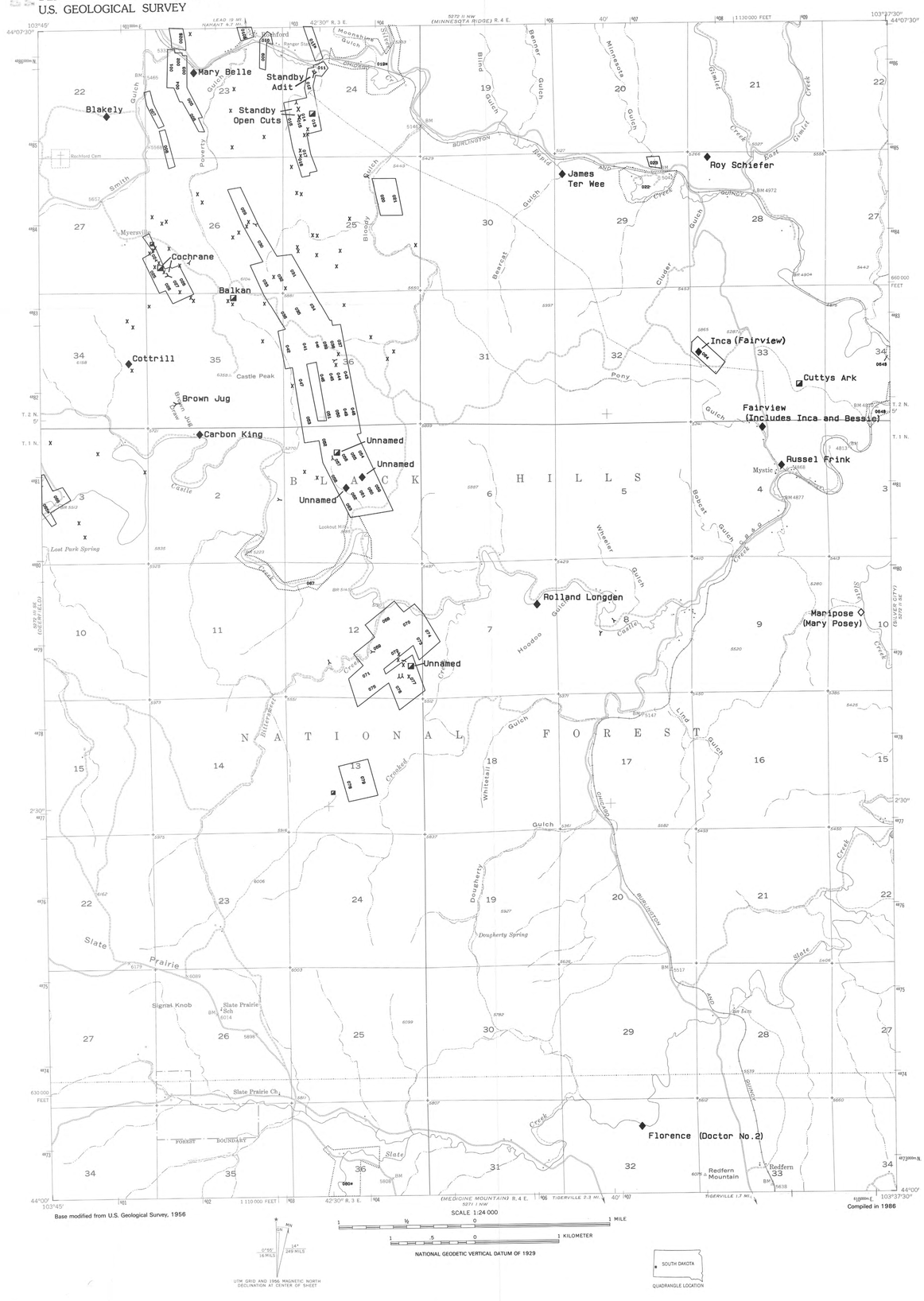
DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY



Base modified from U.S. Geological Survey, 1956

Compiled in 1986

SCALE 1:24 000

1 0 1 MILE

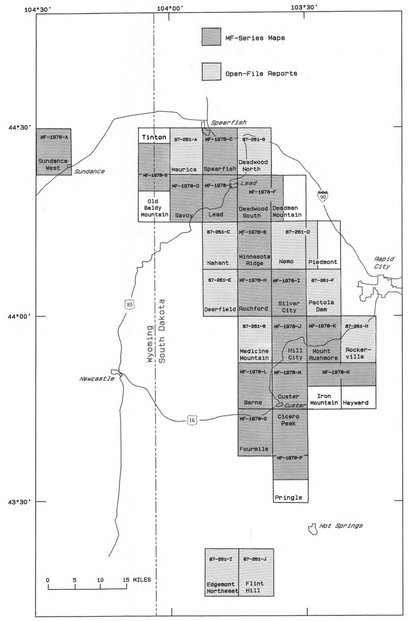
1 .5 0 1 KILOMETER

NATIONAL GEODETIC VERTICAL DATUM OF 1929

UTM GRID AND 1986 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

SOUTH DAKOTA

QUADRANGLE LOCATION



INDEX MAP SHOWING MINES AND PROSPECTS MAPS (MF-SERIES MAPS AND OPEN-FILE REPORTS) IN THE BLACK HILLS REGION

EXPLANATION

Mine--Location known. Distinguished from prospect by name of mine next to symbol. Alternate names or synonym(s) in parentheses. If there is enough space on the map, the entire mine name and synonym(s) are shown; otherwise, mine name may be abbreviated and synonym(s) deleted from map. Full mine names and all synonyms are shown in the "Alphabetic list of mines"

- Adit
- Shaft
- ◆ Open pit or other type of opening
- X Large pit
- △ Quarry
- □ Gravel pit
- ◇ **Mine**--Approximate location shown. Open pit, shaft, adit, or other type of opening

Prospect

- Adit
- Shaft
- X Pit
- \+ Multiple pits

Patented claim--See alphabetic and numeric lists of patented claims. Asterisk (*) indicates part of claim extends into adjacent quadrangle. Dollar sign ($) indicates most of claim in adjacent quadrangle. Boundaries between claims not shown

002 **Lode claim**--Orientation of number parallel to long axis of claim

0048 **Placer claim**--Number approximately in center of claim

using existing information; in that event the most logical location was chosen. The location of some or many mines on this map may differ from those in present-day bases such as the U.S. Bureau of Mines Mineral Inventory Location System (MILS) or the U.S. Geological Survey Mineral Resources Data System (MRDS), formerly the Computerized Resources Information Bank (CRIB).

Locations of prospects in this quadrangle were taken from Atkinson (1976), Bayley (1972a, 1972b), and Richard Gleath (unpub. data, 1986). Because many quadrangles, or parts of quadrangles, have not been mapped in as much detail as other quadrangles, comparison of the density of prospects from one quadrangle to another, or even within one quadrangle, should not be attempted. As an example, part of a quadrangle may be shown on the map as having more prospects than another part, but the first part may have been mapped in greater detail than the second part. Similarly, a part of a quadrangle may have many prospects that are not shown on this map because the original source of information did not map prospect pits.

Geologic data for the map are from Atkinson (1976), Bayley (1972a, 1972b), Richard Gleath (unpub. data, 1984), Darton and Paige (1925), DeWitt and others (1986), Downey (1957), Harder (1934), Harrer (1964), Kleinkopf and Redden (1975), Lane (1951), Luza (1970), McMillan (1977), O'Harra (1916), Redden (1975, unpub. data, 1986), Redden and Norton (1975), Wayland (1936), Wilson (1951), Woodard and Lovseth (1931), and Zeitner (1977).

PRECISION OF LOCATION INFORMATION

All mine symbols except the unfilled diamond (◇) indicate that the location of the deposit is known within a 200-foot radius. The type of opening at a mine (adit, shaft, open pit, trench, and others) is designated by one of ten different symbols. The unfilled diamond symbol indicates that the location is known only to within a 1/4 mile radius and that the type of mine opening is unknown. Mines and prospects whose locations could not be verified to within closer than a 1/4 mile radius were not plotted on the map.

PATENTED CLAIM AND MINE LISTS

Patented mining claims are listed both numerically and alphabetically. Mines are listed alphabetically. For ease in locating the claim or mine on the map, the legal description (section, township, range) is given.

Each patented claim on the map is represented by a number keyed to the numeric and alphabetic listings. Where possible, the claim numbers are plotted approximately in the center of the claim and parallel to its long axis. Boundaries between adjacent claims are not shown. An asterisk (*) following a claim number indicates that most of the claim is in this quadrangle, but it extends into the adjacent quadrangle. A dollar sign ($) following a claim number indicates that most of the claim is in the adjacent quadrangle, but part of it is in this quadrangle. Claims outlined with a solid line are patented lode claims; claims outlined with a dotted line are patented placer claims. Many placer workings on unpatented claims have not been plotted on the maps, principally because the workings lacked a name.

On the map, the most common or most used name of a mine is normally next to its mine symbol. If there is space, any alternate names or synonyms are in parentheses following the most common name. On some maps, where space does not permit showing the first name or any alternate names, the names are shown by a single letter, two letters, or an abbreviation of the name; the mines are keyed to that letter or abbreviation in the alphabetic and numeric lists. Mines with more than one name have the alternate name(s) or synonym(s) shown in parentheses in the alphabetic lists. The first alternate name or synonym is also alphabetized in the alphabetic list of mines; second or third alternate names may not be alphabetized. Uncertain alternate names are not alphabetized and are followed by a query (?).

CLASSIFICATION OF MINES AND DEPOSITS

Mines and deposits are categorized according to geologic criteria of age, environment of formation, and contained metals, as in DeWitt and others (1986, p. 52-53). Deposit-type letter designations (C, D, and so on), corresponding to those in DeWitt and others (1986), are used in the alphabetic list of mines. The criteria used for the deposit types are briefly summarized below and are explained more fully in DeWitt and others (1986).

PRINCIPAL TYPES OF DEPOSITS

C--Early Proterozoic carbonate-, silicate-, and sulfide-facies iron-formations are synsgenetic-exhalite deposits of gold, silver, and arsenic formed in a submarine environment about 1.8-2.2 Ga. The metals were concentrated in sedimentary and volcanclastic rocks by biologic, sedimentologic, or hydrothermal processes.

D--Early Proterozoic veins and shear zones are discordant deposits of gold, silver, lead, and minor amounts of zinc, copper, and arsenic formed in a metamorphic and tectonic environment about 1.6-1.9 Ga. Hydrothermal solutions concentrated the metals in metasedimentary rocks.

K--Early Proterozoic pyrite-rich slate is a stratabound deposit containing iron and carbon, and possibly gold and silver and minor amounts of vanadium, zinc, and copper, formed in a reducing environment about 1.7-2.0 Ga. The metals were concentrated in deep-water mud and silt.

P--Bog-iron deposits are colluvial concentrations of iron-rich material found in stream bottoms and along canyon walls that are formed in the present-day surface weathering environment. Cool, moist conditions and local reducing environments concentrate the iron and minor manganese.

Q--Tertiary and Holocene stream placers are bedded sedimentary deposits of gold and cassiterite formed in a terrestrial environment by rivers and streams transporting and concentrating heavy minerals in stream channels.

ACKNOWLEDGMENTS

J. J. Norton, J. A. Redden, J. P. Gries, and W. L. Roberts reviewed the set of maps. Rob Yambrick helped digitize much of the information.

INTRODUCTION

This map is one in a set of 26 maps (see index map) at 1:24,000 scale of the Black Hills region of South Dakota and Wyoming on which are shown a geologic classification of mines, a bibliography of mineral deposits, and locations of active and inactive mines, prospects, and patented mining claims. Some of these maps are published as U.S. Geological Survey Miscellaneous Field Studies Maps (MF series) and some as U.S. Geological Survey Open-File Reports (OF series); see index map. An earlier unpublished version of this set of maps was the data base from which plate 4 (scale 1:250,000) of DeWitt and others (1986) was compiled. Subsequent to that publication, the set has been revised and updated, and prospects and patented claims have been added. These revised and more detailed 1:24,000-scale maps should be used for the equivalent areas of plate 4 of DeWitt and others (1986).

SOURCES OF INFORMATION

Outlines of patented mining claims were obtained from 1:24,000-scale Forest Service Status Plats, available for inspection at the U.S. Forest Service, Rocky Mountains Region, 11,117 West 8th Avenue, Denver, CO 80225. Names of patented claims were obtained from the Pennington County Courthouse, Rapid City, South Dakota. Claims have been located as accurately as possible, but this map is not intended to be used for legal nor precise locations of mining claims.

Locations of mines and prospects were compiled from all available published and unpublished data. The locations of active and inactive mines in this quadrangle were taken from Allsman (1940), Bayley (1972a, 1972b), Richard Gleath (unpub. data, 1984), Connolly (1933), Connolly and O'Harra (1929), Harrer (1966), Luza (1970), O'Harra (1902), Simmons (1911), U.S. Bureau of Mines (1954, 1986), and U.S. Geological Survey (1986). Also, in some instances, different sources of information gave conflicting location information for mines with the same name. Where possible, this conflict was resolved by comparing the name of the mine to adjacent patented claims, by comparing the description of the deposit to the known geology and topography of the area, or by communication with past owners of the property. In some instances, a unique location could not be determined

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Alphabetic list of mines

[Deposit-type letter designations are explained in the text]

Deposit Type	Name of Mine	Location
C	Balkan	Sec. 35 T2N R3E
D	Bessie (Fairview)	Sec. 33 T2N R4E
P	Blakely	Sec. 22 T2N R3E
K	Brown Jug	Sec. 35 T2N R3E
K	Carbon King	Sec. 2 T3N R3E
C	Cochrane	Sec. 26 T2N R3E
P	Cottrill	Sec. 34 T2N R3E
K	Cuttys Ark	Sec. 33 T2N R4E
Q	Doctor No.2 (Florence)	Sec. 32 T3N R4E
D	Fairview (Sessie)	Sec. 33 T2N R4E
C	Fairview (Inca)	Sec. 33 T2N R4E
Q	Florence (Doctor No.2)	Sec. 32 T3N R4E
C	Inca (Fairview)	Sec. 33 T2N R4E
Q	James Ter Wee	Sec. 29 T2N R4E
D	Mariposa (Mary Posey)	Sec. 10 T1N R3E
C	Mary Belle	Sec. 23 T2N R3E
D	Mary Posey (Mariposa)	Sec. 10 T1N R3E
Q	Rolland Longden	Sec. 7 T3N R4E
Q	Roy Schiefer	Sec. 28 T2N R4E
Q	Russel Frink	Sec. 4 T3N R4E
C	Standby Adit	Sec. 24 T2N R3E
C	Standby Open Cuts	Sec. 24 T2N R3E
C	Unnamed	Sec. 1 T3N R3E
C	Unnamed	Sec. 1 T3N R3E
C	Unnamed	Sec. 1 T3N R3E
C	Unnamed	Sec. 12 T3N R3E

Alphabetic list of patented claims

[Asterisk (*) indicates that part of claim extends into adjacent quadrangle; dollar sign ($) indicates that most of claim is in the adjacent quadrangle]

Claim number	Name of Claim	Location
060	Adelia	Sec. 1 T1N R3E
078	Ajax No.8	Sec. 13 T1N R3E
079	Ajax No.9	Sec. 13 T1N R3E
003	Augusta	Sec. 23 T2N R3E
048	Baccarat	Sec. 36 T2N R3E
002$	Bangor Lode	Sec. 23 T2N R3E
069	Bittersweet	Sec. 12 T1N R3E
056	Blossom	Sec. 1 T1N R3E
010	Bonnie Bell	Sec. 23 T2N R3E
039	Boston	Sec. 36 T2N R3E
006	Bramble	Sec. 23 T2N R3E
044	Brule	Sec. 36 T2N R3E
008	California	Sec. 23 T2N R3E
027	Certificate	Sec. 26 T2N R3E
018	Champion	Sec. 24 T2N R3E
052	Chief of the Hills	Sec. 1 T1N R3E
047	Common Day	Sec. 36 T2N R3E
053	Common Day No.1	Sec. 36 T2N R3E
017	Confidence	Sec. 24 T2N R3E
014	Continental	Sec. 24 T2N R3E
010$	Dakota Lode	Sec. 23 T2N R3E
022	Enos Placer	Sec. 29 T2N R4E
013	Eureka	Sec. 24 T2N R3E
073	Fissure No.2	Sec. 7 T1N R4E
002	Fraction	Sec. 23 T2N R3E
040	Frail	Sec. 36 T2N R3E
050	Franklin	Sec. 36 T2N R3E
076	Gold Bug	Sec. 12 T1N R3E
077	Gold Bug No.2	Sec. 12 T1N R3E
075	Gold Bug No.4	Sec. 12 T1N R3E
072	Gold Bug No.5	Sec. 12 T1N R3E
061	Gray Eagle	Sec. 1 T1N R3E
033	Harry No.1	Sec. 26 T2N R3E
032	Harry No.2	Sec. 26 T2N R3E
031	Harry No.3	Sec. 25 T2N R3E
034	Harry No.4	Sec. 36 T2N R3E
035	Harry No.5	Sec. 36 T2N R3E
036	Harry No.6	Sec. 36 T2N R3E
059	Hill City	Sec. 1 T1N R3E
062	Illinois	Sec. 1 T1N R3E
064	Inca	Sec. 33 T2N R3E
016	Independence	Sec. 24 T2N R3E
028	Isaac	Sec. 26 T2N R3E
066	Isis No.1	Sec. 3 T1N R3E
046	Judson	Sec. 36 T2N R3E
001	Kern	Sec. 23 T2N R3E
029	Lima	Sec. 26 T2N R3E
030	Lima No.1	Sec. 26 T2N R3E
049	Louise	Sec. 36 T2N R3E
057	Lynx	Sec. 1 T1N R3E
005	Margaret	Sec. 23 T2N R3E
007	Mary Belle	Sec. 23 T2N R3E
055	Merritt	Sec. 1 T1N R3E
026	Mineral No.1	Sec. 26 T2N R3E
024	Mineral No.2	Sec. 26 T2N R3E
025	Mineral No.3	Sec. 26 T2N R3E
023	Minnesota Millsite	Sec. 29 T2N R4E
038	Myrtle	Sec. 36 T2N R3E
064$	National Placer	Sec. 34 T2N R4E
019*	Nebraska Placer	Sec. 24 T2N R3E
067	Nellie Consolidated Placer	Sec. 1 T1N R3E
004	New Hope	Sec. 23 T2N R3E
068	Nickel No.1	Sec. 12 T1N R3E
011*	Northern Pacific	Sec. 24 T2N R3E
051	Ohio	Sec. 36 T2N R3E
063	Old Standby	Sec. 24 T2N R3E
015	Old Standby	Sec. 24 T2N R3E
043	Pabst	Sec. 36 T2N R3E
065*	Plug Cut	Sec. 3 T1N R3E
037	Reid Lode	Sec. 36 T2N R3E
080*	Slate Creek Placer	Sec. 36 T2N R3E
071	Spanish N	Sec. 12 T1N R3E
070	Success No.1	Sec. 12 T1N R3E
021	Victor No.3	Sec. 25 T2N R3E
042	Vinton	Sec. 36 T2N R3E
041	Vinton No.1	Sec. 36 T2N R3E
058	Virginia	Sec. 1 T1N R3E
063	Waldo	Sec. 1 T1N R3E
009	Walter Gold Mining	Sec. 23 T2N R3E
054	Williams	Sec. 1 T1N R3E
012	World's Fair	Sec. 24 T2N R3E

Numerical list of patented claims

[Asterisk (*) indicates that part of claim extends into adjacent quadrangle; dollar sign ($) indicates that most of claim is in the adjacent quadrangle]

Claim number	Name of Claim	Location
001	Kern	Sec. 23 T2N R3E
002	Fraction	Sec. 23 T2N R3E
002$	Bangor Lode	Sec. 23 T2N R3E
003	Augusta	Sec. 23 T2N R3E
004	New Hope	Sec. 23 T2N R3E
005	Margaret	Sec. 23 T2N R3E
006	Bramble	Sec. 23 T2N R3E
007	Mary Belle	Sec. 23 T2N R3E
008	California	Sec. 23 T2N R3E
009	Walter Gold Mining	Sec. 23 T2N R3E
010	Bonnie Bell	Sec. 23 T2N R3E
010$	Dakota Lode	Sec. 23 T2N R3E
011*	Northern Pacific	Sec. 24 T2N R3E
012	World's Fair	Sec. 24 T2N R3E
013	Eureka	Sec. 24 T2N R3E
014	Continental	Sec. 24 T2N R3E
015	Old Standby	Sec. 24 T2N R3E
016	Independence	Sec. 24 T2N R3E
017	Confidence	Sec. 24 T2N R3E
018	Champion	Sec. 24 T2N R3E
019*	Nebraska Placer	Sec. 24 T2N R3E
020	Victor No.2	Sec. 25 T2N R3E
021	Victor No.3	Sec. 25 T2N R3E
022	Enos Placer	Sec. 29 T2N R4E
023	Minnesota Millsite	Sec. 29 T2N R4E
024	Mineral No.2	Sec. 26 T2N R3E
025	Mineral No.3	Sec. 26 T2N R3E
026	Mineral No.1	Sec. 26 T2N R3E
027	Certificate	Sec. 26 T2N R3E
028	Isaac	Sec. 26 T2N R3E
029	Lima	Sec. 26 T2N R3E
030	Lima No.1	Sec. 26 T2N R3E
031	Harry No.3	Sec. 25 T2N R3E
032	Harry No.2	Sec. 26 T2N R3E
033	Harry No.1	Sec. 26 T2N R3E
034	Harry No.4	Sec. 36 T2N R3E
035	Harry No.5	Sec. 36 T2N R3E
036	Harry No.6	Sec. 36 T2N R3E
037	Reid Lode	Sec. 36 T2N R3E
038	Myrtle	Sec. 36 T2N R3E
039	Boston	Sec. 36 T2N R3E
040	Frail	Sec. 36 T2N R3E
041	Vinton No.1	Sec. 36 T2N R3E
042	Vinton	Sec. 36 T2N R3E
043	Swanson	Sec. 36 T2N R3E
044	Brule	Sec. 36 T2N R3E
045	Pabst	Sec. 36 T2N R3E
046	Judson	Sec. 36 T2N R3E
047	Common Day	Sec. 36 T2N R3E
048	Baccarat	Sec. 36 T2N R3E
049	Louise	Sec. 36 T2N R3E
050	Franklin	Sec. 36 T2N R3E
051	Ohio	Sec. 36 T2N R3E
052	Chief of the Hills	Sec. 1 T1N R3E
053	Common Day No.1	Sec. 36 T2N R3E
054	Williams	Sec. 1 T1N R3E
055	Merritt	Sec. 1 T1N R3E
056	Blossom	Sec. 1 T1N R3E
057	Lynx	Sec. 1 T1N R3E
058	Virginia	Sec. 1 T1N R3E
059	Hill City	Sec. 1 T1N R3E
060	Adelia	Sec. 1 T1N R3E
061	Gray Eagle	Sec. 1 T1N R3E
062	Illinois	Sec. 1 T1N R3E
063	Waldo	Sec. 1 T1N R3E
064	Inca	Sec. 33 T2N R3E
064$	National Placer	Sec. 34 T2N R4E
065*	Plug Cut	Sec. 3 T1N R3E
066	Isis No.1	Sec. 3 T1N R3E
067	Nellie Consolidated Placer	Sec. 1 T1N R3E
068	Nickel No.1	Sec. 12 T1N R3E
069	Bittersweet	Sec. 12 T1N R3E
070	Success No.1	Sec. 12 T1N R3E
071	Spanish N	Sec. 12 T1N R3E
072	Gold Bug No.5	Sec. 12 T1N R3E
073	Fissure No.2	Sec. 7 T1N R4E
074	Unknown name ?	Sec. 12 T1N R3E
075	Gold Bug No.4	Sec. 12 T1N R3E
076	Gold Bug	Sec. 12 T1N R3E
077	Gold Bug No.2	Sec. 12 T1N R3E
078	Ajax No.8	Sec. 13 T1N R3E
079	Ajax No.9	Sec. 13 T1N R3E
080*	Slate Creek Placer	Sec. 36 T1N R3E

MAP SHOWING LOCATIONS OF MINES, PROSPECTS, AND PATENTED MINING CLAIMS, AND CLASSIFICATION OF MINERAL DEPOSITS IN THE ROCHFORD 7½-MINUTE QUADRANGLE, BLACK HILLS, SOUTH DAKOTA

By
Ed DeWitt, David Buscher, Anna Burack Wilson, and Tom Johnson
1988

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