

STATE OF MONTANA

Tim Babcock, *Governor*

BUREAU OF MINES AND GEOLOGY


E. G. Koch, *Director*

BULLETIN 33

April, 1963

**DIRECTORY OF KNOWN MINING ENTERPRISES
1962**

with a section on
**THE MINERAL INDUSTRY OF MONTANA
1962**



**MONTANA BUREAU
of
MINES AND GEOLOGY
Butte, Montana**

STATE OF MONTANA
BUREAU OF MINES AND GEOLOGY
E. G. Koch, Director

Bulletin 33

D I R E C T O R Y O F K N O W N M I N I N G
E N T E R P R I S E S, 1 9 6 2

Compiled by

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Montana Bureau of Mines and Geology

with

LIST OF ACTIVE COAL MINES, 1962

By Thomas Morgan
State Coal Mine Inspector

And Section on

THE MINERAL INDUSTRY OF MONTANA IN 1962

By F. B. Fulkerson and R. W. Knostman
U. S. Department of the Interior, Bureau of Mines

MONTANA SCHOOL OF MINES
Butte, Montana
April 1963

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DIRECTORY OF KNOWN MINING
ENTERPRISES, 1962

Compiled by
Robert D. Geach

I N T R O D U C T I O N

Each year Bureau geologists visit as many mining properties as they can during the course of their regular field projects. The number visited each year is proportionately small compared to the number of properties either producing or developing for that year. Thus, to maintain contact with Montana mine operators, the Bureau mails a stamped self-addressed questionnaire to each. The information gained from this effort and through personal interviews is compiled and published each year in our Directory of Known Mining Enterprises in Montana.

Since 1963 the Directory has periodically undergone changes in presentation of the included material. This year we are listing the mines alphabetically by county under their principal products rather than only listing the mines alphabetically under counties as in the 1958-61 Directories. The products are divided into two general groups--Metallics and Nonmetallics. In this manner, we feel that a more comprehensive picture of Montana's mineral industry is presented by emphasizing the number of different mineral commodities, which are produced within the State.

An index has been included at the back of this book for locating mines.

The Directory also contains a list of companies that are inactive. This list is not complete because it would be almost impossible to list all such companies in Montana; therefore, the list will include companies that have not returned our questionnaires or companies inactive for three or more years.

Every effort has been made to have exact and complete information. 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. An omission of a property is not to be construed as a reflection on the merits of the property itself. Such omissions are usually the result of 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.

If any additional information or corrections can be provided, please submit such information to the Montana Bureau of Mines and Geology. Your help is needed to keep this yearly publication as up to date as possible.

The abbreviations used throughout this Directory are sec., section; T., township; R., range; and t/d, tons per day.

P A R T 1, M E T A L M I N E S

CHROME MINES

STILLWATER COUNTY: Columbus, County Seat

MOUAT MINE

Operator: American Chrome Co.,
1 Montgomery St., Rm. 1201,
San Francisco 4, Calif.

Owner: M. W. Mouat Estate,
Nye, Mont.

Mill capacity: 1,000 t/d

Employees: 15

Status: Inactive

Nye district,
secs. 20, 21,
28, 29, & 30,
T. 5 S., R. 15 E.

COLUMBIUM-RARE-EARTH MINES

RAVALLI COUNTY: Hamilton, County Seat

RYE CREEK PROSPECT

Operator: J. T. Abbey and
M. Wilson, Box 47,
Darby, Mont.

Owner: Same as operator

Status: Unknown

Rye Creek district,
sec. 29, T. 3 N.,
R. 20 W.

COPPER, GOLD, LEAD, SILVER, ZINC MINES

BEAVERHEAD COUNTY: Dillon, County Seat

AMARANTH MINE

Operator: George V. Elder,
Box 14, Dillon, Mont.

Owner: G. V. Elder and
A. V. Elder, Box 14,
Dillon, Mont.

Status: Developing

Lead,
silver

Argenta district,
sec. 29, T. 6 S.,
R. 10 W.

BANNACK MINE

Operator: Spokane National
Mines, Inc., Field Office,
Bannack, Mont.

Owner: Spokane National
Mines, Inc., 414 Fernwell
Bldg., Spokane, Wash.

Mill Capacity: 100 t/d

Employees: 16

Status: Producing

Gold,
silver

Bannack and Blue
Wing districts,
NW¹/₄ sec. 8,
T. 8 S., R. 11 W.

COPPER, GOLD, LEAD, SILVER, ZINC MINES, cont'd.

BEAVERHEAD COUNTY, cont'd.

CLARA MINE Operator: Alfred Fisher, 1727 Wall St., Butte, Mont. Owner: Alfred and Marie Fisher, 1727 Wall St., Butte, Mont. Employees: 5 (part time) Status: Developing	Gold, silver	Wisdom district
CLEVE MINE Operator: Lively Mining Co., Box 96, Melrose, Mont. Owner: Conway Estate, c/o Mrs. A. French, 114 Reeder St., Dillon, Mont. Employees: 2 Status: Producing	Gold, silver, silica	Bryant (Hecla) district, sec. 1, T. 3 S., R. 11 W.
COOLIDGE MINE Owner: Harper and Deppe, Dillon, Mont. Status: Inactive	Gold, lead, silver zinc, copper	
DIADEM GROUP MINE Operator: Diadem Co., 618 S. Jefferson Ave., Spokane 4, Wash. Owner: J. F. Arnold (co-owner), Wisdom, Mont. Employees: 7 (part time) Status: Producing and developing	Gold, lead, silver, copper	Pioneer district, secs. 7 & 18, T. 2 S., R. 14 W.
FAITHFUL MINE Operator: Harold A. Braham, 939 Waukesha St., Butte, Mont. Owner: Helen J. Browne Estate, Box 399, Butte, Mont. Employees: 3 Status: Developing	Gold, silver	Vipond district

COPPER, GOLD, LEAD, SILVER, ZINC MINES, cont'd.

BEAVERHEAD COUNTY, cont'd.

<p>GRAY JOCKEY MINE Operator: Braham & Wilhelm, 939 Waukesha, Butte, Mont. Owner: Jacobs Estate, First National Bank, Missoula, Mont. Employees: 5 Status: Producing</p>	<p>Silver, gold, silica</p>	<p>Vipond district, secs. 2 & 3, T. 2 S., R. 11 W.</p>
<p>HECLA MINE Operator: L. B. Lively, Melrose, Mont. Owner: Conway Estate, c/o Mrs. A. French, 114 Reeder St., Dillon, Mont. Status: Producing</p>	<p>Gold, silver</p>	<p>Bryant (Hecla) district, sec. 2, T. 3 S., R. 11 W.</p>
<p>HENDRICKS MINE Operator: Spokane National Mines, Inc., 414 Fernwell Bldg., Spokane 1, Wash. Owner: Same as operator Mill capacity: 200 t/d Employees: 14 Status: Producing and developing</p>	<p>Gold</p>	<p>Blue Wing dis- trict, sec. 6, T. 8 S., R. 11 W.</p>
<p>HENRY MINE Operator: Alumont Corp., Dillon, Mont. Owner: John H. Shafer, 205 W. Center, Dillon, Mont. Status: Producing</p>	<p>Gold, silver</p>	<p>SE$\frac{1}{4}$SE$\frac{1}{4}$ sec. 2, T. 6 S., R. 11 W.</p>
<p>JACK MINE Owner: H. C. Russell, 1711 Perkins Lane, Seattle 99, Wash. Status: Inactive</p>	<p>Lead, gold, silver</p>	<p>Argenta district</p>
<p>JACKSON MINE Operator: Noel Jackson, Jackson, Mont. Owner: Same as operator Status: Developing</p>	<p>Silver, lead</p>	

COPPER, GOLD, LEAD, SILVER, ZINC MINES, cont'd.

BEAVERHEAD COUNTY, cont'd.

<p>MAULDEN MINE Operator: Hand Mines, 30 S. Arizona St., Dillon, Mont. Owner: Ida B. Hand, Dillon, Mont. Employees: 3 Status: Producing</p>	<p>Gold, silver, lead,</p>	<p>Argenta district, NW$\frac{1}{4}$NW$\frac{1}{4}$ sec. 29, T. 6 S., R. 10 W.</p>
<p>NEW DEPARTURE MINE Operator: Spokane National Mines, Inc., & Sunset Mines, Inc., 414 Fernwell Bldg., Spokane 1, Wash. Owner: Spokane National Mines, Inc., 414 Fernwell Bldg., Spokane 1, Wash. Mill capacity: 150 t/d Employees: 30 Status: Producing</p>	<p>Gold, silver, lead, copper zinc</p>	<p>Blue Wing dis- trict, NW$\frac{1}{4}$NW$\frac{1}{4}$ sec. 26, T. 7 S., R. 11 W.</p>
<p>POLARIS MINE Operator: Lee M. James, 566 N. Pacific, Dillon, Mont. Owner: Milton E. Hayes, Dillon, Mont. Mill capacity: 125 t/d Employees: 3 Status: Unknown</p>	<p>Silver</p>	<p>Polaris (Lost Cloud) district, sec. 28, T. 5 S., R. 12 W.</p>
<p>QUARTZ HILL TAILINGS Operator: Harold A. Braham, 939 Waukesha, Butte, Mont. Owner: Quartz Hill Mining Co. Employees: 4 Status: Producing and developing</p>	<p>Silver, silica</p>	<p>Quartz Hill dis- trict, sec. 25, T. 1 S., R. 11 W.</p>
<p>SWEENEY MINE Operator: Hughes, Fox & Ward, c/o A. Ward, Box 133, Dillon, Mont. Owner: Sweeney Estate, Deer Lodge, Mont. Status: Inactive</p>	<p>Gold, silver, lead, zinc</p>	<p>Dillon district, T. 17 N., R. 12 W.</p>
<p>VIRGINIA GULCH MINE Operator: Alumont Inc., Box 927, Dillon, Mont. Owner: Same as operator Status: Developing</p>	<p>Gold, silver</p>	<p>T. 6 S., R. 11 W.</p>

COPPER, GOLD, LEAD, SILVER, ZINC MINES, cont'd.

BEAVERHEAD COUNTY, cont'd.

<p>WHITE CAP MINE Operator: George H. Henderson, P. O. Box 1032, Anaconda, Mont. Owner: G. H. Henderson & Wm. I. Ferguson, P. O. Box 1032, Anaconda, Mont. Status: Unknown</p>	<p>Copper, zinc, gold, silver, lead</p>	<p>Calvert Hill dis- trict</p>
<p>YELLOW BAND (Shafer Group) Operator: John H. Shafer, 205 W. Center, Dillon, Mont. Owner: John H. Shafer & Associates, 205 W. Center, Dillon, Mont. Status: Producing and developing</p>	<p>Gold, silver</p>	<p>Argenta district, SE$\frac{1}{4}$SE$\frac{1}{4}$ sec. 2, T. 6 S., R. 11 W.</p>

BROADWATER COUNTY: Townsend, County Seat

<p>COPPER QUEEN MINE Operator: Wayne Miller & J. C. Forkner, Radersburg, Mont. Owner: John J., Elmer, & Louisa Rothfus, Butte, Mont. Status: Inactive</p>	<p>Gold, silver, copper</p>	<p>Cedar Plains dis- trict, NE$\frac{1}{4}$ sec. 9, T. 5 N., R. 1 W.</p>
<p>EAST PACIFIC MINE Operator: East Pacific Co., Box 655, Helena, Mont. Owner: Minmont Co., c/o R. Kurth, Great Falls, Mont. Status: Unknown</p>	<p>Gold, silver, lead, zinc</p>	<p>Winston district, secs. 26 & 27, T. 8 N., R. 1 W.</p>
<p>GOLD BUG & MARY ROSE MINE Operator: Multiform Mining & Exploration Co., 1847 Prince- ton Ave., St. Paul, Minn. Owner: Same as operator Status: Inactive</p>	<p>Gold, silver, copper, lead,</p>	<p>Cedar Plains dis- trict, sec. 18, T. 6 N., R. 1 E.</p>
<p>MARIETTA MINE Operator: Northern Milling Co., Box 361, Townsend, Mont. Owner: Harry Anders, Al Dance & Northern Milling Co., Townsend, Mont. Mill capacity: 200 t/d Employees: 25 Status: Inactive</p>	<p>Gold, silver, copper, lead, zinc</p>	<p>Park (Indian Creek) district, sec. 15, T. 7 N., R 1. W.</p>

COPPER, GOLD, LEAD, SILVER, ZINC MINES, cont'd.

BROADWATER COUNTY, cont'd.

MILLER SLIM JIM MINE	Gold, silver	Baker district
Operator: W. I. M., Inc., Route 1, Box 92-A, Townsend, Mont.		
Owner: W. I. M., Inc., Bur- lington, Wash.		
Status: Producing		

SILVER QUEEN MINE	Gold, silver, lead, copper, zinc	
Operator: T. E. Carpentier & Guy Christian, Radersburg, Mont.		
Status: Inactive		

VALLEY VIEW MINE	Gold, silver, lead, zinc	Park district, sec. 24, T. 7 N., R. 1 E.
Operator: Warren Schreiner, Box 665, Townsend, Mont.		
Owner: Same as operator		
Status: Inactive		

CASCADE COUNTY: Great Falls, County Seat

LEXINGTON MINE	Gold, silver, lead, zinc	Montana district, sec. 28, T. 14 N., R. 8 E.
Operator: Lexington Silver- Lead Mining Co., 621 Columbia Bldg., Spokane, Wash.		
Owner: Same as operator		
Mill capacity: 125 t/d		
Employees: 5		
Status: Producing and developing		

STAR MINES	Silver, lead, zinc	Montana district, secs. 29 & 30, T. 14 N., R. 8 E.
Operator: Lewis B. Stark, Neihart, Mont.		
Owner: Same as operator		
Mill capacity: 50 to 75 t/d		
Status: Developing (limited)		

DEER LODGE COUNTY: Anaconda, County Seat

CAMERON QUARTZ LODE	Silver, gold, silica	Nelly district, sec. 21, T. 5 N., R. 12 W.
Operator: Thomas M. Moe, West of Anaconda, Mont.		
Owner: The Anaconda Co., Hennessy Bldg., Butte, Mont.		
Status: Producing and developing		

COPPER, GOLD, LEAD, SILVER, ZINC MINES, cont'd.

DEER LODGE COUNTY, cont'd.

CHAMPION MINE	Gold, silver	Oro Fino (Dry Cottonwood) dis- trict, secs. 28 & 33, T. 6 N., R. 8 W.
Operator: Ray Kalested, Deer Lodge, Mont.		
Owner: The Anaconda Co., Hennessey Bldg., Butte, Mont.		
Status: Unknown		

SILVER CHAIN MINE	Silver, copper	Olson Gulch district
Operator: George H. Henderson, Box 1032, Anaconda, Mont.		
Owner: Same as operator		
Status: Developing		

SILVER REEF MINE	Gold, silver	Silver Lake dis- trict, sec. 22, T. 5 N., R. 13 W.
Operator: Robert H. Montgomery, Box 432, Anaconda, Mont.		
Owner: Same as operator		
Status: Inactive		

FERGUS COUNTY: Lewistown, County Seat

BIG PUSH MINE	Gold, silver, lead	sec. 18, R. 17 E.
Operator: George H. O'Brien, 401 S. 5th Ave., Lewistown, Mont.		
Owner: George H. O'Brien, 315 Shields St., Lewistown, Mont.		
Status: Developing		

BLACK BULL MINE	Gold, silver, lead, copper, zinc	Warm Springs dis- trict, sec. 7, T. 16 N., R. 20 E.
Operator: Granville S. Abbott, Giltedge, Mont.		
Owner: Same as operator		
Status: Producing		

SHEEP MOUNTAIN MINES	Gold, silver, lead, zinc, copper, flake graphite	Judith Mountain district, secs. 4 & 5, T. 16 N., R. 20 E.
Operator: Lawrence Lenling, Box 74, Lewistown, Mont.		
Owner: Same as operator		
Status: Developing		

COPPER, GOLD, LEAD, SILVER, ZINC MINES, cont'd.

FLATHEAD COUNTY: Kalispell, County Seat

<p>FLATHEAD MINE Operator: Waino Lindbom, 1545$\frac{1}{2}$ - 7th Ave. West, Kalispell, Mont. Owner: The Anaconda Co., Hennessey Bldg., Butte, Mont. Employees: 4 Status: Producing and developing</p>	<p>Silver, lead</p>	<p>Hog Heaven district, sec. 17, T. 25 N., R. 23 W.</p>
<p>O. F. MARTIN MINE Operator: O. F. Martin, Box 514, Hot Springs, Mont. Owner: Northern Pacific Railway Co., St. Paul, Minn. Employees: 2 Status: Producing</p>	<p>Gold, silver, lead, zinc, copper</p>	<p>Hog Heaven district, SE$\frac{1}{4}$ sec. 20, T. 25 N., R. 23 W.</p>
<p>SANKO CREEK MINE Operator: Marion Fishel, 742 - 6th Ave. West, Kalispell, Mont. Owner: Same as operator Status: Developing</p>	<p>Copper, silver, gold</p>	<p>Star Meadow dis- trict, NW$\frac{1}{4}$ sec. 29, T. 31 N., R. 24 W.</p>

GRANITE COUNTY: Philipsburg, County Seat

<p>BLACK PINE DUMP MINE Operator: John C. Bork, 519 W. Porphyry, Butte, Mont. Owner: Same as operator Employees: 2 Status: Producing</p>	<p>Gold, silver, copper, tungsten</p>	<p>Flint Creek district</p>
<p>BROOKLYN MINE Owner: Black and White Mining Co., c/o Roger Little, Pres., 2316 Cloverdale Dr., Missoula, Mont. Status: Inactive</p>	<p>Silver, copper lead, zinc</p>	<p>Boulder district, SW$\frac{1}{4}$NE$\frac{1}{4}$ sec. 5, T. 7 N., R. 12 W.</p>
<p>DANDY MINE Operator: J. D. Hollowell, Drummond, Mont. Owner: Louis Imhof, 785 Park Ave., New York 21, N. Y. Status: Developing</p>	<p>Gold, silver, zinc</p>	<p>Garnet-Elk Creek district, secs. 1 & 2, T. 12 N., R. 14 W.</p>

COPPER, GOLD, LEAD, SILVER, ZINC MINES, cont'd.

GRANITE COUNTY, cont'd.

<p>GOLD KING MINE Operator: H. B. Kaiser, Philipsburg, Mont. Owner: Edward H., Robert, Walter, & H. B. Kaiser & George Jenkins, Philipsburg, Mont. Employees: 4 Status: Inactive</p>	<p>Gold</p>	<p>Sec. 35, T. 8 N., R. 13 W.</p>
<p>JACKIE MARIE (Spokane) MINE Owner: Charles Grant, 356 S.E. Kelley Ave., Gresham, Ore. Status: Unknown</p>	<p>Gold</p>	
<p>M. & T. MINE Operator: Walter Benz, Philips- burg, Mont. Owner: Lester Lindquist & Steve Lahood, P. O. Box 373, White- hall, Mont. Status: Developing</p>	<p>Gold, silver, lead, copper</p>	<p>Moose Lake dis- trict, sec. 25, T. 4 N., R. 16 W.</p>
<p>MINNIE LEE MINE Owner: L. A. Sherrill, 744 E. Mercury, Butte, Mont. Employees: 2 Status: Developing</p>	<p>Silver, copper</p>	<p>Silver Hill dis- trict, W$\frac{1}{2}$ sec. 1 & E$\frac{1}{2}$ sec. 2, T. 4 N., R. 14 W.</p>
<p>NON-PAREIL MINE Operator: R. J. MacCalman, 1010 - 5th St., Deer Lodge, Mont. Owner: Non-Pareil Mining Co., C. H. Bielenberg, Sec.-Treas., 801 Milwaukee, Deer Lodge, Mont. Status: Inactive</p>	<p>Silver, lead</p>	<p>Boulder district, SW$\frac{1}{4}$SW$\frac{1}{4}$ sec. 32, T. 8 N., R. 12 W.</p>
<p>KEYSTONE MINE Operator: Charles Byam, Philipsburg, Mont. Owner: Walt Benz & Melvin Sanderson, Philipsburg, Mont. Status: Inactive</p>	<p>Gold, silver, copper, lead, zinc</p>	

COPPER, GOLD, LEAD, SILVER, ZINC MINES, cont'd.

GRANITE COUNTY, cont'd.

<p>RUMSEY TAILINGS MINE Operator: Dick Tunstill, Philipsburg, Mont. Owner: Mrs. L. R. Nesbit, Philipsburg, Mont. Employees: 2 Status: Producing</p>	<p>Silica, silver, gold</p>	<p>secs. 15 & 16, T. 6 N., R. 13 W.</p>
<p>SALLY ELLEN MINE Operator: Ben Walkup, Philipsburg, Mont. Employees: 2 (part time) Status: Developing</p>		<p>Maxville district, T. 8 N., R. 12 W.</p>
<p>SUNDAY MINE Operator: R. J. MacCalman, 1010 - 5th St., Deer Lodge, Mont. Owner: R. W. Marshall, New York, & A. V. Corry, Butte, Mont. Employees: 2 Status: Developing</p>	<p>Gold</p>	<p>Boulder district, SW$\frac{1}{4}$ sec. 27, T. 8 N., R. 12 W.</p>
<p>TRUE FISSURE, DURANGO & MOORLIGHT Operator: Taylor-Knapp Co., c/o Don Johnson, Box FF, Philips- burg, Mont. Owner: Same as operator Mill capacity: 120 t/d Employees: 33 Status: Producing</p>	<p>Gold, lead, silver, zinc, manganese oxide, manganese carbonate</p>	<p>Flint Creek dis- trict, W$\frac{1}{2}$NW$\frac{1}{4}$ sec. 29, T. 7 N., R. 13 W.</p>

JEFFERSON COUNTY: Boulder, County Seat

<p>AJAX MINE Operator: Delmas Brown, 1830 Banks, Butte, Mont. Owner: Same as operator Mill capacity: 50 t/d Employees: 4 Status: Developing</p>	<p>Gold, silver, lead, copper, silica</p>	<p>Homestake dis- trict, sec. 6, T. 3 N., R. 7 W.</p>
<p>ALTA MINE Operator: Lahey Leasing Co., 506 W. Aluminum, Butte, Mont. Owner: Alta Mines Corp., c/o Fred Small, Helena, Mont. Status: Producing</p>	<p>Gold, silver, copper, zinc, lead, silica</p>	<p>Colorado (Corbin- Wickes) district, sec. 10, T. 7 N., R. 4 W.</p>

COPPER, GOLD, LEAD, SILVER, ZINC MINES, cont'd.

JEFFERSON COUNTY, cont'd.

<p>BERNICE MINE (Salvail) Operator: Roger V. Pierce, 808 New House Bldg., Salt Lake City, Utah Owner: William Mason, 2165 Center Dr., Butte, Mont. Employees: 2 Status: Developing</p>	<p>Gold, silver, copper, zinc</p>	<p>Colorado district, secs. 17, 18, 19, & 20, T. 7 N., R. 4 W.</p>
<p>BIG JIM MINE Operator: V. I. Tillotson, 330 Spring St., Route 8, Helena, Mont. Owner: Same as operator Status: Developing</p>	<p>Gold, copper, lead, silver</p>	<p>Amazon district, secs. 31 & 32, T. 7 N., R. 4 W.</p>
<p>BOULDER MINE Operator: James P. Bragg, 2327 Harrison Ave., Butte, Mont. Owner: Same as operator Status: Developing</p>	<p>Gold, silver, zinc</p>	<p>Cataract district, NE$\frac{1}{4}$NE$\frac{1}{4}$ sec. 13, T. 6 N., R. 6 W.</p>
<p>CRESCENT MINE Operator: Montana Gold & Silver Co., 901 E. 6th Ave., Helena, Mont. Owner: Holter Estate, Helena, Mont. Mill capacity: 100 t/d Status: Inactive</p>	<p>Gold, silver, lead, copper, zinc</p>	<p>Cataract district, NE$\frac{1}{4}$ sec. 29, T. 8 N., R. 5 W.</p>
<p>FOURTH OF JULY & FIFTH OF JULY Owner: The Anaconda Co., Butte, Mont. Status: Inactive</p>	<p>Gold, silver</p>	<p>Elk Park district, secs. 11 & 12, T. 3 N., R. 7 W.</p>
<p>HOPE & BULLION MINE Operator: R. Romerio, Box 281, Boulder, Mont. Owner: Mrs. A. K. Romerio, 4856 W. 115th St., Hawthorne, Calif. Employees: 2 Status: Developing</p>	<p>Gold, silver, copper, lead, zinc</p>	<p>Boulder district, secs. 6 & 31, T. 7 N., R. 6 W.</p>
<p>HUMBOLT MINE & THE BOYCE CLAIMS Operator: Mr. & Mrs. Stanley L. Boyce, Box 206, William- burg, Butte, Mont. Owner: Same as operator Status: Developing</p>	<p>Copper, silver</p>	<p>Homestake district, sec. 9, T. 3 N., R. 6 W.</p>

COPPER, GOLD, LEAD, SILVER, ZINC MINES, cont'd.

JEFFERSON COUNTY, cont'd.

<p>KLONDYKE MINE Operator: Klondyke Gold Mines, Inc., c/o Wade V. Lewis, Boulder, Mont. Owner: Charles & Lilah H. Schreiner, 3011 Richardson, Butte, Mont. Employees: 2 Status: Unknown</p>	<p>Gold, copper</p>	<p>Elkhorn district, sec. 11, T. 6 N., R. 3 W.</p>
<p>MEADOW MINE Operator: Norgard Bros., Mexican Hat, Utah Owner: Albert Haab, Clancy, Mont. Status: Inactive</p>	<p>Silver</p>	<p>Boulder district, sec. 34, T. 9 N., R. 3 W.</p>
<p>MONTREAL STAR MINE Operator: Lee, William, & Jack Hicks, P. O. Box 1525, Butte, Mont. Owner: Godfrey Gagnier, 515 E. 3rd, Anaconda, Mont. Status: Inactive</p>	<p>Gold, silver, copper,</p>	<p>Lowland district, NW$\frac{1}{4}$NW$\frac{1}{4}$ sec. 3, T. 4 N., R. 7 W.</p>
<p>MORNING GLORY MINE Operator: J. K. Curtiss, Box 102, Basin, Mont. Owner: P. O. Dorweiller, Algona, Iowa, & J. K. Curtiss, Basin, Mont. Status: Inactive</p>	<p>Gold, silver, lead, zinc</p>	<p>Cataract district, sec. 33, T. 7 N., R. 5 W.</p>
<p>MT. THOMPSON MINE Operator: J. K. Curtiss, Box 102, Basin, Mont., & Bill Olson, 835 - 13th St., Butte, Mont. Owner: James A. Poore et al, Silver Bow Bldg., Butte, Mont. Employees: 3 Status: Producing and developing</p>	<p>Silver, silica, gold</p>	<p>Cataract district, sec. 34, T. 7 N., R. 5 W.</p>
<p>NELLIE GRANT MINE Operator: Barmont Mines, Inc., 2624 Edwards St., Butte, Mont. Owner: C. E. Pew, Helena, Mont. Status: Inactive</p>	<p>Gold, silver, lead, zinc</p>	<p>Clancy-Lump Gulch district, sec. 14, T. 8 N., R. 5 W.</p>

COPPER, GOLD, LEAD, SILVER, ZINC MINES, cont'd.

JEFFERSON COUNTY, cont'd.

NEW BALD EAGLE MINE Operator: William Mulcahy, Box 21, Butte, Mont. Owner: Same as operator Status: Developing	Gold, silver, lead	Big Foot district, sec. 16, T. 4 N., R. 5 W.
OBELISK MINE Operator: Obelisk Explo- ration Co., Basin, Mont. Status: Inactive	Silver, lead, zinc	Cataract district, secs. 15 & 16, T. 6 N., R. 5 W.
PERHAPS LODE CLAIM Operator: Lester Lindquist, Box 373, Whitehall, Mont. Owner: The Anaconda Co., Hennessy Bldg., Butte, Mont. Status: Developing	Gold, silver, lead	Whitehall district, sec. 18, T. 2 N., R. 3 W. & sec. 13, T. 2 N., R. 4 W.
RUBY MINE Operator: New Park Mining Co., P. O. Box 929, Park City, Utah Owner: Frank Benich, 814 Waukesha, Butte, Mont. Status: Developing	Gold, silver	Lowland district, secs. 2 & 11, T. 5 N., R. 7 W.
SUNNYSIDE MINE Operator: Lester Lindquist, Box 373, Whitehall, Mont. Owner: Same as operator Status: Inactive	Gold, silver	Cardwell district, SE $\frac{1}{4}$ sec. 13, T. 2 N., R. 4 W.
UNION MINE Owner: David D. Walker, et al, 1114 Maryland, Butte, Mont. Status: Developing	Lead, silver	Elkhorn district, sec. 11, T. 6 N., R. 3 W.
URANIUM MINE Operator: John Saari, 305 Clancy St., Helena, Mont. Owner: Same as operator Status: Inactive	Lead, zinc, silver	Colorado district

COPPER, GOLD, LEAD, SILVER, ZINC MINES, cont'd.

JUDITH BASIN COUNTY: Stanford, County Seat

BLOCK P MINE Operator: Hughesville Lumber & Mining Co., Box 27, Monarch, Mont. Owner: American Smelting & Refining Co., 120 Broadway, New York 5, N. Y. Status: Unknown	Gold, silver, lead, zinc	sec. 6, T. 15 N., R. 9 E.
DOCTOR KALLOCH MINE Operator: John Zupan, Box 64, Sand Coulee, Mont. Owner: Same as operator Employees: 2 Status: Inactive	Silver, lead, zinc	Barker district, sec. 6, T. 15 N., R. 9 E.
GOLD BUG (Weatherwax) MINE Operator: W. Lehman, Box 780, Lewistown, Mont. Owner: Same as operator Status: Inactive	Gold, silver, copper	Yogo district, sec. 29, T. 14 N., R. 10 E.
LIBERTY MINE Operator: Faith Mining Co., Monarch, Mont. Owner: Faith Mining Co., Monarch, Mont., or Box 1681, Helena, Mont. Status: Inactive	Lead, zinc, silver	Barker district, secs. 6, 7, & 18, T. 15 N., R. 9 E.
TIGER MINE Operator: Croff & Montague, Box 69, Monarch, Mont. Owner: Clendennin Mines, Inc., c/o John T. Nighten- gale, Boston, Mass. Employees: 2 Status: Developing	Gold, silver, lead, zinc	Barker district, secs. 5 & 6, T. 15 N., R. 9 E.

LEWIS & CLARK COUNTY: Helena, County Seat

BLACKWATCH MINE Operator: Rocky Mountain Ex- ploration Co., Inc., 1639 - 5th Ave. N.W., Great Falls, Mont. Owner: Same as operator, Homer Pike, Director Employees: 3 Status: Producing	Gold	Poorman district, Fields Gulch
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COPPER, GOLD, LEAD, SILVER, ZINC MINES, cont'd.

LEWIS & CLARK COUNTY, cont'd.

<p>COPPER HILL MINE Operator: George Henderson, P. O. Box 1032, Anaconda, Mont. Owner: G. H. Henderson, Al McVay, Wm. Steyle, P. O. Box 1032, Anaconda, Mont. Status: Developing</p>	<p>Copper, silver, gold, silica</p>	<p>Canyon Creek dis- trict</p>
<p>CRYSTAL MINE Operator: James E. Stevens, 1459 Cannon St., Helena, Mont. Owner: Same as operator Status: Inactive</p>	<p>Gold, silver</p>	<p>Gould district, Stemple Pass</p>
<p>EMPIRE MINE Operator: Jack Vandenberg, Box 601, Helena, Mont. Owner: Same as operator Mill capacity: 300 t/d Employees: 4 Status: Developing</p>	<p>Gold, silver, lead</p>	<p>Marysville dis- trict, secs. 33 & 34, T. 12 N., R. 6 W.</p>
<p>FRANKLIN MINE Operator: Helena Minerals Co., Inc., c/o Chester Leirness, 1900 - 11th Ave., Helena, Mont. Owner: Thomas Cruse Mining & Developing Co., Box 137, Helena, Mont. Employees: 5 Status: Producing and developing</p>	<p>Gold, silver, lead, copper</p>	<p>Scratch Gravel district, sec. 11, T. 10 N., R. 4 W.</p>
<p>GOLD DOLLAR MINE Operator: Earl Foster, Lincoln, Mont. Owner: Same as operator Employees: 2 Status: Developing</p>	<p>Gold, silver, copper, lead, zinc</p>	<p>Poorman district, sec. 5, T. 13 N., R. 8 W.</p>
<p>HUMDINGER MINE Operator: Ray W. Crumb, Avon, Mont. Owner: Same as operator Mill capacity: 4 t/d Status: Producing and developing</p>	<p>Gold, silver, copper</p>	<p>Madison Gulch dis- trict, sec. 35, T. 13 N., R. 9 W.</p>

COPPER, GOLD, LEAD, SILVER, ZINC MINES, cont'd.

LEWIS & CLARK COUNTY, cont'd.

<p>PEARL MINE Owner: Fred Palmer & Paul Ortel Status: Inactive</p>	<p>Gold, silver</p>	<p>Scratch Gravel district, sec. 30, T. 10 N., R. 5 W.</p>
<p>SAM GATY MINE Operator: Helena Minerals Co., Inc., c/o C. Leirness, 1900 - 11th Ave., Helena, Mont. Owner: C. E. Pew, et al, 617 Holter Ave., Helena, Mont. Employees: 8 Status: Producing and developing</p>	<p>Gold, silver, lead, copper</p>	<p>Ten Mile district, sec. 11, T. 10 N., R. 4 W.</p>
<p>SILVER CRESCENT MINE Operator: Montana Gold Silver, William Hall, Pres., Box 295, Helena, Mont. Owner: Holter Estate, Helena, Mont. Mill capacity: 100 t/d Employees: 5 Status: Inactive</p>	<p>Gold, silver, lead, zinc, copper</p>	<p>Rimini district, NE$\frac{1}{4}$NE$\frac{1}{4}$ sec. 29; SE$\frac{1}{4}$SE$\frac{1}{4}$ sec. 30, T. 8 N., R. 5 W.</p>
<p>SILVER CROSS MINE Operator: J. B. Menard, 985 Mill Road, Helena, Mont. Owner: Silver Cross Mining Co., 985 Mill Road, Helena, Mont. Status: Developing</p>	<p>Gold, silver, copper</p>	<p>Scratch Gravel district, sec. 27, T. 11 N., R. 4 W.</p>
<p>STEMPLE GOLD MINE Operator: Vern C. Knof, Canyon Creek, Mont. Owner: Same as operator, Box 138, Lincoln, Mont. Mill capacity: 50 t/d Employees: 1 Status: Developing</p>	<p>Gold, silver</p>	<p>Stemple district, sec. 10, T. 13 N., R. 7 W.</p>
<p>WOODROW WILSON MINE Operator: Lee Ireland Mining Co., Inc., 820 - 6th Ave., Helena, Mont. Owner: Same as operator Employees: 1 to 3 Status: Developing</p>	<p>Gold, silver, silica</p>	<p>Rimini district, sec. 29, T. 8 N., R. 5 W.</p>

COPPER, GOLD, LEAD, SILVER, ZINC MINES, cont'd.

LIBERTY COUNTY: Chester, County Seat

<p>SWEETGRASS MINE Operator: L. R. Hannah & Cedor Aronow, Box 378, Shelby, Mont. Owner: Same as operator Employees: 2 Status: Developing</p>	<p>Gold, silver, lead, copper</p>	<p>East Butte dis- trict, sec. 25, T. 36 N., R. 4 E.</p>
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<p>WHITLASH MINE Operator: Whitlash Mining Co., c/o F. W. Knobel, Whitlash, Mont. Owner: Same as operator, Conrad, Mont. Status: Inactive</p>	<p>Silver, copper</p>
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LINCOLN COUNTY: Libby, County Seat

<p>GLORIA MINE Operator: Arlin C. Lewis, Libby, Mont. Owner: Same as operator, 51 - 3rd Ave. E.N., Kali- spell, Mont. Employees: 1 Status: Developing</p>	<p>Gold, silver, lead, zinc</p>	<p>Libby district, secs. 27 & 34, T. 27 N., R. 31 W.</p>
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<p>HIGHLAND SILVER GROUP Operator: R. L. Rittenhouse, Route 3, Troy, Mont. Owner: Same as operator Status: Inactive</p>	<p>Gold, silver, lead</p>	<p>sec. 36, T. 32 N., R. 35 W.</p>
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<p>MORNING GLORY & NEW MORNING GLORY Operator: New Morning Glory Mines, Inc., 418 Maritime Bldg., Seattle 4, Wash. Owner: Same as operator Mill capacity: 50 t/d Status: Inactive</p>	<p>Lead, silver, gold</p>	<p>Sylvanite dis- trict, sec. 34, T. 34 N., R. 33 W.</p>
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<p>NORTH STAR GROUP Operator: North Star Mines, c/o C. W. (Hoyt) Tallmadge, R. R. Box 68, Libby, Mont. Owner: Same as operator Status: Inactive</p>	<p>Lead, zinc</p>	<p>Warland district, secs. 25 & 26, T. 32 N., R. 29 W.</p>
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COPPER, GOLD, LEAD, SILVER, ZINC MINES, cont'd.

LINCOLN COUNTY, cont'd.

WAY UP MINE	Gold	Libby district
Operator: A. G. Cook, Avon, Mont.		
Owner: Mary Jensen (Harpole Estate), St. Regis, Mont.		
Status: Inactive		

MADISON COUNTY: Virginia City, County Seat

AMAZON MINE	Copper	Stone Creek district, T. 7 S., R. 6 W.
Operator: Al Ward, Box 133, Dillon, Mont.		
Owner: R. A. Malesich, Dillon, Mont.		
Employees: 3		
Status: Producing		
APEX MINES, INC.	Gold	Virginia City district, SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 9, T. 7 S., R. 3 W.
Operator: Perry Blakely,		
Employees: 2		
Status: Developing		
BIG BERTHA MINE	Gold, silver	Tidal Wave dis- trict, sec. 34, T. 4 S., R. 5 W.
Operator: Fred R. Starner, Sheridan, Mont.		
Owner: Same as operator		
Status: Developing		
BLACK ACE MINE	Gold, silver, lead, zinc	Tidal Wave dis- trict, NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 34, T. 3 S., R. 5 W.
Operator: Louis R. Lepp, Whitehall, Mont.		
Owner: Lewis C. Rollins, P. O. Box 4, Waterloo, Mont.		
Status: Producing		
BOULDER COBALT MINE	Gold, lead	Tidal Wave dis- trict, secs. 5, 6, & 8, T. 3 S., R. 4 W.
Operator: Boulder Lake Corp., Butte, Mont.		
Owner: A. A. Moser & Norman Smith, Hardin, Mont.		
Status: Developing		
CABIN & CORNUCOPIA LODES	Gold, silver	
Operator: Frank E. Blair, Virginia City, Mont.		
Owner: Same as operator		
Status: Developing		

COPPER, GOLD, LEAD, SILVER, ZINC MINES, cont'd.

MADISON COUNTY, cont'd.

EL FLEEDA MINE Owner: Union Bank & Trust Co., No. 4 Washington Pl., Helena, Mont. Status: Inactive	Gold, silver, copper	Fairweather dis- trict, sec. 26, T. 6 S., R. 3 W.
FAIRVIEW MINE Owner: Hall & Rossiter, Sheridan, Mont. Status: Inactive	Gold, copper	Sheridan district, secs. 31 & 32, T. 3 S., R. 4 W.
GOLD PLATE MINE Operator: Arnold Carter, Norris, Mont. Owner: L. L. Locke, Norris, Mont. Status: Developing	Gold, silver	Cherry Creek dis- trict, secs. 25, 30, & 31, T. 2 S., R. 2 E.
GREEN CAMPBELL MINE Owner: W. C. Giebel & John H. Patterson, Silver Star, Mont. Mill capacity: 25 t/d Status: Developing	Gold, silver, copper	Silver Star dis- trict, secs. 3 & 4, T. 2 S., R. 6 W.
HARTSOLO MINE Operator: Lost Lodes Mines, Inc., Virginia City, Mont. Owner: John Macale, Virginia City, Mont. Status: Developing	Gold	Virginia City district
HAZEL MINE Operator: George Haine, Pony, Mont. Owner: Same as operator Status: Developing	Silver	Washington dis- trict
HIGH RIDGE MINE Operator: Madison High Ridge Co., Lester Taylor, Gen. Mgr., Charles L. Buck, Vice Pres., 2015 - 14th St. West, Billings, Mont. Status: Developing	Gold, silver, copper, lead	Tidal Wave dis- trict, SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 27, T. 3 S., R. 5 W.

COPPER, GOLD, LEAD, SILVER, ZINC MINES, cont'd.

MADISON COUNTY, cont'd.

KEARSARGE MINE Operator: Larry Jackson Owner: Joe Miller, Calif. Employees: 3 Status: Developing	Gold	Virginia City dis- trict, NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 23, T. 7 S., R. 3 W.
LIBERTY MONTANA MINE Operator: Vern J. Huckaba, 2404 Raymond Ave., Missoula, Mont. Owner: B. Suejkosky, Cardwell, Mont. Employees: 2 Status: Unknown	Gold, silver	
MISSOURI-MC KEE MINE Operator: H. Denny, Box 374, Sheridan, Mont. Owner: Same as operator Employees: 2 Status: Developing	Gold, silver	Washington dis- trict, N $\frac{1}{2}$ sec. 30, T. 4 S., R. 2 W.
NICHOLS MINE Operator: Lyle Nichols, Lavina, Mont. Owner: Same as operator Status: Developing	Gold, silver	East Fork of South Boulder
OXIDENTAL MINE Operator: Indian Creek Mining Co., c/o John Magnus, Twin Bridges, Mont. Owner: Elling Estate Co., 1612 Alameda Ave., Alameda, Calif. Employees: 2 Status: Developing	Gold, copper, silver, lead, zinc	Sheridan district, secs. 35 & 36, T. 3 S., R. 4 W.
PACIFIC MINE Operator: Pacific Mines, Inc., Ed Sheitlen, Virginia City, Mont. Owner: Easton Pacific & River- side Mining Corp., c/o Ed Sheitlen, Virginia City, Mont. Status: Producing	Gold	Virginia City dis- trict, sec. 4, T. 7 S., R. 3 W.

COPPER, GOLD, LEAD, SILVER, ZINC MINES, cont'd.

MADISON COUNTY, cont'd.

<p>RED PINE MINE Operator: Indian Creek Mining Co., c/o John Magnus, Twin Bridges, Mont. Owner: Ruby Valley Development Co., Inc., 14503 Washington Ave., S.W., Tacoma 99, Wash. Mill capacity: 100 t/d Employees: 8 Status: Producing and developing</p>	<p>Gold, silver</p>	<p>Sheridan district, sec. 5, T. 4 S., R. 4 W.</p>
<p>SCALDED CAT MINE Operator: Emmett Clary, Pony, Mont. Owner: Same as operator Employees: 1 Status: Developing</p>	<p>Gold, silver</p>	<p>Mineral Hill dis- trict, sec. 14, T. 2 S., R. 3 W.</p>
<p>SHOEMAKER MINE Operator: John A. Layton, 3104 Busch St., Butte, Mont. Owner: R. Dickie & R. Woods, Butte, Mont. Status: Developing</p>	<p>Gold, silver</p>	<p>Rabbit district, SE$\frac{1}{4}$NE$\frac{1}{4}$ sec. 7, T. 3 S., R. 7 W.</p>
<p>SHORT SHIFT MINE Operator: John Layton, Twin Bridges, Mont. Owner: Same as operator, Butte, Mont. Mill capacity: 30 t/d Employees: 1 Status: Developing</p>	<p>Gold, silver</p>	<p>Rabbit district</p>
<p>SILVER BELL MINE Operator: Harold Erickson, 2528 Bridger Dr., Billings, Mont. Owner: Silver Bell Mining Co., 2528 Bridger Dr., Billings, Mont. Employees: 3 Status: Developing</p>	<p>Silver, gold</p>	<p>Warm Springs Creek district, sec. 13, T. 8 S., R. 4 W.</p>

COPPER, GOLD, LEAD, SILVER, ZINC MINES, cont'd.

MADISON COUNTY, cont'd.

<p>SILVER BULLION MINE Operator: Horse Creek Development Co., 1327 W. Granite, Butte, Mont. Owner: Mrs. Reba Storer, 1611-6th St., Walkerville, Mont. Status: Developing</p>	<p>Silver</p>	<p>Horse Creek district, secs. 27 & 28, T. 4 S., R. 4 W.</p>
<p>SILVER HILL MINES Operator: Julio Delgrosso, Box 123, Virginia City, Mont. Owner: Same as operator Status: Developing</p>	<p>Gold, silver, copper</p>	<p>Brown's Gulch (Fairweather) district, sec. 33, T. 6 S., R. 3 W.</p>
<p>ST. LAWRENCE MINE Operator: St. Lawrence Consolidated Mines, Inc., Virginia City, Mont. Owner: E. W. Smith, Virginia City, Mont. Employees: 2 Status: Producing and developing</p>	<p>Gold, silver, copper</p>	<p>Brown's Gulch district, T. 6 S., R. 3 W.</p>

MEAGHER COUNTY: White Sulphur Springs, County Seat

<p>BLACK HAWK MINE Operator: HOCO Inc., Box 0, White Sulphur Springs, Mont. Owner: Russell Manger, Townsend, Mont. Status: Developing</p>	<p>Silver, lead, manganese oxide</p>	<p>Castle Mountain district, sec. 6, T. 8 N., R. 9 E.</p>
<p>COPPER DUKE MINE Operator: Ben Rux, Martinsdale, Mont. Owner: Same as operator Status: Inactive</p>	<p>Gold, copper</p>	<p>Copperopolis district, SW¹/₄ sec. 29, T. 10 N., R. 9 E.</p>
<p>CUMBERLAND MINE Operator: HOCO Inc., c/o Clarence Oliphant, Box 0, White Sulphur Springs, Mont. Owner: HOCO Inc., Lennep, Mont. Employees: 3 to 10 Status: Producing and developing</p>	<p>Silver, lead</p>	<p>Castle Mountain district, sec. 14, T. 8 N., R. 8 E.</p>

COPPER, GOLD, LEAD, SILVER, ZINC MINES, cont'd.

MEAGHER COUNTY, cont'd.

MAYBE MINE (Copper State Group) Gold,
 Operator: J. Althoff & R. J. copper,
 Serich, 620 N. 14th St., lead,
 Billings, Mont. silver,
 Owner: Ed Hughes, Butte, Mont. zinc
 Status: Inactive

YELLOWSTONE MINE Lead, Castle Mountain
 Operator: Hamilton Mines, Inc., silver district, sec. 11,
 George Volseth, Mgr., Lennep, T. 8 N., R. 9 E.
 Mont.
 Owner: Same as operator
 Status: Inactive

MINERAL COUNTY: Superior, County Seat

BONANZA GROUP Gold,
 Operator: George M. Gilder- silver, Cedar Creek dis-
 sleeve, Box 565, Superior, lead, trict, sec. 17,
 Mont. barite T. 15 N., R. 26 W.
 Owner: Same as operator
 Status: Developing

KEYSTONE MINE (Prosperity) Silver,
 Operator: Fred W. Wilson & lead, Keystone district,
 M. E. Engdahl, 1716 S. 9th copper T. 18 N., R. 26 W.
 West, Missoula, Mont.
 Owner: Prosperity Mines Co.,
 Inc., 1716 S. 9th West,
 Missoula, Mont.
 Employees: 2
 Status: Developing

NANCY LEE MINE Silver,
 Operator: The Bunker Hill lead, Keystone district,
 Co., Box 29, Kellogg, Ida. zinc secs. 31 & 32,
 Owner: Nancy Lee Co., 410 T. 18 N., R. 26 W.
 Main St., Kellogg, Ida.
 Mill capacity: 100 t/d
 Employees: 13
 Status: Developing

REDEMPTION 1 & 2 and SILVER STREAK Gold,
 1, 2, & 3 MINES silver, Cedar Creek dis-
 Operator: Roscoe Henderson, copper, trict, sec. 7,
 Box 441, Superior, Mont. lead T. 15 N., R. 27 W.
 Owner: Same as operator
 Status: Developing and
 producing

COPPER, GOLD, LEAD, SILVER, ZINC MINES, cont'd.

MINERAL COUNTY, cont'd.

<p>TARBOX & MEADOW MOUNTAIN MINE Operator: Mineral King Mining Co., c/o C. F. Buls, 509 Patty Canyon Dr., Rt. 3, Missoula, Mont. Owner: Same as operator Status: Unknown</p>	<p>Gold, silver, lead, copper</p>	<p>Saltese-St. Regis district, sec. 36, T. 20 N., R. 31 W.</p>
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MISSOULA COUNTY: Missoula, County Seat

<p>HIDDEN TREASURE MINE Operator: Clinton Mining & Milling Co., & Hera Explo- ration Co., Box 40, Missoula, Mont. Owner: Same as operator Mill capacity: 50 t/d Employees: 2 Status: Inactive</p>	<p>Copper, lead, silver, gold</p>	<p>Clinton (Wallace) district, S$\frac{1}{2}$NW$\frac{1}{4}$ sec. 19, T. 12 N., R. 16 W.</p>
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<p>NINE MILE MINE Operator: William Lamon & Lloyd R. Allen, Huson, Mont. Owner: Same as operator Mill capacity: 15 t/d Status: Developing</p>	<p>Gold</p>	<p>Nine Mile district, sec. 18, T. 17 N., R. 24 W.</p>
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<p>WARD LODE Operator: Ward Development Corp., 321 N. Higgins Ave., Missoula, Mont. Owner: Same as operator Status: Developing</p>	<p>Copper, gold, silver</p>	<p>sec. 22, T. 11 N., R. 22 W.</p>
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PARK COUNTY: Livingston, County Seat

<p>CROWN BUTTE & MELISSA MINE Operator: Scott Riley, Box 356, Cooke City, Mont. Owner: Same as operator Mill capacity: 5 t/d Employees: 1 Status: Developing</p>	<p>Gold, copper, lead, silver</p>	<p>New World district</p>
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COPPER, GOLD, LEAD, SILVER, ZINC MINES, cont'd.

PARK COUNTY, cont'd.

<p>GLENGARRY CLAIMS Operator: Como Mining Co., Cooke City & Columbus, Mont. Owner: Harriet White, Spokane, Wash. Mill capacity: 40 t/d Employees: 6 to 8 Status: Developing</p>	<p>Gold, copper</p>	<p>New World district</p>
<p>REPUBLIC & BLACK ROCK MINE Operator: Lyman H. Brooks, Jr., Cooke City, Mont. Owner: The Irma Mines, Inc., Cooke City, Mont. Mill capacity: 35 t/d Status: Inactive</p>	<p>Lead, zinc, silver</p>	<p>New World district</p>

PHILLIPS COUNTY: Malta, County Seat

<p>JACK DEUCE MINE Operator: Vernon E. Smith, Suffolk, Mont. Owner: Ervin L. Smith, Suffolk, Mont. Status: Inactive</p>	<p>Silver, gold, lead</p>	<p>Landusky district, secs. 14 & 15, T. 25 N., R. 24 E.</p>
<p>LITTLE BEN MINE (Gold Bug) Operator: Continental Materi- als Corp., 412 W. Main, Lewistown, Mont. Owner: Little Rockies Mining & Development Co., Cecil Flinders, Pres., Lewistown, Mont. Employees: 6 Status: Developing</p>	<p>Gold, silver</p>	<p>Little Rockies district, sec. 15, T. 25 N., R. 24 E.</p>
<p>RUBY GULCH MINE Owner: Gold Reserve Corp., Professional Bldg., Bozeman, Mont. Mill capacity: 300 to 400 t/d Status: Inactive</p>	<p>Gold, silver</p>	<p>Little Rockies district, sec. 7, T. 25 N., R. 25 E.</p>

COPPER, GOLD, LEAD, SILVER, ZINC MINES, cont'd.

POWELL COUNTY: Deer Lodge, County Seat

<p>CHARTER OAK MINE Operator: Charter Oak Mining Co., c/o J. T. Bonner, Box 566, Elliston, Mont. Owner: Same as operator Mill capacity: 50 t/d Status: Developing</p>	<p>Gold, silver, lead, zinc</p>	<p>Nigger Hill district, NW$\frac{1}{4}$SE$\frac{1}{4}$ sec. 36, T. 9 N., R. 7 W.</p>
<p>CYCLONE MINE Operator: Clark J. Smith, Avon, Mont. Owner: G. G. Potratz, Avon, Mont. Status: Developing</p>	<p>Copper</p>	<p>Ophir district</p>
<p>JULIA, COPPER KING & SURE THING GROUPS Operator: Elliston Consoli- dated Mining Co., Elliston, Mont. Owner: Same as operator Employees: 1 Status: Developing</p>	<p>Gold, silver, lead, zinc, copper</p>	<p>Elliston district, SW$\frac{1}{4}$SE$\frac{1}{4}$ sec. 5, T. 8 N., R. 6 W.</p>
<p>HIDDEN HAND MINE Operator: Howard C. Banks, Box 514, Deer Lodge, Mont. Owner: Same as operator Employees: 2 Status: Developing</p>	<p>Gold, silver, lead, zinc</p>	<p>Zosell (Emery) district, NW$\frac{1}{4}$SW$\frac{1}{4}$ sec. 2, T. 7 N., R. 8 W.</p>
<p>HOBBY HORSE MINE Operator: Marcum Bielenberg, Avon, Mont. Status: Inactive</p>	<p>Gold, silver, lead</p>	<p>Odgen Mountain district</p>
<p>MONARCH MINE Operator: Monarch Minerals, Inc., Box 33, Helena, Mont. Owner: Same as operator Employees: 3 to 5 Status: Developing</p>	<p>Gold, silver, lead, copper</p>	<p>Ontario district, secs. 30 & 31, T. 8 N., R. 6 W.</p>
<p>NANCY HELEN MINE Operator: Clark J. Smith, Avon, Mont. Owner: Same as operator Status: Developing</p>	<p>Copper</p>	<p>Ophir district</p>

COPPER, GOLD, LEAD, SILVER, ZINC MINES, cont'd.

POWELL COUNTY, cont'd.

<p>NEGROS MINE Operator: John F. Hopkins, 401 N. Montana, Helena, Mont. Owner: Same as operator Status: Producing</p>	<p>Gold, silver, lead</p>	<p>Nigger Hill dis- trict, SE$\frac{1}{4}$SW$\frac{1}{4}$ sec. 36, T. 9 N., R. 7 W.</p>
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<p>NORTHERN PACIFIC & SILVER REEF Operator: Ed C. Hughes, 1301 W. Porphyry, Butte, Mont. Owner: Northern Pacific Rail- road, St. Paul, Minn. Status: Developing</p>	<p>Silver, gold</p>
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OPHIR MINE
 Operator: Francis Slaughtner,
 711 - 4th St., Deer Lodge,
 Mont.
 Owner: Clifford Gravely, Avon,
 Mont.
 Status: Inactive

<p>THIRD TERM MINE Operator: North Western Mining & Exploration Corp., 5 S.W. 136th St., Seattle 66, Wash. Owner: Elmer Lince, Elliston, Mont. Status: Inactive</p>	<p>Gold, silver, lead, copper, zinc</p>	<p>Sec. 28, T. 9 N., R. 6 W.</p>
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SANDERS COUNTY: Thompson Falls, County Seat

<p>HEIDELBERG MINE Operator: Heidelberg Mining Co. of Montana, c/o G. A. Myers, 1001 Court St., Pascoe, Wash. Owner: Same as operator Status: Developing</p>	<p>Gold</p>	<p>Noxon district, SW$\frac{1}{4}$ sec. 29 & NW$\frac{1}{4}$ sec. 32, T. 27 N., R. 31 W.</p>
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<p>HOLLIDAY MINE (Silver Mark) Operator: Holliday Mines, Inc., Box 197, Noxon, Mont. Owner: Same as operator Employees: 8 Status: Inactive</p>	<p>Silver, lead, zinc, copper</p>	<p>Pilgrim Creek district, sec. 30, T. 26 N., R. 33 W.</p>
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COPPER, GOLD, LEAD, SILVER, ZINC MINES, cont'd.

SANDERS COUNTY, cont'd.

<p>JACK WAITE MINE Operator: Alfred Tafte & Les Sanderson Owner: Jack Waite Mining Co., 170 Broadway, New York 38, N. Y. Status: Producing</p>	<p>Gold, silver, copper, lead</p>	<p>Eagle (White Plains) district, W$\frac{1}{2}$ sec. 17, T. 22 N., R. 32 W.</p>
<p>LETTERMAN MINE (Montana Premier) Operator: Frank Puyear & Ben Walkup, Philipsburg, Mont. Employees: 2 Status: Producing and developing</p>	<p>Gold, silver</p>	<p>Plains district, secs. 3 & 10, T. 19 N., R. 26 W., & sec. 34, T. 20 N., R. 26 W.</p>
<p>RAVEN MINE Operator: Raven Mine, c/o Austin Monk, Thompson Falls, Mont. Owner: Austin Monk & Ralph Provence, Thompson Falls, Mont. Mill capacity: 50 t/d Employees: 4 Status: Producing</p>	<p>Copper, silver</p>	<p>sec. 33, T. 22 N., R. 28 W.</p>
<p>SILVER MARK MINES, INC. (Holliday) Operator: Holliday Mines, Inc., Box 197, Noxon, Mont. Owner: Same as operator Employees: 8 Status: Inactive</p>	<p>Silver, lead, zinc, copper</p>	<p>Pilgrim Creek dis- trict, sec. 30, T. 26 N., R. 33 W.</p>

SILVER BOW COUNTY: Butte, County Seat

<p>ADELAID & MAT MINE Operator: A. G. Hooper, 2703 Princeton, Butte, Mont. Owner: The Anaconda Co., Butte, Mont. Status: Inactive</p>	<p>Zinc, lead, silver</p>	<p>Butte district</p>
<p>BADGER MINE Operator: The Anaconda Co., Butte, Mont. Owner: Same as operator Status: Producing</p>	<p>Zinc, lead, silver, gold</p>	<p>Summit Valley district, NE$\frac{1}{4}$NW$\frac{1}{4}$ sec. 7, T. 3 N., R. 7 W.</p>

COPPER, GOLD, LEAD, SILVER, ZINC MINES, cont'd.

SILVER BOW COUNTY, cont'd.

<p>BERKELEY PIT Operator: The Anaconda Co., Butte, Mont. Owner: Same as operator Status: Producing</p>	<p>Gold, silver, copper</p>	<p>Summit Valley district, NE$\frac{1}{4}$NE$\frac{1}{4}$ sec. 18, T. 3 N., R. 7 W.</p>
<p>KELLY MINE Operator: The Anaconda Co., Butte, Mont. Owner: Same as operator Status: Producing</p>	<p>Gold, silver, copper</p>	<p>Summit Valley district, SW$\frac{1}{4}$SW$\frac{1}{4}$ sec. 7, T. 3 N., R. 7 W.</p>
<p>LEONARD MINE Operator: The Anaconda Co., Butte, Mont. Owner: Same as operator Status: Producing</p>	<p>Gold, silver, copper</p>	<p>Summit Valley (Butte) district, Cen. SW$\frac{1}{2}$ sec. 8, T. 3 N., R. 7 W.</p>
<p>MOUNTAIN CON MINE Operator: The Anaconda Co., Butte, Mont. Owner: Same as operator Status: Producing</p>	<p>Gold, silver, copper</p>	<p>Summit Valley district, NE$\frac{1}{4}$SW$\frac{1}{4}$ sec. 12, T. 3 N., R. 8 W.</p>
<p>STEWARD MINE Operator: The Anaconda Co., Butte, Mont. Owner: Same as operator Status: Producing</p>	<p>Copper, silver, gold</p>	<p>Summit Valley district, NW$\frac{1}{4}$NE$\frac{1}{4}$ sec. 13, T. 3 N., R. 8 W.</p>
<p>TUXEDO MINE Operator: Ed Hughes, 1301 W. Porphyry, Butte, Mont. Owner: Same as operator, Maxville, Mont. Employees: 3 Status: Producing and developing</p>	<p>Gold, silver</p>	<p>Summit Valley district, sec. 28, T. 4 N., R. 9 W.</p>

TOOLE COUNTY: Shelby, County Seat

<p>GOLD BUTTE MINE Operator: Ham Mining Co., P. O. Box 255, Shelby, Mont. Owner: Same as operator Status: Developing</p>	<p>Gold</p>	<p>Gold Butte dis- trict, T. 36 N., R. 3 E.</p>
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IRON MINES

BEAVERHEAD COUNTY: Dillon, County Seat

CARTER CREEK MINE	Iron ore	Carter Creek district, secs. 3, 9, & 10, T. 8 S., R. 7 W.
Operator: Carter Creek Holdings Corp., 595 Madison Ave., New York 22, N. Y.		
Owner: Same as operator		
Status: Inactive		

BROADWATER COUNTY: Townsend, County Seat

IRON CROSS MINE	Iron ores	Cedar Plains district, sec. 12, T. 5 N., R. 1 W.
Operator: Ralls & Harris Bros., Box 114, Radersburg, Mont.		
Owner: Same as operator		
Employees: 1		
Status: Producing		

JUDITH BASIN COUNTY: Stanford, County Seat

WILLOW CREEK MINE	Iron ore	Running Wolf district, secs. 2 & 4, T. 14 N., R. 11 E.
Operator: Young-Montana Corp., 2223 - 1st Ave., Hibbing, Minn., Ernest Young, Pres.		
Owner: Same as operator		
Status: Inactive		

MADISON COUNTY: Virginia City, County Seat

RAMSHORN MINE	Iron ore	Sheridan district, sec. 1, T. 5 S., R. 4 W.
Operator: F & S Mining Co., 1300 Chicago, Butte, Mont.		
Owner: Same as operator		
Status: Inactive		

MANGANESE MINES

GRANITE COUNTY: Philipsburg, County Seat

BI-METALLIC MINE	Manganese carbonate, silver, lead, zinc	Flint Creek district, SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 32, T. 7 N., R. 13 W.
Operator: Trout Mining Co., Philipsburg, Mont.		
Owner: Contact Mining Co., 524 S. Washington, Butte, Mont.		
Status: Inactive		

MANGANESE MINES, cont'd.

GRANITE COUNTY, cont'd.

<p>LITTLE EMMA MINE Operator: Ross M. Hayworth, Philipsburg, Mont. Owner: Pete Antonioli Estate, Butte, Mont. Status: Developing</p>	<p>Manganese oxide, silver</p>	<p>Flint Creek dis- trict, SW$\frac{1}{4}$NE$\frac{1}{4}$ sec. 19, T. 7 N., R. 13 W.</p>
<p>TROUT ALGONQUIN MINE Operator: Trout Mining Co., C. A. McKinley, Gen. Mgr., Philipsburg, Mont. Owner: Trout Mining Co., Charles A. R. Lambly, Pres., 233 Broadway, New York 7, N. Y. Mill capacity: 150 t/d Status: Developing</p>	<p>Manganese oxide, manganese carbonate gold, silver, copper, lead, zinc</p>	<p>Flint Creek dis- trict, SE$\frac{1}{4}$SE$\frac{1}{4}$ sec. 30, T. 7 N., R. 13 W.</p>

MOLYBDENUM MINES

CASCADE COUNTY: Great Falls, County Seat

<p>BIG BEN MINE Operator: American Metal Climax, Inc., Neihart Mont. Owner: Frank Mansikka & Dean V. Goings, Neihart, Mont. Status: Inactive</p>	<p>Molybde- num</p>	<p>Neihart district, T. 14 N., R. 8 E.</p>
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JEFFERSON COUNTY: Boulder, County Seat

<p>R. D. POTEE, INC. Operator: R. D. Potee & Wisconsin Associates, Box 95, Clancy, Mont. Owner: Same as operator Employees: 1 Status: Developing</p>	<p>Molybde- num</p>	<p>Warm Springs Creek district, secs. 13, 23, & 24, T. 8 N., R. 3 W.</p>
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THORIUM MINES

BEAVERHEAD COUNTY: Dillon, County Seat

<p>LAST CHANCE MINE Operator: Techmanix Corp., 443 W. 8th South, Salt Lake City, Utah Employees: 3 Status: Developing</p>	<p>Thorium</p>	<p>Frying Pan Creek district, secs. 20, 28, & 29, T. 10 S., R. 15 W.</p>
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TUNGSTEN MINES

BEAVERHEAD COUNTY: Dillon, County Seat

CALVERT MINE	Tungsten	Wise River district, sec. 12, T. 1 N., R. 12 W.
Operator: Minerals Engineer- ing Co., Box 94, Glen, Mont.		
Owner: Same as operator		
Mill capacity: 750 t/d		
Employees: 50		
Status: Inactive		

GRANITE COUNTY: Philipsburg, County Seat

GYPSY QUEEN MINE	Tungsten	secs. 1, 2, 11, & 12, T. 7 N., R. 12 W.
Operator: Gypsy Queen Mining Co., c/o Harley L. Pitman, Deer Lodge, Mont.		
Owner: Same as operator		
Status: Inactive		

MADISON COUNTY: Virginia City, County Seat

STRAWBERRY MINE (Extension)	Tungsten,	Mineral Hill dis- trict, NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 14, T. 2 S., R. 3 W.
Operator: Fred Box, Pony, Mont.	gold, silver	
Owner: Elling Estate Co., Alameda, Calif.		
Mill capacity: 25 t/d		
Employees: 2		
Status: Producing		

POWELL COUNTY: Deer Lodge, County Seat

KEY TUNGSTEN, INC.	Scheelite	Rock Creek Lake district
Operator: Nora & Harley L. Pitman, Deer Lodge, Mont.		
Status: Inactive		

URANIUM MINES

CARBON COUNTY: Red Lodge, County Seat

BICE MINE	Uranium	
Owner: Joel T. Highsmith, E. W. Greenwood, & L. E. Bice		
Status: Inactive		

URANIUM MINES, cont'd.

CARBON COUNTY, cont'd.

PERC NO.14, DANDY, & LEO NO. 6 Uranium Pryor Mountains
 Operator: J. T. Highsmith,
 P. O. Box 264 Shoshoni, Wyo.
 Owner: Same as operator
 Status: Inactive
 district

SWAMP FROG MINE Uranium Pryor Mountains
 Operator: Prytana Mining Co.,
 Box 775, Forsyth, Mont., or
 Box 861, Grand Junction, Colo.
 Owner: Dean-Stoick-Balboa,
 Forsyth, Mont.
 Status: Developing
 district, sec.
 21, T. 9 S.,
 R. 27 E.

PLACER MINES

GRANITE COUNTY: Philipsburg, County Seat

MAYWOOD PLACER (Montana Tonapah) Gold Princeton dis-
 Operator: Treasure State Uran-
 ium Corp., 1301 W. Porphyry,
 Butte, Mont.
 Owner: Same as operator,
 Maxville, Mont.
 Washing plant: 500 yds.
 Employees: 3 (part time)
 Status: Developing
 trict

SUNSET (Placer) MINE Gold Maxville dis-
 Operator: Ben Walkup, Box 644,
 Philipsburg, Mont.
 Owner: Same as operator
 Employees: 2 (part time)
 Status: Developing
 trict, T. 8 N.,
 R. 12 W.

JEFFERSON COUNTY: Boulder, County Seat

SKOOKUM PLACER MINE Gold Comet district,
 Operator: Theodore Nyquest,
 Box 133, Boulder, Mont.
 Owner: Same as operator
 Status: Inactive
 sec. 12, T. 5 N.,
 R. 6 W.

PLACER MINES, cont'd.

PHILLIPS COUNTY: Malta, County Seat

BLUE ROCK PLACER	Gold	Little Rockies
Operator: John Frank, Zortman, Mont.		district, sec.
Status: Inactive		18, T. 25 N., R. 25 E.

POWELL COUNTY: Deer Lodge, County Seat

C. D. HURD PLACER	Gold	Secs. 20 & 29, T. 13 N., R. 10 W.
Owner: Harry C. W. Richter, 842 - 8th Ave., Helena, Mont.		
Status: Inactive		

CHARLES PRYSE PLACER	Gold	Sec. 11, T. 12 N., R. 9 W.
Owner: Harry C. W. Richter, 842 - 8th Ave., Helena, Mont.		
Status: Producing and developing		

L & M PLACER	Gold	Washington Gulch district, secs. 7 & 18, T. 12 N., R. 8 W.
Operator: C. E. Mitchell & Sons, 308 - 4th Ave. South, Great Falls, Mont.		
Owner: Same as operator		
Employees: 2		
Status: Inactive		

OLD SHOE #1 PLACER	Gold	Finn district
Operator: Arthur H. Roat & Sons, Polson, Mont.		
Owner: Same as operator		
Status: Unknown		

RAVALLI COUNTY: Hamilton, County Seat

HUGHES CREEK PLACER	Gold, silver	Overwhich dis- trict, N $\frac{1}{2}$ T. 3 S., R. 21 W.
Operator: Hughes Creek Dredging Co., Inc., Hamilton, Mont.		
Owner: Asbury Smith, Hamilton, Mont.		
Employees: 2 to 3		
Status: Producing		

PLACER MINES, cont'd.

SANDERS COUNTY: Thompson Falls, County Seat

BONANZA GOLD, INC. (Vermillion)	Gold	Silver Butte dis-
Operator: Vermillion Gold,		trict, secs. 6 &
Inc., c/o Frank H. Duval,		7, T. 24 N., R.
E. 15 Walton Ave., Spokane,		30 W.
Wash.		
Owner: Same as operator		
Employees: 2 (3 months)		
Status: Developing		

SILVER BOW COUNTY: Butte, County Seat

LITTLE ACRE PLACER	Gold	Independence dis-
Operator: Peter Rietz, Rt. 1,		trict, sec. 16,
Butte, Mont.		T. 3 N., R. 8 W.
Owner: Same as operator		
Status: Inactive		

P A R T 2, N O N M E T A L M I N E S
A N D Q U A R R I E S

ARAGONITE MINES

MADISON COUNTY: Virginia City, County Seat

WHITE ANGEL QUARRY	Aragonite	Tidal Wave dis-
Operator: Norman Rogers, Box		trict, sec. 27,
1719, Helena, Mont.		T. 3 S., R. 5 W.
Owner: American Chemet Corp.,		
East Helena, Mont.		
Status: Producing		

BARITE MINES

BEAVERHEAD COUNTY: Dillon, County Seat

LUCKY JIM BEAM, CAN'T COOK, WON't	Barite	Saginaw district,
PULL, FRANKIE, CAN'T PULL, AND		secs. 25 & 36,
GARY LEE		T. 4 S., R. 14 W.
Operator: Lee R. Stoddard,		
Robert P. Jackson, & Richard		
M. Shepard, Jackson, Mont.		
Owner: Same as operator		
Status: Developing		

MISSOULA COUNTY: Missoula, County Seat

COLOMA MINE	Barite	Coloma district,
Operator: National Lead Co.,		sec. 32, T. 13
Baroid Division, Box 392,		N., R. 14 W.
Missoula, Mont.		
Owner: Same as operator		
Mill capacity: 5 t/hr.		
Employees: 2		
Status: Producing		
ELK CREEK BARITE MINE	Barite	Elk Creek dis-
Operator: National Lead Co.,		trict, sec. 15,
Baroid Dividion, Box 392,		T. 13 N., R. 24 W.
Missoula, Mont.		
Owner: Same as operator		
Mill capacity: 8 t/hr.		
Employees: 6		
Status: Producing		

BENTONITE MINES

CARTER COUNTY: Ekalaka, County Seat

VARIOUS OPEN PITS Bentonite T. 9 S. Rs. 58
& 59 E.
Operator: National Lead Co.,
Baroid Division, P. O. Box
1675, Houston 1, Texas
Owner: Same as operator
Status: Inactive

VALLEY COUNTY: Glasgow, County Seat

BRAZIL CREEK BENTONITE COMPANY Bentonite T. 28 N., R. 37 E.
Owner: Brazil Creek Bentonite
Co., Glasgow, Mont.
Status: Developing

CLAY MINES

CASCADE COUNTY: Great Falls, County Seat

ARMINGTON MINE Fire clay
Operator: Robert Smerker,
Armington, Mont.
Owner: The Anaconda Co., 25
Broadway, New York 4, N. Y.
Mill capacity: 15 t/d
Employees: 2
Status: Producing

DEER LODGE COUNTY: Anaconda, County Seat

PLACES FIRE CLAY MINE Clay Sec. 34, T. 5 N.,
R. 11 W.
Operator: Harold Snow, Box
1155, Anaconda, Mont.
Owner: Same as operator
Status: Producing

FERGUS COUNTY: Lewistown, County Seat

BEAVER CREEK & LEWISTOWN PITS Brick Sec. 15, T. 15 N.,
clay R. 18 E.
Operator: Lewistown Brick &
Tile Co., P. O. Box 573,
Lewistown, Mont.
Owner: Same as operator
Status: Producing

CLAY MINES, cont'd.

YELLOWSTONE COUNTY: Billings, County Seat

BENT CLAY PIT Clay NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 35,
T. 1 N., R. 26 E.
Operator: The Lovell Clay
Products Co., 1312 Lockwood
Rd., Billings, Mont.
Owner: Same as operator
Status: Producing

HALVORSON CLAY PIT Clay Sec. 20, T. 1 S.,
R. 26 E.
Operator: The Lovell Clay
Products Co., 1312 Lockwood
Rd., Billings, Mont.
Owner: Same as operator
Status: Producing

EXPANDED SHALE MINES

CASCADE COUNTY: Great Falls, County Seat

TREASURELITE SHALE MINE Expanded Sec. 13, T. 21 N.,
shale, R. 3 E.
Operator: Treasurelite, Divi-
sion of Treasure State In-
dustrial Products, Inc.,
P. O. Box 1358, Great Falls, light-
weight
Mont. aggregate
Owner: Same as operator
Mill capacity: 200 t/d
Employees: 3 to 8
Status: Producing

YELLOWSTONE COUNTY: Billings, County Seat

MONTANA SHALE PIT Expanded
shale,
Operator: Montana Liteweight
Co., P. O. Box 3027, lightweight
Billings, Mont. aggregate
Owner: Same as operator
Status: Producing

FLUORSPAR MINES

MINERAL COUNTY: Superior, County Seat

SNOWBIRD MINING CLAIMS

Fluorspar

Cedar Creek, head
of Fish Creek

Operator: Louis Macloon &
Orion Wray, P. O. Box 21,
Chidester, Ark.

Owner: Albert M. Orr & Associ-
ates, c/o Missoula Brewing
Co., Missoula, Mont.

Status: Inactive

RAVALLI COUNTY: Hamilton, County Seat

CRYSTAL MOUNTAIN MINE

Fluorspar

Crystal Mountain
district, SW $\frac{1}{4}$ sec.
18, T. 3 N., R.
18 W.

Operator: Roberts Mining Co.,
Box 365, Darby, Mont.

Owner: A. E. Cumley, L. I.
Thompson, & R. D. Flightner,
Darby, Mont.

Mill capacity: 50 t/hr

Employees: 20

Status: Producing

GRAPHITE MINES

BROADWATER COUNTY: Townsend, County Seat

INDIAN CREEK GRAPHITE MINE

Graphite

Indian Creek district,
sec. 26, T. 7 N.,
R. 1 W.

Operator: Louis Macloon &
Orion Wray, P. O. Box 4,
Townsend, Mont.

Owner: Same as operator,
P. O. Box 21, Chidester, Ark.

Mill capacity: 50 t/wk

Status: Developing

GYPSUM MINES

FERGUS COUNTY: Lewistown, County Seat

HANOVER MINE

Gypsum

Secs. 22 & 27,
T. 16 N., R. 17 E.

Operator: Ideal Cement Co.,
420 Denver National Bldg.,
Denver 2, Colo.

Owner: Same as operator

Employees: 8

Status: Producing

GYPSUM MINES, cont'd.

FERGUS COUNTY, cont'd.

<p>SHOEMAKER MINE (Heath) Operator: U. S. Gypsum Co., Heath, Mont. Owner: Same as operator, 300 W. Adams, Chicago 6, Ill. Mill capacity: 500 t/d Employees: 73 Status: Producing</p>	<p>Gypsum</p>	<p>Secs. 1 & 2, T. 14 N., R. 19 E.</p>
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MADISON COUNTY: Dillon, County Seat

<p>PIKA GYPSUM MINES Owner: Pika Gypsum Co., R. Weidner, R. Kitson, & J. Kirkruleit, co-owners, Alder, Mont., or Box 452, Sheridan, Mont. Status: Developing</p>	<p>Gypsum</p>	<p>Monument Ridge district, Gravelly Range, secs. 21, 22, 27, 28, & 29, T. 10 S., R. 2 W.</p>
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LIMESTONE MINES

CARBON COUNTY: Red Lodge, County Seat

<p>COLE CREEK (Kuhal) QUARRY Operator: Multi-Mineral Pro- ducts Corp., 9 Professional Bldg., Helena, Mont. Status: Inactive</p>	<p>Lime- stone, dolomite</p>	<p>Sec. 22, T. 7 S., R. 19 E.</p>
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<p>WARREN QUARRY Operator: Weaver Construction Co., P. O. Box 60, Billings, Mont. Owner: The Bighorn Limestone Co., P. O. Box 5308, Denver, Colo. Mill capacity: 750 t/d Employees: 20 Status: Producing and developing</p>	<p>Lime- stone</p>	<p>T. 8 S., Rs. 25 & 26 E.</p>
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DEER LODGE COUNTY: Anaconda, County Seat

<p>BROWNS QUARRY Operator: The Anaconda Co., Butte, Mont. Owner: Same as operator Status: Producing</p>	<p>Lime- stone</p>	<p>Sec. 23, T. 5 N., R. 12 W.</p>
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LIMESTONE MINES, cont'd.

GALLATIN COUNTY: Bozeman, County Seat

TRIDENT QUARRY	Lime-	SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 3,
Operator: Ideal Cement Co.,	stone	secs. 9 & 10, T.
Three Forks Portland Cement		2 N., R. 2 E.
Division, 420 Denver National		
Bldg., Denver 2, Colo.		
Owner: Same as operator		
Employees: 14		
Status: Producing		

GRANITE COUNTY: Philipsburg, County Seat

SPRING GULCH MINE	Lime-	Sec. 32, T. 11 N.,
Operator: Frank H. Norborg	stone	R. 12 W.
Co., 703 Guaranty Bank		
Bldg., Denver, Colo.		
Owner: American Crystal		
Sugar Co., Boston Bldg.,		
Denver, Colo.		
Status: Inactive		

JEFFERSON COUNTY: Boulder, County Seat

MC CLELLAN QUARRY	Lime-	McClellan district,
Operator: Maronick Construc-	stone	sec. 7, T. 9 N.,
tion Co., Inc., East Helena,		R. 3 W.
Mont.		
Owner: E. P. Maronick, East		
Helena, Mont.		
Employees: 5		
Status: Producing		

MISSOULA COUNTY: Missoula, County Seat

BONNER QUARRY	Lime-
Operator: Chicago, Milwaukee,	stone
St. Paul, & Pacific R.R.,	
Deer Lodge, Mont.	
Owner: Same as operator	
Status: Unknown	

POWELL COUNTY: Deer Lodge, County Seat

ELLISTON QUARRY	Lime-	Secs. 5 & 6,
Operator: Elliston Lime Co.,	stone	T. 9 N., R. 6 W.
Box 638, Deer Lodge, Mont.		
Owner: Same as operator		
Mill capacity: Limestone, 200		
t/d; Lime, 25 t/d		
Employees: 16		
Status: Producing and		
developing		

PHOSPHATE MINES, cont'd.

GRANITE COUNTY: Philipsburg, County Seat

DOUGLAS CREEK MINE	Phosphate	Maxville district,
Operator: Montana Phosphate	rock	T. 9 N., R. 12 W.
Products Co., Garrison, Mont.		
Owner: Same as operator		
Status: Developing		

POWELL COUNTY: Deer Lodge, County Seat

ANDERSON MINE	Phosphate	Garrison district,
Operator: Montana Phosphate	rock	sec. 3, T. 10 N.,
Products Co., Garrison, Mont.		R. 10 W.
Owner: Same as operator		
Employees: 150		
Status: Producing		

BROCK MINE	Phosphate	Garrison district,
Operator: Montana Phosphate	rock	secs. 21 & 22,
Products Co., Garrison, Mont.		T. 10 N., R. 10 W.
Owner: Same as operator		
Employees: 60		
Status: Producing and developing		

GIMLET MINE	Phosphate	Garrison district,
Operator: Montana Phosphate	rock	sec. 4, T. 10 N.,
Products Co., Garrison, Mont.		R. 9 W.
Owner: Same as operator		
Status: Producing		

JACK PINE MINE (Trout Creek)	Phosphate	Elliston district,
Owner: Russel Luke, 1021 E.	rock	SW $\frac{1}{4}$ sec. 35,
Front, Butte, Mont.		T. 11 N., R. 7 W.
Status: Inactive		

LUKE MINE	Phosphate	Garrison district,
Operator: Montana Phosphate	rock	secs. 14 & 15,
Products Co., Garrison, Mont.		T. 10 N., R. 9 W.
Owner: Same as operator		
Employees: 50		
Status: Producing and developing		

RELYEA MINE	Phosphate	Garrison (Brock
Operator: George Relyea, Box	rock	Creek) district,
85, Garrison, Mont.		S $\frac{1}{2}$ sec. 12, T. 10
Owner: Same as operator		N., R. 10 W.
Mill capacity: 300 t/d		
Employees: 40		
Status: Producing and developing		

QUARTZITE MINES

CASCADE COUNTY: Great Falls, County Seat

<p>KINGS HILL QUARRY Operator: Montana Stone, Inc., 2301 - 10th Ave. South, Great Falls, Mont. Owner: Same as operator Employees: Approx. 15 Status: Producing</p>	<p>Building stone</p>	<p>Sec. 11, T. 13 N., R. 8 E.</p>
<p>MONARCH QUARRY Operator: Montana Stone, Inc., 2301 - 10th Ave. South, Great Falls, Mont. Owner: Same as operator Employees: Approx. 15 Status: Producing</p>	<p>Building stone</p>	<p>SE$\frac{1}{4}$SE$\frac{1}{4}$ sec. 23, T. 5 S., R. 7 E.</p>

MISSOULA COUNTY: Missoula, County Seat

<p>LYON QUARRY Operator: Lyon Construction Co., Clinton, Mont. Owner: Same as operator Mill capacity: 1,500 t/d Employees: 20 Status: Producing</p>	<p>Railroad ballast, road metal</p>	<p>Clinton (Wallace) district, sec. 17, T. 12 N., R. 17 W.</p>
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SAPPHIRE MINES

JUDITH BASIN COUNTY: Stanford, County Seat

<p>YOGO SAPPHIRE MINES Operator: Siskon Corp., H. B. Chessher, Pres., 442 Old Gazette Bldg., Reno, Nevada Owner: New Mine Sapphire Syndicate, Billings, Mont. Status: Inactive</p>	<p>Sapphires</p>	<p>Yogo district, secs. 19, 20, 21, 22, 23, & 24, T. 13 N., R. 11 E.</p>
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SLATE MINES

LEWIS & CLARK COUNTY: Helena, County Seat

<p>SIEBEN RANCH QUARRY Operator: Montana Stone, Inc., 2301 - 10th Ave. South, Great Falls, Mont. Owner: Same as operator Employees: Approx. 15 Status: Producing</p>	<p>Building stone</p>	<p>North of Helena</p>
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TALC MINES

BEAVERHEAD COUNTY: Dillon, County Seat

CRESCENT MINE	Talc	
Operator: Tri-State Minerals Co., Box 227, Dillon, Mont. Status: Inactive		
CROWN-SMITH-DILLON MINE	Talc	Axes Creek district, sec. 23, T. 8 S., R. 8 W.
Operator: Tri-State Minerals Co., Box 227, Dillon, Mont. Owner: Clyde Smith, Dillon, Mont. Mill capacity: 24,000 t/yr. Employees: 3 Status: Producing		

MADISON COUNTY: Virginia City, County Seat

BEAVERHEAD MINE	Talc	Stone Creek dis- trict
Operator: Sierra Talc Co., P. O. Box 390, 1608 Hunting- ton Dr., South Pasadena, Calif. Status: Inactive		
REBISH & IKE MINE	Talc	Sweetwater dis- trict, sec. 7, T. 8 S., Rs. 6 & 7 W.
Operator: American Chemet Corp., East Helena, Mont. Owner: Same as operator Employees: 4 Status: Producing		
REGAL MINE	Talc	Sweetwater dis- trict, N $\frac{1}{2}$ sec. 2, T. 8 S., R. 7 W.
Operator: Tri-State Minerals Co., Box 227, Dillon, Mont. Owner: Same as operator Status: Inactive		
RUBY MINE	Talc	Willow Creek dis- trict, secs. 20 & 29, T. 8 S., R. 3 W.
Operator: American Chemet Corp., East Helena, Mont. Owner: Same as operator Status: Inactive		
RUBY NO. 1 & NO. 2 MINE	Soap- stone, talc	Warm Springs Creek district, sec. 11, T. 8 S., R. 4 W.
Owner: Sam Maloney & Bill Pettus, Box 174, Alder, Mont. Status: Inactive		

TALC MINES, cont'd.

MADISON COUNTY, cont'd.

<p>RUBY VIEW TALC MINE Operator: Claude H. Brown, Box 102, Dillon, Mont. Owner: Same as operator Status: Unknown</p>	<p>Talc</p>	<p>Stone Creek dis- trict, sec. 14, T. 7 S., R. 6 W.</p>
<p>SNOW WHITE TALC MINE Operator: Claude H. Brown, Box 102, Dillon, Mont Owner: Same as operator Status: Developing</p>	<p>Talc</p>	<p>Stone Creek-Spring Creek district, sec. 3, T. 7 S., R. 8 W.</p>
<p>TREASURE STATE MINE Operator: Tri-State Minerals Co., Box 227, Dillon, Mont. Owner: Same as operator Mill capacity: 20,000 t/yr Employees: 4 Status: Producing</p>	<p>Talc</p>	<p>Stone Creek dis- trict, NE$\frac{1}{4}$NE$\frac{1}{4}$ sec. 15, T. 7 S., R. 6 W.</p>
<p>YELLOWSTONE MINE (Cameron) Operator: Sierra Talc Co., 1608 Huntington Dr., South Pasadena, Calif. Owner: Same as operator Employees: 9 to 18 Status: Producing and developing</p>	<p>Talc</p>	<p>Johnny Gulch dis- trict, sec. 4, T. 9 S., R. 1 W.</p>

TRAVERTINE MINES

FERGUS COUNTY: Lewistown, County Seat

<p>PARADISE RANCH QUARRY Operator: Montana Stone, Inc., 2301 - 10th Ave. South, Great Falls, Mont. Owner: Same as operator Employees: Approx. 15 Status: Producing</p>	<p>Traver- tine</p>	<p>Sec. 13, T. 17 N., R. 17 E.</p>
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PARK COUNTY: Livingston, County Seat

<p>GARDINER TRAVERTINE QUARRY Operator: Livingston Marble & Granite Works, Livingston, Mont. Owner: Same as operator Employees: 10 Status: Producing</p>	<p>Traver- tine</p>	<p>Secs. 14 & 24, T. 9 S., R. 8 E.</p>
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TRAVERTINE MINES, cont'd.

PARK COUNTY, cont'd.

GARDINER TRAVERTINE QUARRY	Building	secs. 14 & 24,
Operator: Montana Travertine Quarries, c/o John B. Ahern, Box 163, Gardiner, Mont.	stone, stone chips	T. 9 S., R. 8 E.
Owner: Same as operator		
Mill capacity: 200 t/d		
Employees: 9		
Status: Producing		

VERMICULITE MINES

LINCOLN COUNTY: Libby, County Seat

VERMICULITE MOUNTAIN MINE	Vermiculite	Rainy Creek district, secs. 14, 15, 22, & 23, T. 31 N., R. 30 W.
Operator: Zonolite Co., 135 S. LaSalle St., Chicago 3, Ill.		
Owner: Same as operator		
Mill capacity: 3,000 t/d		
Employees: 130		
Status: Producing		

MADISON COUNTY: Virginia City, County Seat

GILLIAM MINE	Vermiculite	Pony district, sec. 26, T. 1 S., R. 3 W.
Operator: Roy M. Gilliam, Cardwell, Mont.		
Owner: Same as operator		
Status: Producing and developing		

Information on the following mines was received too late to be included under their proper headings.

BROADWATER COUNTY: Townsend, County Seat

KLEINSCHMIDT MINE	Silver, lead, zinc	Beaver Creek district, sec. 3, T. 7 N., R. 1 W.
Operator: George Relyea, Garrison, Mont.		
Owner: Minmont Co., Box 942, Great Falls, Mont.		
Status: Inactive		

GRANITE COUNTY: Philipsburg, County Seat

CLIMAX MINE

Operator: James R. Hunter,
Philipsburg, Mont.
Owner: Poore & Mattison
Families, et al, c/o James A.
Poore, Jr., Box 143, Butte,
Mont.
Status: Inactive

Manganese, T. 7 N., R. 13 W.
silver

LEWIS & CLARK COUNTY: Helena, County Seat

DISCOVERY & MARGURETE MINE

Operator: C. M. Clinger &
Vance Clinger, Cascade, Mont.
Owner: Missoula-Lincoln Metals
Mining Co., Missoula, Mont.
Status: Inactive

Gold

Heddlestone dis-
trict, secs. 5 &
8, T. 14 N.,
R. 9 W.

MIKE HORSE MINE

Operator: Hughesville Lumber &
Mining Co., Hughesville, Mont.
Owner: American Smelting &
Refining Co., Box 440, Wallace,
Ida.
Status: Producing

Lead,
silver

Heddlestone dis-
trict, secs. 27,
28, 33, & 34,
T. 15 N., R. 6 W.

MADISON COUNTY: Virginia City, County Seat

FLORENCE (Cook) MINE

Operator: Mike DiLulo, White-
hall, Mont.
Owner: Northern Pacific Rail-
way Co., St. Paul 1, Minn.
Status: Inactive

Copper,
lead,
zinc,
silver,
iron,
gold

Bone Basin dis-
trict, sec. 9,
T. 1 S., R. 4 W.

MINERAL COUNTY: Superior, County Seat

EAST COEUR D'ALENE SILVER MINES

Operator: The Bunker Hill Co.,
Kellogg, Ida.
Owner: Same as operator
Status: Developing

Copper,
silver,
lead,
zinc

Keystone district,
Ts. 17 & 18 N.,
Rs. 26 & 27 W.

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 former status are A, Active; D, Developing; I, Inactive; P, Producing; and U, Unknown.

BEAVERHEAD COUNTY

Argenta	I 1960	Ivanhoe	I 1959
Amazon	P 1961	Keystone	I 1960
Blackstone	I 1961	Log Cabin	I 1960
Blue Ore	I 1960	Lucky Strike	
Brenner Placer	A 1958	(Storm King)	I 1958
Calvin	I 1959	M. D.	U 1958
Charter Oak	D 1961	May Day	D 1961
Comet	D 1961	Moose Horn	D 1961
Cross	P 1961	Pete Ampo	D 1960
Dexter	I 1959	Ruby (Centennial)	I 1960
Ferdinand	I 1959	Sil-King	I 1960
Fisher	I 1959	Sparkle	U 1961
French Creek	I 1958	S S & R	I 1960
Gladstone	U 1960	Starlight	A 1958
Glendale Smelter Dump	A 1958	Sylvia	I 1958
GOB	I 1961	Templeton	A 1958
Goldsmith	I 1960	Tuscarora	I 1961
Governor Tilden	I 1960	White Lime	D 1961

BLAINE COUNTY

Linda D 1961

BROADWATER COUNTY

Ace In Hole	A 1958	January	P 1961
Acme	I 1958	Keating Dump	I 1959
Blackhawk (North Star)	A 1958	Kelly No. 1	U 1960
Copper City	A 1958	Lakeview	A 1958
Custer Hyantha	I 1961	Liberator	I 1958
Diamond Hill	A 1958	Lonesome Pine	I 1958
Eagle Dump	I 1959	Midas (Iron Age)	I 1958
Edna 1, 2, and 3	D 1960	Miles Lease	A 1958
Endevour	A 1958	Miller Slim Jim	I 1961
Erickson 1, 2, and 3	D 1961	Palmer Engh Placer	U 1961
Green & Waddel Placer	I 1961	Patent 2880	A 1958
Hummingbird	A 1958	Pioneer	I 1959
Hyantha Tunnel	I 1959	Santa Anita	I 1960
Iron Mask	A 1958	Stray Horse	I 1958
Iron Mask No. 3	A 1958	Sullivan Group	I 1958
Josephine & Baby Doe	A 1958		

CARBON COUNTY

Fran 2 and 3	D 1961	Old Glory	U 1961
Key	I 1958	Sandra	I 1961

CASCADE COUNTY

Boss (Rochester & Allantus)	I 1959	Silver Bell Sunshine	I 1958 I 1958
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DEER LODGE COUNTY

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
4-Some	I 1961	Tarlack	I 1958
Gold Coin	P 1961	Tip Top	I 1958
Log Cabin	A 1958	Trigger	I 1958
Lucky Arrowhead	U 1958		

FERGUS COUNTY

America	A 1958	Iron Chancellor	I 1959
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FLATHEAD COUNTY

Blow Out No. 1	A 1958	Golden Queen	A 1958
Cedar Hills	A 1958		

GALLATIN COUNTY

Karst	A 1958	Nellie H	A 1958
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GRANITE COUNTY

Bagdad	I 1958	Grubstake	I 1958
Bearmouth Placer	U 1960	Guy Kneale	I 1958
Blue Bell	A 1958	Harper & Lewis	D 1961
Bohrer	A 1958	Henderson Creek Placer	I 1958
Chicago	I 1959	Hope	U 1958
Comanche	A 1958	Iron Age and Redemption	I 1958
Copper Queen	A 1958	Lyon Placer	P 1960
Cudgie Taylor	A 1958		
Forest Rose	I 1958		

GRANITE COUNTY, cont'd.

Marie	I 1958	Scratch All	I 1960
Mickey	D 1961	Sunlight	I 1957
Mountain View	I 1959	Tarlach	U 1958
Mystery	I 1961	Tibbets Fowler	U 1958
Queen	A 1958	Wegner	I 1958
Ross Hayworth	A 1958	White Horse	I 1958
Sand Basin Placer	A 1958		

JEFFERSON COUNTY

Ariadne	I 1959	Little Nell	A 1958
Aurora	I 1957	Loeber	U 1960
Badger	I 1958	Lotta	A 1958
Baltimore	U 1960	Lucky Hit	I 1958
Basin Jib	I 1959	Mammoth Cleanup	A 1958
Big Chief	A 1959	Midway	I 1958
Blue Bell (Marsh)	I 1960	Minah	I 1958
Bluebird	I 1958	Montana (Colorado district)	A 1958
Blue Boy	I 1958	Montana (Homestake district)	A 1958
Carbonate	A 1958	Montana Hotels Inc.	U 1960
Comet-Grey Eagle	U 1958	Morning	A 1958
Crystal	D 1961	Morning Glory Placer	U 1960
Daily (Atlas)	I 1960	Mountain Queen	I 1958
Daily West	U 1961	Niki	A 1958
Elkadore & Little Nancy	A 1958	Potee	U 1960
Elkhorn Queen	I 1959	President Group	I 1960
Glowing Star	U 1960	Prickly Pear Placer	I 1960
Golden Sunlight	I 1960	Silver Claim	A 1958
Good Friday	A 1958	Silver Hill	U 1961
Greater Montana	I 1961	Silver Queen	D 1961
Gregory Dump	I 1958	White Pine	I 1959
Harriet	I 1958		
Helen's Pride	I 1958		
Hope	I 1959		
Lena	A 1958		

JUDITH BASIN COUNTY

Bell	D 1961
Dewey (Iron King- Iron Clad)	D 1958

LEWIS AND CLARK COUNTY

Ajax	I 1959	Lucky Joe	I 1958
Aurora	I 1958	Midnight	I 1958
Bald Butte	I 1958	Monte Cristo	D 1961
Blackjack (Jack Pot)	U 1958	Nick & Dick	P 1961
Crossfire	I 1960	Pass Creek	A 1958
Drumlummon	I 1960	Paymaster	D 1961
Eagles Nest	A 1958	Rock Rose (Dandy)	A 1958
Frontier	I 1958	Rosetta (Rosenfield)	D 1961
Happy Jack	I 1960	Silver Coin	A 1958
Helena	I 1960	Transit	I 1960
Little Ox	I 1958	Various Placer	A 1956
Little Sampson	I 1961		

LINCOLN COUNTY

Big Sky	I 1960	Larue & Cripe	
Black Diamond	U 1960	Prospect	I 1960
Christmas Trees	A 1958	Snowshoe	U 1961
Copper Mountain	D 1961	St. Paul	U 1961
Daniel Lee Prospect	D 1958	Waylett Group	I 1960
Esther May	I 1960	West Fisher and Miller Placer	I 1961

MADISON COUNTY

Alder	U 1960	Keystone	I 1960
Anthony	A 1958	Leadora	U 1961
Betty Bennit	A 1958	Lost Lode	D 1961
Betty May	U 1958	Mapleton	A 1958
Birdia	I 1958	Marietta Mill	I 1958
Bismark	A 1958	Moonlight	A 1958
Black Ace	A 1958	Mountain Flower	A 1958
Brown	I 1958	Old Joe	I 1960
Calvin	I 1958	Pauline	I 1960
Chemet No. 1	I 1960	Paupers Dream	I 1958
Clancy	U 1961	Pioneer	I 1958
Cliff Lake	D 1958	Pollinger	D 1961
Colorado	U 1961	Ridgeway	A 1958
Copper Flat	A 1958	Sampson	U 1960
Corn Cracker	U 1960	Shamrock	I 1959
Daisy No. 1	I 1958	Sparrow Placer	D 1961
Diamond Hitch	A 1958	Strawn	I 1960
Dictator & Bell Union	P 1960	West Mayflower	I 1961
Hawkeye	A 1958	West Shore	A 1958
Kent & Miller	U 1958	Wetmore	I 1959

MEAGHER COUNTY

Exchange Placer	I 1960	Little Joe No. 1	I 1958
Jack Black	A 1958	Maxine	I 1961
Jim Beam No. 1	A 1958	Rachele Pit (P.R.K.)	A 1958
Little Belt	I 1958	Russi No. 1 & No. 2	A 1958

MINERAL COUNTY

Boulder Gold Placer	U 1960	Gildersleeve	D 1961
Christian's Calumet		Highbar	I 1959
Daly Placer	A 1958	Iron Mountain	A 1956
Cron's C.B. & Q.		Meadow Creek Placer	I 1958
Placer	A 1958	Night Owl	A 1956

MISSOULA COUNTY

Arrowhead	I 1958	Josephine Creek	A 1958
Blacktail	I 1959	La Chambre Placer	I 1961
Blue Bell (Leonard)	I 1958	Mongar	U 1961
Charcoal	I 1958	Pearl	A 1958
Crystal Springs	I 1961		

PARK COUNTY

Ed & Ann	I 1958	Irma	I 1958
Great Rift (Big Blue, St. Jude)	A 1958	Moonlight	U 1960
Hudson	D 1958	Sin Nombre	D 1961

PHILLIPS COUNTY

Hawkeye	D 1961	Lucky Maud Placer	D 1961
Independent	I 1960		

POWELL COUNTY

Alice Marie Placer	I 1958	Jefferson Gulch	P 1961
Bluebell	I 1960	Key	A 1958
Bonanza	I 1961	Kilburn Placer	A 1958
Emery	A 1958	Lazy L	A 1958
Flora	I 1958	Lucky Andy Placer	I 1958
G & G Placer	P 1961	Marjorie (Amended Drift) Placer	A 1958
Golden Anchor	I 1960	New Majestic	I 1959
Graveley	I 1960	Nora	I 1960
Hardrock & Placer	I 1961	Peacock	A 1958
Independence	I 1960	Pineau Placer	U 1960

POWELL COUNTY, cont'd.

Plutarc (Snowflake)	I 1958	Rogers Homestead	U 1960
Reservoir & Ophir		Royal	I 1959
Patents	U 1960	Ruby Gold	I 1958
Reservoir Placer	U 1960	Treasure Mountain	I 1960

RAVALLI COUNTY

Ace	D 1958	Larrigon	U 1961
Curlew	U 1960	Smith	U 1960
Darkstar	I 1961	Woods Creek Iron	D 1960
Lucky Joe	D 1958	Woodtick No. 1 Placer	A 1958

SANDERS COUNTY

Montana Standard	I 1960	State Group	D 1961
Sales	I 1961		

SILVER BOW COUNTY

Agnostic	A 1958	Lavena	I 1958
Alice Pit	P 1959	Lexington	I 1959
Anselmo	P 1959	Little Annie	I 1959
Bay Horse	A 1958	Little Sarah	I 1959
Beal Dike	I 1958	Magna Charta	I 1958
Belmont	I 1958	Major Bud	I 1960
Blue Bird	I 1959	Mapleton	I 1959
Brilliant	I 1959	Marget Ann	A 1958
Brown No. 9	U 1961	McPhail Prospect	U 1960
Burlington	I 1959	Minnie Jane	A 1958
Creole	I 1958	Montana	I 1958
Cumberland	A 1958	Narrow Gauge	A 1958
Diamond	A 1958	Nettie Hubernie	I 1959
Eagle Bird	A 1958	Norwich Plutus	I 1959
East Colusa Pit	I 1958	Olsen Fraction	I 1958
Easter	A 1958	Original	I 1958
Emma	I 1959	Orphan Girl	I 1958
Fairview	A 1958	Poorman	A 1958
Fredonia	I 1959	Poser	A 1958
Fruition	I 1958	Sankey	A 1958
Gagnon Pit	I 1958	Scotia	I 1959
Garibaldi	I 1959	Self Rising	I 1959
Good Luck	I 1959	Silver Cleft	A 1958
Great Republic	P 1958	Snowdrift	I 1958
Gregory	A 1958	Travonia	I 1958
Grey Eagle	A 1958	Tzarena	I 1958
Jane Placer	I 1959	Unita	A 1958
Jewel	U 1961	Valdemere	A 1958

SILVER BOW COUNTY, cont'd.

West Mapleton	I 1959
West Nettie	I 1959

SWEET GRASS COUNTY

Half Moon	U 1961
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P A R T 3, C O A L M I N E S

STATE COAL MINE INSPECTOR'S ANNUAL REPORT

Coal production in the State of Montana for the fiscal year July 1, 1961 to June 30, 1962, with 43 mines reporting was 403,643 tons as compared with 352,924 tons for the previous year, an increase of 50,719 tons.

There was one fatality at the Square Deal coal mine in Musselshell County, and 32 reportable injuries in the other mines.

The increase in coal production was due to severe weather conditions and an increased demand at the Montana Dakota Utilities electric generating plant served by the Knife River coal mine near Savage.

No examination for mine foreman's certificates was held during this year.

The Montana Power Company is considering erecting a steam generating plant in the near future and coal from Coalstrip will be used for this purpose.

Production statistics and a list of the coal mines in Montana will be found on the following pages.

S/ Thomas Morgan
State Coal Mine Inspector

TABLE 1.--Production report, Montana coal mines,
July 1961 - June 1962.

Mines by County	Ave. No. Employees	Total Days Worked	Tonnage Mined	Accidents	
				Fatal	Nonfatal
<u>BLAINE</u>					
Milk River mine	9	131	4,006	0	8
<u>BIG HORN</u>					
Tongue River Coal Co.	2	132	4,800	0	0
<u>CARBON</u>					
Smith Coal Docks	5	215	7,338	0	2
Roadside mine	2	100	530	0	0
Brophy Coal Co.	5	130	4,088	0	5
<u>CASCADE</u>					
Canyon Coal Co.	3	97	550	0	1
Latham mine	2	72	350	0	0
Loveland mine	2	70	450	0	0
East Belt mine	2	133	1,614	0	1
<u>CUSTER</u>					
Storm King mine	3	115	3,150	0	0
Moon Creek mine	1	30	80	0	0
<u>DAWSON</u>					
Clapp mine	1	10	72	0	0
Peuse mine	1	160	953	0	0
Albrecht mine	2	80	600	0	0
<u>FERGUS</u>					
Swanson mine	1	120	98	0	0
Tuss mine	2	116	840	0	0
<u>GARFIELD</u>					
Magnuson mine	2	12	40	0	0
<u>HILL</u>					
Rocky Boy mine	2	72	848	0	0
<u>MC CONE</u>					
No. 1 mine	2	40	425	0	0
Willoughby	2	40	40	0	0
<u>MUSSELSHELL</u>					
Antelope mine	2	20	51	0	0
Divide mine	3	137	8,058	0	0
Gildroy mine	4	108	5,351	0	0
Forstrom Coal Co.	5	110	3,922	0	0

Production report, Montana coal mines, cont'd.

Mines by County	Ave. No. Employees	Total Days Worked	Tonnage Mined	Accidents	
				Fatal	Nonfatal
<u>MUSSELSHELL, cont'd.</u>					
Johnny's Mine	3	112	1,393	0	0
Nies Bros. Mine	9	175	4,300	0	1
Roundup Mining Co.	80	142	51,760	0	3
Square Deal Coal Co.	6	130	6,956	1	1
P. & M. Mine	2	180	2,169	0	0
Western Coal Co.	4	132	3,200	0	0
<u>POWDER RIVER</u>					
Coal Creek Mine	2	144	1,119	0	0
Wilson Mine	2	10	30	0	0
Two Tree Mine	1	5	70	0	0
<u>ROSEBUD</u>					
Lame Deer Mining Co.	3	130	4,800	0	0
Foley Bros.	3	60	596	0	0
<u>RICHLAND</u>					
Pickering Mine	2	30	100	0	0
Bemer Mine	4	107	1,751	0	0
Coal Bank Canyon	2	72	600	0	0
Knife River Co.	14	248	266,763	0	7
Thiell Bros. Mine	3	111	1,996	0	0
<u>SHERIDAN</u>					
Acme Coal Mine	5	165	4,300	0	3
Lagerquist Mine	2	115	1,422	0	0

LIST OF MONTANA COAL MINES ACTIVE IN 1962

By Thomas Morgan
State Coal Mine Inspector

BIG HORN COUNTY

SPRING CREEK MINE
Address: Henry Yellowizer,
Decker, Mont.

BLAINE COUNTY

MILK RIVER COAL CO.
Address: Lauren Sargent,
Box 661, Havre, Mont.

CARBON COUNTY

BROPHY COAL CO.
Address: James R. Brophy,
Red Lodge, Mont.

ROADSIDE COAL CO.
Address: Frank Janskovich,
Box 673, Bearcreek, Mont.

SMITH COAL DOCKS
Address: Samuel Carpenter,
Box 332, Red Lodge, Mont.

CASCADE COUNTY

CANYON COAL CO.
Address: William T. Surmi,
Sand Coulee, Mont.

EAST BELT MINE
Address: Sam Williamson,
Belt, Mont.

LATHAM COAL CO.
Address: Dennis Yatsko,
Stockett, Mont.

LOVELAND COAL CO.
Address: Earl Loveland,
Milligan Route, Great
Falls, Mont.

CUSTER COUNTY

MOON CREEK MINE
Address: Henry Freeze,
509 Pacific Ave.,
Miles City, Mont.

STORM KING MINE
Address: T. J. Fleming,
Box 66, Route 1,
Miles City, Mont.

DAWSON COUNTY

ALBRECHT COAL CO.
Address: Jacob Albrecht,
Bloomfield, Mont.

CLAPP COAL MINE
Address: Clyde Clapp,
Box 93, Glendive, Mont.

PEUSE COAL MINE
Address: Gordon Peuse,
Lindsay, Mont.

FERGUS COUNTY

SWANSON MINE
Address: William Swanson,
Gilt Edge Route,
Lewistown, Mont.

TUSS COAL CO.
Address: C. M. Tuss,
512 Evelyn St.,
Lewistown, Mont.

GARFIELD COUNTY

MAGNUSON MINE
Address: Edwin Magnuson,
Box 715, Jordan, Mont.

HILL COUNTY

ROCKY BOY MINE
Address: Alfred Laursen,
Box Elder, Mont.

MC CONE COUNTY

NO. 1 COAL MINE
Address: R. D. Stephensen,
Circle, Mont.

WILLOUGHBY MINE
Address: Dayton Willough-
by, Vida, Mont.

MUSSELSHELL COUNTY

DIVIDE COAL CO.
Address: Victor C. Carlson,
Box 342, Roundup, Mont.

FORSTROM COAL CO.
Address: Victor Forstrom,
Box 828, Roundup, Mont.

JOHNIE'S COAL MINE
Address: Johnie Keosky,
1011-1st E., Roundup, Mont.

NIES BROS. COAL CO.
Address: William Nies,
905-1st W., Roundup, Mont.

P. M. MINE
Address: Paul Meged, Box
495, Billings, Mont.

THE ROUNDUP MINING CO.
Address: Roundup Mining Co.,
Box 98, Roundup, Mont.

SQUARE DEAL CO.
Address: Virgil Cross, 220-
7th St. W., Roundup, Mont.

WESTERN COAL CO.
Address: Glen H. Johnson,
Box 153, Roundup, Mont.

POWDER RIVER COUNTY

COAL CREEK MINE
Address: John Schoonover,
Volborg, Mont.

TWO TREE MINE
Address: Antone Gali,
Epsie, Mont.

WILSON MINE
Address: J. L. Wilson,
Broadus, Mont.

ROSEBUD COUNTY

FOLEY BROS., INC.
Address: O. E. Rye, Coal-
strip, Mont.

LAME DEER MINING CO.
Address: Lester Scott, Lame
Deer, Mont.

RICHLAND COUNTY

BEMER COAL MINE
Address: Joe Bemer, Culbert-
son, Mont.

COAL BANK CANYON
Address: Cyrus Lowery, Box
882, Sidney, Mont.

KNIFE RIVER COAL CO.
Address: Knife River Coal Co.,
Savage, Mont.

PICKERING COAL MINE
Address: Freeman Pickering,
Crane, Mont.

THIELL BROS. COAL CO.
Address: Thiell Bros. Coal Co.,
Box 586, Sidney, Mont.

SHERIDAN COUNTY

ACME COAL MINE
Address: M. F. Brenteson,
Coalridge, Mont.

List of Montana Coal Mines Active in 1962, cont'd.

SHERIDAN COUNTY, cont'd.

LAGERQUIST MINE

Address: E. C. Lagerquist,
R. F. D. 1, Westby, Mont.

YELLOWSTONE COUNTY

ANTELOPE MINE

Address: Joseph Birrer,
1111 - 6th Ave. N.,
Billings, Mont.

GILDROY MINE

Address: R. J. Gildroy,
Box 734, Billings, Mont.



MINERAL INDUSTRY SURVEYS

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES



Stewart L. Udall, Secretary

Marling J. Ankeny, Director

Region I—Mark L. Wright, Regional Director

Division of Mineral Resources
O. M. Bishop, Chief

Area Report B-99
Albany, Oregon

THE MINERAL INDUSTRY OF MONTANA IN 1962

Preliminary Annual Report

Montana's mineral production value was \$184.8 million, which was \$1.4 million higher than 1961. The main changes occurred in metal-mining industries. Zinc production gained by \$6.6 million, owing mainly to the start of production from the Elm Orlu-Black Rock block-caving project at Butte. The increase in the zinc value more than offset a decline of \$5.5 million in copper output as the result of a strike which shut down the Butte mines. Termination of chromite-ore mining at the Mouat mine in Stillwater County in 1961 resulted in a loss of \$2.9 million in the State mineral production value. Output of tungsten declined sharply due to the February closing of the Minerals Engineering Co. mill near Glen, Beaverhead County. Output values for lead, manganese, and silver increased. Among the fuels, petroleum output gained by \$1.9 million, but little change took place in coal, natural gas, and natural gas liquids production. In the principal nonmetal industries, annual values for cement, phosphate rock, and vermiculite increased, while the totals for lime, sand and gravel, and stone decreased, according to a preliminary report by the Bureau of Mines, U. S. Department of the Interior.

Construction of a 42,000-ton-per-day concentrator adjacent to the Berkeley pit was begun by The Anaconda Company.

Work began in April on the Permanente Cement Co. plant near Helena. Completion of the \$9.6 million facility was expected early in 1963.

Crude petroleum and copper represented 72 percent of the State total value of mineral production.

Average monthly employment in metal mining was less than in 1961, while there were more workers in quarrying and nonmetallic mining, according to estimates by the State Employment Service. The average number of workers in primary metals (smelting and refining) was the same as in 1961. Average monthly employment in petroleum refining declined. Contract construction recorded a sizeable employment gain owing to the impact of several large projects, including dams near Hardin and Dillon, missile base

Prepared by F. B. Fulkerson, Economist, and R. W. Knostman, Mineral Specialist, under the supervision of A. J. Kauffman, Jr., Chief, Albany Office of Mineral Resources, Bureau of Mines, Region I, Albany, Oregon, December 18, 1962.

TABLE 2.- Mineral production in Montana 1/

Mineral	1961		1962 2/	
	Quantity	Value (thousands)	Quantity	Value (thousands)
Chromium ore and concentrate 3/.....short tons, gross weight	82,258	\$2,939	-	-
Clays 4/.....thousand short tons	55	76	54	\$75
Coal (bituminous and lignite).....do.....	371	1,207	375	5/
Copper (recoverable content of ores, etc.).....short tons	104,000	62,400	91,839	56,940
Fluorspar.....do.....	14,905	5/	5/	5/
Gold (recoverable content of ores, etc.).....troy ounces	35,377	1,238	22,161	776
Iron ore (usable).....thousand long tons, gross weight	34	209	9	61
Lead (recoverable content of ores, etc.).....short tons	2,643	544	6,556	1,206
Lime.....thousand short tons	118	986	104	925
Manganese ore and concentrate (35 percent or more Mn)	17,515	6/1,406	5/	5/
Manganiferous ore and concentrate (5 to 35 percent Mn)	2,236	33	5/	5/
Natural gas.....short tons, gross weight	6/ 33,901	2,509	34,100	2,600
Peat.....million cubic feet	7,385	112	7,500	114
Petroleum (crude).....thousand 42-gallon barrels	6/30,906	6/74,793	31,698	76,709
Sand and gravel.....thousand short tons	14,702	13,506	13,500	12,400
Silver (recoverable content of ores, etc.) thousand troy ounces	3,490	3,227	4,399	4,707
Stone.....thousand short tons	1,512	1,849	1,300	1,587
Uranium ore.....short tons	729	10	5/	5/
Zinc (recoverable content of ores, etc.).....do.....	10,262	2,360	38,830	8,931
Value of items that cannot be disclosed: Barite, cement, gem stones, gypsum, mica, natural gas liquids, phosphate rock, talc, tungsten, vermiculite and values indicated by footnote 5/.....		14,852		18,822
Total 7/.....		183,344		184,788

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

2/ Preliminary figures.

3/ Excludes tonnage used for ferrochromium production; included with "Value of items that cannot be disclosed."

4/ Excludes fire clay; included with "Value of items that cannot be disclosed."

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

6/ Revised figure.

7/ Total adjusted to eliminate duplicating value of raw materials used in manufacturing cement and lime;

1961 total revised.

construction, the Butte copper concentrating plant, the cement plant near Helena, an expansion program at the Trident cement plant, and State highway projects, as well as increased commercial and residential building. Estimated average monthly employment figures for the first 10 months of 1962 compared with like periods in 1960 and 1961 are given in Table 2 (November-December figures not available for 1962).

TABLE 3.- Estimated average monthly employment, thousands

	First 10 months 1960	First 10 months, 1961	First 10 months, 1962 ^{1/}	Change 1961-62, percent
Mining.....	7.3	7.0	6.8	-2.9
Metal mining.....	4.4	4.2	3.9	-7.1
Quarrying and nonmetallic mining, including coal..	0.7	0.7	0.8	+14.3
Petroleum and natural gas production.....	2.2	2.1	2.2	+4.8
Manufacturing.....	20.4	20.1	20.6	+2.5
Lumber and timber products.....	7.3	7.3	7.4	+1.4
Primary metals.....	3.8	3.6	3.6	0.0
Petroleum refining.....	0.9	0.9	0.8	-11.1
Contract construction....	11.2	11.5	13.4	+16.5
Transportation and utilities.....	19.2	18.4	18.2	-1.1
Non-agricultural industries.....	167.0	166.3	169.5	+1.9

^{1/} Preliminary

Source: Montana Labor Market, State Employment Service.

REVIEW BY MINERAL COMMODITIES

METALS

Aluminum.- Anaconda Aluminum Co. operated its Columbia Falls primary aluminum plant at capacity (approximately 65,000 tons annually) throughout the year. This was the first full year of capacity production since operations began in 1955. Natural gas replaced electricity as the energy source to heat boilers and casting furnaces at the plant.

The Anaconda Company reactivated an experimental metallurgical pilot plant at Anaconda, Deer Lodge County, designed to extract alumina from clay in deposits near Moscow, Idaho.

A study of the Pacific Northwest aluminum industry was published by the Bureau of Mines.^{1/}

Chromite.- There was no chromite produced in the State for the first time since 1952. American Chrome Co. announced plans to build a \$7 million, 100-ton-a-day ferrochrome smelter on optioned property near Butte, provided a barter program would be acceptable to the Government. However, the barter proposal, under which American Chrome would smelt 900,000 tons of stockpiled chromite concentrate for the Government and receive payment in surplus agricultural commodities for disposal overseas, was not accepted by the Government. At midyear, the property option was dropped.

Ferrochromium, produced in the company pilot smelter before its 1961 closure, was shipped to eastern steel plants until stocks were exhausted.

Pyrometallurgical beneficiation of chromite from the Mouat mine of American Chrome Co. and production of ferrochromium were described in a report.^{2/}

A study of the Pacific Northwest ferroalloy industry was completed by the Bureau of Mines.^{3/}

Copper.- The Anaconda Company accounted for all except 230 tons of the strike-reduced State output of 91,839 tons. Major production came from the Berkeley pit, and the Butte Hill and Kelley mines. The production decline (12 percent) was the result of a strike by the Teamsters Union Local No. 2 which idled the Berkeley pit operation from July 16 to September 21. The strike halted all company mining operations from July 24 to August 2 and again from September 17 to 21. The strike resulted in an output loss equivalent to an estimated 12,000 tons of refined copper and resulted in a wage loss to employees of nearly \$2 million.

The Anaconda Company announced that block-caving at the Kelley mine would cease when existing ore-blocks were exhausted; however, the Kelley No. 1 shaft was being sunk to a point below the 4600 level horizon to provide central hoisting facilities for deep-level ore from the Mountain Con, Steward, Leonard, and Belmont mines. The shaft was expected to be ready for centralized hoisting in early 1964.

Other development programs in progress during the year included: Completion of the Steward subshaft to a depth of 4,785 feet below the surface; preparatory work on the Neversweat shaft-sinking project,

1/ Fulkerson, Frank B. Trends and Outlook in the Pacific Northwest Aluminum Industry. BuMines Inf. Circ. 8046, 1962, 42 pp.

2/ Hunter, Willard L. and Lloyd H. Banning. Pyrometallurgical Beneficiation of Offgrade Chromite and Production of Ferrochromium. BuMines Inf. Circ. 6010, 1962, 16 pp.

3/ Kingston, Gary A. The Pacific Northwest Ferroalloy Industry. BuMines Inf. Circ. 8050, 1962, 26 pp.

originally planned to begin in January but postponed until late in the year; and sinking and concreting the Kelley No. 2 shaft which, when completed to the 3900 level, would replace the High Ore shaft as the central pumping shaft for the Butte district.

Construction of a 42,000-ton-per-day concentrator adjacent to the Berkeley pit was begun. Part of the plant was scheduled for operation in mid 1963, and completion of the entire plant was planned for early 1964. Water for the operation was to be obtained through a 34-inch pipe, capable of delivering 18 million gallons of fresh water daily, being constructed from Anaconda, Deer Lodge County, to the plant site. Another 24 million gallons daily was to be recovered from thickeners and from the tailings pond.

Gold.- Output, the lowest on record (since 1900), declined approximately 37 percent (13,216 ounces) from the 35,377-ounce 1961 output. Most of the production was from copper ores mined by The Anaconda Company and ores and concentrates received at the Anaconda Reduction Works from miscellaneous shippers.

Because much of the State gold output was a byproduct of copper production, strike-reduced operations at The Anaconda Company mines were an important factor in the decline.

The Mayflower and West Mayflower property, Madison County, one of the top 25 domestic gold-producing mines from 1959 to 1961, was idle. The property had been leased previously from The Anaconda Company by the Peter Antonioli estate, but the lease was dropped late in 1961.

The Office of Minerals Exploration (OME) announced that Northern Continental, Inc., Grand Junction, Colo., had been granted an exploration assistance loan to explore for gold and silver in Phillips County. One-half of the \$76,300 contract was to be provided by OME.

Iron Ore.- Compared with 1961, production declined drastically (25,053 long tons) -- the lowest total since 1955. Output was entirely from two mines in Broadwater County operated by Ralls & Harris Bros.

Beneficiation and smelting of ore from the Carter Creek deposit in Beaverhead and Madison Counties were the subject of a report. ^{4/}

Lead.- Production increased an estimated 3,913 tons from the 2,643-ton 1961 output. The major cause of the increase was the beginning of production from the Elm Orlu-Black Rock low-grade zinc mining project, Summit Valley district, Silver Bow County, by The Anaconda Company. The Anaconda slag-fuming operation, miscellaneous shippers to the American Smelting and Refining Co. lead smelter at East Helena, Trout Mining Co. (Algonquin mine), and Taylor-Knapp Co. (True Fissure mine) were the other major producers.

^{4/} Holmes, Wesley T., II, W. Floyd Holbrook, and Lloyd H. Banning. Beneficiating and Smelting Carter Creek, Mont., Iron Ore. BuMines Rept. of Inv. 5922, 1962, 21 pp.

TABLE 4.- Mine production of gold, silver, copper, lead, and zinc, in terms of recoverable metals ^{1/}

Year	Mines producing		Material sold or treated ^{2/} (thousand short tons)	Gold (lode and placer)		Silver (lode and placer)		Total value (thousands)
	Lode	Placer		Troy ounces	Value (thousands)	Troy ounces (thousands)	Value (thousands)	
1953-57 (average) ..	126	10	7,758	\$1,032	6,178	\$5,592		
1958.....	125	11	10,861	910	3,631	3,286		
1959.....	96	14	8,779	999	3,420	3,096		
1960.....	129	13	12,317	1,607	3,607	3,265		
1961.....	135	17	12,792	1,238	3,490	3,227		
1962 ^{3/}	130	15	11,418	776	4,399	4,707		

Year	Copper		Lead		Zinc		Total value (thousands)
	Short tons	Value (thousands)	Short tons	Value (thousands)	Short tons	Value (thousands)	
1953-57 (average) ..	81,289	\$55,490	16,748	\$4,804	66,170	\$15,909	\$82,827
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.....	91,972	59,046	4,879	1,142	12,551	3,238	68,298
1961.....	104,000	62,400	2,643	544	10,262	2,360	69,770
1962 ^{3/}	91,839	56,940	6,556	1,206	38,830	8,931	72,560

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

^{2/} Does not include gravel washed.

^{3/} Preliminary figures. Gold value calculated at U.S. Treasury buying price of \$35 a troy ounce, and silver at a preliminary average price of \$1.07 a troy ounce. In calculating production values for copper, lead, and zinc, preliminary average prices in 1962 per pound of refined metal were used, as follows: Copper, \$0.31; Lead, \$0.092; Zinc, \$0.115.

TABLE 5.- Mine production of gold, silver, copper, lead, and zinc in 1961,
by months, in terms of recoverable metals

Month	Gold (troy ounces)	Silver (troy ounces)	Copper (short tons)	Lead (short tons)	Zinc (short tons)
January.....	1,634	248,734	7,737	161	1,009
February.....	1,771	258,872	7,907	205	839
March.....	2,243	467,322	9,834	609	4,308
April.....	2,095	398,695	9,611	638	4,473
May.....	2,432	455,564	9,448	830	4,308
June.....	2,104	452,386	8,883	797	4,206
July.....	1,863	283,764	5,542	482	2,467
August.....	859	275,257	3,551	582	3,322
September.....	1,054	372,417	4,864	615	3,514
October.....	2,806	494,005	9,244	606	3,770
November.....	1,650	346,000	7,609	516	3,324
December.....	1,650	346,000	7,609	515	3,290
Total.....	22,161	4,399,016	91,839	6,556	38,830

TABLE 6.- 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)
1953-57 (average)....	21	7,643	23,594	5,674
1958.....	22	10,745	17,374	3,308
1959.....	16	8,679	18,615	3,204
1960.....	11	12,169	21,819	2,918
1961.....	12	12,635	18,391	2,765
1962 1/.....	11	11,300	16,348	3,766

Year	Copper (short tons)	Lead (short tons)	Zinc (short tons)	Total value (thousands)
1953-57 (average)....	81,175	13,444	59,566	\$79,554
1958.....	90,557	5,492	26,580	57,942
1959.....	65,810	4,456	22,459	50,149
1960.....	91,754	1,889	4,755	63,980
1961.....	103,788	435	1,384	65,881
1962 1/.....	91,611	5,674	36,229	70,778

1/ Preliminary figures.

Anaconda announced that the planned ore production rate at the Elm Orlu-Black Rock operation was to be 4,000 tons daily. Lead, copper, manganese, and silver were byproducts recovered from the zinc ore.

The Bunker Hill Co. continued shaft-sinking and crosscutting as part of exploration and development of the Nancy Lee mine, Mineral County.

A comprehensive study of lead-zinc marketing by small producers was published.^{5/}

Manganese.- Estimated quantity and value of output increased over 1961. The Taylor-Knapp Co. produced 2,325 short tons of manganiferous ore (5 to 35 percent manganese). Taylor-Knapp also mined battery and chemical grade manganese ore (35 percent or more manganese) from the Moorlight group near Philipsburg. The Anaconda Company produced manganese nodules at its plant at Anaconda, Deer Lodge County. Manganese carbonate (rhodochrosite), the raw material for nodule production, was obtained from Elm Orlu-Black Rock ore, stockpiled Emma mine ore, and low-grade manganese ore from a Government stockpile.

In August, Anaconda purchased 136,143 long dry tons of low-grade manganese ore, averaging approximately 19 percent manganese, from the Government for \$8 a ton. The ore, stockpiled at Butte (123,345 tons) and Philipsburg (12,798 tons), was obtained by the Government during the period from 1951 to 1958. Manganese, gold, silver, lead, and zinc recovered from the ore processed during the year were included in State totals.

Silver.- Silver output reached the highest level since 1957. Due to the increased price, value of production climbed 46 percent (\$1,480,000) compared with a quantity rise of 26 percent (909,000 ounces) over 1961. Copper and zinc ores from Butte mines and miscellaneous shippers to the Anaconda Reduction Works accounted for most of the total.

Steel.- Construction of a steel plant at Anaconda, Deer Lodge County, by Gulf State Lands and Industries, Inc., originally proposed in 1959, was dependent upon securing adequate financing.

Thorium.- The Atomic Energy Commission (AEC) announced in its annual report to the Congress that thorium reserves in the Lemhi Pass area of Idaho and Montana contain approximately 100,000 tons of thorium oxide (ThO₂), and that the possibility exists for the eventual development of much larger reserves in the area.

Tungsten.- Output declined sharply due to the February closure of the Minerals Engineering Co. mill near Glen, Beaverhead County. Production from the company Calvert pit near Wise River was halted in December 1961.

^{5/} Young, Francis M., Frank A. Crowley, and Uuno M. Sahinen. Marketing Problems of Small Business Enterprises Engaged in Lead and Zinc Mining. Montana BuMines and Geol. Bull. 30, 1962, 58. pp.

Uranium.- Production, the lowest since before 1955, was far below the 1961 output of 729 tons. Mines operated by J. A. Highsmith in 1961 were leased by two companies.

Zinc.- Output, the largest since 1957, increased an estimated 28,568 tons over the 10,268 tons produced in 1961. The increase was attributable largely to the start of production from the Elm Orlu-Black Rock block-caving project of The Anaconda Company. The company slag-fuming operation, adjacent to the American Smelting and Refining Co. lead smelter at East Helena, Lewis and Clark County, produced approximately 6,900 tons from old slag. Trout Mining Co., the second largest zinc-producing company in the State, accounted for 1,229 tons before closing the Algonquin mine in September. The Taylor-Knapp Co. mined ore from the True Fissure mine, Granite County; however, zinc-silver mining operations were halted in September.

Production from the Elm Orlu-Black Rock project, which supplied the first zinc ore mined by Anaconda since 1960, began in February. The mine was closed for approximately 2 weeks during the summer because of the Teamsters Union strike. Resumption of zinc mining and concentrating provided 175 jobs at Butte, and 75 employees were added at Anaconda, Deer Lodge County.

In July, Anaconda announced that refined zinc production at the Great Falls electrolytic zinc plant was being reduced 15 percent.

In February, Trout Mining Co. was granted a \$77,610 OME contract to explore for silver, lead, and zinc, in Granite County; Government participation was to be \$38,805.

NONMETALS

Asbestos.- Plans were announced by Superior Asbestos Co., a subsidiary of Zonolite Co., to build a pilot plant to recover short-fiber asbestos as a coproduct from the parent company vermiculite operation at Libby, Lincoln County.

Barite.- The quantity and value of barite sold or used increased substantially over 1961. Baroid Sales Division, National Lead Co., the principal producer, mined and ground the mineral near Greenough, Missoula County. Output was used mainly as a weighting agent for oil-well-drilling mud.

Cement.- Both quantity and value of cement shipments increased compared with 1961. Ideal Cement Co., Montana Division, continued to be the only cement producer in the State. The company completed constructing auxiliary facilities at its Trident plant.

Work began in April on the Permanente Cement Co. plant near the old mining town of Montana City, 3 miles south of East Helena, Lewis and Clark County. Completion of the 1.4-million-barrel-capacity, \$9.6 million facility was expected early in 1963. At that time, shipments of cement for constructing the Yellowtail Dam on the Big Horn River were to begin. The company indicated that some of the plant output was to be marketed in Montana, Wyoming, Idaho, and North Dakota.

Clay.- Output of both miscellaneous clay and fire clay was estimated to be about the same as in 1961.

Montana Liteweight Aggregate Co., Billings, shipped expanded shale to its affiliate, Concrete Products Co., for making a variety of concrete block.

Fluorspar.- Roberts Mining Co. produced fluorspar at its mine in Ravalli County. The Snowbird fluorspar mine near the headwaters of Fish Creek, Mineral County, was reopened under the management of L. O. Macloon. Last production from the area was in 1957.

Fluorspar was the subject of a report.^{6/}

Gypsum.- Estimated production of crude gypsum was slightly less than in 1961. Two mines in Fergus County -- the Shoemaker and Hanover -- operated by United States Gypsum Co. and Ideal Cement Co., respectively, provided the output.

Employees at the Hanover mine completed over 4,000 consecutive accident-free days. The last lost-time accident was in 1951.

Lime.- Quantity and value of lime production declined 12 and 6 percent, respectively, compared with 1961. The Anaconda Company continued making quicklime for metallurgical use in Deer Lodge County. Elliston Lime Co. in Powell County was active, and sugar companies in Big Horn, Missoula, Richland, and Yellowstone Counties calcined limestone to quicklime for their own use.

Mica.- Shipments of mica to the Government purchase depot at Custer, S. Dak., were smaller than in 1961, owing to cessation of the Government mica purchase program on June 30. Production was from the Thumper mine in Gallatin County.

Phosphate Rock.- According to preliminary data, a decrease of about 5 percent in the quantity of marketable phosphate rock output was accompanied by an 10-percent increase in value. The rock, which was processed to elemental phosphorus, phosphoric acid, and phosphate fertilizers, came from operations in Beaverhead, Powell, and Silver Bow Counties.

^{6/} Sahinen, Uuno M. Fluorspar Deposits in Montana. Montana BuMines and Geol., Bull. 29, April 1962, 38 pp.

Rocky Mountain Phosphate Co. (Butte), the only producer of defluorinated phosphate rock for use as animal feed supplement in the West and fourth-ranking in the Nation, began constructing a facility at Garrison. The main purpose for moving from Butte was to be closer to the source of raw material.

Sand, Gravel, and Stone.- Combined output of sand and gravel and stone was estimated at 14.8 million tons (\$14.0 million) compared with 16.2 million tons (\$15.4 million) in 1961. The decrease was due primarily to smaller requirements for these commodities at projects of the State highway department and U. S. Army Corps of Engineers. Use by the Bureau of Reclamation and Bureau of Public Roads was higher.

Two companies -- Livingston Marble & Granite Works (Livingston) and Montana Travertine Quarries, Inc. (Gardiner) -- quarried and marketed travertine for a variety of uses.

Sulfur.- Production of high-purity elemental sulfur from refinery gases by Montana Sulphur & Chemical Co., Yellowstone County, was about 23 percent higher than in 1961.

Talc.- According to preliminary figures, the quantity and value of talc production was slightly less than in 1961. Mines in Beaverhead and Madison Counties yielded the output. The talc was ground at plants in Barratts, Beaverhead County; East Helena, Lewis and Clark County; Three Forks, Gallatin County; Grand Island, Nebr.; Ogden, Utah; and Los Angeles, Calif.

Vermiculite.- There was a small increase in the quantity of crude vermiculite mined compared with 1961. The Zonolite Co. open pit near Libby, Lincoln County, continued to be the principal domestic source of vermiculite. Some of the output was exfoliated by a company in Great Falls, but most was shipped out of the State for processing.

A proposal to merge Zonolite Co. with W. R. Grace & Co. was announced by the management of both companies. The Grace company, a leading producer of chemicals, also was engaged in banking and transportation.

MINERAL FUELS

Coal.- Total output of bituminous coal and lignite remained about the same as in 1961. Mines in Musselshell and Richland Counties were the major sources of bituminous coal and lignite, respectively. The Montana-Dakota Utilities Co. steam-electric generating plant at Sidney continued to be the leading lignite consumer.

Petroleum and Natural Gas.- Estimated recovery of crude oil reached 31.7 million barrels (\$76.7 million) in comparison with 30.9 million barrels (\$74.8 million) in 1961. Marketed production of natural gas rose to 34.1 billion cubic feet (\$2.6 million) from 33.9 billion

cubic feet (\$2.5 million) in 1961. Petroleum continued to represent about 41 percent of the total value of mineral output in the State.

The Pine and Cabin Creek oilfields ranked first and second, respectively, as sources of crude oil. Cut Bank (including Reagan) was the principal gasfield.

Fifty years after the discovery of natural gas on the Cedar Creek anticline (Williston Basin), attention again was focused on the area. Major oil companies drilled in the Pennel and Lookout Butte fields (Fallon County), development took place in the Coral Creek unit at the southern end of the Lookout Butte field, and there was activity at the northwestern end of the anticline near Glendive (Dawson County) in the Seven Mile field. New production along the anticline came from depths of 6,500 to 10,000 feet.

A well drilled by McAllister Fuel Oil Corp. 17 miles northwest of the Brorson field may be the most important wildcat in the Montana portion of the Williston Basin. Oil was recovered on a drill-stem test in the Devonian at about 10,000 feet; production from this horizon has been rare in this area.

A wildcat in Sheridan County, close to the Canadian border and about 26 miles from the nearest production in the Outlook field, apparently struck oil in the Madison formation.

Humble Oil & Refining Co. began large-scale waterflooding in the Cut Bank field, Glacier County. The northwest unit of about 2,700 acres was formed as one of several proposed units for flooding Cut Bank sand. Seven producing wells were converted to injection wells. It was predicted that ultimately production could be doubled from the formation in the area to be flooded.

Montana Power Co. announced plans to drill a 2,000-foot well near Deer Lodge, Powell County, in an attempt to find a formation suitable for storage of natural gas.

Oil and gas leases on the Northern Cheyenne Indian Reservation were open for bidding for the first time since 1956.

Effective July 1, 1962, the Montana Oil & Gas Conservation Commission reduced its tax on production of oil and natural gas by 50 percent. Early in the year the commission also established 320-acre well spacings in the Brorson field area of Richland County. Split spacings -- 80 acres on the western edge and 160 acres on the eastern edge -- were approved for the Pennel field (Fallon County) because of variations in the pay thickness of the producing horizons. For the Benrud field northwest of Tule Creek (Roosevelt County), spacings of 160 acres were approved.

This report summarizes mineral industry activity in Montana in 1962 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-1963 after completion of canvasses of all mineral industry establishments.

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3. Bald Mountain
4. Bannack
5. Beaverhead (Dark Horse) (Mulchy Creek)
6. Big Muddy
7. Blacktail
8. Bloody Dick (Beaverhead)
9. Blue Wing
10. Bryant (Hecla) (Glendale)
11. Chinatown (Armstead)
12. Dillon (Carter Creek) (Frying Pan Basin)
13. Elkhorn (Coolidge) (Wise River)
14. Horse Prairie
15. Jake Creek
16. Lost Creek (Brown's Lake) (Rock Creek)
17. Medicine Lodge
18. Monida
19. Mount Torrey
20. Niccolla
21. Nogo (Apex)
22. Pioneer
23. Polaris (Lost Cloud)
24. Ruby
25. Saginaw (Jackson)
26. Utopia (Birch Creek)
27. Wipond
28. Wisdom (Big Hole)

Blaine County, A-8

29. Bearpaw

Broadwater County, C-5

30. Confederate Gulch (Backer) (Canton) (Diamond City)
31. Deep Creek
32. Hellgate
33. Lone Mountain
34. Maple Gulch
35. Park (Hassel) (Indian Creek) (Townsend)
36. Radersburg (Cedar Plains)
37. Winston (Beaver Creek)

Carbon County, D-7

38. Clark Fork
39. Hellroaring
40. Silver Run

Cascade County, B-5

41. Nelhart (Montana)

Deer Lodge County, D-3

42. Blue Eyed Nellie (Silver Lake)
43. French Gulch
44. Georgetown (Southern Cross) (Cable)
45. Girard
46. Heber (Mill Creek)
47. Lost Creek (Dry Gulch) (Antelope Creek)
48. Oro Fino (Dry Cottonwood)

Fergus County, B-7

49. Cone Butte
50. North Moccasin (Kendall)
51. Warm Springs (Gilt Edge) (Malden)

Flathead County, A-2

52. Hog Heaven (Flathead) (Kila)
53. Star Meadow (Lupfer)
54. Whitefish

Gallatin County, D-5

55. Eldridge
56. West Gallatin (Spring Hill)

Granite County, C-3

57. Alps (Bonita)
58. Antelope Creek
59. Combination (Henderson) (Black Pine)
60. Dunkleburg
61. Frog Pond Basin
62. Garnet (Top-o-Deep) (First Chance)
63. Maxville (Wyman) (Gird Creek)
64. Moose Lake
65. Phillipsburg (Flint Creek) (Granite)
66. Red Lion (Cable Mountain)
67. Rock Creek
68. Rose Mountain (Gold Creek)
69. South Boulder (Princeton)
70. Welcome Creek

Jefferson County, C-4

71. Alhambra (Hot Springs) (Golconda)
72. Amazon
73. Basin (Cataract) (Comet)
74. Beaver Gulch
75. Boulder
76. Big Foot (State Creek)
77. Clancy Gulch (Buffalo Creek)
78. Colorado (Corbin) (Gregory) (Wickes)
79. Elkhorn
80. Elk Park
81. Homestake
82. Little Pipestone
83. Lowland
84. McClellan (Mitchell Creek)
85. Montana City
86. Nez Perce
87. Pipestone
88. Whitehall (Cardwell)
89. Whitetail

Judith Basin County, B-6

90. Barker (Hughesville)
91. Running Wolf
92. Yogo

Lake County, B-2

93. Elmo (Chief Cliff)

Lewis and Clark County, B-4

94. Austin (Greenhorn)
95. Blue Cloud
96. Gould-Stemple (Fool Hen) (Poorman)
97. Heddleston (Blackfoot) (Silver)
98. Helena (Last Chance) (Springhill) (Unionville) (Owyhee)
99. Lincoln (McClellan Gulch) (Seven-up Pete Gulch) (Keep Cool Creek) (Liverpool Creek) (Stonewall Mountain)
100. Marysville (Bald Butte) (Ottawa)
101. Missouri River
102. Ophir

103. Rimini

- (Vaughn) (Bear Gulch)
104. Scratchgravel Hills (Grass Valley)
105. Wolf Creek (Gladstone)
106. York

Lincoln County, A-1

107. Cabinet (Fish River)
108. Libby (Snowshoe)
109. Rainy Creek
110. Sylvanite
111. Tobacco River
112. Troy (Grouse Mountain) (Calahan)
113. Wolf Creek

Madison County, D-5

114. Bismark (Willmah)
115. Cherry Creek
116. McCarthy Mountain
117. Norris (Lower Hot Springs) (Upper Hot Springs)
118. Norwegian Creek
119. Pony (Mineral Hill)
120. Potosi
121. Renova (Bone Basin) (Mayflower)
122. Rochester (Rabbit)
123. Ruby Mountains
124. Sand Creek
125. Sheridan (Mill Creek) (Brandon) (Indian Creek) (Ramshorn)
126. Silver Star (Iron Rod)
127. South Boulder (Mammoth)
128. Tidal Wave (Twin Bridges)
129. Virginia City (Summit) (Pine Grove) (Highland) (Fairweather) (Nevada) (Junction) (Alder Gulch) (Brown's Gulch) (Granite Creek) (William's Gulch) (Barton Gulch)
130. Washington (Meadow Creek) (McAllister)

Meagher County, C-6

131. Beaver (Elk Creek) (Thompson Creek)
132. Castle Mountains
133. Murray (Battle Creek)
134. Musselshell (Copperopolis)

Mineral County, B-2

135. Cedar Creek (Quartz Creek) (Trout Creek)
136. Denemora (Big Elk) (Saltese)
137. Iron Mountain (Superior)
138. Keystone
139. Packer Creek
140. Rock Island
141. St. Regis (Deer Creek) (Ward)

Missoula County, C-3

142. Clinton (Wallace)
143. Coloma (Potomac)
144. Copper Cliff
145. Elk Creek
146. Nine Mile Creek (Kennedy Creek)
147. Petty Creek
148. Woodman (Lolo)

Park County, D-6

149. Cowles (Haystack)
150. Crevasse

151. Emigrant

- (Chico)
152. Horseshoe
153. Jardine (Bear Gulch) (Sheepater)
154. New World (Cooke City) (Blackmore)

Phillips County, A-9

155. Little Rockies (Landusky) (Zortman)

Powell County, C-4

156. Big Blackfoot (Helmville)
157. Elliston (Ontario) (Nigger Hill)
158. Emery (Zosell)
159. Finn (Washington) (Jefferson, and (Buffalo Gulches)
160. Garrison
161. Ophir (Snowshoe) (Deadwood)
162. Oro Fino
163. Pioneer (Gold Creek)
164. Racetrack (Danielsville)

Ravalli County, C-2

165. Curlew
166. Hughes Creek (Alta) (Overwich)
167. Mineral Point
168. Pleasant View
169. Slate Creek
170. Three Mile

Sanders County, B-1

171. Blue Creek (Heron)
172. Camas Prairie (Perma)
173. Plains
174. Prospect Creek
175. Revais Creek (Dixon)
176. Sleepy Creek (Belknap)
177. Silver Butte (Vermillion) (Cabinet)
178. Spring Gulch
179. Thompson River
180. Trout Creek
181. White Pine (Bagle)

Silver Bow County, D-4

182. Basin Creek
183. Butte (Summit Valley) (Lost Child)
184. Divide Creek
185. Fleecer Mountain
186. German Gulch (Siberia)
187. Highland
188. Independence
189. Melrose (Camp Creek) (Soap Gulch)
190. Moose Creek

Stillwater County, D-7

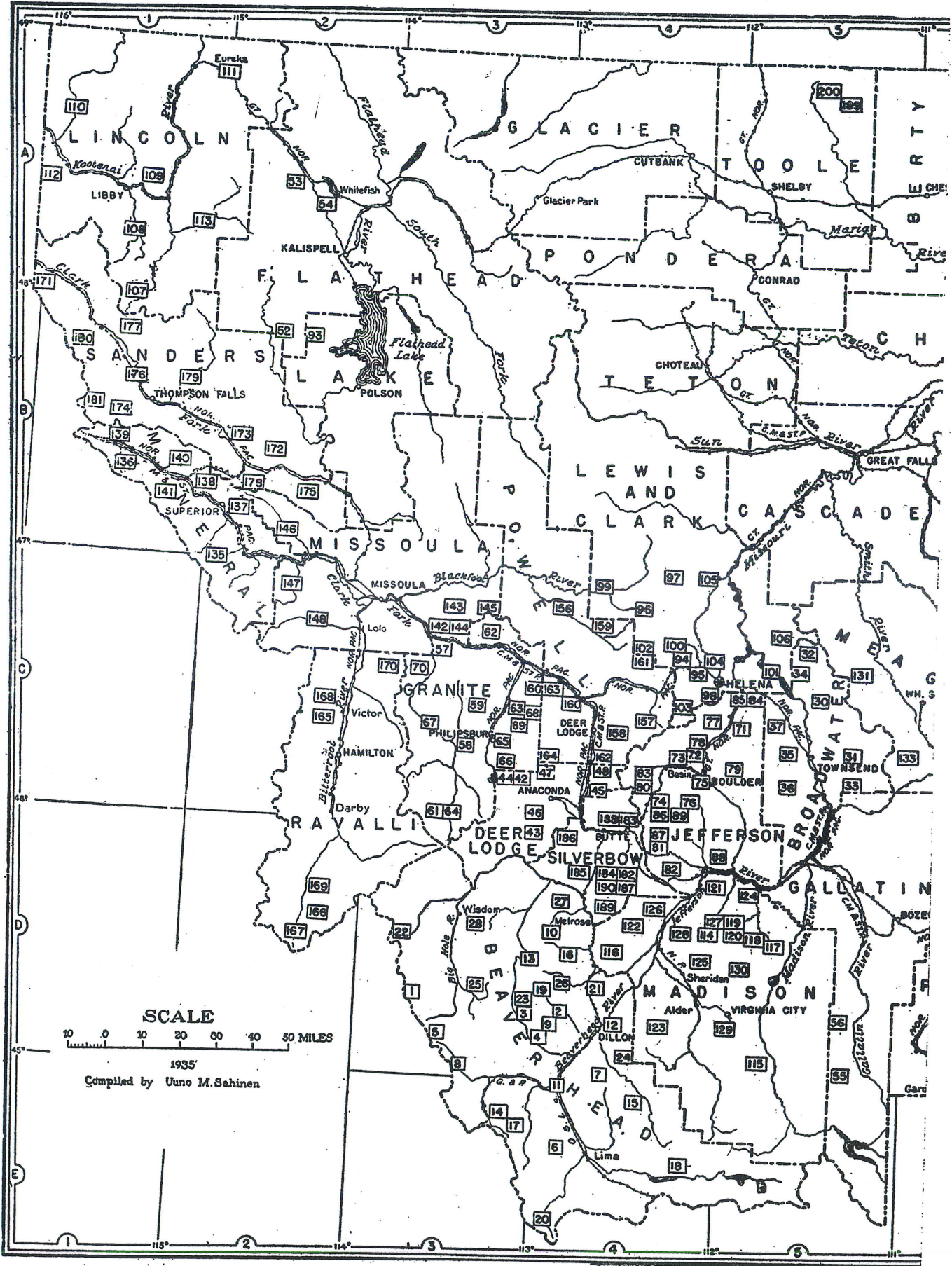
191. Nye
192. Stillwater
193. Yellowstone River

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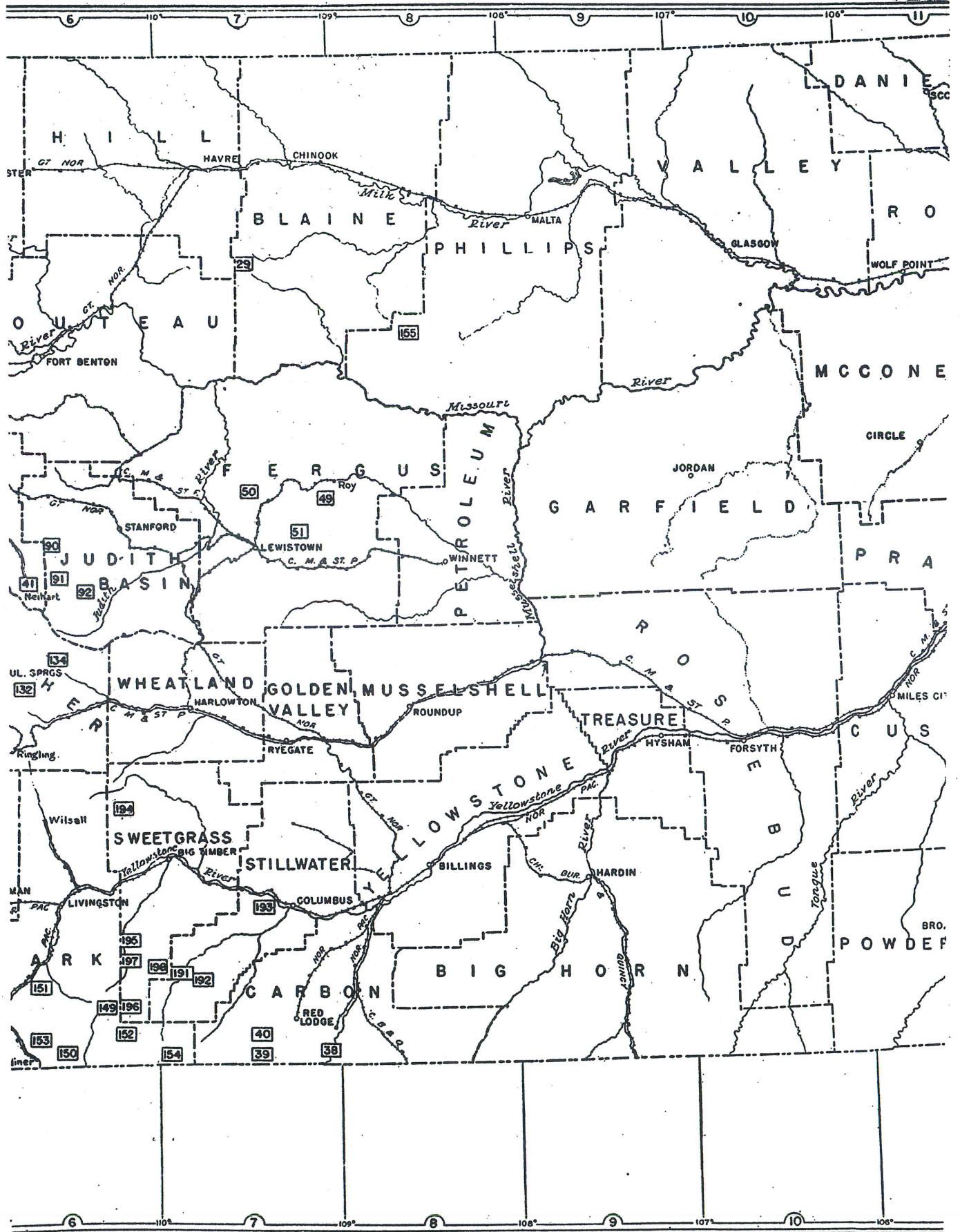
194. Big Timber Canyon
195. Boulder River
196. Independence
197. Natural Bridge
198. West Stillwater

Toole County, A-5

199. Gold Butte
200. West Butte



MAP SHOWING DISTRIBUTION OF



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