u>	<u>Operator</u>
Canyon Coal Company	William Surmi, Sand Coulee
East Belt Mine	Sam Williamson, Belt
Latham Coal Company	Andrew Yatsko, Stockett
Loveland Mine	Earl Loveland, Milligan Route, Cascade

CUSTER COUNTY  
County Seat: Miles City

<u>Company</u>	<u>Operator</u>
Moon Creek Mine	Henry Freeze, 509 Pacific, Miles City

CUSTER COUNTY, Cont'd.

<u>Company</u>	<u>Operator</u>
Storm King Mine	Calvin Fleming, Box 66, Route 1, Miles City

DAWSON COUNTY  
County Seat: Glendive

<u>Company</u>	<u>Operator</u>
Albrecht Coal Company	Jacob Albrecht, Bloomfield
Clapp Coal Mine	Clyde Clapp, Box 93, Glendive
Peuse Coal Mine	Gordon Peuse, Lindsay

FERGUS COUNTY  
County Seat: Lewistown

<u>Company</u>	<u>Operator</u>
Swanson Mine	William S. Swanson, Gilt Edge Route, Lewistown
Tuss Coal Company	C. M. Tuss, 512 Evelyn, Lewistown

GARFIELD COUNTY  
County Seat: Jordan

<u>Company</u>	<u>Operator</u>
Magnuson Mine	John Magnuson, Box 715, Jordan

MC CONE COUNTY  
County Seat: Circle

<u>Company</u>	<u>Operator</u>
Kountz Coal Mine	Ted Kountz, Brockway
LaHay Mine	D. H. Lemieux, Poplar
No. 1 Coal Mine	R. D. Stephenson, Circle
Willoughby Mine	Dayton Willoughby, Vida
Yarger Coal Mine	Wayne Yarger, Brockway

MUSSELSHELL COUNTY  
County Seat: Roundup

<u>Company</u>	<u>Operator</u>
Antelope Coal Company	Joseph Birrer, 1111 - 6th Ave. N., Billings



# MUSSELSHELL COUNTY, Cont'd.

<u>Company</u>	<u>Operator</u>
Divide Coal Company	Victor C. Carlson, Box 342, Roundup
Gildroy Mine	R. J. Gildroy, Box 734, Billings
Johnie's Coal Mine	Johnie Keosky, 1011 -- 1st E., Roundup
Johnson Coal Company	Victor Forstrom, Box 828, Roundup
Nies Bros. Coal Mine	Gust F. Nies, 1011 Main St., Roundup
P. M. Mine	Paul Meged, Box 495, Billings
Roundup Mining Company	Box 98, Roundup
Square Deal Coal Company	Virgil Cross, 220 - 7th St. W., Roundup
Western Coal Company	George Badovinus, 1002 - 1st W., Roundup

## POWDER RIVER COUNTY County Seat: Broadus

<u>Company</u>	<u>Operator</u>
Coal Creek Mine	John Schoonover, Volborg
Erickson Mine	Theodore Erickson, Ashland
Hanson Mine	Perry Hanson, Box 104, Ashland
North Star Mine	Joseph Beilage, Coalwood
Schoenbach Mine	F. L. Schoenbach, Ashland
Sterling Coal Mine	U. B. Sterling, Sonnette
Two Tree Mine	Antone Gali, Epsie
Wilson Mine	J. L. Wilson, Broadus

## RICHLAND COUNTY County Seat: Sidney

<u>Company</u>	<u>Operator</u>
Bemer Coal Mine	Joe Bemer, Culbertson
Coal Bank Canyon	Cyrus Lowry, Box 882, Sidney
Knife River Coal Company	Knife River Co., Box 177, Bismark, North Dakota
Pickering Coal Mine	Freeman Pickering, Crane
Thiell Bros. Mine	Thiell Bros. Coal Co., Box 586, Sidney

ROOSEVELT COUNTY  
County Seat: Wolf Point

<u>Company</u>	<u>Operator</u>
Diamond Lignite	Ralph Higgins, Bainville

ROSEBUD COUNTY  
County Seat: Forsyth

<u>Company</u>	<u>Operator</u>
Foley Bros. Mine	O. E. Rye, Colstrip
Gentry Mine	O. B. Gentry, Ashland
Hanic Mine	Anthony Hanic, Ashland
Knoblock Mine	Albert Knoblock, Birney
Lame Deer Mining Company	Lester Scott, Box 14, Lame Deer

SHERIDAN COUNTY  
County Seat: Plentywood

<u>Company</u>	<u>Operator</u>
Acme Mine	M. F. Brenteson, Coalridge
Lagerquist Mine	E. C. Lagerquist, R. F. D. #1, Westby

# SUPPLEMENTAL LIST OF MINING ENTERPRISES

This list includes mining enterprises that have been inactive for three or more years or that have not returned our questionnaires. The abbreviations used to describe their status are: A, Active; D, Developing; I, Inactive; P, Producing; and U, Unknown.

## BEAVERHEAD COUNTY

<u>Mine</u>	<u>Last Reported</u>	<u>Mine</u>	<u>Last Reported</u>
Brenner Placer	A 1958	Ivanhoe	I 1959
Calvin	I 1959	Jack	P & D 1960
Dexter	I 1959	Lucky Strike	
Ferdinand	I 1959	(Storm King)	I 1958
Fisher	I 1959	M. D.	U 1958
French Creek	I 1958	Polaris	I 1958
Glendale Smelter Dump	A 1958	Starlight	A 1958
Hecla Dump	D 1958	Sylvia	I 1958
		Templeton	A 1958

## BROADWATER COUNTY

<u>Mine</u>	<u>Last Reported</u>	<u>Mine</u>	<u>Last Reported</u>
Ace In Hole	A 1958	Josephine & Baby Doe	A 1958
Acme	I 1958	Keating Dump	I 1959
Blackhawk (North Star)	A 1958	Lakeview	A 1958
Copper City	A 1958	Liberator	I 1958
Diamond Hill	A 1958	Lonesome Pine	I 1958
Eagle Dump	I 1959	Midas (Iron Age)	I 1958
Endevour	A 1958	Miles Lease	A 1958
Hummingbird	A 1958	Miller Slim Jim	I 1958
Hyantha Tunnel	I 1959	Patent 2880	A 1958
Iron Mask	A 1958	Pioneer	I 1959
Iron Mask #3	A 1958	Stray Horse	I 1958
		Sullivan Group	I 1958

## CARBON COUNTY

<u>Mine</u>	<u>Last Reported</u>	<u>Mine</u>	<u>Last Reported</u>
Key	I 1958		

## CASCADE COUNTY

<u>Mine</u>	<u>Last Reported</u>	<u>Mine</u>	<u>Last Reported</u>
Boss (Rochester & Allantus)	I 1959	Silver Bell	I 1958
		Sunshine	I 1958



# DEER LODGE COUNTY

<u>Mine</u>	<u>Last Reported</u>	<u>Mine</u>	<u>Last Reported</u>
Alturas	A 1958	McCabe	I 1959
Blue Eyed Nellie	I 1959	Olsen Mountain	U 1958
Brightstar	A 1958	Ophir	A 1958
Cable	I 1958	Storm Lake	I 1958
Gold Coin	I 1959	Tarlack	I 1958
Log Cabin	A 1958	Tip Top	I 1958
Lucky Arrowhead	U 1958	Trigger	I 1958

# FERGUS COUNTY

<u>Mine</u>	<u>Last Reported</u>	<u>Mine</u>	<u>Last Reported</u>
America	A 1958	Iron Chancellor	I 1959

# FLATHEAD COUNTY

<u>Mine</u>	<u>Last Reported</u>	<u>Mine</u>	<u>Last Reported</u>
Cedar Hills	A 1958	Blow Out #1	A 1958
		Golden Queen	A 1958

# GALLATIN COUNTY

<u>Mine</u>	<u>Last Reported</u>	<u>Mine</u>	<u>Last Reported</u>
Karst	A 1958	Nellie H	A 1958

# GRANITE COUNTY

<u>Mine</u>	<u>Last Reported</u>	<u>Mine</u>	<u>Last Reported</u>
Bagdad	I 1958	Iron Age & Redemption	I 1958
Blue Bell	A 1958	Little Emma	I 1959
Bohrer	A 1958	Marie	I 1958
Cadgie Taylor	A 1958	Mountain View	I 1959
Chicago	I 1959	Queen	A 1958
Comanche	A 1958	Ross Hayworth	A 1958
Copper Queen	A 1958	Sand Basin Placer	A 1958
Forest Rose	I 1958	Sunlight	I 1957
Grubtake	I 1958	Tarlack	U 1958
Guy Kneale	I 1958	Tibbets Fowler	U 1958
Henderson Creek Placer	I 1958	Wegner	I 1958
Hope	U 1958	White Horse	I 1958

# JEFFERSON COUNTY

<u>Mine</u>	<u>Last Reported</u>	<u>Mine</u>	<u>Last Reported</u>
Ariadne	I 1959	Lena	A 1958
Aurora	I 1957	Little Nell	A 1958
Badger	I 1958	Lotta	A 1958
Basin Jib	I 1959	Lucky Hit	I 1958
Bernice	A 1958	Mammoth Cleanup	A 1958
Big Chief	A 1958	Midway	I 1958
Bluebird	I 1958	Minah	I 1958
Blue Boy	I 1958	Montana (Colorado district)	A 1958
Carbonate	A 1958	Montana (Homestake district)	A 1958
Comet-Grey Eagle	U 1958	Morning	A 1958
Elkador & Little Nancy	A 1958	Mountain Queen	I 1958
Elkhorn Queen	I 1959	Niki	A 1958
Good Friday	A 1958	Silver Claim	A 1958
Gregory Dump	I 1958	Uranium	I 1958
Harriet	I 1958	White Pine	I 1959
Helen's Pride	I 1958		
Hope	I 1959		

# JUDITH BASIN COUNTY

<u>Mine</u>	<u>Last Reported</u>	<u>Mine</u>	<u>Last Reported</u>
Dewey (Iron King-Iron Clad)	D 1958		

# LEWIS & CLARK COUNTY

<u>Mine</u>	<u>Last Reported</u>	<u>Mine</u>	<u>Last Reported</u>
Ajax	I 1959	Lucky Joe	I 1958
Aurora	I 1958	Midnight	I 1958
Bald Butte	I 1958	Pass Creek	A 1958
Blackjack (Jack Pot)	U 1958	Pearl	A 1958
Eagles Nest	A 1958	Rock Rose (Dandy)	A 1958
Frontier	I 1958	Silver Coin	A 1958
Little Ox	I 1958	Various Placer	A 1956

# LINCOLN COUNTY

<u>Mine</u>	<u>Last Reported</u>	<u>Mine</u>	<u>Last Reported</u>
Christmas Tree	A 1958	Daniel Lee Prospect	D 1958

# MADISON COUNTY

<u>Mine</u>	<u>Last Reported</u>	<u>Mine</u>	<u>Last Reported</u>
Anthony	A 1958	Green Campbell	I 1959
Betty Bennit	A 1958	Hawkeye	A 1958
Betty May	U 1958	Kent & Miller	U 1958
Birdia	I 1958	Mapleton	A 1958
Bismark	A 1958	Marietta Mill	I 1958
Black Ace	A 1958	Moonlight	A 1958
Brown	I 1958	Mountain Flower	A 1958
Calvin	I 1958	Pioneer	I 1958
Cliff Lake	D 1958	Ridgeway	A 1958
Copper Flat	A 1958	Shamrock	I 1959
Daizy No. 1	I 1958	West Shore	A 1958
Diamond Hitch	A 1958	Wetmore	I 1959

# MEAGHER COUNTY

<u>Mine</u>	<u>Last Reported</u>	<u>Mine</u>	<u>Last Reported</u>
Jack Black	A 1958	Little Belt	I 1958
Jim Beam #1	A 1958	Rachele Pit (P.R.K.)	A 1958
		Russi #1 & #2	A 1958

# MINERAL COUNTY

<u>Mine</u>	<u>Last Reported</u>	<u>Mine</u>	<u>Last Reported</u>
Christian's Calumet		Highbar	I 1959
Daly Placer	A 1958	Iron Mountain	A 1956
Cron's C. B. & S.		Meadow Creek Placer	I 1958
Placer	A 1958	Night Owl	A 1956
		Snowbird	I 1958

# MISSOULA COUNTY

<u>Mine</u>	<u>Last Reported</u>	<u>Mine</u>	<u>Last Reported</u>
Arrowhead	I 1958	Charcoal	I 1958
Blacktail	I 1959	Josephine Creek	A 1958
Blue Bell (Leonard)	I 1958	Pearl	A 1958

# PARK COUNTY

<u>Mine</u>	<u>Last Reported</u>	<u>Mine</u>	<u>Last Reported</u>
Ed & Ann	I 1958	Hudson	D 1958
Great Rift (Big Blue, St. Jude)	A 1958	Irma	I 1958



# POWELL COUNTY

<u>Mine</u>	<u>Last Reported</u>	<u>Mine</u>	<u>Last Reported</u>
Alice Marie Placer	I 1958	Marjorie (Amended	
Emery	A 1958	Drift) Placer	A 1958
Flora	I 1958	New Majestic	I 1958
Key	A 1958	Peacock	A 1958
Kilburn Placer	A 1958	Plutarc (Snowflake)	I 1958
Lazy L	A 1958	Royal	I 1959
Lucky Andy Placer	I 1958	Ruby Gold	I 1958

# RAVALLI COUNTY

<u>Mine</u>	<u>Last Reported</u>	<u>Mine</u>	<u>Last Reported</u>
Ace	D 1958	Lucky Joe	D 1958
		Woodtick #1 Placer	A 1958

# SILVER BOW COUNTY

<u>Mine</u>	<u>Last Reported</u>	<u>Mine</u>	<u>Last Reported</u>
Agnostic	A 1958	Lexington	I 1959
Alice Pit	P 1959	Little Annie	I 1959
Anselmo	P 1959	Little Sarah	I 1959
Bay Horse	A 1958	Magna Charta	I 1958
Beal Dike	I 1958	Mapleton	I 1959
Belmont	I 1958	Marget Ann	A 1958
Blue Bird	I 1959	Minnie Jane	A 1958
Brilliant	I 1959	Montana	I 1958
Burlington	I 1959	Narrow Gauge	A 1958
Creole	I 1958	Nettie Hubernie	I 1959
Cumberland	A 1958	Norwich Plutus	I 1959
Diamond	A 1958	Olsen Fraction	I 1958
Eagle Bird	A 1958	Original	I 1958
East Colusa Pit	I 1958	Orphan Girl	I 1958
Easter	A 1958	Poorman	A 1958
Emma	I 1959	Poser	A 1958
Fairview	A 1958	Sankey	A 1958
Fredonia	I 1959	Scotia	A 1958
Fruition	I 1958	Self Rising	I 1959
Gagnon Pit	I 1958	Silver Cleft	A 1958
Garibaldi	I 1959	Snowdrift	I 1958
Good Luck	I 1959	Steward	I 1958
Great Republic	P 1958	Travona	I 1958
Gregory	A 1958	Tzarena	I 1959
Grey Eagle	A 1958	Unita	A 1958
Jane Placer	I 1959	Valdemere	A 1958
Lavena	I 1958	West Mapleton	I 1959
Leonard	I 1959	West Nettie	I 1959



# MINERAL INDUSTRY SURVEYS

## UNITED STATES DEPARTMENT OF THE INTERIOR

### BUREAU OF MINES

Fred A. Seaton - Secretary

Marling J. Ankeny - Director

Region I - Mark L. Wright, Regional Director

Division of Mineral Resources  
O. M. Bishop, Chief

Area Report B-83  
Albany, Oregon

#### THE MINERAL INDUSTRY OF MONTANA IN 1960

##### Preliminary Annual Report

Mineral production in Montana totaled \$185.0 million in value in 1960, according to a preliminary report by the Bureau of Mines, U. S. Department of the Interior. This was a \$17.1-million increase over the strike-reduced total for 1959. The gain reversed a 3-year decline in the annual mineral production value for the State. The 1960 total value was the third highest on record (exceeded only in 1956 and 1957). Production of copper gained over the previous year due to settlement on February 16, 1960, of the 6-month strike at the Butte mines. This was more than enough to offset lower lead and zinc production resulting from poor market conditions and a strike at the Jack Waite mine.

Production of several nonmetals increased, including fluorspar, gypsum, lime, mica, phosphate rock, and pyrite. Output of barite, cement, sand and gravel, stone, and talc declined.

Estimated recovery of crude oil, the State's leading mineral product in value of output, was about the same as in 1959. Marketed production of natural gas increased in 1960.

Two new phosphate rock mines were being developed. A mechanical planer devised by the Bureau of Mines for underground phosphate mining was to be used at one of the mines with production scheduled to begin in 1961. Another development in the mineral industries was construction on a 190-mile petroleum pipeline from Glendive, Mont., to Minot, N. Dak. In 1961 a crude oil pipeline was to cross the State from the Cut Bank oil field to the Wyoming State line south of Billings.

The Anaconda Co. began an \$11 million, 5-year program to bring high-grade copper ore reserves into production from deep levels. The company also planned a \$6 million program for improving and enlarging the Anaconda Reduction Works.

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Prepared by F. B. Fulkerson, G. A. Kingston, and N. S. Petersen, commodity specialists, under the supervision of A. J. Kauffman, Jr., Chief, Albany Office of Mineral Resources, Bureau of Mines, Region I, Albany, Oregon, December 21, 1960.



TABLE 1.- Mineral production in Montana 1/

Mineral	1959		1960 2/	
	Short tons (unless otherwise stated)	Value (thousands)	Short tons (unless otherwise stated)	Value (thousands)
Chromium ore and concentrate 3/	105,381	\$3,765	106,478	\$3,804
Clays 4/	46	48	43	45
Coal (bituminous and lignite)	345	1,478	293	5/
Copper (recoverable content of ores, etc.)	65,911	40,469	93,190	59,642
Fluorspar	18,542	5/	5/	5/
Gold (recoverable content of ores, etc.)	28,551	999	45,840	1,604
Iron ore (usable)	50	254	52	5/
Lead (recoverable content of ores, etc.)	7,672	1,765	4,860	1,128
Manganese ore and concentrate (35 percent or more Mn)				
.....gross weight	21,604	1,520	5/	5/
Manganiferous ore and concentrate (5 to 35 percent Mn) gross weight	2,415	34	633	8
Natural gas	30,743	2,306	32,280	2,580
Petroleum (crude).....thousand cubic feet	30,079	77,002	30,108	77,076
Sand and gravel.....thousand 42-gallon barrels	10,930	12,587	10,500	12,000
Silver (recoverable content of ores, etc.).....thousand short tons	3,420	3,096	3,463	3,134
Stone.....thousand troy ounces	1,186	1,691	1,200	1,700
Uranium ore.....thousand short tons	2,890	5/	5/	5/
Zinc (recoverable content of ores, etc.)	27,848	6,405	11,800	3,044
Value of items that cannot be disclosed: Barite, cement, gem stones, gypsum, lime, mica, natural-gas liquids, phosphate rock, pyrites, talc, thorite concentrate (1959), tungsten (1960), vermiculite, and values indicated by footnote 5/		15,248		19,786
Total 6/		167,896		184,965

1/ Production as measured by mine shipments, sales, or marketable production (including consumption by producers).

2/ Preliminary figures.

3/ Incomplete total--excludes tonnage used for ferrochromium production.

4/ Excludes fire clay and bentonite.

5/ Figure withheld to avoid disclosing individual company confidential data.

6/ Total adjusted to eliminate duplicating value of clays and stone; 1959 total revised.



General.- Five major construction projects were to get under way in Montana in 1961, according to the State Employment Service. Included were three dams, Yellowtail at Hardin, Clark Canyon at Dillon, and Libby at Libby. Missile bases near Great Falls and Lewistown, and a steel mill on a 160-acre site at Anaconda also were to be constructed.

Employment at the Butte mines was far below the pre-strike figure but showed an upward trend. Average monthly employment in the oil fields and in the construction industry was less than in 1959. Completion of some military and public works projects caused the drop in construction employment.

Immediate construction of the Libby Dam on the Kootenai River in northwestern Montana would be feasible under a basic agreement reached by delegations representing the Governments of the United States and Canada. The agreement, if incorporated into a treaty, would make possible the cooperative development of the upper Columbia River and its tributaries for power, flood control, and other benefits. The Libby Dam would form a reservoir extending across the boundary into Canada.

## REVIEW BY MINERAL COMMODITIES

### METALS

Aluminum.- Production at the Anaconda Aluminum Co. Columbia Falls reduction plant remained at 87.5 percent of capacity throughout the year. Over 530 persons were employed at the plant in November when an average wage increase of 7.5 cents an hour went into effect. The new wage boost brought the plant minimum wage to \$2.33 an hour.

Chromium.- Output of chromite concentrate by American Chrome Co. from the Mouat mine and mill at Nye was 106,478 tons, a slight increase (less than 1 percent) over 1959. The tonnage was delivered entirely to a nearby stockpile under a Government contract that was to be completed in 1961. The mill supplied a small quantity of concentrate to an adjacent pilot smelting operation for the production of various grades of high- and medium-carbon ferrochromium; bulk alloy shipments were made by railroad in 9-ton steel containers to eastern steel companies.

Copper.- Return in February of The Anaconda Co. copper concentrator to production, after the prolonged 1959 strike, raised copper output 41 percent to 93,190 tons, compared with 65,911 tons in 1959. The Anaconda Butte-area mines accounted for over 99 percent of the State total.

A major development was an announcement by The Anaconda Co. of an \$11 million, 5-year program to tap high-grade copper ore reserves at deep levels. Additionally, the company announced a \$6 million replacement and modernization program at the Anaconda Reduction Works.

Gold.- Gold production reached 45,840 ounces, a 61-percent increase over the 28,551 ounces in 1959. Miscellaneous shipments to The Anaconda Co. accounted for a large portion of the total output. The Anaconda Co. mining and smelting operations showed an increase of gold from copper ore; gold recovered from zinc ore decreased.

TABLE 2.- Mine production of gold, silver, copper, lead, and zinc, in terms of recoverable metals <sup>1/</sup>

Year	Mines producing		Material sold or treated <u>2/</u> (thousand short tons)	Gold (lode and placer)		Silver (lode and placer)	
				Troy ounces	Value (thousands)	Troy ounces	Value (thousands)
	Lode	Placer					
1951-55 (average)...	143	11	5,411	26,243	\$918	6,096	\$5,517
1956.....	152	7	9,536	38,121	1,334	7,386	6,685
1957.....	125	13	10,790	32,766	1,147	5,558	5,030
1958.....	125	11	10,861	26,003	910	3,631	3,286
1959.....	96	14	8,779	28,551	999	3,420	3,096
1960 <u>3/</u> .....	70	10	12,221	45,840	1,604	3,463	3,134

Year	Copper		Lead		Zinc		Total value (thousands)
	Short tons	Value (thousands)	Short tons	Value (thousands)	Short tons	Value (thousands)	
1951-55 (average)...	67,572	\$39,633	18,876	\$5,717	75,509	\$21,385	\$73,171
1956.....	96,426	81,962	18,642	5,854	70,520	19,322	115,157
1957.....	91,512	55,090	13,300	3,804	50,520	11,721	76,792
1958.....	90,683	47,699	8,434	1,974	33,238	6,781	60,649
1959.....	65,911	40,469	7,672	1,765	27,848	6,405	52,734
1960 <u>3/</u> .....	93,190	59,642	4,860	1,128	11,800	3,044	68,552

<sup>1/</sup> Includes recoverable metal content of gravel washed (placer operations); ore milled; old tailings retreated; and ore, old slag, and copper precipitates shipped to smelters during the calendar year indicated. Owing to rounding, individual items may not add to totals.

<sup>2/</sup> Does not include gravel washed.

<sup>3/</sup> Preliminary figures. Gold and silver values calculated at U. S. Treasury buying price of \$35 a troy ounce and \$0.9050505 a troy ounce, respectively. In calculating production values for copper, lead, and zinc, preliminary average prices in 1960 per pound of refined metal were used, as follows: Copper, \$0.32; Lead, \$0.116; Zinc, \$0.129.



TABLE 3.- Mine production of gold, silver, copper, lead, and zinc in 1960,  
by months, in terms of recoverable metals

Month	Gold (troy ounces)	Silver (troy ounces)	Copper (short tons)	Lead (short tons)	Zinc (short tons)
January.....	340	28,270	20	310	190
February.....	1,440	74,880	2,270	350	380
March.....	2,560	211,230	7,290	410	750
April.....	3,210	266,400	8,570	600	1,490
May.....	5,110	341,110	8,650	580	1,420
June.....	5,280	443,520	8,320	850	2,060
July.....	5,940	532,160	8,770	760	1,830
August.....	6,570	321,630	9,950	290	690
September.....	7,040	327,380	9,500	200	820
October.....	2,590	329,840	10,270	200	770
November.....	2,790	298,500	10,020	150	700
December.....	2,970	287,900	9,560	160	700
Total.....	45,840	3,462,820	93,190	4,860	11,800

TABLE 4.- Mine production of gold, silver, copper, lead, and zinc in Silver  
Bow County, in terms of recoverable metals

Year	Mines producing	Material sold or treated (thousand short tons)	Gold, lode and placer (troy ounces)	Silver, lode and placer (thousand troy ounces)
1951-55 (average).....	20	5,271	18,426	5,600
1956.....	21	9,395	31,132	6,772
1957.....	19	10,673	27,312	5,069
1958.....	22	10,745	17,374	3,308
1959.....	16	8,679	18,615	3,204
1960 <u>1</u> /.....	15	12,119	20,579	2,779
Year	Copper (short tons)	Lead (short tons)	Zinc (short tons)	Total value (thousands)
1951-55 (average).....	67,315	15,081	69,551	\$69,521
1956.....	96,292	14,989	63,375	111,138
1957.....	91,393	9,617	43,169	73,328
1958.....	90,557	5,492	26,580	57,942
1959.....	65,810	4,456	22,459	50,149
1960 <u>1</u> /.....	92,953	2,421	9,453	65,726

1/ Preliminary figures.



Iron Ore.- Two companies produced 52,380 long tons of iron ore, 5 percent more than the 50,081 long ton 1959 output. Magnetite from the Iron Cross property (Ralls & Harris Bros.) near Radersburg was used in manufacturing cement. The Willow Creek mine (Young-Montana Corp.) near Stanford yielded magnetite for shipment to Cleveland Cliffs Iron Co., Superior, Wis., and numerous other companies in the Pacific Northwest and Canada.

Lead.- Lead output was 4,860 tons, a sharp decline of 37 percent from 1959. The decrease was due to curtailed production of lead-bearing zinc ore by The Anaconda Co. Anaconda zinc concentrator operations were not resumed until April, following the late-1959 strike settlement; the plant again was closed in September for the remainder of the year because of what the company termed a "slow zinc market." Also contributing to the State production drop was a 7-month-long strike at the American Smelting and Refining Co. Jack Waite mine.

Manganese.- Output from three company operations--The Anaconda Co., Trout Mining Co., and Taylor-Knapp Co.--was above the 21,604 tons produced in 1959.

Silver.- Approximately 80 percent of the State production (3,462,820 ounces) was yielded by mines of The Anaconda Co. Output was about the same as 1959, increasing 1 percent principally because of greater production at the Anaconda copper concentrator that just offset a decrease at the zinc concentrator.

Steel.- Webb & Knapp, Inc., was still contemplating the construction of an integrated steel plant at Anaconda. The proposed 350,000-ton-annual capacity plant would utilize iron-bearing slag from the Anaconda Reduction Works. A contract was signed during the year with the Bonneville Power Administration for a total of 150,000 kw. of firm and interruptible low-cost Federal power. Shipment of 750 tons of slag was made to Strategic-Udy Metallurgical & Chemical Process, Ltd., at Niagara Falls, Ont., for large-scale testing in a prototype of the plant to be erected at Anaconda.

Thorium.- There was no production of thorite during the year.

Tungsten.- Minerals Engineering Co. mined tungsten ore the entire year from the Calvert mine near Wise River, Beaverhead County. The ore was trucked to a company mill at Glen for concentrating; the concentrate was marketed under contract to an eastern firm.

Uranium.- The tonnage of ore mined was less than in 1959, but the production value remained substantially the same.

Zinc.- Total output was 11,800 tons compared with 27,848 tons in 1959, a decrease of 58 percent. The Anaconda Co. zinc-fuming plant at East Helena accounted for a major portion of the State total. The company zinc concentrator at Anaconda, normally the largest producer, had no production until April following the 1959 strike. In September, the zinc concentrator was closed because of a company view toward the zinc market and the fact that stocks of slab zinc at the company's Anaconda and Great Falls reduction plants were ample to meet demand.

Development work was conducted during the year on the Anaconda Black Rock-Elm Orlu low-grade-zinc block-caving project; the company planned to begin production in 1961.

#### NONMETALS

Barite.- Output of barite was considerably less than in 1959. Baroid Sales Division, National Lead Co., mined and ground the mineral at Greenough, Missoula County.

Montana Bureau of Mines and Geology announced discovery of barite mineralization on the west flank of Tobacco River Valley 5 miles southwest of Eureka, Lincoln County. This discovery was incidental to a survey of mineral resources in northwestern Montana sponsored jointly by the State bureau, the Great Northern Railway, and the Pacific Power & Light Co.

Cement.- There was a sizeable decrease indicated in the quantity and value of cement shipments compared with 1959. The Trident plant of Ideal Cement Co., Montana Division, continued to be the only producer of cement in the State.

Clays.- The quantity of clays sold or used by producers in Montana declined an estimated 11 percent from 1959. Cessation of bentonite production at the National Lead Co. Alzada pit in Carter County was the principal reason for the decline; lower output of miscellaneous clay (includes expansible shale) also contributed. Miscellaneous clay used for making heavy clay products was produced in Fergus, Powell, and Yellowstone Counties, and shale for making expanded lightweight aggregate was dug in Cascade and Yellowstone Counties. Fire clay was produced from the Armington mine in Cascade County.

The Montana Bureau of Mines and Geology in January published a report of clay and shale resources in the State.

Fluorspar.- Shipments of fluorspar by Cummings-Roberts, Darby, Ravalli County, rose sharply compared with 1960. The steel industry was the major consumer. Crude fluorspar mined at the Crystal Mountain pit was trucked to the Darby plant for processing.

Gypsum.- A small increase in output of gypsum compared with 1959 was accompanied by a decrease in value of the same order. Fergus County was the source with U. S. Gypsum Co. (Shoemaker mine) and Ideal Cement Co. (Hanover mine) contributing to the production. As in past years, most of the output was calcined and marketed as ground gypsum, wallboard, and lath.

Lime.- Production of lime increased 34 and 25 percent, respectively, in quantity and value compared with 1959, returning to the level of 1958. Quicklime was made by The Anaconda Co. (Deer Lodge County) and by Elliston Lime Co. (Powell County). Some hydrated lime was marketed by the latter company.

Mica.- Three operations contributed to a fivefold increase in the quantity of mica shipped to the Government purchase depot at Custer, S. Dak., compared with 1959. The bulk of the output came from the Thumper No. 1



mine (Planet Exploration Co.) near Gallatin Gateway, Gallatin County. Two other operations--the Sparkle mine, 11 miles southeast of Dillon, Beaverhead County, and the Merlin mine, 12 miles south of Ennis, Madison County--also shipped.

Phosphate Rock.-- Quantity and value of marketable phosphate rock produced were 12 percent higher than 1959. Rock from operations in Beaverhead, Powell, and Silver Bow Counties was converted to elemental phosphorus, phosphoric acid, and phosphate fertilizers. Most of the output from Powell County was exported to British Columbia.

Phosphate rock from Conda, Idaho, was processed by Rocky Mountain Phosphates, Inc., using facilities at the old Domestic Manganese & Development Co. plant at Butte. A defluorinated phosphate product for use as animal food supplement was made, using chemicals from The Anaconda Co. operations.

The Bunker Hill Co. continued work at the Jack Pine phosphate-rock prospect near Elliston. Development consisted of driving two tunnels and road building.

Encouraged by adaptation of the Bureau of Mines mechanical planer to phosphate mining, Montana Phosphate Products Co. started work at a mine near Maxville designed specifically for use of the planer. Mining was scheduled to begin next year on beds 5-7 feet thick that dip 30-60 degrees. The planer was described in a Bureau of Mines Report of Investigations No. 5437, 1959.

Pyrite.-- There was a substantial increase in the quantity of pyrite converted to sulfuric acid by The Anaconda Co. Processing Silver Bow County base-metal ores provided the pyrite product. The acid produced was used at the company chemical-fertilizer plant and at the metallurgical works.

Sand and Gravel and Stone.-- Combined output of these commodities totaled 11.7 million tons valued at \$13.7 million. This was somewhat less than the corresponding figures--12.1 million tons and \$14.3 million--for 1959.

Multi-Mineral Products Co. began quarrying dolomitic and high-purity limestone from a deposit near Red Lodge. A crushing plant was completed at midyear. The mixed carbonate was marketed for agricultural purposes.

Building and decorative stone was produced at a new quarry near Thompson Falls.

Sulfur.-- Waste gases from two oil refineries at Billings were converted to high-purity elemental sulfur by Montana Sulphur & Chemical Co. Hydrogen sulfide gas was transported from the Continental Oil Co. refinery through a 4-mile pipeline. The other source was the nearby Humble Oil & Refining Co. refinery. Most of the output was used by an Idaho chemical-fertilizer manufacturer.

Talc.-- There was a slight decline in the tonnage and value of talc mined compared with 1959. Sierra Talc Co. (Yellowstone and Beaverhead mines) and Tri-State Minerals Co. (Smith-Dillon, Regal, and Treasure State mines) were the principal producers.



Vermiculite.- Output of crude vermiculite by Zonolite Co. was about the same as 1959. The company open pit near Libby, Lincoln County, continued to be the major source of this commodity in the Nation. A program was initiated to study ways of beneficiating the low-grade material from the mine and to develop new products. Masonry-fill water-repellant insulation and fire-proofing material, new products, showed promise.

#### MINERAL FUELS

Coal.- Production of bituminous coal and lignite was about 293,000 tons compared with 345,000 tons in 1959. Lignite was mined to supply requirements of Montana-Dakota Utilities Co. steam-electric generating plant at Sidney, Richland County.

Petroleum and Natural Gas.- Estimated recovery of crude oil was about the same as in 1959. Marketed production of natural gas rose to 32.3 billion cubic feet (\$2.6 million) compared with 30.7 billion cubic feet (\$2.3 million) in 1959.

Crude oil production from fields in central Montana nearly doubled in the last year and a half due mainly to increasing recovery from the Stensvad field, brought into production in 1958, and to continued expansion of the Sumatra and Ivanhoe fields. Montana ranked twelfth in the Nation as a liquid petroleum source and fourteenth in proved reserves.

One of the most significant wildcat wells drilled in Montana in recent years was brought in by T. E. Murphy Corp., 13 miles northeast of Wolf Point, Roosevelt County. The test flow was 87.1 barrels an hour through a 7/16-inch choke. To date the well was the westernmost in the Williston Basin yielding crude oil from a Devonian horizon. Another wildcat well (No. 1-V Kesterson) drilled by Sinclair Oil & Gas Co. 10 miles southeast of the main portion of the Sumatra field in Rosebud County showed promise of a new producing area. This was the first drilling activity in the immediate vicinity.

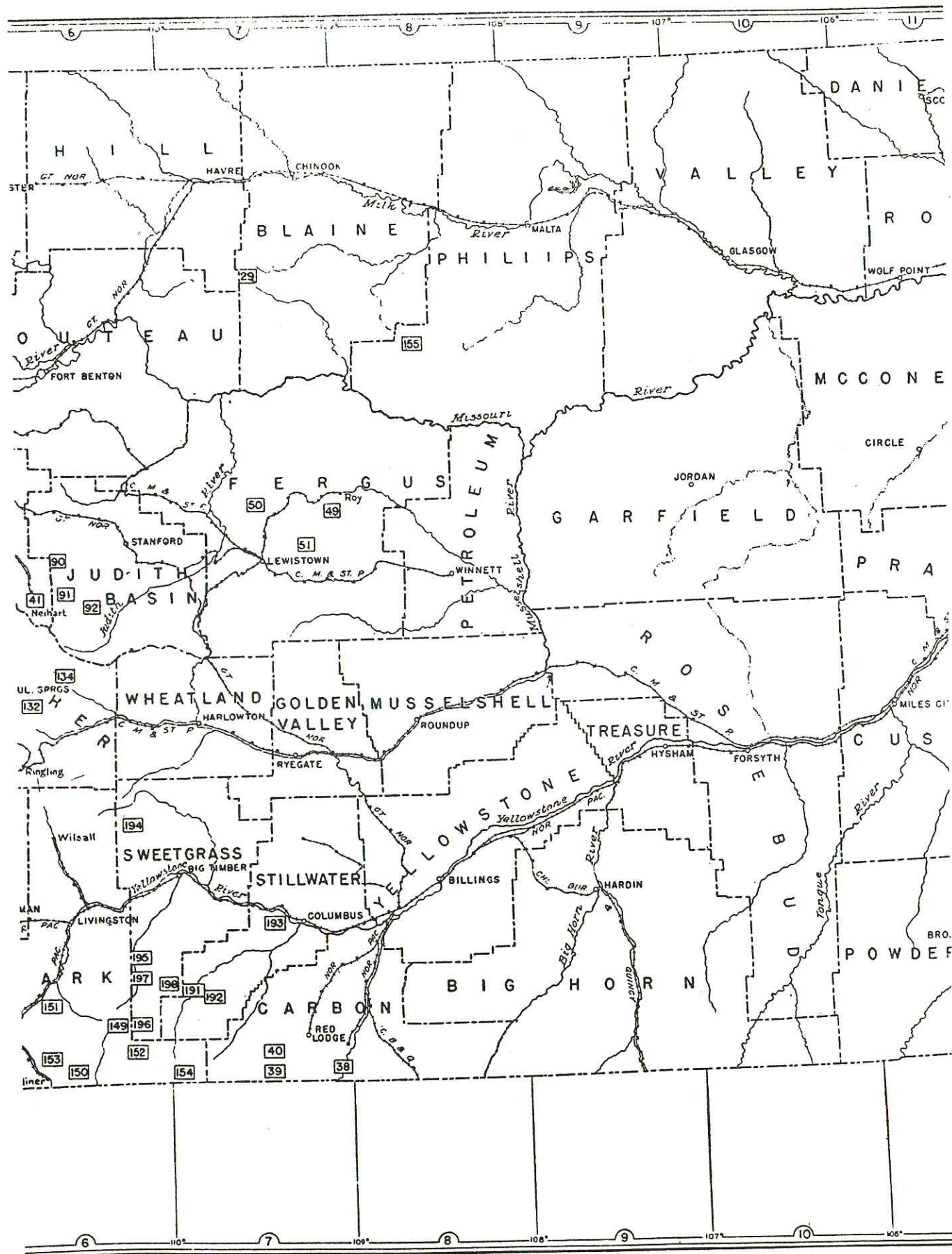
Construction of a 190-mile pipeline from Glendive, Mont., to Minot, N. Dak., was begun by Farmers Union Central Exchange of South St. Paul, Minn. This would be an extension of the line the company has from Laurel to Glendive. Announcement was made of a proposed crude-oil pipeline to be completed by mid-1961 from fields near Cut Bank to the Wyoming State line south of Billings. At the southern end the pipeline would connect with other lines to transport crude oil to Midwestern cities.

The Montana Bureau of Mines and Geology published Bulletin 15, "Oil and Gas in Montana," early in the year.

This report summarizes mineral industry activity in Montana in 1960 and contains preliminary production data for the year as estimated from company monthly and quarterly production canvasses, smelter and Government purchase depot receipt reports, and information contained in industry publications. Final production totals for the State's mineral commodities will be published in mid-1961 after completion of canvasses of all mineral industry establishments.



MAP SHOWING DISTRIBUTION OF



MINING DISTRICTS IN MONTANA