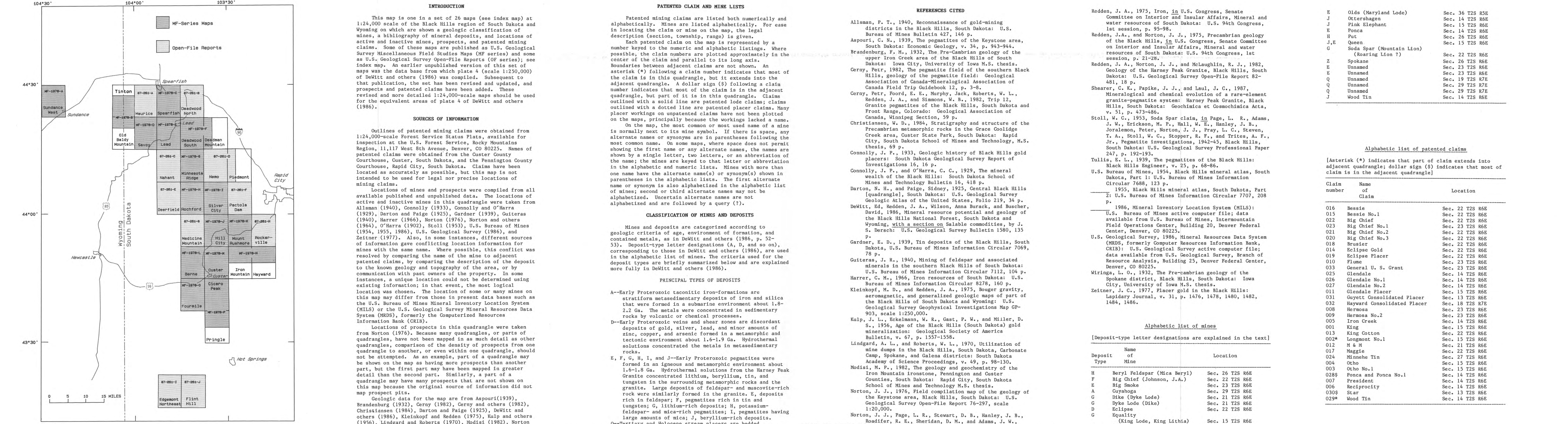
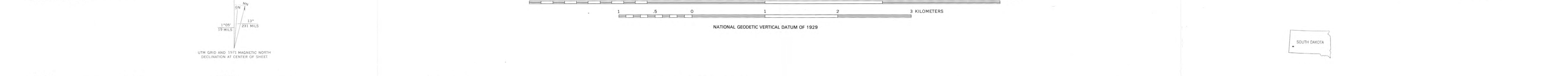
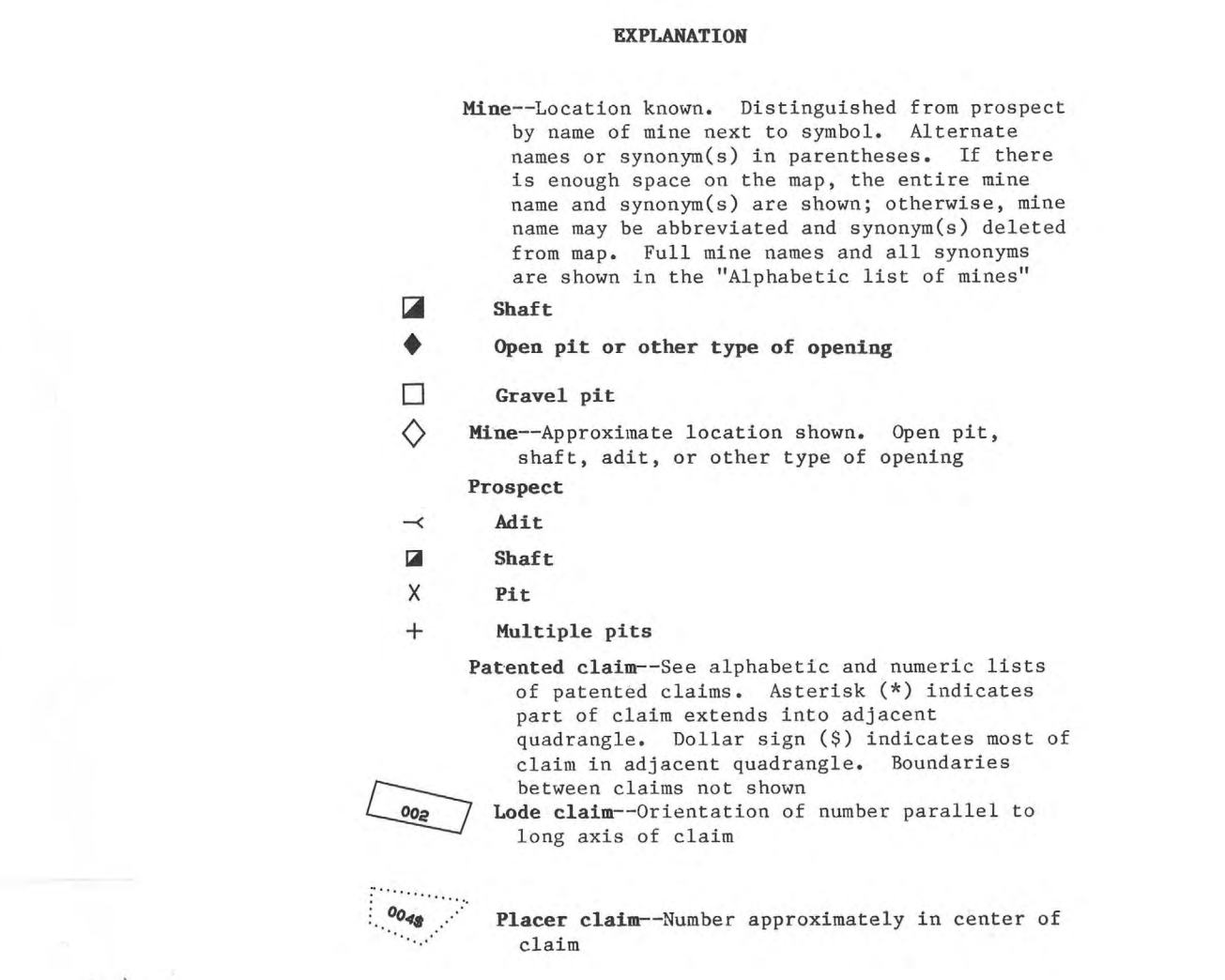


Base modified from U.S. Geological Survey, 1954.
photorevision as of 1971

Compiled in 1986



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



MAP SHOWING LOCATIONS OF MINES, PROSPECTS, AND PATENTED MINING CLAIMS, AND CLASSIFICATION OF MINERAL DEPOSITS IN PARTS OF THE
IRON MOUNTAIN AND HAYWARD 7 1/2-MINUTE QUADRANGLES, BLACK HILLS, SOUTH DAKOTA

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

MF-1978-N

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 An earlier unpublished version of this set of maps was the data base from which plate 4 (scale 1:250,000) of DeWitt and others (1986) was compiled.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 Plans, available for inspection at the U.S. Forest Service, Rocky Mountain Region, 11,117 West 8th Avenue, Denver, CO 80225. Names of patented claims were obtained from the Custer County Courthouse, Custer, South Dakota, and 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), Connolly (1933), Connolly and O'Hara (1929), Darton and Paige (1925), Gardner (1939), Galters (1940), Harter (1960), Norton (1976), Norton and others (1964), O'Hara (1902), Stoll (1953), U.S. Bureau of Mines (1954, 1955, 1986), U.S. Geological Survey (1986), and Zeitner (1977). 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 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 data 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 Norton (1976). 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 Aspour (1939), Brandenburg (1932), Cerny (1982), Cerny and others (1982), Christiansen (1984), Darton and Paige (1925), DeWitt and others (1986), Kleinfelt and Redden (1975), Norton and others (1964), Lindgard and Roberts (1970), Modell (1982), Norton (1976), Norton and others (1984), Page and others (1953), Rapp (1970), Raymond (1981), Redden (1975), Redden and Norton (1975), Redden, Norton, and McLaughlin (1982), Shearer, Papke, and Lant (1987), Stoll (1953), Tullis (1959), Wirtz (1932), 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 (dirt, shaft, open pit, tunnel, etc.) 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 a radius closer than 1/4 mile radius were not plotted on the map.

ACKNOWLEDGMENTS

J. J. Norton, J. A. Redden, J. P. Gries, and W. L. Robinson, U.S. Geological Survey, and Bob Yarnbick helped digitize much of the information.

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 map, 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. 32-53). Deposit-type letter designations (A, 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

A—Early Proterozoic tectonic iron-formations are stratiform metasedimentary deposits of iron and silica that were formed in a submarine environment about 1.8-2.2 Ga. The metals were concentrated in sedimentary rocks by volcanic or chemical 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, F, G, H, I, and J—Early Proterozoic pegmatites were formed in an igneous and metamorphic environment about 1.6-1.8 Ga. Hydrothermal solutions from the Harney Peak Granite concentrated lithium, beryllium, tin, and tungsten in the surrounding metamorphic rocks and the granite. Large deposits of feldspar and monazite-rich rock were similarly formed in the granite. K deposits rich in feldspar; F, pegmatites rich in tin and tungsten; G, lithium-rich deposits; H, potash-feldspar and mica-rich pegmatites; I, pegmatites having large amounts of micas; J, beryllium-rich deposits.

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

Z—Upper Cretaceous or lower Tertiary vein deposits are discordant to concordant concentrations of base and precious metals formed in a tectonic environment about 65 Ma. Hydrothermal fluids rich in lead, zinc, and silver, and containing minor amounts of gold deposited sulfide minerals in fissures created by uplift of the Black Hills.

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Alphabetic list of mines		
[Deposit-type letter designations are explained in the text]		
Deposit of Type	Name of Mine	Location
H	Beryl Feldspar (Mica Beryl)	Sec. 26 T2S R5E
F	Big Chief (Johnson, J.A.)	Sec. 22 T2S R5E
E	Big Smoke	Sec. 13 T2S R5E
A	Cuyahoga	Sec. 29 T2S R5E
D	Dike (Dike Dike)	Sec. 21 T2S R5E
G	Dyke Lode (Dike)	Sec. 21 T2S R5E
G	Eclipse	Sec. 22 T2S R5E
G	Equality	Sec. 15 T2S R5E
F	(King Lode, King Lithia)	Sec. 15 T2S R5E
E	Burack	Sec. 15 T2S R5E
F	Fern Cliff	Sec. 27 T2S R5E
I	Formosa	Sec. 25 T2S R5E
H	Glendale	Sec. 14 T2S R5E
G	Gravel Pit	Sec. 1 T3S R5E
E	Hannard	Sec. 17 T2S R5E
F	Johnson, J.A. (Big Chief)	Sec. 14 T2S R5E
I	Josie Lode	Sec. 34 T2S R5E
H	Judson	Sec. 21 T2S R5E
G	Jumbo Lode	Sec. 34 T2S R5E
G	King Lithia	Sec. 15 T2S R5E
G	(King Lode, Equality)	Sec. 15 T2S R5E
G	King Lode	Sec. 15 T2S R5E
E	Underposen	Sec. 23 T2S R5E
E	Maryland Lode (Olds)	Sec. 36 T2S R5E
G	Reciprocity	Sec. 14 T2S R5E
G	Mountain Lion (Soda Spar)	Sec. 13 T2S R5E
E	Wood Tin	Sec. 14 T2S R5E
E	New England	Sec. 27 T2S R5E

Alphabetic list of patented claims		
Claim number	Name of Claim	Location
016	Bessie	Sec. 22 T2S R5E
015	Bessie No.1	Sec. 22 T2S R5E
028	Boarling Lion T?	Sec. 22 T2S R5E
023	Big Chief No.1	Sec. 23 T2S R5E
022	Big Chief No.2	Sec. 22 T2S R5E
020	Big Chief No.3	Sec. 22 T2S R5E
018	Brusler	Sec. 22 T2S R5E
016	Eclipse Gold	Sec. 22 T2S R5E
019	Eclipse Placer	Sec. 22 T2S R5E
015	Flume	Sec. 23 T2S R5E
033	General U. S. Grant	Sec. 23 T2S R5E
025	Glendale	Sec. 14 T2S R5E
006	Glendale No.1	Sec. 14 T2S R5E
027	Glendale No.2	Sec. 14 T2S R5E
011	Glendale Placer	Sec. 15 T2S R5E
031	Guyett Consolidated Placer	Sec. 13 T2S R5E
032	Harvey Consolidated Placer	Sec. 18 T2S R5E
008	Hermosa	Sec. 23 T2S R5E
009	Hermosa No.2	Sec. 23 T2S R5E
005	Iron Creek	Sec. 14 T2S R5E
001	King	Sec. 15 T2S R5E
013	King Cotton	Sec. 22 T2S R5E
012	Longmont No.1	Sec. 15 T2S R5E
017	Magpie	Sec. 22 T2S R5E
016	Mine No.1	Sec. 22 T2S R5E
004	Ocho	Sec. 15 T2S R5E
003	Ocho No.1	Sec. 15 T2S R5E
002	Ponce and Ponce No.1	Sec. 15 T2S R5E
007	President	Sec. 14 T2S R5E
005	Reciprocity	Sec. 14 T2S R5E
030	Star	Sec. 13 T2S R5E
029	Wood Tin	Sec. 14 T2S R5E

Numerical list of patented claims		
Claim number	Name of Claim	Location
001	King	Sec. 15 T2S R5E
002	Longmont No.1	Sec. 15 T2S R5E
003	Ocho No.1	Sec. 15 T2S R5E
004	Ocho	Sec. 15 T2S R5E
005	Iron Creek	Sec. 14 T2S R5E
006	Reciprocity	Sec. 14 T2S R5E
007	President	Sec. 14 T2S R5E
008	Hermosa	Sec. 23 T2S R5E
009	Hermosa No.2	Sec. 23 T2S R5E
010	Flume	Sec. 23 T2S R5E
011	Eclipse Placer	Sec. 22 T2S R5E
012	N & H	Sec. 21 T2S R5E
013	King Cotton	Sec. 22 T2S R5E
014	Eclipse Gold	Sec. 22 T2S R5E
015	Bessie No.1	Sec. 22 T2S R5E
016	Magpie	Sec. 22 T2S R5E
018	Brusler	Sec. 22 T2S R5E
019	Eclipse Placer	Sec. 22 T2S R5E
020	Big Chief No.3	Sec. 22 T2S R5E
021	Big Chief No.2	Sec. 22 T2S R5E
022	Big Chief	Sec. 22 T2S R5E
023	Big Chief No.1	Sec. 23 T2S R5E
024	Mine No.1	Sec. 27 T2S R5E
025	Glendale	Sec. 14 T2S R5E
026	Glendale No.1	Sec. 14 T2S R5E
027	Glendale No.2	Sec. 14 T2S R5E
028	Ponce and Ponce No.1	Sec. 15 T2S R5E
029	Wood Tin	Sec. 14 T2S R5E
030	Star	Sec. 13 T2S R5E
031	Guyett Consolidated Placer	Sec. 13 T2S R5E
032	Harvey Consolidated Placer	Sec. 18 T2S R5E
033	General U. S. Grant	Sec. 23 T2S R5E

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

Alphabetic list of patented claims		
Claim number	Name of Claim	Location
001	King	Sec. 15 T2S R5E
002	Longmont No.1	Sec. 15 T2S R5E
003	Ocho No.1	Sec. 15 T2S R5E
004	Ocho	Sec. 15 T2S R5E
005	Iron Creek	Sec. 14 T2S R5E
006	Reciprocity	Sec. 14 T2S R5E
007	President	Sec. 14 T2S R5E
008	Hermosa	Sec. 23 T2S R5E
009	Hermosa No.2	Sec. 23 T2S R5E
010	Flume	Sec. 23 T2S R5E
011	Eclipse Placer	Sec. 22 T2S R5E
012	N & H	Sec. 21 T2S R5E
013	King Cotton	Sec. 22 T2S R5E
014	Eclipse Gold	Sec. 22 T2S R5E
015	Bessie No.1	Sec. 22 T2S R5E
016	Magpie	Sec. 22 T2S R5E
018	Brusler	Sec. 22 T2S R5E
019	Eclipse Placer	Sec. 22 T2S R5E
020	Big Chief No.3	Sec. 22 T2S R5E
021	Big Chief No.2	Sec. 22 T2S R5E
022	Big Chief	Sec. 22 T2S R5E
023	Big Chief No.1	Sec. 23 T2S R5E
024	Mine No.1	Sec. 27 T2S R5E
025	Glendale	Sec. 14 T2S R5E
026	Glendale No.1	Sec. 14 T2S R5E
027	Glendale No.2	Sec. 14 T2S R5E
028	Ponce and Ponce No.1	Sec. 15 T2S R5E
029	Wood Tin	Sec. 14 T2S R5E
030	Star	Sec. 13 T2S R5E
031	Guyett Consolidated Placer	Sec. 13 T2S R5E
032	Harvey Consolidated Placer	Sec. 18 T2S R5E
033	General U. S. Grant	Sec. 23 T2S R5E

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