

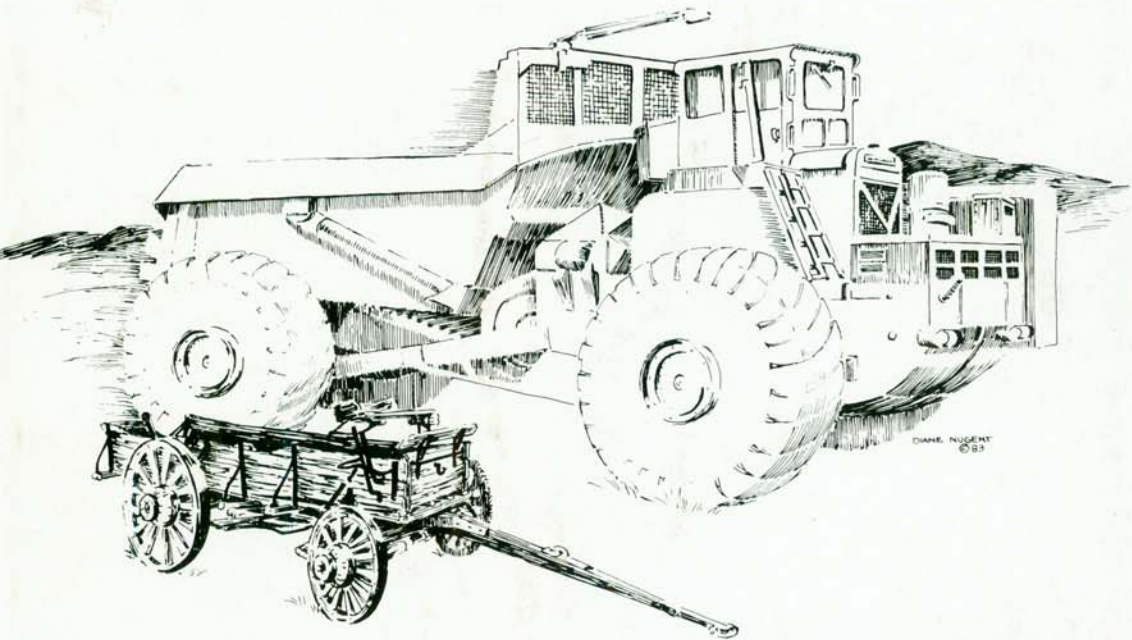
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**DIRECTORY OF
MONTANA
MINING
ENTERPRISES
FOR 1983**

**compiled by
D. C. Lawson**

**with a section on
the gold deposits of the Big Belt Mountains by Henry G. McClernan**



Bulletin 121

1984

**Montana Bureau of Mines and Geology
A Department of
Montana College of Mineral Science and Technology**

Bulletin 121



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MINING ENTERPRISES
FOR 1983**

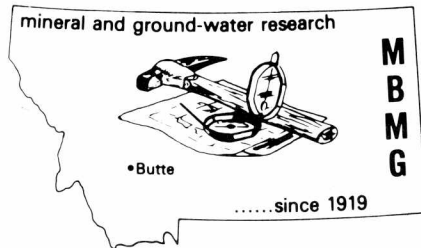
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D. C. Lawson

*with a section on the Gold deposits
of the Big Belt Mountains*

by

Henry G. McClernan



Prepared in cooperation with the
Montana Mining and Mineral Resources Research Institute.

1984

Contents

PREFACE	iii
FOREWORD	iv
PART I—METAL MINES	1
Antimony	1
Gold, silver, copper, lead, zinc	1
Iron	18
Molybdenum	18
Titanium	18
Tungsten	19
Uranium	19
Gold placers	19
PART 2—NONMETAL MINES, PITS AND QUARRIES	23
Barite	23
Bentonite	23
Chlorite	24
Clay	24
Fluorspar	24
Graphite	25
Gypsum	25
Limestone	25
Phosphate	26
Sapphire	26
Semiprecious stones	27
Shale	27
Silica	27
Soil conditioners	27
Stone	28
Talc	28
Vermiculite	29
PART 3—COAL MINES	30
GOLD DEPOSITS OF THE BIG BELT MOUNTAINS	33
Figure 1—Location map	34
Figure 2—Cross section of the Golden Messenger mine vein system	38
References	40
APPENDIX	41
Table 1—Nonfuel mineral production in Montana	41
List 1—Major Montana exploration projects	42
List 2—Supplemental list of mining enterprises	43
List 3—Mining districts	44
List 4—Strippable subbituminous and lignite coal fields	46
List 5—New mining companies incorporated in Montana in 1983	48
INDEX	50

Photographs

Confederate Gulch in the Big Belt Mountains	32
Main street of Diamond City	32

Sheets

1—Distribution of mining districts and strippable coal fields in Montana . (back pocket)	
2—Generalized geologic map of the northern Big Belt Mountains	(back pocket)

Preface

Each year the Bureau Staff Field Agent visits many mining properties in Montana under the Title III Aid to Small Miners Program and the long-established Bureau Small Mines Program. With the tremendously accelerated mineral activities in the State, however, it is impossible to visit all properties during the year, and therefore information is requested by mail from mine operators and owners relating to their mining activities. The responses to this canvassing and to personal interviews are then compiled and published annually in the Directory of Montana Mining Enterprises.

Mining enterprises are listed, by counties, either under *Metal Mines*, *Nonmetal Mines*, *Pits and Quarries* or *Coal Mines*. Within the counties, the properties are listed alphabetically, and contain the type of ore or mineral produced; mining district and location of the property based on legal subdivisions of land survey; owners' and operators' names and addresses; mill capacity; and the number of employees. The yearly status is also outlined, i.e., whether the property produced ore during the year; is still producing; developed ore without producing; did exploration work; or remained totally inactive. To facilitate use of the Directory, an index of mines, mine owners and operators is included at the back. Also included is a list entitled *Major Montana Exploration Projects*.

The map in the back pocket includes township and range lines to facilitate locating the area in which a mine or group of claims is located. Also, the Directory entries include the mining district index number in [brackets], which will allow one quickly to locate the district on the map.

The Directory contains a supplemental list of mines that have previously been listed as active but have been inactive over three continuous years. Mines inactive for a period of six consecutive years have been dropped entirely from the Directory.

The compiler wishes to thank the many Montana mine owners and operators for allowing information on their activities to be published. Every effort has been made to publish exact and complete information. The fact that a property is listed in the Directory, however, is not to be regarded as an endorsement of the property by the Montana Bureau of Mines and Geology. Conversely, if a property is omitted from the Directory, the omission is not to be taken as questioning its value or potential. Such omissions are known to occur, but most are traceable to failure by the last known operator to respond to repeated requests for necessary information. Nevertheless, in most cases, the missing data have been supplied from the best sources available.

For their contributions to the Directory, special acknowledgements are due H. R. Babitzke, U.S. Bureau of Mines, who provided the *Foreword* on the mineral industry of Montana in 1983, and to Henry G. McClernan, who contributed the section on gold deposits of the Big Belt Mountains. The feature on the Big Belt Mountains is the fourth of such articles on selected mining areas within the State, and we hope to continue these profiles in forthcoming directories.

If any additional facts or corrections are known, please submit such information to D. C. Lawson, Montana Bureau of Mines and Geology, Butte, Montana 59701, phone 406/496-4171.

The abbreviations and symbols used throughout the Directory are: (sec.), section; (T.), township; (R.), range; (t/d), tons per day; (t/hr), tons per hour; (t/y), tons per year; (g/d), gallons per day; (y/hr), yards per hour; (*), openpit; (**), openpit and underground.

D. C. Lawson
Staff Field Agent
Montana Bureau of Mines and Geology

Butte
March 1, 1984

Foreword

The estimated value of nonfuel mineral production in Montana for 1983 was \$240 million, a decrease of 10 percent from that recorded in 1982, according to the Bureau of Mines, U.S. Department of the Interior. The most significant loss was in copper production, although a substantial gain was noted in the production of silver. The metallics accounted for 65 percent of the total production value for the year.

After a century of mining, the Anaconda Minerals Company suspended operations in Butte, a suspension that is expected to last until copper prices are increased drastically. ASARCO Inc.'s Troy mine near Libby produced at capacity in 1983, making it the nation's largest silver producer. Placer Amex Inc. began production in February at its Golden Sunlight mine near Whitehall; the mine reportedly will produce about 72,000 ounces of gold annually over a projected life of 13 years. Zortman and Landusky Mining, Inc. continued to improve its two gold-mining operations in Phillips County, with new recovery plants and leach-pad modifications. U.S. Antimony Corporation produced at less than capacity, and the Black Pine Mining Company produced gold and silver northwest of Philipsburg, but shelved plans for new mill construction. Companies announcing plans for gold and silver mining operations within the next few years included Homestake Mining Company near Jardine, CoCa Mines, Inc. near Polson, and Resources American, Inc. near Norris.

Exploration and development continued at a high rate. Anaconda Minerals signed a joint-venture agreement with Stillwater PGM Resources for continued development of the Stillwater platinum-palladium deposit. ASARCO and U.S. Borax and Chemical Corporation continued to explore the Chicago Peak area in the Cabinet Mountains; the deposits could develop into a major silver-metals producing area. Other companies known to be exploring for precious metals in western Montana were the St. Joe Lead Company, Cominco American, Inc., Exxon Minerals Company, Coeur Explorations, Inc., Climax Molybdenum Company, Meridian Land and Minerals Company, Amax Exploration, Inc., and Noranda Exploration, Inc.

ARCO Aluminum Company, after reducing production at the start of the year to 40 percent of capacity at its Columbia Falls plant, returned to 95 percent of capacity at year-end when the plant's fifth potline was reenergized.

Production continued at most of the industrial-mineral sites. The Elk Creek barite mine was reopened and producing, but at less than its previous capacity. Despite falling demand for gypsum for the wallboard industry, mining continued on U.S. Gypsum properties near Lewistown. Cyprus Industrial Minerals Company began construction of an expanded sorting facility at its Yellowstone talc mine. Most exploration for industrial minerals was being undertaken by companies currently mining for the same minerals within the State.

H. R. Babitzke
State Liaison Officer
U.S. Bureau of Mines

Spokane
January 13, 1984

Part I—Metal Mines

ANTIMONY MINES

Ravalli County: Hamilton 59840

*DOMINIC GROUP Antimony
Sec. 35, T. 7 N., R. 19 W.
Owner-Operator: Betty Lykins
Box 181, 300 S. 9th, Hamilton MT 59840
Status: Developing

Sanders County: Thompson Falls 59873

BABBIT MINE Antimony
Prospect Creek dist. [174],
sec. 17, T. 21 N., R. 31 W.
Operator: John C. Lawrence
Box 643, Thompson Falls MT 59873
Owner: U.S. Antimony Corp.
Box 643, Thompson Falls MT 59873
Employees: 12
Mill capacity: 250 t/d, refinery and electrolytic plant
Smelter: High-purity antimony, battery-grade antimony, antimony trioxide, sodium antimonate
Status: Producing

GOLD, SILVER, COPPER, LEAD AND ZINC MINES

Beaverhead County: Dillon 59725

AJAX MINE Gold, silver, lead
Sec. 7, T. 6 S., R. 17 W.
Owner-Operator: Ajax Gold, Inc.
Willow Creek Rd., Corvallis MT 59828
Mill capacity: 50 t/d
Status: Produced, developing

BURGIEROSA MINE Silver, lead, copper
Vipond Park dist. [27],
sec. 34, 35, T. 1 S., R. 11 W.
Owner-Operator: Burgierosa Silver Mines, Inc.
P.O. Box 65, Genoa City WI 53128
Employees: 2
Status: Developing

BUSTER MINE Silver, gold, lead, copper, zinc
Birch Creek dist. [26],
sec. 17, 18, 19, 20, T. 5 S., R. 10 W.
Owner-Operator: Ken Langstaff
5200 Argenta Rd., Dillon MT 59725
Employees: 2
Status: Inactive

CLEVE-AVON and FRANKLIN MINE Gold, silver
Bryant (Hecla) dist. [10], sec. 2, T. 3 S., R. 11 W.
Owner-Operator: University of Mississippi Foundation, Geoscience and Services, Inc.,
3608 Pershing Ave., Fort Worth TX 76107
Status: Inactive

FAITHFUL LODGE Silver, lead
Vipond Park dist. [27], sec. 3, T. 1 S., R. 11 W.
Owner-Operator: Lively Mining, Inc.
Box 96, Melrose MT 59743
Status: Inactive

FERDINAND MINE Lead, zinc, silver
Argenta dist. [2], sec. 29, T. 6 S., R. 10 W.
Owner-Operator: Rudy and Nels Nygren
4700 Argenta Rd., Dillon MT 59725
Status: Inactive

GOLDEN DAWN MINE Gold, silver
Argenta dist. [2], SE¼ sec. 24, T. 6 S., R. 11 W.
Owner-Operator: Dan A. MacDonald
7200 Argenta Road, Dillon MT 59725
Status: Developing

*GRASS HOPPER CLAIMS NO. 1 Gold, silver, lead
Bannack dist. [4], sec. 9, T. 8 S., R. 11 W.
Owner-Operator: Martin L. Belus
35021 W.V.H., Algona WA 98002
Status: Developing

**GRASSHOPPER MINE Gold
Bannack dist. [4], sec. 8, T. 8 S., R. 11 W.
Operator: R. A. Hanson Mining Co.
N. 8700 Crestline, Spokane WA 99207
Owner: Hanson Properties, Inc.
N. 8700 Crestline, Spokane WA 99207
Status: Developing

Beaverhead County (continued)

HAND MINE Gold, silver, lead
 Argenta dist. [2],
 NW¼ NW¼ sec. 29, T. 6 S., R. 10 W.
 Operator: William M. Hand
 30 S. Arizona, Dillon MT 59725
 Owner: Hand Mine
 P.O. Box 1298, Dillon MT 59725
 Status: Inactive

*LAMPLIGHTER GROUP Silver, copper
 Vipond Park dist. [27],
 sec. 29 (unsurveyed), T. 2 S., R. 11 W.
 Owner-Operator: Roy Hoekema and Arthur Semsak
 Box 180, Sultan WA 98294
 Status: Developing

LAST CHANCE GROUP Gold
 Vipond Park dist. [27], sec. 9, T. 2 S., R. 11 W.
 Owner-Operator: Lee Mining Corp.
 P.O. Box 467, Sheridan MT 59749
 Status: Producing, developing

**LUCKY STRIKE MINE Gold, silver, copper
 Horse Prairie dist. [14], sec. 14, T. 11 S., R. 13 W.
 Owner-Operator: Owen Adams
 Box A, Teasdale UT 84773
 Status: Developing

MAYDAY MINE Gold, silver, lead
 Argenta dist. [2], sec. 7, T. 6 S., R. 10 W.
 Owner-Operator: Rudy and Nels Nygren
 4700 Argenta Rd., Dillon MT 59725
 Status: Inactive

POLARIS MINE Silver
 Polaris (Lost Cloud) dist. [23],
 sec. 28, T. 5 S., R. 12 W.
 Owner-Operator: Midnite Mines, Inc.
 15600 Redmond Way, Redmond WA 98052
 Employees: 3
 Status: Produced, developing

**SATA MAIRA RAINBOW GROUP Copper,
 silver, lead, tungsten
 Utopia dist. [26], sec. 21, 27, 28, T. 5 S., R. 10 W.
 Owner-Operator: J. V. Brady and Harold Reid
 Box 3, Moise MT 59824
 Status: Developing

Broadwater County: Townsend 59644

BLUEBELL GROUP Copper, silver, gold, lead, zinc
 Hassel dist. [35], sec. 1, T. 6 N., R. 1 W.;
 sec. 32, T. 7 N., R. 1 E.
 Owner-Operator: Nila Tyrrel
 Box 369, Townsend MT 59644
 Status: Developing

*CHAR TAM MINE Gold, silver, lead
 Winston dist. [37], sec. 13, T. 8 N., R. 1 W.
 Owner-Operator: Don Holmes
 409 Cherry St., Townsend MT 59644
 Employees: 2
 Status: Producing, developing

SILVER RIDGE GROUP Silver, molybdenum,
 tungsten
 Sec. 26, T. 5 S., R. 17 W.
 Operator: S & S Diversified
 Ted Siaperias, General Manager
 Box 4123, Pocatello ID 83201
 Owner: Florence Coates and others
 P.O. Box 368, Mullan ID 83846
 Employees: 8
 Status: Developing

SYLVIA AND SYLVIA EXTENSION MINE Gold,
 lead, silver
 Argenta dist. [2], sec. 13, 24, T. 6 S., R. 10, 11 W.
 Owner-Operator: Rudy and Nels Nygren
 4700 Argenta Rd., Dillon MT 59725
 Status: Inactive

THUNDERBIRD GROUP Silver, tungsten,
 molybdenum
 Elkhorn dist. [13],
 sec. 14, 15, 22, 23, T. 4 S., R. 12 W.
 Owner-Operator: Thunderbird Resources
 Don L. Jenkins, President
 P.O. Box 506, Corvallis MT 59828
 Employees: 2
 Status: Developing

**TIGER GROUP Silver, tungsten, lead, zinc,
 copper
 Elkhorn dist. [13],
 sec. 13, 14, 15, 22, 23, 26, 27, T. 4 S., R. 12 W.
 Owner-Operator: Don L. Jenkins
 P.O. Box 506, Corvallis MT 59828
 Employees: 3
 Status: Developing

VIRGINIA GULCH MINE Gold, silver
 Argenta dist. [2], sec. 15, T. 6 S., R. 11 W.
 Owner-Operator: Kenneth Langstaff
 Box 145, 5200 Argenta Rd., Dillon MT 59725
 Employees: 2
 Status: Developing

WAPITA MINE Lead, silver
 Argenta dist. [2], sec. 22, 24, T. 6 S., R. 11 W.
 Owner-Operator: Rudy and Nels Nygren
 4700 Argenta Rd., Dillon MT 59725
 Status: Developing

CROSS MINE Lead, zinc, gold, silver
 Park dist. [35], sec. 20, 21, T. 7 N., R. 1 W.
 Owner-Operator: L. W. Doggett, C. Kokoruda and
 F. Beniger
 810 Breckenridge, Helena MT 59601
 Status: Inactive

Broadwater County *(continued)*

- CUSTER MINE** Gold
Winston dist. [37], sec. 13, T. 8 N., R. 1 W.
Owner-Operator: West Gate Mining and
Construction
3301 San Mateo NE, Suite 205,
Albuquerque NM 87110
Mill capacity: 250 t/d
Employees: 25
Status: Producing, developing
- DIAMOND HILL MINE** Gold, tungsten
Hassel dist. [35], sec. 36, T. 7 N., R. 1 W.
Owner-Operator: Mrs. Palmer Engh
Box 231, Townsend MT 59644
Mill capacity: 10 t/d
Status: Inactive
- EAST PACIFIC MINE** Gold, silver, lead
Winston dist. [37], sec. 26, T. 8 N., R. 1 W.
Operator: Herb Carver
Winston MT 59647
Owner: East Pacific Mining Co.,
c/o Bill Cullen, 1306 Washington,
Mutual Bldg., Spokane WA 99201
Mill capacity: 40 t/d
Status: Produced, inactive
- EDNA MINE** Gold, silver
Winston dist. [37], sec. 13, T. 7 N., R. 1 W.
Operator: Don Holmes
Route 1, Box 138, Townsend MT 59644
Owner: Bob Cobben
Winston MT 59647
Status: Developing
- GOLDEN ASSET MINE** Gold, silver
Sec. 20, T. 7 N., R. 3 W.
Operator: United Minerals, Jim Hill
P.O. Box 682, Townsend MT 59644
Status: Inactive
- **GRANITE HILL NO. 1 AND NO. 2** Ox Tree mill
gold
North Fork-Deep Creek dist. [31], sec. 35, 36,
T. 8 N., R. 4 E.
Owner-Operator: Arnold J. Kolberg
R.R. 1, Box 57, Toston MT 59643
Employees: 2
Status: Developing
- HARD CASH MINE** Gold
Cedar Plains dist. [36], sec. 10, 11, T. 5 N., R. 1 W.
Operator: Dennis Miller
Radersburg MT 59641
Owner: Jim Forkner
6037 N. Van Hess Blvd., Fresno CA 93705
Status: Developing
- IRON AGE GROUP** Gold
Winston dist. [37], sec. 13, 24, T. 7 N., R. 1 W.
Operator: Don Holmes
Route 1, Box 138, Townsend MT 59644
Owner: Mrs. Gwendlyn Couch Johnson and others
2875 Westwood Lane No. 2
Carmichael CA 95608
Status: Developing
- **KOLBERG EUREKA LEAD NO. 1** Silver, lead,
zinc
Eureka dist., sec. 20, T. 7 N., R. 1 W.
Owner-Operator: Arnold J. Kolberg
R.R. 1, Box 57, Toston MT 59643
Employees: 2
Status: Developing
- KOLBERG MILL** Free milling (Preferred)
Toston Flat dist., sec. 5, T. 4 N., R. 2 E.
Owner-Operator: Arnold J. Kolberg
R.R. 1, Box 57, Toston MT 59643
Mill capacity: 40 t/d
Employees: 3
- MAPLES AND BRIDGTON GROUP** Gold, silver
Winston dist. [37], sec. 24, T. 7 N., R. 1 W.
Owner-Operator: Don Holmes
Route 1, Box 138, Townsend MT 59644
Status: Developing
- ST. LOUIS MINE** Gold, silver
Park dist. [35], sec. 26, T. 7 N., R. 1 W.
Operator: United Minerals, Jim Hill
P.O. Box 682, Townsend MT 59644
Status: Inactive
- SILVER DIKE GROUP** Gold, silver
Cedar Plains dist. [36], sec. 4, T. 7 N., R. 1 W.
Operator: Don Holmes
409 Cherry St., Townsend MT 59644
Owner: Mary Ann Miller and Don Holmes
Box 748, Townsend MT 59644
Employees: 2
Status: Produced
- SKY MINE** Gold, silver
Cedar Plains dist. [36], sec. 10, 15, T. 6 N., R. 1 W.
Operator: Don Holmes
409 Cherry St., Townsend MT 59644
Owner: Mary Ann Miller and Don Holmes
Route 1, Box 138, Townsend MT 59644
Status: Developing
- STOLEN SWEETS MINE** Gold, silver
Winston dist. [37], sec. 24, T. 7 N., R. 1 W.
Operator: Don Holmes
409 N. Cherry St., Townsend MT 59644
Owner: Ed Sewell
6314 Laurel Canyon Blvd., N. Hollywood CA 91606
Status: Inactive

Broadwater County (continued)

****SLIM SAM GROUP** Lead, silver, gold
Radersburg dist. [36],
sec. 19, 20, 29, 30, T. 6 N., R. 1 W.
Owner-Operator: Art Roberts
Box 65, Radersburg MT 59641
Status: Inactive

****VALLEY VIEW MINE** Gold, silver, lead, zinc
Park (Indian Creek) dist. [35],
sec. 24, T. 7 N., R. 1 W.
Owner-Operator: Warren Schreiner
Box 665, Townsend MT 59644
Status: Developing

Cascade County: Great Falls 59401

CHAMPION B. MINE Silver, lead, zinc
Neihart dist. [41], unsurv., sec. 29, T. 14 N., R. 8 E.
Owner-Operator: Marvin E. Corkill
Box 403, White Sulphur Springs MT 59645
Status: Developing

FLORENCE and QUEEN MINE Silver, lead, zinc
Neihart dist. [41], sec. 29, 30, 31, 32, T. 14 N., R. 8 E.
Operator: Hecla Mining Co., Gordon Waldo, Mgr.,
New Mines, Box 220, Wallace ID 83873
Owner: The Monarch Co., Carroll R. Bennett
Box 2267, Great Falls MT 59401
Status: Exploration

MOULTON MINE
Silver, lead, zinc
Neihart dist. [41], sec. 29, 32, unsurv., T. 14 N., R. 8 E.
Operator: West Gate Mining and Construction
3301 San Mateo NE, Suite 205,
Albuquerque NM 87110
Owner: Peter J. Antonioli Estate
1001 W. Gold, Butte MT 59701
Status: Developing, producing

Deer Lodge County: Anaconda 59711

***GREAT EASTERN MINE** Silver, copper, zinc
Lost Creek dist. [47], sec. 9, 10, T. 5 N., R. 11 W.
Owner-Operator: Nettie Lord, Two Knudson Dr.,
Yerington NV 89447; and Lyman Thayer, 3103 Lost
Creek Rd., Anaconda MT 59711
Status: Inactive

Fergus County: Lewistown 59457

****BLACK BULL MINE** Gold, silver, copper, lead,
zinc
Warm Springs dist. [51], sec. 7, T. 16 N., R. 20 E.
Owner-Operator: G. S. Abbott
Gilt Edge Route, Lewistown MT 59457
Status: Developing, produced, producing

VULTURE MINE Lead, silver
Park dist. [35], sec. 8, T. 7 N., R. 1 W.
Owner-Operator: Dr. Raymond G. Bayles
321 E. Main St., Bozeman MT 59715
Status: Developing

****PONDEROSA 102 and 102A MINE** Gold, silver,
lead, zinc, copper
Neihart dist. [41], sec. 15, T. 14 N., R. 8 E.
Operator: Morgan Enterprises, Inc.
Mike Morgan, Pres., c/o MED-PRO
P. O. Box 53, Virginia City MT 59755
Owner: James M. Morgan
P.O. Box 15, Neihart MT 59465
Employees: 2
Status: Developing

***SILVER DYKE MINE** Silver, lead, zinc
Neihart dist. [41], sec. 10, T. 14 N., R. 8 E.
Owner-Operator: Peter J. Antonioli
1001 W. Gold, Butte MT 59701

BONANZA GROUP Gold, silver
Kendall dist. [50], sec. 30, T. 18 N., R. 18 E.
Owner-Operator: Arnold Smith
318 W Blvd., Lewistown MT 59457
Status: Developing

***COPPER ELK GROUP** Lead, silver
Cone Butte dist. [49], sec. 22, T. 17 N., R. 20 E.
Owner-Operator: T. A. Pentecost and others
204 E. Washington, Lewistown MT 59457
Status: Developing

Fergus County (continued)

- **FEDERAL RESERVE GROUP** Silver, lead, gold
South Moccasin dist. sec. 35, T. 17 N., R. 17 E.
Operator: Dean C. Burnham
Route 3, Lewistown MT 59457
Owner: D. C. Burnham and others
Route 3, Lewistown MT 59457
Status: Developing
- *JAY DEE NO. 3** Gold, silver
Cone Butte (unorg.), sec. 8, T. 17 N., R. 21 E.
Owner-Operator: John and Dolores Rife
P.O. Box 193, Roy MT 59471
Status: Developing
- KENDALL MINE** Gold
North Moccasin dist. [50], sec. 31, T. 18 N., R. 18 E.
Operator: North Moccasin Inc., Ltd.
5360 Manhattan Cr., Suite 201
Boulder CO 80303
Owner: Triad Investments, Inc.
5360 Manhattan Cr., Suite 201
Boulder CO 80303
Mill capacity: 100 t/d
Employees: 5
Status: Producing, developing
- **MAGINNIS MINE** Gold, silver
Warm Springs (Gilt Edge) dist. [51],
sec. 5, T. 16 N., R. 20 E.
Operator: Jerry Hanley
138 - 13th Ave., Lewistown MT 59457
Owner: Selma Hanley and others
Lewistown MT 59457
Status: Developing
- MYRANDA CLAIM** Gold, silver, lead
Warm Springs dist. [51], sec. 8, T. 16 N., R. 20 E.
Owner-Operator: William and Glenn McVeda
915 W. Watson, Lewistown MT 59457
Status: Developing
- *NO. 4 MINE** Gold, silver, copper, lead, zinc
Warm Springs dist. [51], sec. 7, 18, T. 16 N., R. 20 E.
Operator: S & P Mining Co.
204 E. Washington, Lewistown MT 59457
Owner: T. A. Pentecost and others
204 E. Washington, Lewistown MT 59457
Status: Inactive
- REPUBLIC MINE** Silver, lead, zinc, gold,
lanthanum group
Sec. 23, T. 16 N., R. 17 E.
Owner-Operator: Mrs. C. L. Kuhnhausen
P.O. Box 278, Lewistown MT 59457
Status: Inactive
- SHEEP MOUNTAIN MINE** Gold, silver, copper,
lead
Warm Springs dist. [51], sec. 4, 5, T. 16 N., R. 20 E.
Owner-Operator: Lawrence Lenling and others
Box 74, Lewistown MT 59457
Status: Developing
- SPOTTED HORSE MINE** Gold, silver, tellurium,
lead, zinc
Warm Springs dist. [51], sec. 5, T. 16 N., R. 20 E.
Owner-Operator: Viking Exploration, Inc.,
Charles A. Eimarsen, Pres.
801 Denver Center Bldg.
1776 Lincoln St., Denver CO 80203
Status: Inactive
- *TWO LADY NO. 7** Gold, silver
Cone Butte (unorg.), sec. 17, T. 17 N., R. 21 E.
Owner-Operator: John and Dolores Rife
P.O. Box 193, Roy MT 59471
Status: Developing
- **WAR EAGLE MINE** Silver, lead
Warm Springs dist. [51], sec. 7, T. 16 N., R. 20 E.
Operator: Harry Abbott
AM Mining and Development Co.
Box 413, Lewistown MT 59457
Owner: Cougar
Calgary, Alberta, Canada
Employees: 3
Status: Developing

Flathead County: Kalispell 59901

- *HERRIGG CREEK MINING CO. INC. GROUP**
Gold, silver, copper, bismuth
Sec. 14, T. 28 N., R. 25 W.
Owner-Operator: L. O. and Jack Bauska
Box 511, Kalispell MT 59901
Status: Developing
- HOG HEAVEN PROJECT** Silver, gold
Hog Heaven dist. [52], sec. 17, T. 25 N., R. 23 W.
Owner-Operator: CoCa Mines, Inc.,
Leigh Freeman, Project Mgr.
P.O. Box 131, Polson MT 59868
Employees: 12
Status: Developing

Granite County: Philipsburg 59858

BLACK PINE MINE Silver, gold
Black Pine dist. [59], sec. 7, 8, 16, 17 and
18, T. 8 N., R. 14 W.
Operator: Black Pine Mining Co.
Dan McLaughlin, Mgr.
Box 724, Philipsburg MT 59858
Owner: Inspiration Consolidated Copper Co.
55 Madison, Morristown NJ 07960
Employees: 100
Status: Producing, developing

BLUE BIRD MINE Gold, silver, copper
Rose Mountain dist. [68], sec. 26, T. 8 N., R. 12 W.
Operator: David M. Harris
Box 296, Philipsburg MT 59858
Owner: Ben Walkup
Philipsburg MT 59858
Employees: 2
Status: Developing

****CADGIE-TAYLOR MINE** Silver
Flint Creek dist. [65], sec. 19, T. 7 N., R. 13 W.
Owner-Operator: Mrs. Joe Metesh
Philipsburg MT 59858
Status: Inactive

CONTACT MINING CUSTOM MILL Sulfide ores
Flint Creek dist. [65], sec. 36, T. 7 N., R. 14 W.
Operator: Contact Mining Co.
724 S. Western Ave., Butte MT 59701
Owner: Contact Mining Co.
P.O. Box 337, Philipsburg MT 59858
Mill capacity: 1,000 t/d
Employees: 12
Status: Producing

GLITTERING HILL MINE Gold
Red Lion dist. [66],
sec. 22,, 23, 26, 27, T. 6 N., R. 12 W.
Operator: Joe Balkovatz
1016 W. Quartz, Anaconda MT 59711
Owner: Mary L. McCabe
2010 Haggin Ave., Anaconda MT 59711
Status: Produced, developing

****GOLDEN JUBILEE MINE** Gold, silver
Red Lion dist. [66], sec. 14, T. 6 N., R. 13 W.
Owner-Operator: Golden Jubilee Corp.,
D. C. Nielsen, Pres.
Box 322, Philipsburg MT 59858
Mill capacity: 200 t/w
Status: Produced, developing

Jefferson County: Boulder 59632

****BASIN JIB GROUP** Gold, silver, copper, lead,
zinc
Cataract dist. [73], sec. 18, T. 6 N., R. 5 W.
Operator: Gladstone Crushing & Construction, Inc.
1825 Gladstone, Butte MT 59701
Owner: Silvinita, Inc., Butte MT 59701
Employees: 12
Mill capacity: 150 t/d
Status: Producing, developing

HOPE GROUP Silver, siliceous ore
Flint Creek dist. [65], sec. 19, T. 7 N., R. 13 W.
Operator: Contact Mining Co.
724 S. Western Ave., Butte MT 59701
Owner: Contact Mining Co.
P.O. Box 337, Philipsburg MT 59858
Employees: 2
Status: Developing

LYCOMING MINE Gold, silver, lead
Philipsburg dist. [65], sec. 17, T. 7 N., R. 13 W.
Owner-Operator: Mrs. Joe Metesh
Philipsburg MT 59858
Status: Inactive

****NEW SEATTLE (DOLLY QUARTZ) MINE**
Silver, gold
Maxville dist. [63], sec. 9, T. 8 N., R. 13 W.
Owner-Operator: James E. Maehl and Grace Maehl
Maxville Star Route, Philipsburg MT 59858
Status: Inactive

***NUT PINE MINE** Gold, silver, tungsten
Gold Bar Basin-Twin Peaks-Red Lion dist. [66],
sec. 7, T. 6 N., R. 12 W.
Owner-Operator: F. N. Earll
2044 S. Gaylord Ave., Butte MT 59701
Status: Developing

PARNELL GROUP MINE Silver, copper, lead
Flint Creek dist. [65], sec. 7, 8, T. 7 N., R. 13 W.
Owner-Operator: Ethel C. Heaney
Box 130, Philipsburg MT 59858
Status: Developing

****QUEEN MINE** Silver, lead
South Boulder dist. [69],
SW¼ sec. 33, T. 8 N., R. 12 W.
Owner-Operator: Mrs. K. W. MacPherson
St. Helena CA 94574
Status: Inactive

SILVER KING MINE Gold, silver
Rock Creek dist. [67], sec. 4, 5, T. 6 N., R. 15 W.
Operator: Aurum, Inc.
10th Floor, East Tower, 5080 Spectrum Dr.,
Dallas TX 75248
Owner: Charles Byam, Frenett Byam
P.O. Box 640, Philipsburg MT 59858
Status: Developing

****BIG MARY MINE** Gold, silver
Sec. 10, T. 7 N., R. 2 W.
Owner-Operator: Horace Wilson
Box 4012, Helena MT 59601
Status: Developing

BOULDER CHIEF MINE Silver, lead
Cataract (Basin) dist. [73], sec. 27, T. 7 N., R. 5 W.
Owner-Operator: Mrs. Joe Metesh
Philipsburg MT 59858
Status: Inactive

Jefferson County (continued)

- COLUMBIA MINE** Gold, silver
Little Pipestone dist. [82], sec. 21, T. 2 N., R. 5 W.
Owner-Operator: Joe Kountz Estate and others
Box 233, Whitehall MT 59759
Status: Inactive
- COMET GROUP** Silver, gold, lead, zinc
Comet dist. [73], sec. 36, T. 7 N., R. 5 W.
Operator: Billern Corp.
Basin MT 59631
Owner: Martyn Salusso, Lloyd Wilhelm
1825 Gladstone, Butte MT 59701
Mill capacity: 150 t/d
Status: Developing
- *CRYSTAL MINE** Gold, silver, copper, lead, zinc
Cataract (Basin) dist. [73], sec. 20, T. 7 N., R. 5 W.
Owner-Operator: Delbert and John Bullock
Basin MT 59631
Status: Producing, developing
- **EAST RIDGE GROUP** Gold, copper, lead, zinc
Nez Perce dist. [86], sec. 12, T. 3 N., R. 7 W.
Owner-Operator: Leber Mining Co.
36 S. Market St., Elizabethtown PA 17022
Status: Developing
- FLORENCE GROUP** Gold, silver
Sec. 18, T. 2 N., R. 3 W.
Owner-Operator: Lester Lindquist
P.O. Box 373, Whitehall MT 59759
Employees: 2
Status: Produced, producing, developing
- **GOLDEN CURRY (SOURDOUGH) MINE**
Gold, silver, copper, lead, zinc
Elkhorn dist. [79], sec. 10, T. 6 N., R. 3 W.
Owner-Operator: John Rothfuss
2100 Oregon Ave., Butte MT 59701
Employees: 2
Status: Developing
- **GOLDEN SUNLIGHT GROUP** Gold, silver
Cardwell dist. [88],
sec. 17, 18, 19, 20, T. 2 N., R. 3 W.
Owner-Operator: Golden Sunlight Mines, Inc.
P.O. Box 678, Whitehall MT 59759
Employees: 120
Mill capacity: 5,000 t/d
Status: Producing
- **HOPE AND BULLION GROUP** Gold, silver,
copper, lead, zinc
Comet dist. [73], sec. 6, T. 6 N., R. 7 W.;
sec. 31, T. 7 N., R. 5 W.
Operator: Romero Co.
Boulder MT 59632
Owner: Mrs. A. K. Romero
19320 Hinsdale, Torrance CA 90503
Status: Developing
- HUMBOLT MINE** Gold, silver
Homestake dist. [81], sec. 9, T. 3 N., R. 6 W.
Owner-Operator: Stanley L. Boyce
Box 4222, Butte MT 59702
Status: Developing
- INFINITE GROUP** Gold, silver
Lowland dist. [83], sec. 11, 12, 13, T. 6 N., R. 7 W.
Owner-Operator: Harvey Allen and George Kralicek
Route 1, Box 85, Sheridan MT 59749
Status: Developing
- **KADY GULCH GROUP** Gold, silver, copper,
lead, zinc
Colorado dist. [78], sec. 1, T. 7 N., R. 5 W.;
sec. 6, T. 7 N., R. 4 W.
Owner-Operator: Leber Mining Co.
36 S. Market St., Elizabethtown PA 17022
Employees: 6
Status: Developing
- **LUCKY HIT GROUP** Gold, silver, lead
Sec. 19, T. 2 N., R. 3 W.
Operator: Ralph Huckaba
Box 336, Whitehall MT 59759
Owner: Ralph Huckaba and Charlie Weber
Route 2, Box 2228, Whitehall MT 59759
Mill capacity: 60 t/d
Employees: 3
Status: Produced, producing, developing
- MAGDELENA GROUP** Gold, silver
Basin dist. [73], sec. 31, T. 8 N., R. 5 W.;
sec. 36, T. 7 N., R. 6 W.
Owner-Operator: Robert L. Lynn
690 S. Hilltop Rd., Columbia Falls MT 59912
Status: Developing
- MEADOW MINE** Silver, lead
Clancy dist. [77], sec. 34, T. 9 N., R. 3 W.
Operator: Albert Haab, Mascot Mines
Clancy MT 59634
Owner: David H. Dennis
Clancy MT 59634
Mill capacity: 75 t/d
Status: Inactive
- MONTANA TUNNEL GROUP** Gold, silver, lead,
zinc
Wickes dist. [78], sec. 8, T. 7 N., R. 4 W.
Operator: USMX of Montana, Inc.
406 Fuller Ave., Helena MT 59601
Owner: AMSELCO Exploration, Inc.
90 W. Grove St., Suite 100, Reno NV 89509
Status: Developing
- MOUNTAIN QUEEN MINE** Copper, silver,
lead, uranium
Big Foot dist. [76], sec. 26, T. 4 N., R. 5 W.
Owner-Operator: William Mulcahy
Box 631, Butte MT 59701
Status: Developing

Jefferson County (continued)

*NEW BALD EAGLE MINE Gold, silver, copper
Big Foot dist. [76], sec. 16, T. 4 N., R. 5 W.
Owner-Operator: Ronald L. Nordwick
846 W. Quartz, Butte MT 59701
Status: Developing

NORTH SUNLIGHT GROUP Gold, silver, copper,
lead, zinc
Cardwell dist. [88], sec. 18, 19, T. 2 N., R. 3 W.
Operator: Golden Sunlight Mines, Inc.
D. E. Jenkins, Admin. Supt.
P.O. Box 678, Whitehall MT 59759
Owner: Wegener Mining Company
Box 144, Whitehall MT 59759
Status: Developing

**PAYDAY GROUP Gold, silver
Cardwell dist. [88], sec. 18, T. 2 N., R. 3 W.
Owner-Operator: Ralph Huckaba
Box 336, Whitehall MT 59759
Employees: 1
Mill capacity: 35 t/d
Status: Developing

*PIERMONT NO. 1 EAST MINE Lead, gold, silver,
copper, zinc
Cataract dist. [73], sec. 8, T. 7 N., R. 5 W.
Owner-Operator: Raymond L. Beaver
829 N. Lamborn St., Helena MT 59601
Status: Developing

*RUMLEY MINE Lead, gold, silver
Comet dist. [73], sec. 36, T. 7 N., R. 5 W.
Owner-Operator: Harold J. Giulio
305 S. Cleveland, Boulder MT 59632
Status: Produced, producing, developing

Judith Basin County: Stanford 59479

**CLENDENNIN GROUP Lead, silver, zinc
Barker dist. [90], sec. 5, 6, T. 15 N., R. 9 E.
Operator: Croff and Montague
Box 69, Monarch MT 59463
Owner: G. A. Croff and others
Box 69, Monarch MT 59463
Employees: 2
Status: Produced, developing

LIBERTY MINE Silver, lead, zinc
Barker dist. [90], sec. 6, 7, 18, T. 15 N., R. 9 E.
Operator: Amax Exploration, Inc.
Giles Walker, District Geologist
Box 5358, Helena MT 59604
Owner: Mrs. G. V. R. McBride and others
Box 905, Monarch MT 59643
Status: Developing

STREAK OF LUCK, SUNNYSIDE GROUP
Gold, silver
Cardwell dist. [88], sec. 18, T. 2 N., R. 3 W.
Owner-Operator: Lester Lindquist
P.O. Box 373, Whitehall MT 59759
Mill capacity: 3 t/d
Employees: 2
Status: Produced, producing, developing

SUMMIT MINE Gold, silver, copper, lead, zinc
Big Foot dist. [76], sec. 16, T. 4 N., R. 5 W.
Owner-Operator: Ronald Nordwick, Vernon Smith
William Tudor
846 W. Quartz, Butte MT 59701
Status: Developing

TOURMALINE QUEEN MINE Gold
Elkhorn dist. [79], sec. 22, T. 6 N., R. 3 W.
Operator: Falcon Explorations
1900 Powell St., Emerville CA 94608
Owner: Wade V. Lewis Estate
Boulder MT 59632
Status: Inactive

WILD CAT and LINE LODGE Gold, silver
SE¼ sec. 33, T. 7 N., R. 2 W.
Owner-Operator: Tom Coster
117 - 11th St., Black Eagle MT 59414
Status: Developing

**MONTGOMERY and SAN MIGUEL MINE
Gold, silver, copper, lead, zinc
Barker dist. [90], sec. 31, T. 15 N., R. 9 E.
Owner-Operator: Mrs. G. V. R. McBride
Box 905, Monarch MT 59463
Status: Developing

**SETTER MINE Silver, copper, lead
Running Wolf dist. [91], sec. 21, T. 14 N., R. 10 E.
Operator: James A. Casper
Box 322, Stanford MT 59479
Owner: Setter Mining Co.
Box 322, Stanford MT 59479
Status: Inactive

Lewis and Clark County: Helena 59601

FRANKLIN MINE Gold, silver
Scratchgravel Hills (Grass Valley) dist. [104],
sec. 11, T. 10 N., R. 4 W.
Operator: John J. Womack
200 S. Stabern, Helena MT 59601
Owner: Thomas Cruse Mining & Development Co.
c/o Fergus Fay, 446 W. Lawrence,
Helena MT 59601
Status: Inactive

GENERAL MINE Gold, silver, lead, zinc, copper
Rimini dist. [103], sec. 8, T. 8 N., R. 5 W.
Owner-Operator: Sparrow Resources, Ltd.,
Box 6566, Stn. D., Calgary, Alberta, Canada
Status: Inactive

****GRAY ROCK MINE** Gold, copper, zinc
Owyhee dist. [98], sec. 11, T. 9 N., R. 4 W.
Owner-Operator: Carl A. Tintinger
Box 658, Helena MT 59624
Status: Developing

****HUMDINGER GROUP** Gold, copper,
molybdenum
Sec. 35, T. 13 N., R. 9 W.
Owner-Operator: Guy E. Maycumber
2217 Hwy. 2E, Kalispell MT 59901
Status: Developing

INDEPENDENT MINE Gold, copper, zinc, uranium
Owyhee dist. [98], sec. 11, T. 9 N., R. 4 W.
Owner-Operator: Carl A. Tintinger
Box 658, Helena MT 59624
Status: Produced, developing

JOLLY ROGER MINE Silver, lead
Rimini dist. [103], sec. 16, T. 8 N., R. 5 W.
Owner-Operator: Sparrow Resources, Ltd.
P.O. Box 6566, Stn. D, Calgary, Alberta, Canada
Status: Inactive

LUCKY LINDA MINE Silver, lead
Rimini dist. [103], sec. 16, T. 8 N., R. 5 W.
Owner-Operator: Sparrow Resources, Ltd.
P.O. Box 6566, Stn. D, Calgary, Alberta, Canada
Status: Inactive

Lincoln County: Libby 59923

CABLEWAY GROUP Silver, lead, gold
Sec. 33, T. 28 N., R. 31 W.
Owner-Operator: Donald C. and Marie O. Cripe
Route 1, Box 929-B, Libby MT 59923
Status: Developing

****PRINCESS ETHNE** Gold, silver
West Fisher dist. sec. 26, T. 27 N., R. 31 W.
Owner-Operator: Rockie Nethercott
Route 1, Box 164, Polson MT 59860
Mill capacity: 1 t/d
Employees: 1
Status: Developing

MARYSVILLE PROJECT Gold, silver
Marysville dist. [100], sec. 33, 34, T. 12 N., R. 5 W.;
sec. 36, T. 12 N., R. 6 W.
Owner-Operator: Goldsil Mining and Milling, Inc.,
Peter Towndrow, Proj. Mgr.
P.O. Box 5626, Helena MT 59604
Status: Developing

MONTE CHRISTO MINE Gold, silver, copper, lead
Rimini (Vaughn) dist. [103], sec. 17, T. 8 N., R. 5 W.
Owner-Operator: Hans Mo
1500 Madison Ave., Helena MT 59601
Status: Developing

NELLIE GRANT MINE Gold, silver, lead, zinc
Sec. 14, T. 8 N., R. 5 W.
Owner-Operator: Sparrow Resources, Ltd.
P.O. Box 6566, Stn. D, Calgary, Alberta, Canada
Mill capacity: 150 t/d
Status: Inactive

NEW VALLEY FORGE MINE Silver, lead
Rimini dist. [103], sec. 33, T. 9 N., R. 5 W.
Owner-Operator: Herb Ballou
3440 Rimini Rd., Helena MT 59601
Mill capacity: 10 t/d
Employees: 1
Status: Developing

PEGGY ANN MINE Gold, silver
Sec. 24, T. 13 N., R. 7 W.
Operator: Peggy Ann Mines, Inc.
C. E. Mannix, President
Box 494, Canyon Creek MT 59633
Owner: C. E. Mannix
12520 - 19 N.E., Seattle WA 98125
Employees: 2
Status: Inactive

****SKY MINE** Gold, silver, copper, zinc
Owyhee dist. [98], sec. 2, 11, T. 9 N., R. 4 W.
Owner-Operator: Carl A. Tintinger
1857 Oro Fino Gulch, Helena MT 59601
Status: Produced, producing, developing

****TWILIGHT GROUP** Gold, silver, copper, barite
Helena dist. [98], sec. 2, T. 9 N., R. 2 W.
Owner-Operator: Charles Hansen
Box 309, Big Sandy MT 59520
Status: Developing

TROY UNIT Silver, copper
Sec. 12, 13, 14, 23, 24, 25, 26, 35, 36,
T. 29 N., R. 34 W.
Operator: Troy Unit, ASARCO, Inc.
Jack Bingham, Project Manager
Box 868, Troy MT 59935
Owner: ASARCO, Inc.
120 Broadway, New York NY 10271
Mill capacity: 8,500 t/d
Employees: 350
Status: Producing

Madison County: Virginia City 59755

- ALAMEDA-WAKOOSTA MINE** Gold, silver
Virginia City dist. [129], sec. 27, 28, T. 6 S., R. 3 W.
Owner-Operator: Alameda Mines, Inc.
P.O. Box 53, Virginia City MT 59755
Employees: 4
Status: Developing
- ***ATLANTIC PACIFIC MINE** Gold, silver, copper
Mineral Hill dist. [119], sec. 20, T. 2 S., R. 3 W.
Owner-Operator: Fred Box Estate, Oleta C. Box
Pony MT 59747
Employees: 3
Status: Inactive
- B & H (PETE & JOE) GROUP** Gold, silver,
copper, lead
Tidal Wave dist. [128], sec. 7, T. 3 S., R. 4 W.
Operator: Hughes Mining Co., Inc.
Drawer J, Twin Bridges MT 59754
Owner: Gold Ranch Mining Corp.
Twin Bridges MT 59754
Employees: 4
Status: Developing
- BADGER NO. 1 and NO. 2 MINES** Gold, silver
Norris (Lower Hot Springs) dist. [17],
sec. 19, 20, T. 3 S., R. 1 E.
Owner-Operator: Earl Clopton
P.O. Box 66, Norris MT 59745
Mill capacity: 4 t/d
Status: Developing
- ***BAYARD CLAIM** Copper, silver
Sec. 14, T. 7 S., R. 5 W.
Owner-Operator: Walter L. Maguire
17 Wall St., Madison CT 06443
Status: Exploration
- BESSIE and GOLDEN WAVE MINE** Gold,
silver, copper, tungsten
Mineral Hill dist. [119], sec. 14, 15, T. 2 S., R. 2 W.
Owner-Operator: W. G. Forbes
Pony MT 59747
Mill capacity: 10 t/d
Employees: 3
Status: Inactive
- ****BUCKEYE MINES** Gold, silver, lead, zinc
Brandon dist. [125],
sec. 17, 18, 19, 20, T. 4 S., R. 4 W.
Operator: Buckeye Mines, Inc.
412 Mill St., Sheridan MT 59749
Owner: John T. Potts Estate, c/o First Security Bank
of Utah, Trustee, Salt Lake City UT
Mill capacity: 75 t/d
Employees: 2
Status: Producing, developing
- DIVIDEND LODE MINE** Gold, silver
Mineral Hill dist. [119], sec. 15, T. 2 S., R. 3 W.
Owner-Operator: Richard F. Horton and
Mildred M. Horton
1304 N. 195th, Seattle WA 98133
Status: Inactive
- DON-A-VERA GROUP** Gold, silver
Fairweather dist. [129],
sec. 25, 26, 35, T. 6 S., R. 3 W.
Owner-Operator: Western Division, Tabor
Mines and Metals Corp., c/o A. J. Katches
Box 252, Virginia City MT 59755
Status: Developing
- EAGLE BLACK GROUP** Gold, silver, copper
Highland dist. [129],
sec. 2, 3, 10, 11, T. 7 S., R. 3 W.
Owner-Operator: Western Division, Tabor
Mines and Metals Corp., c/o A. J. Katches
Box 252, Virginia City MT 59755
Status: Developing
- EXCHEQUER MINE** Gold, silver
Sec. 25, T. 2 S., R. 1 E.
Owner: George C. Dringle
Belgrade MT 59714
Status: Inactive
- FRIDA MARIE GROUP** Gold
Silver Star dist. [126], sec. 10, 11, T. 2 S., R. 6 W.
Operator: Northern Mining Co., Inc.
P.O. Box 583, Sheridan MT 59749
Owner: Robert Decker, Sr., Frida Decker,
Russ Herman
P.O. Box 583, Sheridan MT 59749
Employees: 2
Status: Producing, developing
- ***GLENAM CLAIM** Gold, silver
Mill Creek dist. [125], sec. 24, T. 4 S., R. 4 W.
Operator: Richard Anderson
P.O. Box 154, Sheridan MT 59749
Owner: Goldstream Corporation
2163 South 2700 West, West Valley City UT 84119
Employees: 3
Status: Developing
- ****GREEN CAMPBELL MINE** Gold
Silver Star dist. [126], sec. 3, T. 2 S., R. 6 W.
Owner-Operator: United Investors Corporation
L. S. Leatham, President
546 DeSoto St., Salt Lake City UT 84103
Mill capacity: 100 t/d
Status: Developing
- ****GRUBSTAKE MINE** Gold, silver
Lower Hot Springs dist. [117],
sec. 19, 24, 30, T. 3 S., R. 1 E.
Operator: Sam Phifer, Mgr.
P.O. Box 2812, Norris MT 59745
Owner: Resources America, Inc.
P.O. Box 1843, Winter Park FL 32790
Mill capacity: 100 t/d
Employees: 14
Status: Developing

Madison County (continued)

- **HIGH HOPE MINE** Gold, silver
Mill Creek dist. [125], sec. 9, T. 4 S., R. 3 W.
Operator: Raymond D. Shafer
Sheridan MT 59749
Owner: Raymond Shafer and Dorothy Buck
Sheridan MT 59749
Status: Developing
- JACK RABBIT MINE** Gold, silver, lead
Rochester dist. [122], sec. 21, T. 2 S., R. 8 W.
Owner-Operator: Jim McLaughlin
Route 1, Box 22, Sheridan MT 59749
Status: Developing
- **KENNETT-BERTHA MINE** Gold, silver, lead,
zinc, manganese
Virginia City (Alder Gulch) dist. [129],
sec. 5, T. 6 S., R. 2 W.
Operator: Hughes Mining Co., Inc.
Rick Hughes, Drawer J, Twin Bridges MT 59754
Owner: Kennett Gold Corp.
Twin Bridges MT 59754
Status: Developing
- KEYHOLD GROUP** Gold, silver
Highland dist. [129], sec. 1, 12, T. 7 S., R. 3 W.
Owner-Operator: Western Division, Tabor Mines
and Metals Corp., c/o A. J. Katches
Box 252, Virginia City MT 59755
Status: Developing
- MADDEN GROUP** Gold
Virginia City (Alder Gulch) dist. [129],
sec. 12, T. 7 S., R. 3 W.
Owner-Operator: Lively Mining Co.
Box 96, Melrose MT 59743
Status: Developing
- **MAMMOTH MINE** Gold
Mammoth dist. [127], sec. 7, 18, T. 2 S., R. 3 W.
Operator: South Boulder Mining Corp.
R. Von Kleist, President
Box 696, Whitehall MT 59759
Owner: Ed Workman
Box 4, Cardwell MT 59721
Employees: 2
Status: Developing
- MORNING STAR MINE** Silver, zinc
Lower Hot Springs dist. [117],
sec. 28, 29, T. 3 S., R. 1 E.
Owner-Operator: R. B. Farnsworth Estate
P.O. Box 788, Bozeman MT 59715
Status: Inactive
- MUELLER MINE** Gold, silver, lead
Sec. 3, 4, T. 4 S., R. 8 W.
Owner-Operator: Ed Mueller
1013 Utah Ave., Butte MT 59701
Status: Inactive
- NELLIE BLY GROUP** Gold
Highland dist. [129], sec. 1, 12, T. 7 S., R. 3 W.
Owner-Operator: Western Division,
Tabor Mines and Metals Corp., c/o A. J. Katches
Box 252, Virginia City MT 59755
Status: Developing
- NEW WINNETKA TRUST GROUP** Gold, silver
Highland dist. [129], sec. 1, 2, T. 7 S., R. 3 W.
Owner-Operator: A. J. Katches
Box 275, Virginia City MT 59755
Status: Developing
- PEARL GROUP** Gold, silver
Alder Gulch dist. [129], sec. 1, 2, T. 7 S., R. 3 W.
Owner-Operator: Western Division,
Tabor Mines and Metals Corp., c/o A. J. Katches
Box 252, Virginia City MT 59755
Status: Developing
- RED PINE MINE** Gold, silver
Sheridan dist. [125], sec. 34, T. 3 S., R. 4 W.;
sec. 3, T. 4 S., R. 4 W.
Owner-Operator: Shermont Mining Co.
John Magnus, Pres., Box 254, Sheridan MT 59749
Mill capacity: 50 t/d
Status: Developing, producing
- RIDGEWAY MINE** Gold
Operator: Ridgeway Mining Co.
Wally Lindsey, President
1515 Smith Lake Rd., Kalispell MT 59901
Status: Inactive
- RY & K MINE** Gold, silver
Norwegian Creek dist. [118], sec. 2, T. 3 S., R. 2 W.
Owner-Operator: Howard Kruse
Box 86, Clancy MT 59634
Status: Inactive
- ST. JOHN GROUP** Gold, silver
Highland dist. [129], sec. 1, T. 7 S., R. 2 W.
Owner-Operator: Western Division,
Tabor Mines and Metals Corp., c/o A. J. Katches
Box 252, Virginia City MT 59755
Status: Developing
- SCALDED CAT MINE** Gold, silver
Mineral Hill dist. [119], sec. 14, T. 2 S., R. 3 W.
Operator: Jean Clary
5375 S. Sandhill Rd., Las Vegas NV 89120
Owner: Jean Clary and Jack Clary
5375 S. Sandhill Rd., Las Vegas NV 89120
Status: Developing
- SHORT SHIFT MINE** Gold
Rabbit dist. [122], SE $\frac{1}{4}$ sec. 6, T. 2 S., R. 7 W.
Owner-Operator: John A. Layton Estate
c/o D. J. Thiessen, 216 - 13 W., Billings MT 59102
Mill capacity: 20 t/d
Status: Inactive

Madison County (continued)**SILVER CROWN MINE** Gold, silver, lead

Unorg. dist. sec. 5, T. 2 S., T. 2 E.

Operator: Clinton A. Cain

Box 2864, Norris MT 59745

Owner: Silver Crown Mines, Inc.,

Clinton Cain, Pres., Norris MT 59745

Status: Developing

SPUHLER GROUP Gold, silver, lead

Sec. 20, T. 3 S., R. 4 W.

Owner-Operator: Lee Mining Corp.

P.O. Box 467, Sheridan MT 59749

Status: Inactive

STRAWN MINE Gold, silver, antimony

Unorg., sec. 18, T. 2 S., R. 4 W.

Operator: Sam Bear Mining Co.

Twin Bridges MT 59754

Owner: Dale Bros.

Box 302, Twin Bridges MT 59754

Employees: 2

Status: Produced, developing

UNCLE SAM MINE Gold, silver

Mill Creek dist. [125], NE¼ sec. 17, T. 4 S., R. 3 W.

Owner-Operator: Steve Mortensen and

Audrey Mortensen

Sheridan MT 59749

Employees: 3

Mill capacity: 40 t/d

Status: Producing, developing

U. S. GRANT MINE Gold, silver

Virginia City dist. [129], sec. 26, T. 6 S., R. 3 W.

Operator: R & D Minerals Corp.

Virginia City MT 59755

Owner: Ed Scheitlin Estate

Virginia City MT 59755

Mill capacity: 100 t/d

Status: Inactive

VALLEY VIEW MINES Gold, silver

Williams Gulch dist. [129], sec. 29, T. 6 S., R. 3 W.

Operator: Jim Thomas

Box 52, Virginia City MT 59755

Owner: St. Lawrence Consolidated Mines, Inc.

Box 52, Virginia City MT 59755

Status: Developing

WATSECA MINE Gold, silver

Rabbit dist. [122], sec. 31, 32, T. 2 S., R. 3 W.

Owner-Operator: Rocky Mountain Minerals, Inc.

W. Ray Hill, Pres., P.O. Box 489, Butte MT 59701

Mill capacity: 200 t/d

Employees: 8

Status: Produced, producing

Meagher County: White Sulphur Springs 59645**BIGLER GROUP** Gold

Thompson Creek dist. [131], sec. 28, T. 9 N., R. 4 E.

Operator: G & M Mining

c/o Richard K. George and Kenneth McGuire

P.O. Box 510, White Sulphur Springs MT 59645

Owner: A. J. Burchak and Travis Belue

213 Collins, Lavina MT 59046; and

1242 Avenue F, Billings MT 59102

Employees: 6

Status: Produced, producing, developing

COTTONTAIL MINE Copper

Castle Mountains dist. [132],

sec. 22, T. 10 N., R. 10 E.

Owner-Operator: Richard K. George and others

c/o Checkerboard, Martinsdale MT 59053

Status: Inactive

***LOGGERS DREAM** Gold, silver

Beaver Creek dist. [131], sec. 32, T. 9 N., R. 4 E.

Operator: Gypsy Creek Mining Co.

Lloyd Craig, President

White Sulphur Springs MT 59645

Owner: Lloyd T. Craig

Box 778, White Sulphur Springs MT 59645

Status: Inactive

LUCKY DOLLAR MINE Lead, silver

Castle Mountains dist. [132], sec. 12, T. 8 N., R. 8 E.

Owner-Operator: Carl Berg

Box 126, Martinsdale MT 59053

Status: Developing

***McDANIEL COPPER GROUP** Silver, copper, lead, barite

Unorg. dist. sec. 17, 18, T. 13 N., R. 7 E.

Owner-Operator: Duane McDaniel

Box 33, Neihart MT 59465

Status: Developing

SNOW BANK MINE Gold

Beaver Creek dist. [131], sec. 28, T. 9 N., R. 4 E.

Operator: G & M Mining

Richard K. George and Kenneth McGuire

P.O. Box 510, White Sulphur Springs MT 59645

Owner: Steve and Mary Helburn

1301 Loreauville Rd., New Iberia LA 70560

Employees: 2

Status: Produced, producing, developing

Mineral County: Superior 59872

AMAZON-DIXIE MINE Copper, lead, zinc
 Saltese dist. [136], sec. 4, 5, T. 19 N., R. 32 W.
 Owner-Operator: Amazon-Dixie Mining Co.
 Box 469, Scott Bldg., Wallace ID 83873
 Employees: 3
 Status: Developing

BONANZA GROUP Gold, silver, copper, lead,
 barite
 Cedar Creek dist. [135], sec. 29, T. 15 N., R. 26 W.
 Owner-Operator: G. M. Gildersleeve
 Box 568, Superior MT 59872
 Status: Developing

*CROWN SILVER GROUP Lead, zinc, copper,
 silver
 Sec. 19, 20, T. 20 N., R. 31 W.
 Operator: Frank A. Morbeck
 Box 1127, Wallace ID 83873
 Owner: Crown Silver Mining Co.
 504 Bank St., Box 1127, Wallace ID 83873
 Employees: 4
 Status: Developing

EAST COEUR D'ALENE SILVER MINE Silver,
 copper, lead, zinc
 Keystone dist. [138], sec. 17, T. 18 N., R. 26, 27 W.
 Owner-Operator: East Coeur d'Alene Silver
 Mines, Inc.
 Scott Bldg., Wallace ID 83873
 Employees: 3
 Status: Developing

LITTLE ANACONDA GROUP Silver, lead, zinc
 Sec. 35, T. 18 N., R. 26 W.
 Operator: Sunrise Silver Mines
 c/o Hugh G. King, Frenchtown MT 59834
 Owner: Hugh G. King and Lucinda Cone
 Box 8717, Missoula MT 59807
 Status: Developing

Missoula County: Missoula 59801

CHARCOAL GROUP Lead, zinc, silver, copper
 Coloma dist. [143], sec. 11, T. 12 N., R. 16 W.
 Owner-Operator: Esther Keller
 547 S. 5th St. W., Missoula MT 59801
 Status: Inactive

**NINE MILE MINE Gold
 Nine Mile Creek dist. [146],
 sec. 21, 22, 27, 28, T. 17 N., R. 24 W.
 Operator: Nine Mile Mines, Inc.
 Box 100, Huson MT 59846
 Owner: Nine Mile Mines, Inc.
 Box 1329, Park City UT 84060
 Mill capacity: 150 t/d
 Employees: 6
 Status: Developing

NANCY LEE MINE Silver, lead, zinc
 Keystone dist. [138], sec. 31, 32, T. 18 N., R. 26 W.
 Operator: Western Silver Development Co.
 Jay Elander, Pres.,
 4300 Chime Lane, Wayzata MN 55391
 Owner: Nancy Lee Mines, Inc.
 Box 67, Kellogg ID 83837
 Mill capacity: 150 t/d
 Status: Inactive

RIVERS CREEK MINE Silver, lead
 Saltese dist. [136], sec. 5, T. 18 N., R. 30 W.
 Owner-Operator: Charles L. Kannegaard and
 Ray and Charles Minnick
 Box 386, Medical Lake WA 99022
 Status: Developing

SILVER CABLE GROUP Lead, zinc, copper, silver
 Sec. 24, T. 20 N., R. 31 W.
 Operator: Frank A. Morbeck
 Box 1127, Wallace ID 83873
 Owner: Silver Cable Mining Co.
 504 Bank St., Box 1127, Wallace ID 83873
 Employees: 5
 Status: Developing

SILVER PEAK GROUP Lead, zinc, copper, silver
 Sec. 10, T. 20 N., R. 32 W.
 Operator: Frank A. Morbeck
 Box 1127, Wallace ID 83873
 Owner: Silver Peak Mining Co.
 504 Bank St., Box 1127, Wallace ID 83873
 Employees: 3
 Status: Developing

NUGGET MINE Lead, zinc, copper, silver
 Nine Mile Creek dist. [146],
 sec. 13, T. 16 N., R. 23 W.
 Operator: Frank A. Morbeck
 Box 684, Wallace ID 83873
 Owner: Nugget Mining Co.
 504 1/2 Bank St., Box 1127, Wallace ID 83873
 Employees: 3
 Status: Developing

SILVER BELL GROUP Copper, silver, gold
 Clinton dist. [142], sec. 17, T. 12 N., R. 16 W.
 Operator: Silver Bell, Inc.
 965 - 8th St. W. Riverside, Missoula MT 59801
 Owner: Del Fontaine, Les Bonnet, Del Holter,
 Richard Souders
 965 - 8th St. W. Riverside, Missoula MT 59801
 Status: Developing

Missoula County (continued)

WALDBILLIG MINE Copper, silver, gold
 Sec. 1, 2, T. 11 N., R. 19 W.
 Owner-Operator: Joe and O. R. Waldbillig
 Route 5, Miller Creek, Missoula MT 59801
 Status: Developing

WALLACE CREEK CUSTOM MILL Gold, silver,
 copper, lead
 Wallace Creek dist. [146], sec. 24, T. 12 N., R. 17 W.
 Operator: Wallace Creek Milling Co.,
 Harold Ask, Supv.
 23001 Wallace Creek Rd., Clinton MT 59825
 Owner: Wallace Creek Milling Co., 820 Denver Ctr.
 1776 Lincoln St., Denver CO 80203
 Mill capacity: 50-100 t/d
 Status: Inactive

**WARD LODGE MINE Gold, silver, copper, lead,
 zinc
 Sec. 22, T. 11 N., R. 22 W.
 Owner-Operator: Ward Development Co.
 (Fred Ward), Hwy 93 and South Avenue
 Missoula MT 59801
 Status: Inactive

Park County: Livingston 59047

ACME GROUP Silver, lead
 New World dist. [154], sec. 34, T. 8 S., R. 14 E.
 Owner-Operator: Margaret Reeb
 Box 301, Livingston MT 59047
 Status: Developing

**BAR GROUP Gold, silver, lead, copper,
 molybdenum
 Emigrant dist. [151], sec. 5, 6, 7, 8, 9, 16, 17, 19,
 20, 21 and 30, T. 7 S., R. 9 E.
 Operator: J. H. Counts
 221 South C St., Livingston MT 59047
 Owner: J. H. Counts, Jr., Silase Counts and
 Steven J. Counts
 622 S. 12th St., Livingston MT 59047
 Status: Developing

BARBARA ANN MINE Gold, silver, lead, copper
 Sec. 26, 35, T. 6 S., R. 9 E.
 Owner-Operator: Barbara Prather
 Apt. 147, 3477 E. 49th Ave.,
 Vancouver, B.C., Canada V5S 1M3
 Status: Inactive

*COPPER GROUP Copper, iron, nickel
 Emigrant dist. [151], sec. 1, 2, 3, T. 7 S., R. 8 E.
 Operator: J. H. Counts
 221 South C St., Livingston MT 59047
 Owner: J. H. Counts, Jr., Silase Counts and
 Steven J. Counts
 622 S. 12th St., Livingston MT 59047
 Status: Developing

COPPER KING GROUP Platinum, palladium,
 copper, molybdenum, gold, silver
 Sec. 19, T.8 S., R. 15 E.
 Owner-Operator: Copper King Mining Co.
 Margaret Reeb, President
 Box 301, Livingston MT 59047
 Status: Developing

GOLDEN GRIZZLY GROUP Gold, silver, copper
 New World dist. [154], sec. 2, 3, 10, 11, 12, 13,
 T. 9 S., R. 14 E.
 Owner-Operator: Ranchers Exploration and Devel-
 opment Corp., J. E. Motica, Mgr. Spec. Proj.
 P. O. Box 6217, Albuquerque NM 87197
 Status: Inactive

GOOSE LAKE GROUP Platinum, palladium,
 copper, lead, tungsten, gold, silver
 New World dist. [154], sec. 19, T. 15 E., R. 8 S.
 Owner-Operator: Margaret Reeb
 Box 301, Livingston MT 59047
 Status: Developing

**HENDERSON GROUP Gold, silver, copper
 New World dist. [154], sec. 14, T. 9 S., R. 14 E.
 Owner-Operator: Margaret Reeb
 Box 301, Livingston MT 59047
 Status: Developing

*HOPE GROUP Copper, silver
 Emigrant dist. [151], sec. 36, T. 6 S., R. 8 E.
 Operator: J. H. Counts
 221 South C St., Livingston MT 59047
 Owner: J. H. Counts, Jr., Silase Counts and
 Steven J. Counts
 622 S. 12th St., Livingston MT 59047
 Status: Developing

**MAGNITITE GROUP Gold, silver, lead, iron,
 copper, nickel
 Emigrant dist. [151],
 sec. 2, 10, 11, 12, 18, 21, 24, 25, T. 7 S., R. 8 E.
 Operator: J. H. Counts
 221 South C St., Livingston MT 59047
 Owner: J. H. Counts, Jr., Silase Counts and
 Steven J. Counts
 622 S. 12th St., Livingston MT 59047
 Status: Developing

Park County (continued)

MOHAWK MINE Gold, lead, silver
 New World dist. [154], sec. 25, 36, T. 9 S., R. 14 E.
 Operator: Durden Construction and Cop
 Construction
 Box 845, Colstrip MT 59323
 Owner: Durden Construction and Cop
 Construction
 Box 39189, Billings MT 59104
 Status: Developing

NEW WORLD PROJECT Gold, copper
 New World dist. [154], sec. 11, T. 9 S., R. 14 W.
 Operator: Plexus Inc., A. H. Ditto, Pres.
 Suite 781, 175 SW Temple St.,
 Salt Lake City UT 84101
 Owner: Bear Creek Mining Co., Salt Lake City UT
 Status: Developing

Phillips County: Malta 59538

***GOLD BUG-LITTLE BEN-AUGUST GROUP**
 Gold, silver
 Little Rockies dist. [155], sec. 15, T. 25 N., R. 24 E.
 Operator: Zortman-Landusky Mining Co.
 Ed Roper, Resident Manager
 P.O. Box 313, Zortman MT 59546
 Owner: Wharf Resources, 2790 Scotia Centre,
 700-2d St. SW, Calgary, Alberta, Canada T2P2W2
 Mill capacity: 14,000 t/d
 Employees: 85
 Status: Producing

MONTANA GROUP Gold, silver
 Little Rockies dist. [155],
 sec. 10, 11, 12, 14 and 15, T. 25 N., R. 24 E.
 Operator: Meridian Land & Mining Co.
 1st Northwestern Bank Center
 Box 2521, Billings MT 59101
 Owner: Vernon Smith and Alfred Peterson
 c/o Gardee Peterson, Winifred MT 59489
 Status: Inactive

Powell County: Deer Lodge 59722

AMANDA MINE Gold, silver
 Elliston dist. [157], sec. 22, T. 8 N., T. 6 W.
 Owner-Operator: Enard Lindquist and
 James R. Dixon
 1805 Joslyn, Helena MT 59601
 Status: Developing

***BARRY DEAN MINE** Gold
 Zosell dist. [158], sec. 10, T. 7 N., R. 8 W.
 Owner-Operator: Lionel C. Taft
 920 - 65th Ave. NE, Puyallup WA 98371
 Status: Developing

****REPUBLIC MINES** Lead, silver, zinc
 New World dist. [154], sec. 36, T. 9 S., R. 14 E.
 Owner-Operator: Ralph Huckaba
 Box 336, Whitehall MT 59759
 Employees: 2
 Mill capacity: 35 t/d
 Status: Developing

***RUBY GULCH MINE** Gold, silver
 Little Rockies dist. [155], sec. 18, T. 25 N., R. 25 E.
 Operator: Zortman-Landusky Mining Co.
 Ed Roper, Resident Manager
 Box 313, Zortman MT 59546
 Owner: Gold Reserve Corp.
 503 Northtown Office Bldg., Spokane WA 99207
 Employees: 85
 Status: Producing

****ELLISTON CONSOLIDATED GROUP**
 Lead, zinc, silver, gold
 Elliston dist. [157],
 sec. 5, 8, 10, 15, 22, T. 8 N., R. 6 W.
 Owner-Operator: Elliston Consolidated Mining Co.
 c/o Dave R. Newman, Box 396, Elliston MT 59728
 Employees: 1
 Status: Developing

MONARCH MINE Gold, silver, copper
 Ontario dist. [157], sec. 30, 31, T. 8 N., R. 6 W.
 Owner-Operator: Monarch Minerals, Inc.
 D. L. Jones, Mgr., Box 33, Helena MT 59601
 Status: Inactive

Powell County (continued)

NEGROS MINE Gold, silver, lead, zinc
Nigger Hill dist. [157],
SE¼ SW¼ sec. 36, T. 9 N., R. 7 W.

Owner-Operator: James R. Dixon, Box 302, Elliston
MT 59728; Enard Lindquist, 1805 Joslyn, Helena
MT 59601

Status: Developing

NORTH POLE MINE Silver, copper, zinc, gold
Elliston dist. [157], sec. 29, T. 8 N., R. 6 W.

Operator: James R. Dixon
Box 302, Elliston MT 59728

Owner: James R. Dixon and Dorothy E. Dixon
Box 302, Elliston MT 59728

Status: Developing

Ravalli County: Hamilton 59840

***CURLEW MINE** Silver, lead
Pleasant View dist. [168], sec. 13, T. 8 N., R. 21 W.

Operator: Montana Mountain Mining, Inc.
Jack H. Whiteley, President

2109 North 1st St., Hamilton MT 59840

Owner: Holter Estate, c/o First National Bank
Helena MT 59601

Status: Inactive

****VIOLET GROUP** Molybdenum, tungsten,
silver, gold

Mineral Point dist. [167],
sec. 22, 28, 29, T. 4 S., R. 22 W.

Owner-Operator: Mary W. Motley
121 Parkside Apts., #201

121 State St., Hamilton MT 59840

Status: Inactive

Sanders County: Thompson Falls 59873

BABE #1 (old Sid claim) Copper
Trout Creek dist. [171], sec. 24, T. 24 N., R. 32 W.

Owner-Operator: Sidney A. deBarathy
2900 Sherman Ave., Butte MT 59701

Status: Developing

BAY CHIEF MINE Lead, silver, copper
Sec. 14, 23, T. 20 N., R. 28 W.

Operator: U.S. Antimony Corp.
John C. Lawrence, President

Box 643, Thompson Falls MT 59873

Owner: State Mining Co.
509 N. Main St., Colville WA 99114

Status: Inactive

FOUR UP GROUP Copper
Blue Creek dist. [171], sec. 10, T. 27 N., R. 34 W.

Owner-Operator: Donald C. Cripe and others
Route 1, Box 929-B, Libby MT 59923

Status: Inactive

THIRD TERM MINE Zinc, copper, gold, silver, lead
Elliston dist. [157], sec. 28, T. 9 N., R. 6 W.

Owner-Operator: Delbert Woodley

Box 353, Warm Springs Rd., Garrison MT 59731

Status: Developing

TIBBETTS MINE Gold
Sec. 7, 8, T. 8 N., R. 11 W.

Operator: Clifford Hatton
2501 S. Dakota St., Butte MT 59701

Owner: Clifford Hatton and others
2501 S. Dakota St., Butte MT 59701

Status: Developing

***WOODS CREEK COPPER MINE** Copper,
silver, gold

Mineral Point dist. [167],
sec. 16, 17, 20 and 21, T. 3 S., R. 22 W.

Owner-Operator: Shook Mines, Inc.,
Earnest J. Shook, Pres.

Box 77, Darby MT 59829

Status: Developing

HEIDELBERG MINE Gold, silver
SE¼ sec. 29, NW¼ sec. 32, T. 27 N., R. 31 W.

Owner-Operator: Heidelberg Mining and
Leasing Co. (G. A. Myers)

1001 W. Court St., Pasco WA 99301

Employees: 3

Status: Developing

LAURA APEX GROUP Copper, silver
Sec. 12, T. 24 N., R. 29 W.

Owner-Operator: Donald C. Cripe and others
Route 1, Box 929-B, Libby MT 59923

Status: Inactive

LUCKY LADY GROUP Gold, silver, lead, zinc
Blue Creek dist. [171], sec. 10, T. 27 N., R. 34 W.

Owner-Operator: J. C. Brooks Estate
c/o Geraldine LaMarche, Route 1, Box 132, Sagle

ID 83860; Ralph Dettwiler, Noxon MT 59853

Status: Inactive

Sanders County (continued)

MONTRO GOLD MINES Lead, silver, copper, gold
Plains dist. [173], SE¼ sec. 4, SW¼ sec. 3,
T. 19 N., R. 26 W.
Operator: William L. Burns
Moise MT 59824
Owner: Mrs. Marion R. Kruger and William L. Burns
Plains MT 59859
Status: Inactive

RAVEN MINE Copper, silver
Thompson River dist. [179],
NW¼ sec. 4, T. 21 N., R. 28 W.; and
SW¼ sec. 33, T. 22 N., R. 28 W.
Owner-Operator: Raven Mining Co.,
Austin Monk, Pres., Marion MT 59925
Status: Inactive

Silver Bow County: Butte 59701

***BERKELEY PIT** Copper, gold, silver
Summit Valley dist. [183], sec. 5, 6, 7, 8, 18,
T. 3 N., R. 7 W.
Owner-Operator: Anaconda Minerals Co.
J. F. Gardner, Operations Manager
Box 689, Butte MT 59701
Mill capacity: 42,000 t/d
Status: Inactive

DAY AND HARVEY GROUP Silver, gold
Moose Creek dist. [190], sec. 9, T. 1 S., R. 8 W.
Owner-Operator: Royal Apex Silver, Inc.
P.O. Box 886, Wallace ID 83873
Status: Exploration

***EAST BERKELEY PIT** Copper, molybdenum
Summit Valley dist. [183], sec. 5, 6, 7, 8, 18,
T. 3 N., R. 7 W.
Owner-Operator: Anaconda Minerals Co.
J. F. Gardner, Gen. Mgr., Montana Operations
Box 687, Butte MT 59701
Employees: 737
Mill capacity: 42,000 t/d
Status: Produced, inactive

EMMA MINE Gold, silver
Highland dist. [187], sec. 29, T. 1 N., R. 7 W.
Owner-Operator: Howard Stratton
2619 Walnut St., Butte MT 59701
Mill capacity: 5 t/d
Status: Producing, developing

FOURTH ESTATE MINE Fluorspar, gold
Summit Valley dist. [183], sec. 13, T. 3 N., R. 7 W.
Owner-Operator: Tom Helehan
Box 235, Butte MT 59701
Status: Developing

KELLEY MINE Copper, gold, silver
Summit Valley dist. [183],
SW¼ SW¼ sec. 7, T. 3 N., R. 7 W.
Owner-Operator: Anaconda Minerals Co.
J. F. Gardner, Gen. Mgr., Montana Operations
Box 689, Butte MT 59701
Status: Inactive

LAST CHANCE MINE Gold, silver
Highland dist. [187], sec. 28, T. 1 N., T. 7 W.
Owner-Operator: Howard Stratton
2619 Walnut St., Butte MT 59701
Status: Developing

MONTE CLARK GROUP Silver, copper
Moose Creek dist. [190],
sec. 25, 30, T. 1 S., R. 8, 9 W.
Owner-Operator: Lively's, Inc.
Box 96, Melrose MT 59743
Status: Developing

MOONLIGHT MINE Gold, silver
Highland dist. [187], sec. 28, T. 1 N., R. 7 W.
Owner-Operator: Howard Stratton
2619 Walnut St., Butte MT 59701
Status: Produced

PEABODY MINE Silver, lead
Soap Gulch dist. [189], sec. 6, T. 1 S., R. 8 W.
Owner-Operator: Lively's, Inc.
Box 96, Melrose MT 59743
Status: Inactive

STRATTON MINE Gold, silver, copper
Highland dist. [187], sec. 32, T. 1 N., R. 7 W.
Owner-Operator: Howard Stratton
2619 Walnut St., Butte MT 59701
Employees: 2
Status: Developing

WRONG FONT GROUP Gold, silver
Summit Valley dist. [183], sec. 24, T. 3 N., R. 9 W.
Owner-Operator: Tom Helehan
Box 235, Butte MT 59701
Status: Developing

IRON MINES

Meagher County: White Sulphur Springs 59645

*BLACK BUTTE MINE Iron
 Sec. 34, T. 12 N., R. 6 E.
 Operator: Hallett Minerals Co.
 Irving Sewell, General Manager
 Box 169, Livingston MT 59047
 Owner: R. Borland and J. Potter
 White Sulphur Springs MT 59645
 Employees: 3
 Status: Produced

MOLYBDENUM MINES

Beaverhead County: Dillon 59725

ELKHORN GROUP Molybdenum, silver
 Elkhorn dist. [13],
 sec. 15, 21, 22, 27, 28, T. 4 S., R. 12 W.
 Owner-Operator: Timberline Minerals, Inc.
 John A. Wells, Bd. Chm.
 Box 308, Dubois WY 82513
 Status: Inactive

Broadwater County: Townsend 59644

*SPOKANE HILLS MINE Tungsten, molybdenum
 Winston dist. [37], sec. 11, 12, T. 9 N., R. 1 W.
 Owner-Operator: West Gate Mining & Construction
 3301 San Mateo NE, Suite 200,
 Albuquerque NM 87110
 Status: Inactive

Ravalli County: Hamilton 59840

VIOLET GROUP Molybdenum, tungsten, silver, gold
 Mineral Point dist. [167],
 sec. 22, 28, 29, T. 4 S., R. 22 W.
 Owner-Operator: Mary W. Motley
 121 Parkside Apts., #201
 121 State St., Hamilton MT 59840
 Status: Inactive

TITANIUM MINES

Teton County: Choteau 59422

*CHOTEAU PROJECT Titanium, iron, zircon
 Sec. 11, 12, 13, 14, T. 25 N., R. 6 W.;
 sec. 18, T. 25 N., R. 5 W.
 Owner-Operator: Earthsearch, Inc.
 7100 W. 44th St., Suite 201, Wheatridge CO 80033
 Status: Developing

TUNGSTEN MINES

Beaverhead County: Dillon 59725

LOST CREEK MINE Tungsten
 Lost Creek dist. [16],
 sec. 11, 14, 23, T. 4 S., R. 10 W.
 Operator: Union Carbide Corp.
 J. S. Hollingsworth, Director Exploration
 P. O. Box 1029, Grand Junction CO 81501
 Owner: Moly Tung, Inc.
 First National Bank Bldg., Butte MT 59701
 Status: Inactive

THUNDERBIRD GROUP Silver, tungsten,
 molybdenum
 Elkhorn dist. [13],
 sec. 14, 15, 22, 23, T. 4 S., R. 12 W.
 Owner-Operator: Thunderbird Resources,
 Don L. Jenkins, Pres.
 P. O. Box 506, Corvallis MT 59828
 Employees: 2
 Status: Developing

Broadwater County: Townsend 59644

*SPOKANE HILLS MINE Tungsten, molybdenum
 Winston dist. [37], sec. 11, 12, T. 9 N., R. 1 W.
 Owner-Operator: West Gate Mining & Construction
 3301 San Mateo NE, Suite 200,
 Albuquerque NM 87110
 Status: Inactive

URANIUM MINES

Carbon County: Red Lodge 59068

**SWAMP FROG MINE Uranium
 Sec. 17, 20, 21, T. 9 S., R. 27 E.
 Owner-Operator: James J. Stoick
 Box 2074, Billings MT 59101
 Status: Developing

Jefferson County: Boulder 59632

FREE ENTERPRISE URANIUM-RADON MINE
 Uranium, radon
 Boulder dist. [75], sec. 22, T. 6 N., R. 4 W.
 Owner-Operator: Elkhorn Mining Co.,
 Wade V. Lewis, Pres.
 201 N., Boulder MT 59632
 Employees: 5
 Status: Active health mine

PLACER MINES

Beaverhead County: Dillon 59725

*GOLD NUGGET PLACER CLAIMS Gold
 (precious metals)
 SW $\frac{1}{4}$ sec. 30, T. 3 S., R. 17 W.;
 N $\frac{1}{2}$ sec. 36, T. 3 S., R. 18 W.
 Owner-Operator: Prospect Mining Co., Inc.
 Preston ID 83263
 Status: Developing

*RUBY GOLD PLACER CLAIMS Gold
 Pioneer dist. [22], sec. 29, T. 3 S., R. 17 W.
 Owner-Operator: Valley International Products, Inc.
 P.O. Box 1721, Helena MT 59601
 Status: Developing

Broadwater County: Townsend 59644

*INDIAN CREEK PLACER Gold
 Indian Creek dist. [35], Sec. 28, T. 7 N., R. 1 E.
 Operator: Raymond G. Bayles
 Box 1108, Townsend MT 59644
 Owner: Indian Creek Inc.
 Box 1108, Townsend MT 59644
 Status: Producing, developing

Granite County: Philipsburg 59858

*ELM NO. 6 Placer gold
 Philipsburg dist. [65], sec. 31, T. 8 N., R. 15 W.
 Operator: Chris Koenig
 8860 Sharptail, Missoula MT 59802
 Owner: SK Ventures, Inc., A. K. Raymond, Pres.
 P.O. Box 255, Baldwin City KS 66006

Placer mines (continued)**Jefferson County: Boulder 59632**

*BLACK CANYON PLACERS Gold
Alhambra dist. [71], sec. 14, 15, T. 7 N., R. 3 W.
Owner-Operator: A. E. Reichel Estate, Horace Wilson
and Erma Fox; Rodney Kurth, Representative
P.O. Box 942, Great Falls MT 59401
Employees: 1
Status: Developing

CHINESE DIGGINGS Gold
Boulder dist. [75], sec. 5, 8, 9, T. 5 N., R. 4 E.
Operator: S & G Mining Co.
Thomas Gwynn, Manager, Resource Development
Box 3049, Sheridan WY 82801
Owner: Kiewit Mining and Engineering Co.
1000 Kiewit Plaza, Omaha NE 68131
Status: Inactive

HAWKEYE PLACER Gold
Sec. 24, 25, T. 7 N., R. 2 W.
Owner-Operator: Lynn Mines & Mining, Inc.
R. L. Lynn, President
690 S. Hilltop Road, Columbia Falls MT 59912
Status: Developing

*SKOOKUM PLACER Gold
Comet dist. [73], sec. 1, 12, T. 6 N., R. 5 W.
Owner-Operator: Mrs. Theodore Nyquist
Box 133, Boulder MT 59632
Status: Inactive

Lewis and Clark County: Helena 59601

*FRENCH BAR PLACER Sapphires, gold
Missouri River dist. [101], sec. 4, 5, T. 10 N., R. 1 W.
Owner-Operator: James McMaster
Box 483, East Helena MT 59635
Status: Produced, producing

FRENCH BAR UNDERWATER SECTION
Gold, sapphires, garnets, rubies
Missouri River dist. [101], sec. 4, T. 10 N., R. 1 W.
Operator: Montana Gold and Sapphires, Inc.
MacDonald M. Mader II
Box 155, Helena MT 59624
Owner: State of Montana, Helena MT
Plant: 8" suction dredge
Status: Produced, developing

*PRETTY GIRL PLACER Gold
Sec. 9, 10, T. 9 N., R. 4 W.
Operator: Al Ballard, P.G. Mine,
Box 106, Wolf Creek MT 59648
Owner: Ballard Mining Corp.
1712 Grizzly Gulch, Helena MT 59601
Employees: 4
Mill capacity: 40 y/h
Status: Produced

Madison County: Virginia City 59755

*BUBANY PLACER Gold
Browns Gulch dist. [129], sec. 16, 21, T. 6 S., R. 3 W.
Owner-Operator: Montana Minerals Browns Gulch
Placer, Box 34, Virginia City MT 59755
Status: Developing

NORWEGIAN PLACER Gold
Norwegian Creek dist. [118],
NE¼ sec. 31, T. 2 S., R. 1 W.
Operator: Clinton Cain, Alder MT 59710;
Darrel Taylor, Norris MT 59745
Owner: L. L. Higinbotham, Harrison MT 59735
Employees: 2
Status: Produced, developing

Meagher County: White Sulphur Springs 59645

*BLUE JAY PLACER Gold
Beaver Creek dist. [131], sec. 3, T. 8 N., R. 4 E.
Owner-Operator: Norman Walters
Box 722, White Sulphur Springs MT 59645
Status: Developing

*CAMP ROBBER PLACER Gold
Thompson Creek dist. [131],
sec. 22, 27, T. 9 N., R. 4 E.
Owner-Operator: Larry Burns
Box 324, White Sulphur Springs MT 59645
Employees: 2
Status: Inactive

*HUNGRY HOLLOW PLACER Gold
Beaver Creek dist. [131],
sec. 23, 24, T. 10 N., R. 3 E.
Owner-Operator: Howard Weaver, Albert Bodle
Box 215, White Sulphur Springs MT 59645
Employees: 2
Status: Developing

*LITTLE JOE PLACER Gold
Thompson Creek dist. [131], sec. 27, T. 9 N., R. 4 E.
Owner-Operator: Joe Stevens
Sapphire Village, Hobson MT 59452
Status: Developing

Placer mines (continued)

*MARY SUE PLACER Gold
 Beaver Creek dist. [131],
 SE $\frac{1}{4}$ sec. 24, T. 10 N., R. 4 E.
 Owner-Operator: Raymond J. Heinrich
 Box P, White Sulphur Springs MT 59645
 Status: Developing

*RICH-MICH PLACER Gold
 Thompson Creek dist. [131], sec. 27, T. 9 N., R. 4 E.
 Owner-Operator: Mrs. Richard Conklin
 93 Northern Lights Blvd., Kalispell MT 59901
 Status: Inactive

Mineral County: Superior 59872

*F. D. PLACER Gold
 SE $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$ and SE $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 8;
 N $\frac{1}{2}$ N $\frac{1}{2}$ NW $\frac{1}{4}$ sec. 17, T. 12 N., R. 24 W.
 Owner-Operator: Fred D. Slemes
 Box 143, Alberton MT 59820
 Employees: 3
 Status: Developing

LOST GULCH PLACER Gold
 Cedar Creek (unorg.), sec. 24, T. 16 N., R. 27 W.
 Owner-Operator: Ray Wagner
 Box 137, Ravalli MT 59863
 Status: Producing

*MEADOW CREEK PLACER Gold
 Sec. 24, T. 15 N., R. 25 W.
 Owner-Operator: C & H Company
 c/o Sam Coleman, Box 74, Superior MT 59872
 Status: Developing

*STEMWINDER PLACER Gold
 Cedar Creek dist. [135], sec. 29, T. 15 N., R. 27 W.
 Owner-Operator: George Gildersleeve
 Box 565, Superior MT 59872
 Status: Developing

*SUNRISE CREEK PLACER Gold
 Sec. 21, T. 15 N., R. 26 W.
 Owner-Operator: C & H Company
 c/o Sam Coleman, Box 74, Superior MT 59872
 Status: Developing

TRIANGLE PLACER Gold
 Quartz Creek dist. [135], sec. 3, T. 14 N., R. 26 W.
 Owner-Operator: Victor D. Wright
 Box 40, Superior MT 59872
 Status: Developing

*TROUT CREEK PLACER Gold
 Trout Creek dist. sec. 28, T. 16 N., R. 26 W.
 Owner-Operator: Mrs. Joe Arpan
 Box 51, Superior MT 59872
 Status: Inactive

Missoula County: Missoula 59801

*CLAY LEWIS PLACER Gold
 Nine Mile dist. [146], sec. 16, T. 17 N., R. 24 W.
 Operator: Clay Lewis
 Huson MT 59846
 Owner: Stanley McElligett Family
 1001 Stella Road, Longview WA 98632
 Employees: 1
 Status: Producing

*ROBIN L. PLACER Gold
 Nine Mile Creek dist. [146],
 sec. 21, T. 17 N., R. 24 W.
 Owner-Operator: Mary C. Anliker
 923 Spartan Dr., Missoula MT 59801
 Status: Developing

*IDA A. PLACER Gold
 Nine Mile Creek dist. [146],
 sec. 15, T. 16 N., R. 23 W.
 Operator: Albert Byron Peterson, Claude DeValle
 1859 S. 9th St. W., Missoula MT 59801
 Owner: A. B. Peterson
 1859 S. 9th St. W., Missoula MT 59801
 Status: Developing

Park County: Livingston 59047

*STILLWATER RIVER PLACER Gold
 New World dist. [154], sec. 9, 10, 16, T. 9 S., R. 14 E.
 Owner-Operator: Margaret Reeb
 General Delivery, Livingston MT 59047
 Status: Developing

Placer mines (continued)**Powell County: Deer Lodge 59722**

*BIG SKY PLACER Gold, silver
 Pioneer dist. [163], sec. 1, T. 8 N., R. 11 W.
 Operator: Big Sky GeoResources, Ray Bozlee, Mgr.
 48 Mountain View, Anaconda MT 59711
 Owner: T & B Mining Co., Inc.
 621 Kentucky, Box 9, Deer Lodge MT 59711
 Status: Developing

*SILVER BAR PLACER Gold
 Big Blackfoot dist. [156],
 sec. 15, 16, 21, 22, T. 13 N., R. 10 W.
 Owner-Operator: Roy A. Betlach
 Route 7, Spokane WA 99206
 Mill capacity: 20-50 t/d
 Status: Inactive

KLONDIKE ORE #1 Placer gold
 Finn dist. [159], sec. 2, T. 12 N., R. 8 W.
 Owner-Operator: Ernest H. and Bill E. Young
 Box 568, Deer Lodge MT 59722
 Status: Producing

*YOUR NAME PLACER Gold, tungsten
 Sec. 4, 13, 17, 18, 22, 23, T. 13 N., R. 12, 13 W.
 Owner-Operator: H. C. Craig and Co.
 336 Peyton Bldg., Spokane WA 99201
 Status: Developing

OLYMPIC #2 Placer gold
 Finn dist. [159], sec. 11, T. 12 N., R. 8 W.
 Owner-Operator: Ernest H. and Bill E. Young
 102 N. Main, Deer Lodge MT 59722
 Status: Developing

Silver Bow County: Butte 59701

HIGHLAND PLACER Gold
 Highland dist. [187], sec. 28, T. 1 N., R. 7 W.
 Operator: Howard Stratton, Mark Stratton,
 Gladstone Crushing and Construction Co.
 2619 Walnut St., Butte MT 59701
 Owner: Butte Water Co.
 124 W. Granite St., Butte MT 59701
 Status: Produced, developing

*MACKEG PLACER Gold
 Soap Gulch dist. [189], sec. 12, T. 2 S., R. 9 W.
 Owner-Operator: Lively Mining Co.
 Box 96, Melrose MT 59743
 Status: Developing

Toole County: Shelby 59474

*GOLD BUTTE PLACER Gold
 Gold Butte dist. [199], sec. 17, 18, T. 37 N., R. 3 E.
 Operator: F. Eugene Knobel
 Star Route, Box 35, Conrad MT 59425
 Owner: F. Eugene Knobel, Keanan Duncan,
 Tom Stolks
 Conrad MT 59425
 Mill capacity: 50 t/d
 Status: Inactive

Part 2—Nonmetal Mines, Pits and Quarries

BARITE MINES

Beaverhead County: Dillon 59725

*LUCKY JIM BEAM GROUP MINE Barite
 Jackson dist. [25], sec. 25, 26, T. 4 S., R. 14 W.
 Operator: R. P. Jackson
 Jackson MT 59736
 Owner: R. P. Jackson and R. M. Shepherd
 Jackson MT 59736
 Status: Inactive

Lincoln County: Libby 59923

KENELTY MINE Barite
 Libby dist. [108], sec. 34, T. 27 N., R. 28 W.
 Owner-Operator: Montana Barite Co.,
 Bob Walsh, Mgr.
 P.O. Box 3296, Missoula MT 59801
 Employees: 4
 Status: Producing

Mineral County: Superior 59872

BONANZA GROUP Barite
 Cedar Creek dist. [135], sec. 29, T. 15 N., R. 27 W.
 Owner-Operator: Fern and George Gildersleeve
 Box 568, Superior MT 59872
 Status: Developing

*MULLEN BARITE MINE Barite
 St. Regis dist. [141], sec. 9, T. 18 N., R. 28 W.
 Owner-Operator: June Alexander
 Box 167, St. Regis MT 59866
 Mill capacity: 50 t/d
 Employees: 4
 Status: Developing

Missoula County: Missoula 59801

**COLOMA MINE Barite
 Coloma dist. [143], sec. 31, T. 13 N., R. 14 W.
 Owner-Operator: Montana Barite Co.
 Bob Walsh, Mgr.
 Box 3296, Missoula MT 59801
 Mill capacity: 40 t/h
 Employees: 8
 Status: Producing

FROSTBITE DEPOSIT Barite
 Elk Creek dist. [145], sec. 20, T. 13 N., R. 14 W.
 Operator: Montana Barite Co.
 Bob Walsh, Mgr.
 P.O. Box 3296, Missoula MT 59801
 Owner: Anaconda Minerals Co.
 Butte MT 59701
 Status: Inactive

**ELK CREEK MINE Barite
 Elk Creek dist. [145],
 sec. 15, 16, 20, T. 13 N., R. 14 W.
 Owner-Operator: Montana Barite Co.
 Bob Walsh, Mgr.
 P.O. Box 3296, Missoula MT 59801
 Employees: 6
 Status: Producing

BENTONITE PITS

Carter County: Ekalaka 59324

*COLONY OPEN PITS Bentonite
 T. 9 S., R. 58, 59 E.
 Operator: NLIndustries, Inc., Baroid Division
 D. A. Sturgeon, Mgr., Belle Fourche SD 57717
 Owner: NLIndustries, Inc., Baroid Division
 Box 1675, Houston TX 77001
 Mill capacity: 300,000 t/y
 Status: Inactive

Bentonite pits (continued)**Phillips County: Malta 59538**

*AMERICAN COLLOID PIT Bentonite
 Sec. 6, T. 26 N., R. 31 E.
 Owner-Operator: American Colloid Co.
 5100 Suffield Ct., Skokie IL 60076
 Status: Inactive

*MALTA PLANT Bentonite
 Unorg., NW¼ SE¼ sec. 16, T. 30 N., R. 30 E.
 Owner-Operator: American Colloid Co.
 Malta MT 59538
 Mill capacity: 500 t/d
 Employees: 6
 Status: Producing

CHLORITE MINES**Madison County: Virginia City 59755**

*ANTLER MINING COMPANY PIT Chlorite
 Silver Star dist. [126], sec. 14, T. 2 S., R. 6 W.
 Owner-Operator: Sylvan Donegan, Jr., Robert Nolte
 Box 304, Twin Bridges MT 59754
 Employees: 3
 Status: Producing

CLAY MINES AND PITS**Deer Lodge County: Anaconda 59711**

*PLACER FIRE CLAY PIT Fire clay
 Sec. 34, T. 5 N., R. 11 W.
 Owner-Operator: Harold Snow
 Box 1155, Anaconda MT 59711
 Status: Produced

Jefferson County: Boulder 59632

*CALICO CLAY PIT Pottery clay
 Sec. 36, T. 2 N., R. 3 W.
 Owner-Operator: Robert C. and Barbara Nevin
 Box 5, Cardwell MT 59721
 Mill capacity: 50 g/d
 Employees: 4
 Status: Producing

FLUORSPAR MINES**Mineral County: Superior 59872**

SNOWBIRD MINE Acid-grade fluorspar
 Unorg., sec. 19, T. 12 N., R. 25 W.
 Owner-Operator: Paul and Jerry Carter
 RFD 1, Box 79, Spanish Fork UT 84661, and
 Al Willden, 347 S. Main, Spanish Fork UT 84661
 Status: Inactive

Silver Bow County: Butte 59701

**FOURTH ESTATE MINE Fluorspar, gold
 Summit Valley dist. [183], sec. 13, T. 3 N., R. 9 W.
 Owner-Operator: Tom Helehan
 Box 235, Butte MT 59701
 Status: Developing

GRAPHITE MINES

Broadwater County: Townsend 59644

BLACK DIAMOND GROUP Graphite
 Indian Creek dist. [35],
 sec. 17, 20, 29, 32, T. 7 N., R. 1 E.
 Owner-Operator: Black Diamond Graphite Co.
 Jim Hill, Mgr., Clancy MT 59634
 Status: Developing

GYPSUM MINES

Fergus County: Lewistown 59457

SHOEMAKER (HEATH) MINE Gypsum
 Sec. 1, 2, T. 14 N., R. 19 E.
 Operator: U.S. Gypsum Co., Heath MT 59449
 Owner: U.S. Gypsum Co.
 101 S. Wacker Dr., Chicago IL 60606
 Mill capacity: 240 t/d
 Employees: 35
 Status: Producing

LIMESTONE MINES AND QUARRIES

Beaverhead County: Dillon 59725

**WHITE LIME GROUP Limestone
 Argenta dist. [2], sec. 17, T. 6 S., R. 10 W.
 Owner-Operator: Rudy Nygren
 Argenta Star Route, Dillon MT 59725
 Status: Developing

Broadwater County: Townsend 59644

*CONTINENTAL LIME INC. PLANT Quick lime,
 limestone
 Indian Creek dist. [35], sec. 28, 33, T. 7 N., R. 1 E.
 Operator: Continental Lime Inc.
 P.O. Box 550
 Owner: Steel Brothers Canada
 215-10451 Shellbridge Way
 Richmond, B.C., Canada V6X 2W8
 Mill capacity: 480 t/d
 Employees: 20
 Status: Producing

Carbon County: Red Lodge 59068

*WARREN QUARRY Limestone
 Sec. 24, 25, T. 8 S., R. 25 E., and
 sec. 19, 30, T. 8 S., R. 26 E.
 Operator: Big Horn Calcium Co.
 P.O. Box 22007, Billings MT 59104
 Owner: Big Horn Limestone Co.
 P.O. Box 1952, Denver CO 80901
 Mill capacity: 10 t/hr
 Employees: 20
 Status: Producing

Deer Lodge County: Anaconda 59711

*BROWNS QUARRY Metallurgical limestone
 Blue Eyed Nellie dist. [42], sec. 23, T. 5 N., R. 12 W.
 Operator: General Constructors
 4999 Harrison Ave., Butte MT 59701
 Owner: The Anaconda Co.
 Butte MT 59701
 Status: Inactive

Gallatin County: Bozeman 59715

*TRIDENT QUARRY Portland cement limestone
 Sec. 9, 10, T. 2 N., R. 2 E.
 Owner-Operator: Ideal Basic Industries—Cement Div.
 W. T. Springman, Vice Pres., Prod., Western Div.
 P.O. Box 8789, Denver CO 80201
 Mill capacity: 330,000 t/y
 Employees: 100
 Status: Producing

Granite County: Philipsburg 59858

*BIG HORN CALCIUM QUARRY Limestone
 Sec. 14, T. 11 N., R. 13 W.
 Owner-Operator: Big Horn Calcium Co.
 Denis L. Adams, Pres.
 P.O. Box 22007, Billings MT 59104
 Status: Inactive

Limestone mines and quarries (continued)**Jefferson County: Boulder 59632**

*McCLELLAN QUARRY Limestone
 McClellan dist. [84], sec. 7, T. 9 N., R. 2 W.
 Operator: Maronick Construction Co., Inc.
 East Helena MT 59635
 Owner: E. P. Maronick, Pres.
 East Helena MT 59635
 Mill capacity: 600 t/d
 Employees: 3
 Status: Producing

*MONTANA CITY QUARRY
 Portland cement limestone
 Sec. 12, 13, T. 9 N., R. 3 W.
 Operator: Kaiser Cement Corp.
 R. J. O'Hara, Plant Mgr.
 Montana City MT 59602
 Owner: Kaiser Cement Corp.
 Kaiser Center, Oakland CA 94600
 Mill capacity: 1000 t/d
 Employees: 86
 Status: Produced, producing

PHOSPHATE MINES**Powell County: Deer Lodge 59722**

RELYEA MINE Phosphate rock
 Garrison dist. [160], S½ sec. 12, T. 10 N., R. 10 W.
 Owner-Operator: George Relyea Estate
 Box 116, Garrison MT 59731
 Mill capacity: 50 t/d
 Status: Inactive

WARM SPRINGS MINE Phosphate rock
 Garrison dist. [160], sec. 11, 13, 24, T. 10 N.,
 R. 10 W.; sec. 19, T. 10 N., R. 9 W.
 Owner-Operator: Cominco American, Inc.
 Garrison MT 59731
 Employees: 115
 Status: Producing, developing

SAPPHIRE MINES**Granite County: Philipsburg 59858**

GEM MOUNTAIN SAPPHIRE MINE Sapphire
 [Old Chaussee Sapphire mine]
 Rock Creek dist. [67], sec. 16, T. 6 N., R. 16 W.
 Owner-Operator: Gem Mountain Sapphire
 Richard and Joan Taplin,
 P.O. Box 701, Philipsburg MT 59856
 Status: Producing

Judith Basin County: Stanford 59479

YOGO SAPPHIRE MINE Sapphire
 Yogo dist. [92], sec. 19, 20, 21, 22, T. 13 N., R. 11 E.
 Owner-Operator: Intergam, Inc.
 3025 S. Parker, Aurora CO 80014
 Mill capacity: 500 t/d
 Employees: 5
 Status: Developing

Lewis and Clark County: Helena 59601

*EL DORADO BAR SAPPHIRE MINE Sapphire
 Sec. 2, 10, 11, T. 11 N., R. 12 W.
 Owner-Operator: El Dorado Inc.
 6240 Nelson Road, Helena MT 59601
 Status: Producing

FRENCH BAR Sapphire, gold
 Missouri River dist. [101], sec. 4, 5, T. 10 N., R. 1 W.
 Owner-Operator: James McMaster
 Box 483, East Helena MT 59635
 Employees: 1
 Status: Produced, producing

FRENCH BAR UNDERWATER SECTION
 Gold, sapphire, garnet, rubies
 Missouri River dist. [101], sec. 4, T. 10 N., R. 1 W.
 Operator: Montana Gold & Sapphire, Inc.
 MacDonald M. Mader II
 P.O. Box 155, Helena MT 59624
 Owner: State of Montana, Helena MT 59604
 Plant: 8" suction dredge
 Status: Produced, developing

SEMIPRECIOUS STONES

Missoula County: Missoula 59801

*FOUR V's CLAIMS Smoky quartz
 Sec. 22, T. 11 N., R. 24 W.
 Owner-Operator: Albert E. Volker
 1806 S. 10th West, Missoula MT 59801
 Status: Produced

SHALE PITS

Gallatin County: Bozeman 59715

*KANTA PIT Expanded shale
 Sec. 13, T. 2 N., R. 2 E.
 Owner-Operator: Kanta Products, Inc.
 George E. Kanta, President
 Box 96, Three Forks MT 59752
 Employees: 1
 Status: Produced, producing

Jefferson County: Boulder 59632

CARDWELL PIT Expanded shale
 Unorg., E½ W½ sec. 36, T. 2 N., R. 3 W.
 Operator: Kanta Products, Inc.
 Box 96, Three Forks MT 59752
 Owner: State of Montana, Helena MT 59601
 Employees: 1
 Status: Produced, producing

SILICA MINES AND QUARRIES

Beaverhead County: Dillon 59725

*CANYON CREEK QUARRY Metallurgical silica
 Sec. 32, T. 1 S., R. 9 W.
 Owner-Operator: Industrial Chemical Div., Stauffer
 Chemical Co., Box 3146, Butte MT 59702
 Mill capacity: 500 t/d
 Employees: 3
 Status: Producing

Ravalli County: Hamilton 59840

**EAGLE ROCK GROUP Quartz
 Unorg., sec. 1, 2, 6, 10, 11, 12, 13, 14, 15, and
 22, T. 5 N., R. 19 W.
 Owner-Operator: Eagle Rock Mining Co., Inc.
 1308 S. 1st St., Hamilton MT 59840
 Status: Developing

Jefferson County: Boulder 59632

*BASIN QUARTZ QUARRY Industrial silica
 Basin dist. [73], sec. 16, T. 6 N., R. 5 W.
 Operator: Pacific Silica Co.
 Basin MT 59631
 Owner: Union Carbide Co.
 Portland OR 97200
 Status: Produced

SOIL CONDITIONERS

Lake County: Polson 59860

*MARTIN'S PEAT, INC. Peat
 Sec. 16, 17, T. 24 N., R. 17 W.
 Owner-Operator: Martin's Peat, Inc.
 Ronald I. Martin, Pres., Swan Lake MT 59911
 Employees: 12
 Mill capacity: 6,000 t/y
 Status: Produced

STONE QUARRIES**Missoula County: Missoula 59801**

*McQUARRIE QUARRY Ballast and road material
Clinton (Wallace) dist. [142],
sec. 17, T. 12 N., R. 17 W.
Operator: Janney Construction Co., Inc.
Box 517, Deer Lodge MT 59723
Owner: Burlington Northern, Inc.
St. Paul MN 55101
Mill capacity: 200 t/hr
Employees: 10
Status: Producing

Ravalli County: Hamilton 59840

*BITTERROOT VALLEY STONE QUARRY
Quartz, ornamental stone
Sec. 7, T. 4 N., R. 21 W.
Owner-Operator: Frank Jaquette
Box 4021, Hwy. 93 S., Hamilton MT 59840
Status: Inactive

Park County: Livingston 59047

*LIVINGSTON MARBLE & GRANITE QUARRY
Ashlar, cut stone, rubble
Sec. 14, 24, T. 9 S., R. 8 E.
Operator: Livingston Marble and Granite Works
Livingston MT 59047
Owner: H. W. Strong
711 E. Park, Livingston MT 59047
Employees: 23
Status: Producing

TALC MINES**Madison County: Virginia City 59755**

ADAM AND EVE NO. 1 and NO. 2 Talc
Unorg., sec. 30, T. 8 S., R. 4 W.
Owner-Operator: Sam Maloney, Goldie S. Maloney
and others
Box 118, Alder MT 59710
Status: Inactive

*RUBY NO. 1 and NO. 2 MINE Talc
Unorg., sec. 11, T. 8 S., R. 4 W.
Owner-Operator: Sam Maloney, Goldie S. Maloney
Box 118, Alder MT 59710
Status: Developing

*BEAVERHEAD MINE Talc
Sec. 11, 14, T. 7 S., R. 6 W.
Owner-Operator: Cyprus Industrial Minerals
555 S. Flower St., Los Angeles CA 90017
Status: Inactive

*TREASURE CHEST MINE AND PLANT Talc
Unorg., NE¼ NE¼ sec. 15, T. 7 S., R. 6 W.
Owner-Operator: Pfizer, Inc.
Box 1147, Dillon MT 59725
Employees: 118
Status: Producing

*BIG WILLOW NO. 1 and NO. 2 Talc
Unorg., sec. 30, T. 8 S., R. 4 W.
Owner-Operator: Sam Maloney, Goldie S. Maloney
and others
Box 118, Alder MT 59710
Status: Inactive

*WILLOW CREEK MINE (RUBY RIDGE GROUP)
Talc
Unorg., sec. 30, T. 8 S., R. 3 W.
Owner-Operator: Cyprus Industrial Minerals
555 S. Flower St., Los Angeles CA 90017
Status: Inactive

*REGAL MINE Talc
Unorg., N½ sec. 2, T. 8 S., R. 7 W.
Owner-Operator: Pfizer, Inc.
Box 1147, Dillon MT 59725
Status: Inactive

*YELLOWSTONE (CAMERON) MINE Talc
Sec. 4, T. 9 S., R. 1 W.
Owner-Operator: Cyprus Industrial Minerals
555 S. Flower St., Los Angeles CA 90017
Employees: 83
Status: Producing

VERMICULITE MINES

Lincoln County: Libby 59923

*ZONOLITE MINE Vermiculite
 Rainy Creek dist. [109],
 sec. 14, 15, 22, 23, T. 31 N., R. 30 W.
 Owner-Operator: Construction Products Division,
 W. R. Grace & Co.
 62 Whittemore Ave., Cambridge MA 02140
 Mill capacity: 1000 t/d
 Employees: 200
 Status: Producing

Madison County: Virginia City 59755

*CONSTELLATION DEPOSIT Vermiculite
 Mineral Hill dist. [119], sec. 26, T. 1 S., R. 3 W.
 Owner-Operator: Mine-X, Inc., c/o W. G. Forbes
 Box 656, Pony MT 59747
 Status: Developing

*GILLIAM VERMICULITE DEPOSIT Vermiculite
 Mineral Hill dist. [119], sec. 25, T. 1 S., R. 3 W.
 Owner-Operator: Mine-X, Inc., c/o W. G. Forbes
 Box 656, Pony MT 59747
 Employees: 4
 Status: Developing

Ravalli County: Hamilton 59840

*WESTERN VERMICULITE COMPANY Vermiculite
 Sec. 24, 25, T. 6 N., R. 19 W.
 Operator: Western Vermiculite Co.
 P.O. Box 220, Victor MT 59893
 Owner: National Vermiculite Corp. and Argee Corp.
 Box 220, Victor MT 59875
 Mill capacity: 100 t/hr
 Employees: 2
 Status: Inactive

Part 3—Coal Mines

Big Horn County: Hardin 59034

*ABSALOKA MINE Coal
 Sec. 25, T. 1 N., R. 37 E.
 Operator: Morrison-Knudsen Co., Inc.
 Don Cutbirth, Business Manager
 Box 529, Hardin MT 59034
 Owner: Westmoreland Resources
 Box 430, Hardin MT 59034
 Employees: 110
 Status: Produced

*EAST DECKER MINE Coal
 Sec. 11, 12, 14, T. 9 S., R. 40 E.
 Owner-Operator: Decker Coal Co.
 Box 12, Decker MT 59025
 Employees: 242
 Status: Producing

SPRING CREEK MINE Coal
 Sec. 16, T. 8 S., R. 40 E.
 Operator: Spring Creek Coal Co.
 William Ritchie, Gen. Mgr.
 Box 67, Decker MT 59025
 Owner: NERCO, Inc.
 111 SW Columbia, Portland OR 97201
 Plant capacity: 10,000,000 t/y
 Employees: 112
 Status: Producing

*WEST DECKER MINE Coal
 Sec. 9, T. 9 S., R. 40 E.
 Operator: Decker Coal Co.
 P.O. Box 12, Decker MT 59025
 Owner: Kiewit Mining and Engineering Co., and
 Pacific Power and Light Co.
 1000 Kiewit Plaza, Omaha NE 68131
 Mill capacity: 3,000 t/hr
 Employees: 222
 Status: Producing

Dawson County: Glendive 59330

*PEUSE MINE Coal
 Sec. 13, T. 16 N., R. 53 E.
 Owner-Operator: Gordon Peuse
 CB Route, Glendive MT 59330
 Mill capacity: 500 t/d
 Status: Inactive

Musselshell County: Roundup 59072

*P.M. MINE Coal
 Sec. 13, T. 6 N., R. 26 E.
 Owner-Operator: P.M. Coal Mining Co.
 Meged Bros.
 Goulding Creek Route, Roundup MT 59072
 Mill capacity: 100 t/h
 Employees: 4
 Status: Producing

STORM KING PIT Coal
 Sec. 24, T. 6 N., R. 26 E.
 Operator: Storm King Coal Mining Co., Inc.
 Jerry J. Prouse, Mgr.,
 427 Lordwith Dr., #5, Billings MT 59102
 Owner: L. Von Bretz
 427 Lordwith Dr., #5, Billings MT 59102
 Employees: 5
 Status: Producing

Powder River County: Broadus 59317

*COAL CREEK MINE Coal
 Sec. 3, T. 3 S., R. 45 E.
 Owner-Operator: Coal Creek Mining Co.
 Clayton Tonnemaker, Pres.
 P.O. Box 145, Ashland MT 59003
 Mill capacity: 500 t/d
 Status: Inactive

Coal mines (*continued*)

Richland County: Sidney 59270

*SAVAGE MINE Coal
 Sec. 27, T. 20 N., R. 57 E.
 Operator: Knife River Coal Mining Co.
 Box 32, Savage MT 59262
 Owner: Knife River Coal Co.
 Douglas Kane, Vice President Operations
 1915 Kavaney Dr., Bismarck ND 58501
 Plant capacity: 350 t/hr
 Employees: 26
 Status: Produced

Rosebud County: Forsyth 59327

*BIG SKY MINE Coal
 Sec. 27, T. 1 N., R. 41 E.
 Operator: Peabody Coal Co.
 Tracy Hendricks, Supt.
 Box 97, Colstrip MT 59323
 Owner: Peabody Coal Co.
 301 N. Memorial Dr., St. Louis MO 63102
 Employees: 119
 Mine capacity: 3,000,000 t/y
 Status: Producing

*ROSEBUD MINE Coal
 Sec. 1, 2, 3, 4, 5, 9, 10, 12, T. 1 N., R. 41 E.;
 sec. 34, 35, T. 2 N., R. 41 E.
 Operator: Long Construction
 Box 30238, Billings MT 59101
 Owner: Western Energy Co.
 Richard T. Dale, Operations Manager
 Box 67, Colstrip MT 59323
 Employees: 325
 Mine capacity: 15,000,000 t/y
 Status: Producing

ALL MINERS AND PROSPECTORS SHOULD BE AWARE OF THE STATE LAW PERTAINING TO INSPECTION OF MINES

[Title 50-108 (3425)]

“This act shall apply to all mines (except coal and lignite) and individuals, owners, lessors, lessees, agents, partnerships, corporations, managers, operators or employers operating any surface or underground metal or nonmetallic mines in this state. These individuals, owners, lessors, lessees, agents, partnerships, corporations, managers, operators or employers operating any surface or underground metal or nonmetallic mines (excluding coal and lignite) shall report the same to the Workers’ Compensation Division (State Inspector of Mines), state the name of the mine, the location of the same, the name of the company, person or persons owning or operating the same, post office address and number of men employed.”



Gullied Confederate Gulch in the Big Belt Mountains (circa 1870), with Diamond City perched precariously on its north bank. Extensive earth scarring and denuding above the town are from placing of high-level terrace gravels. In the upper reaches of the gulch, note spray of water indicating hydraulic mining activities.



Main Street of Diamond City. This eastward view was taken in 1889, and the posed subjects probably represent the last vestiges of a population that exceeded 10,000 people two decades earlier.

[Photos courtesy Montana Historical Society.]

Gold Deposits of the Big Belt Mountains

by
Henry G. McClernan

Introduction

The Big Belt Mountains, the prominent range east of Helena and Canyon Ferry Lake (**Figure 1**), yielded significant amounts of placer gold in the early days of Montana's history. Except for some production from the Golden Messenger mine in the north end of the range, however, gold mining has been relatively dormant in recent years.

History

Pardee and Schrader (1933) described Confederate Gulch on the west side of the Big Belt Mountains as . . . *one of the three or four outstanding discoveries of the gold-rush period in Montana. Although less extensive than Alder Gulch and Last Chance Gulch, it exceeded them in richness.* . . . Confederate Gulch was discovered in 1864 (Pardee and Schrader, 1933), and the bulk of the placer production from the range was made before the turn of the century. The boom times in Confederate Gulch, when pounds of gold rather than ounces were being mined, lasted from 1866 to 1869. After 1869 placer mining activity declined rapidly because the richest gravel deposits were exhausted. Total production from Confederate Gulch and its tributaries has been estimated (Pardee and Schrader, 1933) at between \$10,000,000 (285,714; 483,793) and \$30,000,000 (857,143; 1,451,379), with the most probable figure being about \$12,000,000 (342,857; 580,522). [Figures in parentheses are ounces of gold at \$35/oz and \$20.67/oz, respectively, during the period of mining in the area.] This would be a yield of about \$100 (2.9; 4.8) per lineal foot of gulch. The early work in the mountainous part of the gulch generated a large amount of tailings material that was carried to the mouth of the drainage by spring floods and thus buried any placer deposits that may exist downstream on the lower flood plain.

The other gulches on the west side of the mountains were worked in the same era. Placer deposits in York Gulch and Trout Creek were discovered in 1864 and first mined by drifting under thick overburden. Most of the placer mining occurred in York Gulch before 1874 although some reworking by hydraulic operations was done from 1888 to 1891 by the Trout Creek Mining Company. Pardee and Schrader (1933) estimated that \$400,000 (11,429; 19,352) in gold was produced from York Gulch. Cave Gulch placer deposits were discovered in 1866, and mining ceased about 1880 after producing about \$500,000. In Magpie Gulch early placer mining was done by drifting below thick overburden, but later, during the period 1911-1914, about half a mile of the creek was dredged. Total production from Magpie Gulch placers was estimated (Pardee and Schrader, 1933) to be about \$280,000 (8,000; 13,546). Avalanche Gulch production was from a high-level terrace along the north side of the creek, but no estimates of the production are available. White Gulch, the next major drainage north of Confederate Gulch, was mined sporadically for about 20 years, beginning about 1865, and produced \$1,000,000 (28,571; 48,379) to \$1,500,000 (42,857; 72,569) (Pardee and Schrader, 1933).

From Canyon Ferry Dam downstream along the Missouri River, a number of terrace deposits have yielded placer gold. Locations of these deposits can be found in a recent

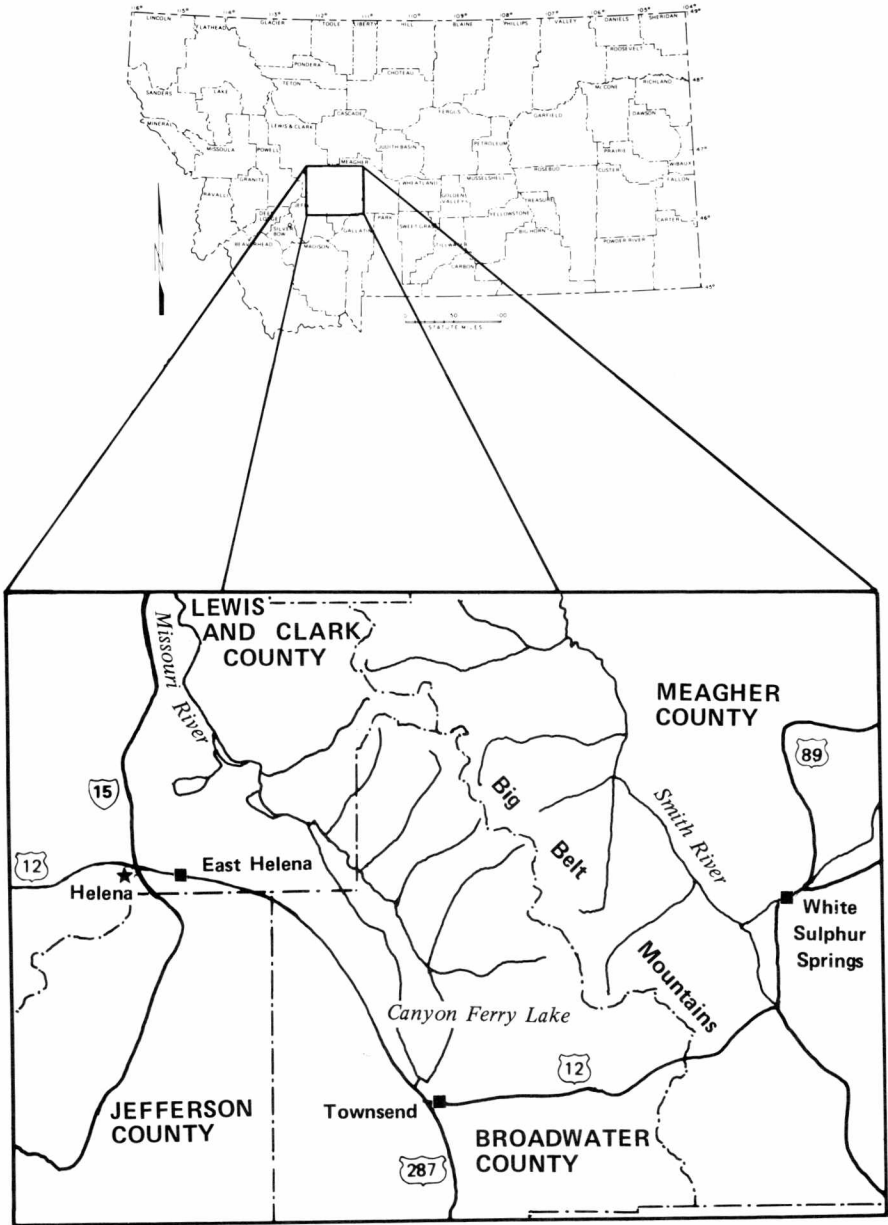


Figure 1—Location map.

report by McClernan (1983, Figure 30). Although the Tertiary and younger stratigraphy has not been mapped in detail, most geologists would agree that the source of the gold in these deposits is along the west flank of the mountains. French Bar was probably the richest of these terraces, having produced about \$1,500,000, and Spokane Bar was next in production at about \$550,000 (Pardee and Schrader, 1933). The other terraces, El Dorado, American, Gruel's, Ming's and Ruby, collectively produced about \$100,000. In addition to gold, these deposits have produced sapphires.

Gold was also produced from placers on the east flank of the Big Belt Mountains, most notably from the upper reaches of Camas Creek and its tributaries, Atlanta Creek, Elk Creek, Thomas Creek and Benton Gulch. The upper drainage of Thompson Gulch also contains placer operations. Very little is known about these operations except what can be learned from examining the workings. Thus it is inferred that the work on Atlanta Gulch was done by a dredge or trommel with a stacker.

The Golden Messenger mine is the only large lode gold mine in the Big Belt Mountains. Activity as compiled from Lorain (1937), Pardee and Schrader (1933) and McClernan (1983) is summarized below:

- 1899—Columbia Gold Mining and Milling Company developed the mine and built a mill.
- 1902—The mill was destroyed by fire.
- 1913—York Mining Company constructed another mill on the property.
- 1927—The total recorded production (to date) from the Golden Messenger was about 34,000 tons of \$6-\$7 (.2 to .3) per ton ore.
- 1927-28—Approximately 2,000 feet of development work was done by the Golden Messenger Corporation, but the mill did not operate.
- 1934—The mill was renovated.
- 1935-36—The mine was operated at a rate of about 125 tons/day.
- 1939—Seventy men were employed on the property.
- 1939-42—During this period, 309,936 tons of ore were produced and milled, yielding \$1,801,956 in revenue from mint shipments for an average recovery of \$5.91 per ton.
- 1942—Mine was closed.
- 1960-83—Property was explored by several mining companies.

All of the sources used to compile the history of the Golden Messenger and the placer deposits refer to total dollar value of the gold produced. Relating these figures to ounce-per-ton or ounce-per-yard is difficult because the authors did not define the production in terms of value when produced. The variation in price of gold per troy ounce is indicated below:

1899-1931	\$20.67
1931-1942	\$35.00

Geology

Bedrock in the Big Belt Mountains is composed of rocks equivalent to the Prichard Formation and Ravalli Group of the Belt Supergroup (Precambrian) (Harrison, 1972), overlain by Paleozoic and Mesozoic units (**Sheet 2, back pocket**). These rocks were intruded by younger igneous rocks and folded and faulted. Time relationships between

faulting and intrusion have not yet been firmly established. Geologic maps of the range or parts of it were prepared by Pardee and Schrader (1933), Johnson (1973), Birkholz (1967), Shaffer (1971), Gualtieri (1975), Nelson (1963), McClernan (in preparation), McClernan (1980), Woodward (1982), and Mertie, Fischer and Hobbs (1951).

The Newland Limestone of the Belt Supergroup of Precambrian age is the oldest formation in the range. This unit consists largely of gray argillite and siltite with some limestone and quartzite. Conformably overlying the Newland is the Greyson Shale, also a formation within the Belt Supergroup. The Greyson Shale consists predominantly of black and gray shale and argillite. The Spokane Formation conformably overlies the Greyson and consists predominantly of red shale and argillite. Overlying the Spokane is the Empire Formation, which marks the top of the Belt Supergroup in this part of the State. A regional unconformity separates the Precambrian from Paleozoic and Mesozoic units. Tertiary and Quaternary alluvium fill both the Helena-Townsend valley on the west and the Smith River Valley to the east.

Probably the oldest igneous rocks in the range are sills described as quartz diorite by Pardee and Schrader (1933). Because these bodies are confined to the Newland Limestone, they are generally regarded as Precambrian although they have not been radiometrically dated. Stocks and plugs exposed along and near the crest of the range have been considered to be Cretaceous to Tertiary age and were described as quartz monzonite by Pardee and Schrader (1933) and as tonalite by Johnson (1973). Numerous felsic dikes and plugs occur predominantly along the east side of the range. These include andesite, latite, and rhyolite (Birkholz, 1967).

The Big Belt Mountains in general are the result of an anticlinal flexure and high-angle, dip-slip faulting along the west side of the range. Some high-angle faulting also was described in the White Sulphur Springs Valley (Reynolds, 1979), but it does not appear to have major geomorphic influence. Principal structural elements in the range are the numerous thrust faults; some occur totally within Precambrian rocks, and some involve younger rocks (**Sheet 2, back pocket**). Although displacement is considered to be major along these faults, specific offset determinations await more detailed mapping.

Mineral deposits

Gold from both placer and lode deposits accounted for most of the production from the range, but copper was produced from the Argo mine in Hellgate Gulch, and sapphires are still being produced from the Missouri River bars and some of the gulches on the west side of the range. The most significant lode mine in terms of total production is the Golden Messenger. Most lode mines occur on the west side of the range although the Snowbank mine east of the divide was the only operation active in 1983. With the exception of the Golden Messenger deposit (described below), the lode deposits consist of narrow, quartz-filled fractures in igneous rocks and along bedding planes in sedimentary rocks. In most of the deposits, ore occurred within 50 to 100 feet of the surface. The primary ore consists of auriferous pyrite, but with relatively deep oxidation in the area, most of the ore mined consisted of a mixture of native gold with limonite.

The Golden Messenger deposit is the only one in the area that was studied and described in detail. It was open and accessible in 1928 when Pardee studied the area (Pardee and Schrader, 1933) and again in 1937 when Lorain (1937) described the min-

ing methods. Mineral deposits in the Miller Gulch-Confederate Gulch area were studied by Johnson (1973), but most of the deposits were inaccessible. The Golden Messenger deposit was described as a ladder-vein system in which a number of parallel veins cut through a dike and abruptly terminate at the contacts. The orebodies also terminate at the dike contacts although their enclosing faults seem to continue into the Greyson Shale (argillite). Most of the veins are in this system, striking northward and dipping westward, although a few trend at right angles to the others and dip northward. The veins consist essentially of soft limonite mixtures with gold in quartz and range in thickness from stringers only inches thick to 30 feet thick. They usually extend 200 to 300 feet both along strike and down dip. Several writers credit the deposit with an average production of \$6 to \$7 per ton. The primary mineral assemblage, in addition to quartz, contains pyrite in graphic intergrowth with hematite and a small amount of galena and sphalerite. Some ankerite is also present. Vein contacts with the diorite host rock are usually well defined although a few veins have gradational contacts. The orebodies within the veins are generally indefinite and structureless. Post-mineralization faulting has offset the orebodies though the amount of offset is minor (**Figure 2**).

Future potential and exploration possibilities

The source of the placer gold in the Big Belt Mountains presents an enigma. Confederate Gulch was one of the richest placer deposits in the early days of mining in Montana, and yet no large, rich lode sources for the gold have been identified. Some lodes have been found near the headwaters of Confederate Gulch (Johnson, 1973), but these appear to be small and do not have a significant record of production nor does the size of the workings suggest any large-scale production. On the other hand, the largest lode deposit in the range, the Golden Messenger, lies within a drainage that yielded only modest placer production.

Johnson (1973) described two types of lode deposits in the Confederate Gulch-White Gulch area—contact metamorphic and vein deposits within Tertiary-Cretaceous igneous bodies. The contact metamorphic deposits were defined on the basis of dump samples and communication with miners familiar with the mines. The veins in the igneous rocks were described on the basis of field examination. In addition, the ladder-vein system was observed and defined within the Golden Messenger mine. A narrow gold-quartz vein cutting bedding was also observed in the Snowbank mine east of the divide (McClernan, in preparation). Johnson (1973) concluded that the lode gold in the Confederate Gulch-White Gulch area is either magmatic gold, in the strict sense, or was derived from assimilated upper-crustal material. This conclusion would also apply to the Golden Messenger veins simply because they are restricted to positions within the diorite dike. It would also require that two ages of lode deposits exist, if the dikes are Precambrian as is generally accepted. Thus the Golden Messenger deposits would be Precambrian, and the Confederate Gulch lodes would be Cretaceous-Tertiary.

Very little detailed geologic work has been published on the Big Belt Mountains; consequently little evidence supporting or refuting Johnson's hypotheses is available. It is known only that the area produced a sizable amount of placer gold, including some from east of the divide where there is no obvious bedrock source. The same situation exists on the west slope of the mountains except that a larger number of lode deposits have been identified. It can be accepted, as a working model, that two ages of lode

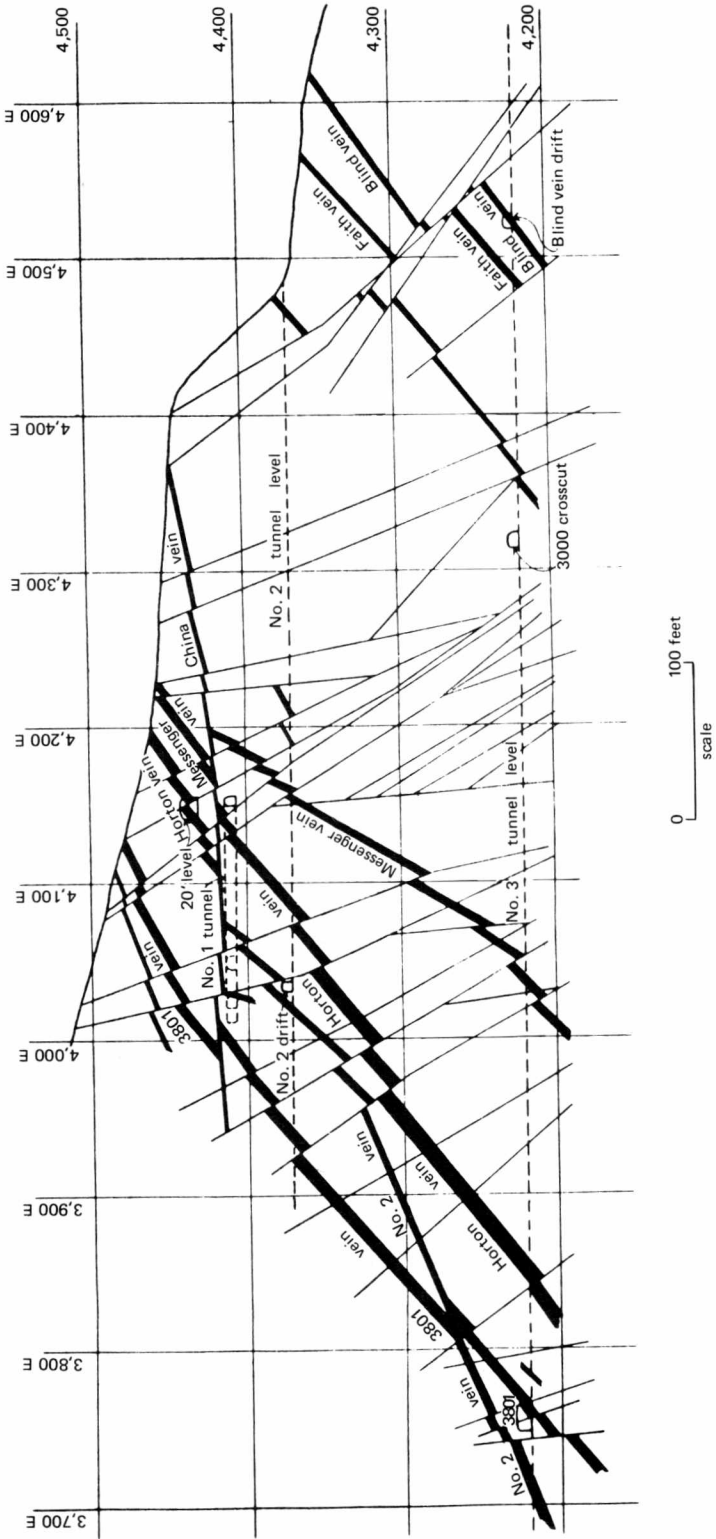


Figure 2—Cross section of the Golden Messenger mine vein system (from Lorain, 1937).

deposits exist. Even if the Golden Messenger dike is of similar age to granitic stocks in the upper part of Confederate Gulch, most geologists would agree that two different magmatic systems are responsible for these rocks. The conclusion is that for some reason the earth's crust in the vicinity of the Big Belt Mountains contains anomalous amounts of gold. Presently no data conclusively support one particular argument or another as to why this anomalous concentration exists in this area. In order to test several alternative hypotheses, the Montana Bureau of Mines and Geology is presently mapping and evaluating portions of the mountains.

The basic premise of the Bureau project is that the Belt Supergroup rocks of the Big Belt Mountains contain anomalous gold concentrations and that some of this gold has been remobilized during intrusion of diorite dikes and during intrusion of Tertiary-Cretaceous granitic bodies. The gold was mobilized probably by geothermal convection systems caused by intrusives and came to rest as veins within the igneous rocks. The immediate source of gold available to the intrusives is probably from within the Newland Limestone because this is the only commonality shared by all the lode deposits. If the Newland is the source, one or more zones within this unit could be the specific source. Identifying whether the Newland Limestone is the source of the gold is the immediate task; the next is determining the reason for its existence within the unit. A mechanism was defined by Pretorius (1976) for the Witwatersrand gold deposits of South Africa that may be applicable to the Big Belt Mountains. The mechanism requires a fluvial system that brought both coarse sediments and gold into an elongated basin. Algal mats floating farther basinward from the site of deposition of the clastics are responsible for trapping and collecting gold. The mechanism also requires a longitudinal fault peripheral to the basin and, obviously, a source for the gold within the fluvial system. In applying this mechanism to the Big Belt Mountains, the correlative situation is that in which the Newland Limestone was deposited in the Helena embayment of the Belt basin at about the same time that the LaHood Formation, a coarse clastic unit, was being deposited by a fluvial system emanating into the basin from Precambrian highlands to the south. The longitudinal fault in this instance is the Willow Creek fault. Fossil remains attributable to algal growth were identified by a number of writers including Birkholz (1967), and Pre-Belt crystalline rocks south of the Willow Creek fault are known to contain gold deposits of uncertain age.

If this mechanism is applicable to the Big Belt Mountains, one of the implications that bears on the future mineral potential of the area is that the gold in the Newland Limestone may be in economically exploitable deposits. Testing this hypothesis is the ultimate aim of the Bureau project.

Acknowledgements

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Appendix

Table 1—Nonfuel mineral production in Montana* (from U.S. Bureau of Mines).

Mineral	Measure	1982		1983**	
		Quantity	Value (thousands)	Quantity	Value (thousands)
Antimony	short tons	209	W	250	W
Clays†	thousand short tons	218	\$ 8,064	166	\$ 5,075
Copper (recoverable content of ores, etc.)	metric tons	57,086	93,521	33,241	56,429
Gem stones		NA	225	NA	300
Gold (recoverable content of ores, etc.)	troy ounces	75,171	28,258	71,305	30,305
Lead (recoverable content of ores, etc.)	metric tons	661	372	1,144	555
Lime	thousand short tons	45	2,331	46	2,426
Sand and gravel (constr.)	thousand short tons	5,338	12,794	5,000	9,500
Silver (recoverable content of ores, etc.)	thousand troy ounces	6,169	49,041	6,040	69,460
Stone, crushed	thousand short tons	1,400**	4,700**	1,300	5,000
Combined value of barite, ce- ment, clays (fire clay, 1982), graphite, gypsum, iron ore, peat, phosphate rock, sand and gravel (industrial), stone (dimension), talc, tungsten ore and concentrate (1982), ver- miculite, zinc (1982) and values indicated by symbol W		XX	67,288	XX	61,269
TOTAL		XX	\$266,594	XX	\$240,319

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

**Preliminary.

†Excludes fire clay; value included in "Combined value" figure.

(NA), not available; (W), withheld to avoid disclosing company proprietary data (value included in "Combined value" figure); (XX), not applicable.

Note: Montana coal production in 1983 was 28,660,284 million tons, produced from 9 mines (from Department of Labor and Industry).

List 1

Major Montana Exploration Projects

Cabinet Project	Pacific Coast Mines T. 27 N., R. 34 W., Lincoln County Copper, silver
Rock Creek Project	ASARCO, Inc. T. 27 N., R. 32 W., Lincoln County Copper, silver
PGM Stillwater Joint Venture Project	Stillwater PGM Resources Anaconda Minerals Company Chevron and Johns-Manville Stillwater Complex Stillwater and Sweet Grass counties Platinum-group metals

List 2

Supplemental List of Mining Enterprises

This list includes mining enterprises that have been inactive up to three years, or have not returned questionnaires. The abbreviations used to describe their former status are: (I), inactive; (U), unknown.

BEAVERHEAD COUNTY			LINCOLN COUNTY		
Calvert mine	I	1983	Lost Cause	I	1982
Comet group	I	1983	MADISON COUNTY		
Grasshopper placer	I	1982	Easton Pacific mine	I	1982
Ground Hog mine	I	1983	Gold Bar mine	I	1982
Hecla group	I	1982	Lucky Strike mine	I	1982
Last Chance mine	U	1983	MISSOULA COUNTY		
BROADWATER COUNTY			Bellview mine	I	1982
Summit and Blackhawk mine	I	1981	POWELL COUNTY		
CARBON COUNTY			Pineau placer	I	1982
Brophy No. 2 mine	I	1983	RAVALLI COUNTY		
CASCADE COUNTY			Highland mine	U	1981
Spoofer mine	I	1983	Molly 1, 2, 3, 4 & 5 mine	I	1982
FERGUS COUNTY			SANDERS COUNTY		
Lewistown pit	U	1983	Red Fir (Amazon) mine	U	1983
GRANITE COUNTY			VALLEY COUNTY		
Copper Queen mine	I	1981	Glasgow works	I	1983
Ivanhoe mine	I	1982			
Mickey mine	I	1982			
JEFFERSON COUNTY					
Big Major mine	I	1983			
Rhoades mine	U	1983			
Solar Silver mine	I	1983			

List 3

Mining Districts

Beaverhead Co., D-4

1. Ajax
2. Argenta
(Montana)
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. Niccolia
21. Nogo
(Apex)
22. Pioneer
23. Polaris
(Lost Cloud)
24. Ruby
25. Saginaw
(Jackson)
26. Utopia
(Birch Creek)
27. Vipond Park
28. Wisdom
(Big Hole)

Blaine Co., A-8

29. Bearpaw Mountain

Broadwater Co., C-5

30. Confederate Gulch
(Backer)
(Canton)
(Diamond City)
31. Deep Creek
32. Hellgate

33. Lone Mountain
34. Magpie Gulch
35. Park
(Hassel)
(Indian Creek)
(Townsend)
36. Radersburg
(Cedar Plains)
37. Winston
(Beaver Creek)

Carbon Co., D-7

38. Clark Fork
39. Hellroaring
40. Silver Run

Cascade Co., B-5

41. Neihart
(Montana)

Deer Lodge Co., 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 Co., B-7

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

Flathead Co., A-2

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

Gallatin Co., D-5

55. Eldridge
56. West Gallatin
(Spring Hill)

Granite Co., 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. Philipsburg
(Flint Creek)
(Granite)
66. Red Lion
(Cable Mountain)
67. Rock Creek
68. Rose Mountain
(Gold Creek)
69. South Boulder
(Princeton)
70. Welcome Creek

Jefferson Co., 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
(Lump 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 Co., B-6

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

Lake Co., B-2

93. Elmo
(Chief Cliff)

Lewis and Clark Co., 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 Co., A-1

107. Cabinet
(Fish River)
108. Libby
(Snowshoe)
109. Rainy Creek
110. Sylvanite
111. Tobacco River

List 3—Mining Districts *(continued)*

112. Troy
(Grouse Mountain)
(Calahan)
113. Wolf Creek
- Madison Co., D-5**
114. Bismark
(Wilmah)
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 Co., C-6**
131. Beaver Creek
(Elk Creek)
(Thompson Creek)
132. Castle Mountains
133. Murray
(Battle Creek)
134. Musselshell
(Copperopolis)
- Mineral Co., 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 Co., 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 Co., D-6**
149. Cowles
(Haystack)
150. Crevasse
151. Emigrant
(Chico)
152. Horseshoe
153. Jardine
(Bear Gulch)
(Sheepeater)
154. New World
(Cooke City)
(Blackmore)
- Phillips Co., A-9**
155. Little Rockies
(Landusky)
(Zortman)
- Powell Co., 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 Co., C-2**
165. Curlew
166. Hughes Creek
(Alta)
(Overwich)
167. Mineral Point
168. Pleasant View
169. Slate Creek
170. Three Mile
- Sanders Co., 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
(Eagle)
- Silver Bow Co., 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. Mcoose Creek
- Stillwater Co., D-7**
191. Nye
192. Stillwater
193. Yellowstone River
- Sweet Grass Co., D-6**
194. Big Timber Canyon
195. Boulder River
196. Independence
197. Natural Bridge
198. West Stillwater
- Toole Co., A-5**
199. Gold Butte
200. West Butte

List 4

Strippable Subbituminous and Lignite Coal Fields

No. on map	Name of field	Coal bed	Est. reserves in millions of tons	Acreage	Average tons/acre	Ash*	Sulfur*	Btu*
1C	Decker	Anderson-Dietz 1 & 2	2,239.99	25,523	87,763	4.0	.40	9,652
2C	Deer Creek	Anderson-Dietz 1 & 2	495.65	14,214	35,397	4.0	.50	9,282
3C	Roland	Roland	218.04	12,076	18,055	9.2	.74	8,164
4C	Squirrel	Roland	133.41	6,208	21,490	5.5	.29	7,723
5C	Kirby	Anderson	216.52	5,655	38,285	4.2	.32	8,328
		Wall	473.69	5,952	79,579			
		Dietz	834.35	17,516	47,630	5.8	.59	8,509
		Canyon	158.53	4,066	38,983	5.8	.24	8,789
6C	Canyon	Wall	1,884.25	23,859	78,974	4.6	.30	9,088
		Brewster-Arnold	65.86	2,067	31,859	7.5	.40	8,444
7C	Birney	Brewster-Arnold	180.55	6,969	25,905	5.1	.41	9,055
8C	Poker Jim Lookout	Anderson-Dietz	872.65	19,609	44,501	5.2	.37	7,925
9C	Hanging Woman Creek	Anderson	1,583.29	30,547	51,830	4.9	.29	8,496
		Dietz	1,120.96	43,654	25,678	5.5	.33	8,078
10C	West Moorhead	Anderson	883.74	19,660	44,949	5.3	.36	8,296
		Dietz	397.49	20,416	19,469	4.1	.41	7,990
		Canyon	690.19	22,547	30,611	5.6	.45	8,055
11C	Poker Jim O'Dell	Knobloch	373.29	7,890	47,311	5.1	.22	8,846
		Knobloch	564.78	7,187	78,581			
12C	Otter Creek	Knobloch	2,075.55	25,791	80,475	4.7	.36	8,468
13C	Ashland	Knobloch	2,696.20	27,200	99,125	4.8	.15	8,421
		Sawyer A & C	357.49	20,262	17,643	4.9	.49	7,883
14C	Colstrip	Rosebud	1,439.26	33,379	43,118	9.5	.12	8,836
15C	Pumpkin Creek	Sawyer	2,426.50	45,695	53,102	7.5	.34	7,438
16C	Foster Creek	Knobloch	708.13	27,801	25,470	7.8	.76	7,573
		Terret	460.87	27,462	16,782	5.8	.21	7,770
		Flowers-Goodale	258.90	14,444	17,924	7.8	.51	7,553
17C	Broadus	Broadus	739.82	18,429	40,142	7.2	.27	7,437
18C	East Moorhead	T	525.21	15,559	33,756	6.2	.57	7,120
19C	Diamond Butte	Canyon	418.02	21,363	19,566	4.8	.43	7,330
20C	Goodspeed Butte	Cook	628.95	13,446	46,775	10.6	1.63	6,771
21C	Fire Gulch	Pawnee & Cook	336.69	8,486	39,674	3.8	.33	7,739
22C	Sweeney-Snyder	Terret	326.33	10,921	29,880	9.1	.11	8,175
23C	Yager Butte	Elk & Dunning	1,175.86	26,924	43,673	4.8	.33	7,646
		Cook	312.02	14,507	21,507	6.7	.63	7,254
24C	Threemile Buttes	Canyon & Ferry	225.40	13,836	16,289	5.5	.94	6,867
25C	Sonnette	Pawnee	320.25	8,224	38,940	9.8	.88	6,964
		Cook	362.98	10,470	34,668	8.1	1.23	6,891
26C	Home Creek Butte	Canyon & Ferry	217.21	4,851	44,774			
27C	Little Pumpkin Creek	Sawyer A & C, D, X & E	215.83	8,534	25,290			
28C	Sand Creek	Knobloch	267.34	5,952	44,915	6.6	.30	7,340
29C	Beaver-Liscom	Flowers-Goodale & Terret	135.87	8,851	15,350	8.1	.96	8,102
		Knobloch	491.62	17,075	28,791	7.7	.50	8,027
30C	Greenleaf-Miller Creek	Rosebud, Knobloch and Sawyer	453.71	14,918	30,413	7.5	.71	8,422
31C	Pine Hills	Dominy	193.87	6,022	32,191	7.2	.53	7,293
32C	Knowlton	Dominy (M & L)	747.51	19,613	38,112	7.1	.41	6,710
		Dominy (U)	120.31	4,448	27,048	5.6	.38	6,645
33C	Sarpy Creek	Rosebud-McKay	1,500.00	42,373	35,400	6.5	.50	8,600
34C	Cheyenne Meadows	Knobloch	1,200.00	13,560	88,500	4.1	.40	8,400
35C	Little Wolf	Rosebud-McKay	314.00	7,411	42,370			
36C	Jeans Fork		90.00	3,800	23,685			
37C	Wolf Mountains		1,922.00	31,000	62,000			
38C	Lame Jones	Dominy	150.00	10,593	14,160			6,020
39C	Lamesteer	Harmon(?)	35.00	1,978	17,700			6,332
40C	Wibaux	C	643.00	18,518	34,720	7.9	.90	6,050
41C	Little Beaver	C	134.00	8,445	15,865			
42C	Four Buttes	C	91.00	5,180	17,570			6,140
43C	Hodges		10.00	807	12,390			
44C	Griffith Creek		10.00	568	17,700			
45C	Smith-Dry Creek	G	150.00	8,475	17,700			
46C	O'Brian-Alkalie Creek		150.00	8,475	17,700			
47C	Breezy Flat	Pust	200.00	7,062	30,090	6.7	.50	6,660
48C	Burns Creek	Pust	200.00	7,062	30,090			
49C	N. F. Thirteen Mile Creek	Pust	225.00	5,085	44,250			6,880
50C	Fox Lake	Pust	46.00	2,166	21,240			6,880
51C	Lane	Lane	561.00	44,582	12,390			7,150
52C	Carroll	Carroll	345.00	29,780	11,584	5.5	.30	7,400

List 4—Strippable Subbituminous and Lignite Coal Fields (*continued*)

No. on map	Name of field	Coal bed	Est. reserves in millions of tons	Acreage	Average tons/acre	Ash*	Sulfur*	Btu*
53C	Redwater River	S	642.00	24,181	26,550	6.1	.40	7,400
54C	Weldon-Timber Creek	S	724.00	25,565	28,320			7,660
55C	Fort Kipp	Ft. Kipp-Ft. Peck	331.00	14,500	22,830	4.6	.20	6,110
56C	Lanark	Lanark	100.00	3,531	12,390	6.3	.40	6,853
57C	Medicine Lake		58.00	3,740	15,510	7.2	1.00	6,870
58C	Reserve		246.00	18,231	13,495	7.6	.40	6,599
59C	Coal Ridge	Coal Ridge	150.00	19,200	17,700	7.5	.40	5,830
60C	Carpenter Creek	Carpenter	50.00	3,211	14,015	6.5	.40	9,270
61C	Charter	Mammoth	60.00	3,210	17,700	6.0	.90	10,190
62C	Little Sheep Mountain	A&C	200.00	10,272	19,470			
			TOTAL	42,561.93	1,152,640			

*"As received" basis. Where more than one sample available, average figures are given. (Robert E. Matson, pers. commun., 1973.)

List 5

New Mining Companies Incorporated in Montana in 1983.

ALPINE ENERGY INC.
George Twibey
340 East 1323 North, Kaysville UT 84037

ALPINE MINERALS CORPORATION
Knutte Kirkeberg
Box 192, Hot Springs MT 59845

ARGUA RESOURCES CORPORATION
Walter L. Maguire
1st National Bank Bldg., 1 E. 1st St.
Suite 1400, Reno NV 89501

ATKINS MINING AND EXPLORATION, INC.
Thomas A. Dooling
P.O. Box 1339, Dillon MT 59725

AURUM EXPLORATION COMPANY, INC.
Bill R. Presley
2806 Dill Drive, Boise ID 83705

BALDY MOUNTAIN, INC.
Gene I. Brown
27 North Tracy, Bozeman MT 59715

BASS BROTHERS ENTERPRISES, INC.
Sid R. Bass
201 Main Street, Fort Worth TX 76102

BITTERROOT NUGGET EXCHANGE, INC.
Leonard E. Vohs
216 N. Higgins Ave., Missoula MT 59801

BLACK HAWK MINING COMPANY, INC.
John W. Mahan
19 1/2 S. Last Chance Gulch
P.O. Box 1208, Helena MT 59624

BURGIEROSA SILVER MINES, INC.
George S. Gluck
Box S, Ramsay MT 59748

BUSINESS RESOURCE ASSOCIATES, INC.
Charles H. Koski
1941 East Broadway, Missoula MT 59802

BUTTE-MONT MINING, INC.
Joseph M. Chelini
1110 Dewey Blvd., Butte MT 59701

CARBON RESOURCES, INC.
Richard E. Anderson
14 Hodgman Canyon, Bozeman MT 59715

CHARITY GOLD NUGGET, INC.
Henry Lauri
P.O. Box 356, Elliston MT 59728

CM SILVER MINES, INC.
24 Agate, Kellogg ID 83837

COCA MINES, INC.
Hugh J. Matheson
#1100 - 1176 Lincoln St., Denver CO 80203

COMPASS EXPLORATION, INC.
Jack W. McKee, Jr.
3317 Vickery Dr., Billings MT 59102

CUMBERLAND RESOURCES, INC.
Martin L. Truax
6445 Powers Ferry Landing, Suite 160
Atlanta GA 30339

DIAMOND SHAMROCK EXPLORATION CO.
C. Barton Groves
P.O. Box 631, Amarillo TX 77173

DISCOVERY RESOURCES, INC.
Joseph F. Daley
30 Fourth Street East, Kalispell MT 59901

DJ & COMPANY, INC.
Dorris Jean Dallas
P.O. Box 408, Sidney MT 59270

EAGLE EXPLORATION CO., INC.
P.O. Box 2526, Amarillo TX 79105

FIMPLE ENTERPRISES, INC.
John W. Fimple
940 East 17th Ave., Denver CO 80218

GL MINING COMPANY
Philip P. McGimpsey
P.O. Box 1500, Billings, MT 59103

GOLD HILL PLACERS, INC.
Harold Reid
Route 1, Box 301, Townsend MT 59644

GOLDEN RULE MINING COMPANY
Lee G. Hanson
523 W. Bismarck Avenue, Bismarck ND 58501

GOLDEN SIERRA MINING & EXPLORATION CORP.
James C. Fisher
7100 W. 44th Ave., Suite 201, Wheatridge CO 80033

GOLDSTREAM CORPORATION
Albert E. Hunt
1136 Alton Way, Salt Lake City UT 84108

HECLA MINING COMPANY
William A. Griffith
P.O. Box 320, Wallace ID 83873

HIGH COUNTRY MINING CORPORATION
O. J. Roman
3375 S. Bannock #103, Englewood CO 80110

INTERGEM, INC.
Dennis K. Brown
3025 South Parker Road, #202, Aurora CO 80014

INTRAMOUNTAIN DEVELOPMENT, INC.
Bruce F. Hinkley
705 Coral, Lewistown MT 59457

List 5—New Mining Companies Incorporated in Montana in 1983 (continued)
ISLAND MINING (U.S.A.), INC.

John L. Petersen
3700 S. Russell Street, C-119, Missoula MT 59801

KIEWIT MINING & ENGINEERING COMPANY

William Bogensberger
1000 Kiewit Plaza, Omaha NE 68131

KING OF KINGS MILLING, INC.

Oliver W. Bivins
1800 Washington, Suite 310, Amarillo TX 79102

KING OF KINGS MINING, INC.

Oliver W. Bivins
1800 Washington, Suite 310, Amarillo TX 79102

LLC CORPORATION

Archie Clawson
Box 919, Coquille OR 97423

L M B E, INC.

David M. McLean
113 East 3rd St., Anaconda MT 59711

LUNAR, LTD.

Janet L. Mullens
10885 Half Moon Pass, Littleton CO 80127

MACUM ENERGY, INC.

Gary B. Broeder
805 First Bank Building, Billings MT 59101

MIDORO, INC.

Edward Kopfman
Route 2, Box 175-A, Stevensville MT 59870

MINERAL DEVELOPMENTS, INC.

Ann Pryor
P.O. Box 422, Lincoln MT 59639

MINES MANAGEMENT, INC.

William R. Green
1025 W. A Street #2, Moscow ID 83843

MINEX RESOURCES, INC.

Dennis W. Tippets
North Broadway & Park, Riverton WY 82501

NELSON MOUNTAIN MINING CORPORATION

John L. Petersen
1740 Cyprus Court, Missoula MT 59801

NINE-MILE MINES, INC.

Robert Pinder
1901 Prospector, Park City UT 84060

NORTH AMERICAN EXPLORATION, INC.

O. J. Gatten
77 Winthrop St., Augusta ME 04330

N.R.S., INC.

John F. Ratchye, Jr.
36 North Brooks, Sheridan WY 82801

PEMBINA MINERALS, INC.

M. J. Hughes
P.O. Box 1166, Helena MT 59624

PERIGEE RESOURCES, INC.

Theodore W. Lindgren
2640 Whitetail, Gillette WY 82716

PORTABLE, INC.

William A. Ogle
1010 Bear Canyon Road, Bozeman MT 59715

PROSPECT MINING CO., INC.

Anciel Griffith
420 South State, Preston ID 82363

PURNELL-JARVIS EXPLORATION, INC.

5307 Mockingbird Lane, Suite 3, Dallas TX 75206

R & R PROSPECTORS, INC.

Ronald U. Toomer
401 College, Stevensville MT 59870

SAMSON RESOURCES COMPANY

Charles Schusterman
2700 1st National Tower, Tulsa OK 74103

SILVER BOW MINERALS, INC.

John W. Stuker
Chinook MT 59523

SK VENTURES, INC.

Stacey, K. Raymond
411-8th St., Baldwin City KS 66006

SPINDLE-TOP RESOURCES, INC.

Joseph F. Daley
30 Fourth Street East, Kalispell MT 59901

STORM KING COAL MINING COMPANY, INC.

Jerry J. Prouse
R.R. 1, Shepherd MT 59079

TEXASGULF MINERALS AND METALS, INC.

Gino P. Giusti
Texasgulf Inc., High Ridge Park, Stamford CT 06904

U.S. INDUSTRIAL METALS CORPORATION

3301 San Mateo, N.E., Albuquerque NM 87110

WEST MONT OIL, INC.

A. P. Waggoner
P.O. Box 507, Whitefish MT 59937

YB ENERGY, INC.

Bill J. Joyner
1119 North 7th Avenue, Bozeman MT 59715

Index of Mines, Mine Owners and Operators

(Mines in Supplemental List [page 43] not included in this Index.)

Abbott, G. S.....	4	Bear Creek Mining Co.....	15
Abbott, Harry.....	5	Beaver, Raymond L.....	8
Absaloka mine.....	30	Beaverhead mine.....	28
Acme group.....	14	Belue, Travis.....	12
Adam and Eve No. 1 and No. 2.....	28	Belus, Martin L.....	1
Adams, Denis L.....	25	Beniger, F.....	2
Adams, Owen.....	2	Bennett, Carroll R.....	4
Ajax Gold, Inc.....	1	Berg, Carl.....	12
Ajax mine.....	1	Berkeley pit.....	17
Alameda Mines, Inc.....	10	Bessie and Golden Wave mine.....	10
Alameda-Wakoosta mine.....	10	Betlach, Roy A.....	22
Alexander, June.....	23	Big Horn Calcium Co.....	25
Allen, Harvey.....	7	Big Horn Calcium quarry.....	25
AM Mining and Development Co.....	5	Big Horn Limestone Co.....	25
Amanda mine.....	15	Big Mary mine.....	6
Amax Exploration, Inc.....	8	Big Sky GeoResources.....	22
Amazon-Dixie mine.....	13	Big Sky mine.....	31
Amazon-Dixie Mining Co.....	13	Big Sky placer.....	22
American Colloid Co.....	24	Big Willow No. 1 and No. 2.....	28
American Colloid pit.....	24	Bigler group.....	12
American Smelting & Refining Co., Inc.....	9	Billern Corp.....	6, 7
AMSELCO Exploration, Inc.....	7	Bingham, Jack.....	9
Anaconda Minerals Co.....	17, 23, 25	Bitterroot Valley stone quarry.....	28
Anderson, Richard.....	10	Black Bull mine.....	4
Anliker, Mary C.....	21	Black Butte mine.....	18
Antler Mining Co. pit.....	24	Black Canyon placers.....	20
Antonoli, Peter J., Estate.....	4	Black Diamond Graphite Co.....	25
Argee Corp.....	29	Black Diamond group.....	25
Arpan, Joe, Mrs.....	21	Black Pine mine.....	6
ASARCO, Inc.....	9	Black Pine Mining Co.....	6
Ask, Harold.....	14	Blue Bird mine.....	6
Atlantic Pacific mine.....	10	Blue Jay placer.....	20
August-Gold Bug-Little Ben group.....	15	Bluebell group.....	2
Aurum, Inc.....	6	Bodle, Albert.....	20
		Bonanza group (Fergus Co.).....	4
B & H (Pete & Joe) group.....	10	Bonanza group (Mineral Co.).....	13, 23
Babbit mine.....	1	Bonnet, Les.....	13
Babe #1.....	16	Borland, R.....	18
Badger No. 1 and No. 2 mines.....	10	Boulder Chief mine.....	6
Balkovatz, Joe.....	6	Box, Fred, Estate.....	10
Ballard, Al.....	20	Box, Oleta C.....	10
Ballard Mining Corp.....	20	Boyce, Stanley L.....	7
Ballou, Herb.....	9	Bozlee, Ray.....	22
Bar group.....	14	Brady, J. V.....	2
Barbara Ann mine.....	14	Brooks, J. C., Estate.....	16
Barry Dean mine.....	15	Browns quarry.....	25
Basin Jib group.....	6	Bubany placer.....	20
Basin quartz quarry.....	27	Buck, Dorothy.....	11
Bauska, Jack.....	5	Buckeye mines.....	10
Bauska, L. O.....	5	Buckeye Mines, Inc.....	10
Bay Chief mine.....	16	Bullion and Hope group.....	7
Bayard claim.....	10	Bullock, Delbert.....	7
Bayles, Raymond G.....	4, 19	Bullock, John.....	7

Burchak, A. J.	12	Copper King group	14
Burgierosa Silver Mines, Inc.	1	Copper King Mining Co.	14
Burlington Northern, Inc.	28	Corkill, Marvin E.	4
Burnham, D. C., and others	5	Coster, Tom	8
Burnham, Dean C.	5	Cottontail mine	12
Burns, Larry	20	Cougau	5
Burns, William L.	17	Counts, J. H.	14
Buster mine	1	Counts, John H., Jr.	14
Butte Water Co.	22	Counts, Silase	14
Byam, Charles	6	Counts, Steven J.	14
Byam, Frenett	6	Craig, H. C., and Co.	22
C & H Company	21	Craig, Lloyd T.	12
Cableway group	9	Cripe, Donald C.	9
Cadgie-Taylor mine	6	Cripe, Donald C., and others	16
Cain, Clinton A.	12, 20	Cripe, Marie O.	9
Calico clay pit	24	Croff, G. A., and others	8
Cameron (Yellowstone) mine	28	Croff and Montague	8
Camp Robber placer	20	Cross mine	2
Canyon Creek quarry	27	Crown Silver group	13
Cardwell pit	27	Crown Silver Mining Co.	13
Carter, Jerry	24	Cruse, Thomas, Mining & Development Co.	9
Carter, Paul	24	Crystal mine	7
Carver, Herb	3	Cullen, Bill	3
Casper, James A.	8	Curlew mine	16
Champion B. mine	4	Custer mine	3
Char Tam mine	2	Cutbirth, Don	30
Charcoal group	13	Cyprus Industrial Minerals	28
Chinese Diggings	20	Dale Bros.	12
Choteau project	18	Dale, Richard T.	31
Clary, Jack	11	Day and Harvey group	17
Clary, Jean	11	deBarathy, Sidney A.	16
Clay Lewis placer	21	Decker Coal Co.	30
Clendennin group	8	Decker, Frida	10
Cleve-Avon and Franklin mine	1	Decker, Robert, Sr.	10
Clopton, Earl	10	Dennis, David H.	7
Coal Creek mine	30	Dettwiler, Ralph	16
Coal Creek Mining Co.	30	DeValle, Claude	21
Coates, Florence, and others	2	Diamond Hill mine	3
Cobben, Bob	3	Ditto, A. H.	15
CoCa Mines, Inc.	5	Dividend Lode mine	10
Coleman, Sam	21	Dixon, Dorothy E.	16
Coloma mine	23	Dixon, James R.	15, 16
Colony open pits	23	Doggett, L. W.	2
Columbia mine	7	Dolly Quartz (New Seattle) mine	6
Comet group	7	Dominic group	1
Cominco American, Inc.	26	Don-A-Vera group	10
Cone, Lucinda	13	Donegan, Sylvan, Jr.	24
Conklin, Richard (Mrs.)	21	Dringle, George C.	10
Constellation deposit	29	Duncan, Keanan	22
Contact Mining Co.	6	Durden Construction	15
Contact Mining Custom Mill	6	Eagle Black group	10
Continental Lime, Inc.	25	Eagle Rock group	27
Continental Lime Inc. plant	25	Eagle Rock Mining Co., Inc.	27
Cop Construction	15	Earll, F. N.	6
Copper Elk group	4	Earthsearch, Inc.	18
Copper group	14		

East Berkeley pit	17	Gildersleeve, Fern	23
East Coeur d'Alene silver mine	13	Gildersleeve, G. M.	13
East Coeur d'Alene Silver Mines, Inc.	13	Gildersleeve, George	21,23
East Decker mine	30	Gilliam vermiculite deposit	29
East Pacific mine	3	Giulio, Harold J.	8
East Pacific Mining Co.	3	Gladstone Crushing & Construction, Inc.	6,22
East Ridge group	7	Glenam claim	10
Edna mine	3	Glittering Hill mine	6
Eimarsen, Charles A.	5	Gold Bug-Little Ben-August group	15
Elander, Jay	13	Gold Butte placer	22
El Dorado Bar Sapphire mine	26	Gold Nugget placer claims	19
El Dorado Inc.	26	Gold Ranch Mining Corp.	10
Elk Creek mine	23	Gold Reserve Corp.	15
Elkhorn group	18	Golden Asset mine (Broadwater Co.)	3
Elkhorn Mining Co.	19	Golden Curry (Sourdough) mine	7
Elliston Consolidated group	15	Golden Dawn mine	1
Elliston Consolidated Mining Co.	15	Golden Grizzly group	14
Elm No. 6	19	Golden Jubilee Corp.	6
Emma mine	17	Golden Jubilee mine	6
Engl, Palmer (Mrs.)	3	Golden Sunlight group	7
Exchequer mine	10	Golden Sunlight Mines, Inc.	7,8
F. D. placer	21	Golden Wave and Bessie mine	10
Faithful Lode	1	Goldsil Mining and Milling, Inc.	9
Falcon Explorations	8	Goldstream Corp.	10
Farnsworth, R. B., Estate	11	Goose Lake group	14
Fay, Fergus	9	Grace, W. R., and Co.	29
Federal Reserve group	5	Granite Hill No. 1 and No. 2	3
Ferdinand mine	1	Grass Hopper claims No. 1	1
First National Bank, Helena	16	Grasshopper mine	1
First Security Bank of Utah, Salt Lake City	10	Gray Rock mine	9
Florence group	7	Great Eastern mine	4
Florence and Queen mine	4	Green Campbell mine	10
Fontaine, Del	13	Grubstake mine	10
Forbes, W. G.	10,29	Gwynn, Thomas	20
Forkner, Jim	3	Gypsy Creek Mining Co.	12
Four Up group	16	Haab, Albert	7
Four V's claims	27	Hallett Minerals Co.	18
Fourth Estate mine	17,24	Hand mine	2
Fox, Erma	20	Hand, William M.	2
Franklin mine	9	Hanley, Jerry	5
Franklin and Cleve-Avon mine	1	Hanley, Selma, and others	5
Free Enterprise Uranium-Radon mine	19	Hansen, Charles	9
Freeman, Leigh	5	Hanson Properties, Inc.	1
French Bar placer	20,26	Hanson, R. A., Mining Co.	1
French Bar underwater section	20,26	Hard Cash mine	3
Frida Marie group	10	Harris, David M.	6
Frostbite deposit	23	Hatton, Clifford	16
G & M Mining	12	Hatton, Clifford, and others	16
Gardner, J. F.	17	Hawkeye placer	20
Gem Mountain Sapphire mine	26	Heaney, Ethel C.	6
General Constructors	25	Heath (Shoemaker) mine	25
General mine	9	Hecla Mining Co.	4
Geordge, Richard K.	12	Heidelberg mine	16
Geordge, Richard K., and others	12	Heidelberg Mining and Leasing Co.	16
Geoscience and Services, Inc.	1	Heinrich, Raymond J.	21
		Helburn, Mary	12

Helburn, Steve	12	Katches, A. J.	10, 11
Helehan, Tom	17, 24	Keller, Esther	13
Henderson group	14	Kelley mine	17
Hendricks, Tracy	31	Kendall mine	5
Herman, Russ	10	Kenelty mine	23
Herrigg Creek Mining Co., Inc. group	5	Kennett-Bertha mine	11
High Hope group	11	Kennett Gold Corp.	11
Highland placer	22	Keyhold group	11
Higinbotham, L. L.	20	Kiewit Mining and Engineering Co.	20, 30
Hill, Jim	3, 25	King, Hugh G.	13
Hill, W. Ray	12	Klondike Ore #1	22
Hoekema, Roy	2	Knife River Coal Co.	31
Hog Heaven project	5	Knife River Coal Mining Co.	31
Hollingsworth, J. S.	19	Knobel, F. Eugene	22
Holmes, Don	2, 3	Koenig, Chris	19
Holter, Del	13	Kokoruda, C.	2
Holter Estate	16	Kolberg, Arnold J.	3
Hope and Bullion group	7	Kolberg Eureka Lead No. 1	3
Hope group (Granite Co.)	6	Kolberg mill	3
Hope group (Park Co.)	14	Kountz, Joe, Estate, and others	7
Horton, Mildred M.	10	Kralicek, George	7
Horton, Richard F.	10	Kruger, Marion R. (Mrs.)	17
Huckaba, Ralph	7, 8, 15	Kruse, Howard	11
Hughes Mining Co., Inc.	10, 11	Kuhnhausen, C. L. (Mrs.)	5
Hughes, Rick	11	Kurth, Rodney	20
Humbolt mine	7		
Humdinger group	9	LaMarche, Geraldine	16
Hungry Hollow placer	20	Lamplighter group	2
		Langstaff, Kenneth	1, 2
Ida A. placer	21	Last Chance group (Beaverhead Co.)	2
Ideal Basic Industries	25	Last Chance mine (Silver Bow Co.)	17
Independent mine	9	Laura Apex group	16
Indian Creek, Inc.	19	Lawrence, John C.	1, 16
Indian Creek placer	19	Layton, John A., Estate	11
Infinite group	7	Leatham, L. S.	10
Inspiration Consolidated Copper Co.	6	Leber Mining Co.	7
Intergam, Inc.	26	Lee Mining Corp.	2, 12
Iron Age group	3	Lenling, Lawrence, and others	5
		Lewis, Clay	21
Jack Rabbit mine	11	Lewis, Wade V.	19
Jackson, R. P.	23	Lewis, Wade V., Estate	8
Janney Construction Co., Inc.	28	Liberty mine	8
Jaquette, Frank	28	Lindquist, Enard	15, 16
Jay Dee No. 3	5	Lindquist, Lester	7, 8
Jenkins, D. E.	8	Lindsey, Wally	11
Jenkins, Don L.	2, 19	Little Anaconda group	13
Johnson, Gwendlyn Couch, and others	3	Little Ben-Gold Bug-August group	15
Jolly Roger mine	9	Little Joe placer	20
Jones, D. L.	15	Lively Mining Co.	11, 22
		Lively Mining, Inc.	1
Kady Gulch group	7	Lively's, Inc.	17
Kaiser Cement Corp.	26	Livingston marble and granite quarry	28
Kane, Douglas	31	Livingston Marble and Granite Works	28
Kannegaard, Charles L.	13	Loggers Dream mine	12
Kanta, George E.	27	Long Construction	31
Kanta pit	27	Lord, Nettie	4
Kanta Products, Inc.	27	Lost Creek mine	18

Lost Gulch placer	21	Meged Bros.....	30
Lucky Dollar mine	12	Meridian Land & Mining Co.....	15
Lucky Hit group	7	Metesh, Joe (Mrs.)	6
Lucky Jim Beam group mine	23	Midnite Mines, Inc.	2
Lucky Lady group	16	Miller, Dennis	3
Lucky Linda mine	9	Miller, Mary Ann	3
Lucky Strike mine (Beaverhead Co.)	2	Mine-X, Inc.	29
Lycoming mine	6	Minnick, Charles	13
Lykins, Betty	1	Minnick, Ray	13
Lynn Mines & Mining, Inc.	20	Mississippi, Univ. of, Foundation.....	1
Lynn, R. L.	20	Mo, Hans	9
Lynn, Robert L.	7	Mohawk mine	15
MacDonald, Dan A.	1	Moly Tung, Inc.....	19
Mackeg placer	22	Monarch Co., The.....	4
MacPherson, K. W. (Mrs.)	6	Monarch mine	15
Madden group	11	Monarch Minerals, Inc.	15
Mader, MacDonald M., II.....	20,26	Monk, Austin	17
Maehl, Grace	6	Montana Barite Co.....	23
Maehl, James E.	6	Montana City quarry.....	26
Magdalena group	7	Montana Gold and Sapphires, Inc.	20,26
Maginnis mine	5	Montana group	15
Magnitite group	14	Montana Minerals Browns Gulch placer...	20
Magnus, John	11	Montana Mountain Mining, Inc.....	16
Maguire, Walter L.	10	Montana, State of	20,26,27
Maloney, Goldie S.	28	Montana Tunnel group.....	7
Maloney, Goldie S., and others	28	Monte Christo mine	9
Maloney, Sam	28	Monte Clark group	17
Malta plant	24	Montgomery and San Miguel mine	8
Mammoth mine	11	Montro gold mines	17
Mannix, C. E.	9	Moonlight mine	17
Maples and Bridgton group.....	3	Morbeck, Frank A.	13
Maronick Construction Co., Inc.	26	Morgan Enterprises, Inc.	4
Maronick, E. P.	26	Morgan James M.....	4
Martin, Ronald I.	27	Morgan, Mike.....	4
Martin's Peat, Inc.	27	Morning Star mine	11
Mary Sue placer	21	Morrison-Knudsen Co., Inc.	30
Marysville project	9	Mortensen, Audrey	12
Mascot Mines	7	Mortensen, Steve	12
Maycumber, Guy E.	9	Motica, J. E.	14
Mayday mine	2	Motley, Mary W.....	16,18
McBride, G. V. R. (Mrs.)	8	Moulton mine	4
McBride, G. V. R. (Mrs.), and others	8	Mountain Queen mine	7
McCabe, Gary L.	6	Mueller, Ed	11
McClellan quarry	26	Mueller mine	11
McDaniel, Copper group	12	Mulcahy, William.....	7
McDaniel, Duane.....	12	Mullen barite mine.....	23
McElligett, Stanley, Family	21	Myers, G. A.	16
McGuire, Kenneth	12	Myranda claim	5
McLaughlin, Dan	6	N L Industries, Inc.....	23
McLaughlin, Jim	11	Nancy Lee mine	13
McMaster, James	20,26	Nancy Lee Mines, Inc.....	13
McQuarrie quarry.....	28	National Vermiculite Corp.....	29
McVeda, Glenn	5	Negros mine	16
McVeda, William	5	Nellie Bly group	11
Meadow Creek placer	21	Nellie Grant mine	9
Meadow mine	7	NERCO, Inc.....	30

Nethercott, Rockie	9	Potter, J.	18
Nevin, Barbara	24	Potts, John T., Estate	10
Nevin, Robert C.	24	Prather, Barbara	14
New Bald Eagle mine	8	Pretty Girl placer	20
New Seattle (Dolly Quartz) mine	6	Princess Ethne mine	9
New Valley Forge mine	9	Prospect Mining Co., Inc.	19
New Winnetka Trust group	11	Prouse, Jerry J.	30
New World project	15	Queen mine	6
Newman, Dave R.	15	Queen and Florence mine	4
N i e l s e n , D . C . 6		R & D Minerals Corp.	12
Nine Mile mine	13	Ranchers Exploration & Development Corp. ..	14
Nine Mile Mines, Inc.	13	Raven mine	17
Nolte, Robert	24	Raven Mining Co.	17
Nordwick, Ronald L.	8	Raymond, A. K.	19
North Moccasin Inc., Ltd.	5	Red Pine mine	11
North Pole mine	16	Reeb, Margaret	14, 21
North Sunlight group	8	Regal mine	28
Northern Mining Co., Inc.	10	Reichel, A. E., Estate	20
Norwegian placer	20	Reid, Harold	2
Nugget mine	13	Relyea, George, Estate	26
Nugget Mining Co.	13	Relyea mine	26
No. 4 mine	5	Republic mine (Fergus Co.)	5
Nut Pine mine	6	Republic mines (Park Co.)	15
Nygren, Nels.	1, 2	Resources America, Inc.	10
Nygren, Rudy	1, 2, 25	Rich-Mich placer	21
Nyquest, Theodore (Mrs.)	20	Ridgeway mine	11
O'Hara, R. J.	26	Ridgeway Mining Co.	11
Olympic #2 placer	22	Rife, Delores	5
P. G. Mine	20	Rife, John	5
P. M. Coal Mining Co.	30	Ritchie, William	30
P. M. mine	30	Rivers Creek mine	13
Pacific Power and Light Co.	30	Roberts, Art	4
Pacific Silica Co.	27	Robin L. placer	21
Parnell group mine	6	Rocky Mountain Minerals, Inc.	12
Payday group	8	Romerio, A. K. (Mrs.)	7
Peabody Coal Co.	31	Romerio Co.	7
Peabody mine	17	Roper, Ed	15
Pearl group	11	Rosebud mine	31
Peggy Ann mine	9	Rothfuss, John	7
Peggy Ann Mines, Inc.	9	Royal Apex Silver, Inc.	17
Pentecost, T. A., and others	4, 5	Ruby Gold placer claims	19
Pete & Joe (B & H) group	10	Ruby Gulch mine	15
Peterson, A. B.	21	Ruby No. 1 and 2 mine	28
Peterson, Albert Byron	21	Ruby Ridge group (Willow Creek mine) ..	28
Peterson, Alfred	15	Rumley mine	8
Peterson, Guardee	15	RY and K mine	11
Peuse, Gordon	30	S & G Mining Co.	20
Peuse mine	30	S & P Mining Co.	5
Pfizer, Inc.	28	S & S Diversified, Inc.	2
Phifer, Sam	10	St. John group	11
Piermont No. 1 East mine	8	St. Lawrence Consolidated Mines, Inc.	12
Placer fire clay pit	24	St. Louis mine	3
Plexus Inc.	15	Salusso, Martyn	7
Polaris mine	2	Sam Bear Mining Co.	12
Ponderosa 102 and 102A mine	4		

San Miguel and Montgomery mine	8	Steel Brothers Canada	25
Sata Maira Rainbow group	2	Stemwinder placer	21
Savage mine	31	Stevens, Joe	20
Scalded Cat mine	11	Stillwater River placer	21
Scheitlin, Ed, Estate	12	Stoick, James J.	19
Schreiner, Warren	4	Stolen Sweets mine	3
Semsak, Arthur	2	Stols, Tom	22
Setter mine	8	Storm King Coal Mining Co., Inc.	30
Setter Mining Co.	8	Storm King pit	30
Sewell, Ed	3	Stratton, Howard	17,22
Sewell, Irving	18	Stratton, Mark	22
Shafer, Raymond D.	11	Stratton mine	17
Sheep Mountain mine	5	Strawn mine	12
Shepherd, R. M.	23	Streak of Luck, Sunnyside group	8
Shermont Mining Co.	11	Strong, H. W.	28
Shoemaker (Heath) mine	25	Sturgeon, D. A.	23
Shook, Earnest J.	16	Summit mine (Jefferson Co.)	8
Shook Mines, Inc.	16	Sunnyside, Streak of Luck group	8
Short Shift mine	11	Sunrise Creek placer	21
Siaperias, Ted	2	Sunrise Silver Mines	13
Silver Bar placer	22	Swamp Frog mine	19
Silver Bell group	13	Sylvia and Sylvia Extension mine	2
Silver Bell, Inc.	13		
Silver Cable group	13	T & B Mining Co., Inc.	22
Silver Cable Mining Co.	13	Tabor Mines and Metals Corp.	10,11
Silver Crown mine	12	Taft, Lionel C.	15
Silver Crown Mines, Inc.	12	Taplin, Joan	26
Silver Dike group	3	Taplin, Richard	26
Silver Dyke mine	4	Taylor, Darrel	20
Silver King mine	6	Thayer, Lyman	4
Silver Peak group	13	Thiessen, D. J.	11
Silver Peak Mining Co.	13	Third Term mine	16
Silver Ridge group	2	Thomas, Jim	12
Silvinite, Inc.	6	Thunderbird group	2,19
SK Ventures, Inc.	19	Thunderbird Resources	2,19
Skookum placer	20	Tibbetts mine	16
Sky mine (Broadwater Co.)	3	Tiger group	2
Sky mine (Lewis and Clark Co.)	9	Timberline Minerals, Inc.	18
Slemes, Fred D.	21	Tinting, Carl A.	9
Slim Sam group	4	Tonnemaker, Clayton	30
Smith, Arnold	4,8	Tourmaline Queen mine	8
Smith, Vernon	15	Towndrow, Peter	9
Snow Bank mine	12	Treasure Chest mine and plant	28
Snow, Harold	24	Triad Investments, Inc.	5
Snowbird mine	24	Triangle placer	21
Souders, Richard	13	Trident quarry	25
Sourdough (Golden Curry) mine	7	Trout Creek placer	21
South Boulder Mining Corp.	11	Troy unit	9
Sparrow Resources, Ltd.	9	Tudor, William	8
Spokane Hills mine	18,19	Twilight claims group	9
Spotted Horse mine	5	Two Lady No. 7	5
Spring Creek Coal Co.	30	Tyrrel, Nila	2
Spring Creek mine	30		
Springman, W. T.	25	Uncle Sam mine	12
Spuhler group	12	Union Carbide Co.	27
State Mining Co.	16	Union Carbide Corp.	19
Stauffer Chemical Co.	27	United Investors Corp.	10

United Minerals	3	Watseca mine	12
U.S. Antimony Corp.	1, 16	Weaver, Howard	20
U.S. Grant mine	12	Weber, Charlie	7
U.S. Gypsum Co.	25	Wegener Mining Co.	8
USMX of Montana, Inc.	7	Wells, John A.	18
Valley International Products, Inc.	19	West Decker mine	30
Valley View mine (Broadwater Co.)	4	West Gate Mining & Construction .	3, 4, 18, 19
Valley View mines (Madison Co.)	12	Western Energy Co.	31
Viking Exploration, Inc.	5	Western Silver Development Co.	13
Violet group	16, 18	Western Vermiculite Co.	29
Virginia Gulch mine	2	Westmoreland Resources	30
Volker, Albert E.	27	Wharf Resources	15
Von Bretz, L.	30	White Lime group	25
Von Kleist, R.	11	Whiteley, Jack H.	16
Vulture mine	4	Wild Cat and Line Lode	8
Wagner, Ray	21	Wilhelm, Lloyd	7
Waldbillig, Joe	14	Willden, Al	24
Waldbillig mine	14	Willow Creek mine (Ruby Ridge group) .	28
Waldbillig, O. R.	14	Wilson, Horace	6, 20
Waldo, Gordon	4	Womack, John J.	9
Walish, Bob	23	Woodley, Delbert	16
Walker, Giles	8	Woods Creek copper mine	16
Walkup, Ben	6	Workman, Ed	11
Wallace Creek Custom Mill	14	Wright, Victor D.	21
Wallace Creek Milling Co.	14	Wrong Font group	17
Walters, Norman	20	Yellowstone (Cameron) mine	28
Wapita mine	2	Yogo Sapphire mine	26
War Eagle mine	5	Young, Bill E.	22
Ward Development Co.	14	Young, Ernest H.	22
Ward, Fred	14	Your Name placer	22
Ward lode mine	14	Zonolite mine	29
Warm Springs mine	26	Zortman-Landusky Mining Co.	15
Warren quarry	25		

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Sheet 1—Map showing distribution of mining districts and strippable coal fields in Montana.

Sheet 2—Generalized geologic map of the northern Big Belt Mountains.