

## TABLE OF CONTENTS

- A. STATE OF OREGON---CERTIFICATE OF INCORPORATION  
ARTICLES OF INCORPORATION
- B. ARTICLES OF INCORPORATION
- C. ARTICLES OF AMENDMENT
- D. INTERNAL REVENUE SERVICE---EMPLOYER IDENTIFICATION NUMBER
- # 1. GEOLOGY & MINERAL RESOURCES OF DOUGLAS COUNTY, OREGON
- # 2. COMMODITY LISTING OF STRATEGIC & CRITICAL MATERIALS
- # 3. REINER LABORATORIES---ASSAY
- # 4. REINER LABORATORIES---ASSAY
- # 5. ASSAY OFFICE---ASSAY
- # 6. METALLURGICAL LABORATORIES---ASSAY OF 2 PAGES
- # 7. ASSAY OFFICE---ASSAY
- # 8. METALLURGICAL LABORATORIES---ASSAY OF 2 PAGES
- # 9. ASSAY OFFICE---ASSAY
- #10. REINER LABORATORIES---ASSAY
- #11. DRAWING OF "CLAIMS"
- #12. DOWSEING MAP
- #13. MAP OF SEMIPRECIOUS GEM STONE AREAS
- #14. PHYSIOGRAPHIC MAP OF OREGON
- #15. MAP OF GENERALIZED MINERAL LOCALITIES
- #16. NOTICE OF MINING LOCATION---SIERRA 6
- #17. NOTICE OF MINING LOCATION---SIERRA 7
- #18. NOTICE OF MINING LOCATION---SIERRA 8
- #19. NOTICE OF MINING LOCATION---SIERRA 9
- #20. NOTICE OF MINING LOCATION---SIERRA 10

- #21. NOTICE OF MINING LOCATION---SIERRA 21
- #22. NOTICE OF MINING LOCATION---SIERRA 21
- #23. NOTICE OF MINING LOCATION---SIERRA 22
- #24. NOTICE OF MINING LOCATION---SIERRA 23
- #25. NOTICE OF MINING LOCATION---SIERRA 24
- #26. NOTICE OF MINING LOCATION---SIERRA 25
- #27. NOTICE OF MINING LOCATION---MILLSITE # 2
- #28. NOTICE OF MINING LOCATION---MILLSITE # 3
- #29. TOPOGRAPHIC MAP
- #30. TOPOGRAPHIC MAP
- #31. TOPOGRAPHIC MAP
- #32. SURVEYORS' MAP OF 1893
- #33. SURVEYORS' FIELD NOTES
- #34. BONDAR--CLEGG----ASSAY
- #35. EARTH SERVICES---GEOLOGICAL REPORT
- #36. REINER LABORATORIES---ASSAY

# State of Oregon

## Department of Commerce Corporation Division

### Certificate of Incorporation

OF

BONNY-L-MINING CORP.

The undersigned, as Corporation Commissioner of the State of Oregon, hereby certifies that one original and one true copy of Articles of Incorporation, duly signed and verified pursuant to the provisions of the Oregon Business Corporation Act, have been received in this office and are found to conform to law.

Accordingly, the undersigned, as such Corporation Commissioner, and by virtue of the authority vested in him by law, hereby issues this Certificate of Incorporation, and attaches hereto a true copy of the Articles of Incorporation.

In Testimony Whereof, I have hereunto set my hand and affixed hereto the seal of the Corporation Division of the Department of Commerce of the State of Oregon this  
30th day of December, 19 82



Frank J. Healy

Corporation Commissioner

By Shirley H. Smith  
Chief Clerk



B

ARTICLE V The number of directors constituting the initial board of directors of the corporation is 3, and the names and addresses of the persons who are to serve as directors until the first annual meeting of shareholders or until their successors are elected and shall qualify are:

<u>Name</u>	<u>Address</u>
	(NOTE: A P.O. BOX NUMBER IS NOT ACCEPTABLE)
	(Street and Number) (City and State) (Zip)
<u>BURNETTA Long</u>	<u>2416 Ramona Pinalo Calif 94564</u>
<u>MARK N. Long</u>	<u>2416 Ramona Pinalo Calif 94564</u>
<u>CAROL A. Webb</u>	<u>3416 Ramona Pinalo Calif 94564</u>
<u>CAROL A. Webb</u>	<u>805 SITKA AVE Newberg Ore 97132</u>

ARTICLE VI The name and address of each incorporator is:

<u>Name</u>	<u>Address</u>
	(NOTE: A P.O. BOX NUMBER IS NOT ACCEPTABLE)
	(Street and Number) (City and State) (Zip)
<u>BURNETTA Long</u>	<u>2416 Ramona Pinalo Calif 94564</u>
<u>MARK N. Long</u>	<u>3416 Ramona Pinalo Calif 94564</u>
<u>CAROL A. Webb</u>	<u>805 SITKA Newberg Ore 97132</u>

ARTICLE VII (Provisions for regulation of internal affairs of the corporation as may be appropriate.)

We, the undersigned incorporators, declare under penalties of perjury that we have examined the foregoing and to the best of our knowledge and belief, it is true, correct and complete.

Burnetta Long  
Carol A Webb

Dated Dec. 10, 1982

SIGNATURE Richard A. Cantelero  
 MY COMM. EXPIRES 2-26-83

**\*\*Submit one original and one true copy of articles with filing and license fees as listed below. One original means one copy MUST have original signatures—the true copy may be a xerox copy.**

If authorized shares exceed	But do not exceed	Filing Fee	License Fee	Total Fees
\$ 0	\$ 5,000	\$ 10	\$ 10	\$ 20
5,000	10,000	15	15	30
10,000	25,000	20	20	40
25,000	50,000	30	30	60
50,000	100,000	50	50	100
100,000	250,000	75	75	150
250,000	500,000	100	100	200
500,000	1,000,000	125	125	250

If the authorized shares exceed \$1,000,000, a \$200 license fee and a \$200 filing fee—totaling \$400.

To determine the amount of organization fee payable by a corporation having stock without par value, but for no other purpose, such shares of stock shall be deemed equivalent to shares having a par value of \$10 each.

File with Corporation Commissioner, Commerce Bldg., 158 12th St., N.E., Salem, Oregon 97310.



Submit one original and one true copy

\*\*Filing Fee (831106) \$\_\_\_\_\_

\*\*License Fee (831006) \$\_\_\_\_\_

One or more natural persons of the age of 18 years or more, a domestic or foreign corporation, a partnership or an association may act as incorporators of a corporation by signing and verifying Articles of Incorporation and delivering one original and one true copy of the articles for the corporation to the Corporation Commissioner. The procedure for the formation of business corporations is set forth in ORS 57.306 through 57.331. See ORS 57.311 for the content of the Articles of Incorporation.

## Articles of Incorporation

The undersigned natural person(s) of the age of eighteen years or more, a domestic or foreign corporation, a partnership or an association acting as incorporator(s) under the Oregon Business Corporation Act, adopt the following Articles of Incorporation:

ARTICLE I The name of this corporation is Bonny-L-mining Corp.

(The corporate name must contain the word "Corporation", "Company", "Incorporated" or "Limited" or an abbreviation of one of such words.)

and its duration shall be unlimited (eternity) Perpetual

ARTICLE II The purpose or purposes for which the corporation is organized are:

mining - metals - and Exploration -

Developing & operating mines.

To engage in any lawful activity for which corporations may be organized under this chapter. 57.311

(It is not necessary to set forth in the Articles any of the corporate powers enumerated in ORS 57.030 and 57.035. It is sufficient to state, either alone or with other purposes, "That the corporation may engage in any lawful activity for which corporations may be organized under ORS Chapter 57"; however, it is desirable to state the primary purpose of the corporation in conjunction with such statement.)

ARTICLE III The aggregate number of shares which the corporation shall have authority to issue is

50,000 shares non-par value

(Insert statement as to par value of such shares or a statement that all of such shares are to be without par value. If there is more than one class of stock, insert a statement as to the preference, limitations and relative rights of each class.)

ARTICLE IV The address of the initial registered office of the corporation is

805 Sixth Ave. Newberg, Oregon 97132

STATE OF OREGON  
DEPARTMENT OF COMMERCE  
CORPORATION DIVISION

Submit one original  
and one true copy  
Filing Fee (831.115) \$15.00  
Unless Increasing Stock.  
Payment made by:  
Name \_\_\_\_\_  
Address \_\_\_\_\_

## Articles of Amendment

By Directors

Pursuant to the provisions of ORS 57.370, the undersigned corporation executes the following Articles of Amendment to its Articles of Incorporation:

1. The name of the corporation is Benny-L Mining Corp
2. The corporation has not issued any shares of stock.
3. The following amendment of the Articles of Incorporation was adopted by a majority of the directors on March 2<sup>nd</sup>, 1984:

(State article number(s) and set forth article(s) in full as will be amended to read.)

Article III 3. million shares  
having a par value of (\$10<sup>00</sup>) Ten dollars  
Per share

Department of the Treasury  
Internal Revenue Service

29251597

BONNY-L-MINING CORPORATION  
805 SITKA AVE  
NEWBERG

OR 97410

Date of This Notice

If you inquire about  
your account, please  
refer to this  
number or attach a  
copy of this notice

01-27-83  
Employer Identification Number  
93-0823725

575 B 550155555  
55555555

**NOTICE OF NEW EMPLOYER IDENTIFICATION NUMBER ASSIGNED**

Thank you for your application for an employer identification number. The number above has been assigned to you. We will use it to identify your business tax returns and any other related documents, even if you have no employees.

Please keep this number in your permanent records. Use the number and your name, exactly as shown above, on all Federal tax forms that require this information, and refer to the number in all tax payments and in tax-related correspondence or documents. You may wish to make a record of the number for reference in case this notice is lost or destroyed.

Note that the assignment of this number does not grant tax-exempt status to nonprofit organizations. For details on how to apply for this exemption, see IRS Publication 557, Tax-Exempt Status for Your Organization, available at most IRS offices.

We appreciate your cooperation.



#1

STATE OF OREGON  
DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES  
1069 State Office Building  
Portland, Oregon 97201

CANT:

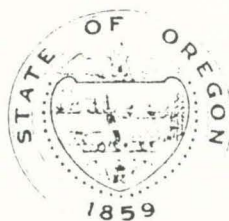
BULLETIN 75

GEOLOGY & MINERAL RESOURCES  
*of*  
DOUGLAS COUNTY, OREGON

COUNT

Len Ramp  
Oregon Department of Geology and Mineral Industries

The preparation of this report was financially aided by a grant from  
Douglas County



## FOREWORD

Douglas County has a history of mining operations extending back for more than 100 years. During this long time interval there is recorded production of gold, silver, copper, lead, zinc, mercury, and nickel, plus lesser amounts of other metalliferous ores. The only nickel mine in the United States, owned by The Hanna Mining Co., is located on Nickel Mountain, approximately 20 miles south of Roseburg. The mine and smelter have operated continuously since 1954 and provide year-round employment for more than 500 people. Sand and gravel production keeps pace with the local construction needs. It is estimated that the total value of all raw minerals produced in Douglas County during 1972 will exceed \$10,000,000.

This bulletin is the first in a series of reports to be published by the Department that will describe the general geology of each county in the State and provide basic information on mineral resources. It is particularly fitting that the first of the series should be Douglas County since it is one of the mineral leaders in the state and appears to have considerable potential for new discoveries during the coming years.

R. E. Corcoran  
Oregon State Geologist

October 1972

## GENERAL GEOLOGY

### Geology of Geomorphic Provinces

Within Douglas County are located parts of four distinctive geomorphic provinces recognized in western Oregon (see inset on Geologic Map, Figure 1). They include the Klamath Mountains, the Coast Range, the Western Cascades, and the High Cascades. Each province is characterized by a more or less unique suite of rocks, which in turn is responsible for the particular topographic expression and mineral resources of the area.

The oldest rocks in the county are of Mesozoic age (Figure 2) and are restricted to the rugged Klamath Mountains Province in the southern part of the county. They consist primarily of marine sediments and volcanic rocks, and have a composite thickness of about 6 miles. Tertiary rocks underlying the more gently deformed Coast Range Province consist of a composite thickness of 15,000 to 20,000 feet of submarine basalt and rhythmically bedded sandstone and siltstone. Deltaic deposits are present locally. Dune fields of Holocene and late Pleistocene age overlie the older marine strata along the coast.

The Western Cascades Province is composed of late Eocene andesitic breccias and fluvial sedimentary rocks, middle Tertiary silicic ash-flow tuffs and subordinate flow rock of andesitic to basaltic composition, and late Miocene andesitic flow rock. Total composite thickness for the units probably does not exceed 20,000 feet. The geologically youthful High Cascades Province to the east consists of a series of Plio-Pleistocene flows of basalt and basaltic andesite spotted with several late Pleistocene volcanic peaks and cinder cones. The province is mantled locally in the south with Holocene ash and pumice deposits.

#### Klamath Mountains Province

The Klamath Mountains Province is an area of complex geology and rugged topography. Major streams include Cow Creek and other tributaries of the South Umpqua River. Cultivation is restricted to the lowlands bordering the rivers. Mining has yielded a variety of useful metals including gold, silver, copper, chromite, nickel, mercury, and zinc. Industrial minerals and potential non-metallic ores in the province include sand, gravel and crushed rock, building stone, barite, limestone, asbestos, talc, olivine, and semiprecious gem rock.

Applegate Group (Ra): The Applegate Group was defined by Wells and others (1949) for exposures south of the county line in the Applegate River Drainage. It is equivalent to the May Creek Schist of Diller and Kay (1924). The Applegate Group consists of several tens of thousands of feet of amphibolite, slate, slaty siltstone, chlorite schist, quartz-mica schist, and quartzite representing metamorphosed sandstone, shale, and volcanic rock. The gneissic amphibolites appear to have been derived mainly from volcanic rocks and possibly in part from gabbros related to the ultramafic rocks associated with the unit.

The Applegate Group underlies approximately 30 square miles of terrain in south central Douglas County and extends southward into Jackson County. It is intimately folded with serpentinites and peridotites and is intruded by quartz diorite of Mesozoic age. To the west the Applegate Group is thrust over a series of younger, generally less metamorphosed, strata here assigned to the Jurassic volcanics (Jv) and the Galice sedimentary rock unit (Jgs).

Based on fossils collected by Diller and Kay (1909) and re-examined by Wells and others (1949), the Applegate is believed to be Late Triassic in age. Diller (1898) erroneously interpreted a Paleozoic age.

Metaliferous mineral deposits occurring in the Applegate Group include gold, silver, copper, zinc, mercury, and manganese. Potential industrial mineral resources from the formation include talc,



mica, garnet, and building stone.

Jurassic volcanic rocks (Jv): All the mappable volcanic rocks of Jurassic age in Douglas County are included in this unit. As such it is composed of rocks assigned to the Rogue Formation by Wells and Walker (1953), the volcanic rocks of the Galice Formation by Wells and Peck (1961), and pillow basalts of the Dothan Formation by Wells and Peck (1961). Lumping of the Jurassic volcanic rocks into one unit is a convenient treatment based on the similarity of rock type and in no way implies precise age equivalence or uniformity of origin.

The Jurassic volcanic rocks form a discontinuous set of exposures in south central Douglas County which varies in thickness from 1 mile to 10 miles and trends northeasterly. A small additional exposure is situated in the extreme southwestern corner of the county. Many smaller bodies of volcanic rock of Jurassic age are too small to be mapped and are included in the other Jurassic units.

The Jurassic volcanic rock consists of thick, greenish-gray, altered andesite and basalt flows and flow breccias assigned to the Galice Formation, and light gray to greenish gray lenses of porphyritic andesite and dacite flow rock, tuff, and flow breccia assigned to the Rogue Formation by Wells and Walker (1953). Some of the massive greenstone exposed in cuts along the freeway in the southern part of the county appears to be altered pillow lavas. A few lenticular bodies of serpentinite and small dikes and stocks of quartz diorite intrude rocks assigned to the Jurassic volcanic unit.

Rocks assigned to the Galice and Rogue Formations by other authors are dated as Late Jurassic and rocks assigned to the Dothan Formation are believed to be Latest Jurassic in age on the basis of recent fossil discoveries (Ramp, 1969). Intrusive rocks of the Late Jurassic Nevadan Orogeny cut the Galice and Rogue Formations, but are absent in the Dothan Formation.

Mineralization is largely restricted to the volcanic rocks in the vicinity of Canyon Creek and Silver Peak, where gold, silver, copper, and zinc have been mined. Some of the more massive greenstones constitute excellent sources of road rock for subgrade and surfacing aggregate.

Galice sedimentary rocks (Jgs): The Galice Formation was defined by Diller (1907) to include thick interbeds of andesitic flows and agglomerates and thick sections of marine sedimentary rock. The volcanic rocks are assigned to the Jurassic volcanic rock unit and the sedimentary strata are termed Galice sedimentary rock in this report. Diller and Kay (1924) mapped the sediments separately from the volcanic rocks. Wells and others (1949) assigned the volcanic rocks to the Galice Formation, and Wells and Peck (1961) assigned some of the volcanic rocks to the Rogue Formation.

The sedimentary rocks of the Galice Formation are exposed in south-central Douglas County as a northeasterly trending band which extends into the county from the south and is terminated on the north by a prominent east-west fault immediately south of Days Creek. The rocks consist primarily of dark slaty siltstone with lesser amounts of interbedded graywacke sandstone and occasional lenses of conglomerate.

The Galice sedimentary rocks are Late Jurassic in age, but they predate the Dothan Formation. Koch (1966) reports the discovery of Buchia concentrica, a late Oxfordian to early Kimmeridgian pelecypod, within beds assigned to the unit. Intrusive bodies of the Late Jurassic Nevadan Orogeny cut the Galice sedimentary rocks in places, indicating that the unit predates at least the later phases of the orogeny.

Non-metallic industrial mineral potential of the Galice sedimentary rocks is confined to a few select zones of slaty rock suitable for use as patio stones, and clay suitable for use as brick and tile. The clay is derived from extensive weathering of some of the more argillaceous sedimentary interbeds.

Dothan-Otter Point Formation (Jds): Rocks of this unit include strata assigned to the Dothan Formation of Diller (1907) and equivalent to rocks assigned to the Otter Point Formation by Koch (1966). Although they differ somewhat in lithology, the Otter Point Formation and Dothan Formation are believed to be contemporaneous units. Together they form a discontinuous northeasterly trending set of exposures that extends from the southwestern corner of the county to the center of the county east of Roseburg.

Rocks of Dothan type are restricted to the area south of the major east-west fault which passes immediately south of Canyonville. They consist primarily of massive to thickly bedded graywacke sandstone and thin interbeds of dark mudstone. Lenticular bodies of thin-bedded chert and pillow basalt are



## GENERAL GEOLOGY

present in places. The larger bodies of volcanic rock are included in the Jurassic volcanic rock unit (Jv) of this report.

The Otter Point Formation is exposed north of the major east-west fault and exhibits a somewhat more diverse lithology than does the Dothan Formation. It consists of sheared graywacke, siltstone, greenstone, limestone lenses, blueschist pods, and chert. The unit is highly disordered and was extensively deformed during or shortly following deposition. A few small bodies of highly sheared serpentinite have apparently become involved in this tectonism.

Specimens of Buchia piochii recovered from both the Dothan Formation (Ramp 1969) and the Otter Point Formation are indicative of a Tithonian (Latest Jurassic) age. The rocks postdate the Nevadan Orogeny and none of the exposures are intruded by igneous bodies associated with that period of tectonism.

Copper mineralization occurs in the altered volcanic rocks near the head of Rice Creek and near Bolivar Mountain just outside of Douglas County. The bedded cherts have been considered as a source for roofing granules, and the massive sandstones and altered pillow basalts have been used on a limited basis for road aggregate. Pods of limestone of uncertain origin (Whitsett limestone lentils of Diller, 1898) associated with the Otter Point rocks have been mined to a limited extent.

Cretaceous sedimentary rocks (Ks): This unit includes all the conglomerate, sandstone, and siltstone in the county for which a Cretaceous age is interpreted. The unit includes strata assigned elsewhere to the Riddle Formation (Imlay and others, 1959), the Day Creek Formation (Imlay and others, 1959), and the Late Cretaceous sediments. Much of the strata correspond to the upper part of the Myrtle Formation as originally defined by Diller, (1898). Exposures include the large area surrounding Riddle, Days Creek and Myrtle Creek, a small exposure in the extreme southwestern part of the county, and small exposures south of Tenmile Creek between Roseburg and Camas Valley.

The stratigraphically lowest part of the unit (Riddle Formation) consists of massive chert pebble conglomerate overlain by medium-bedded dirty-gray lithic sandstone, siltstone, and conglomerate. A few small limestone lentils, possibly equivalent to some of the Whitsett limestone lentils of Diller (1898), are present within the Riddle Formation.

Overlying the Riddle beds with probable conformity are the beds assigned to the Days Creek Formation by Imlay and others (1959). They consist of a lower, relatively fine-grained, dark-gray, sandy siltstone and a subordinate light-gray, fine-grained sandstone overlain by thick- to medium-bedded, fine- to medium-grained gray sandstone. Overall these beds are thicker and contain more sand than those of the underlying Riddle Formation. Both the Riddle and Days Creek Formations are Early Cretaceous.

Small exposures of Late Cretaceous marine sedimentary rock of local extent consist of conglomerate and pebbly massive grayish-green to brown sandstone and dark siltstone. The beds are less deformed than the underlying strata and correlate in part with the lower Hornbrook Formation in Northern California.

Thin-bedded greenish-gray flagstone of the Riddle Formation exposed along Cow Creek west of Riddle has been quarried for building stone. A small outcrop of Late Cretaceous pebbly sandstone overlying the Days Creek Formation west of the community of Days Creek has been quarried for roadfill ballast. No valuable metallic minerals are known to occur in the Cretaceous sedimentary rocks.

Igneous rocks (ig): Several large bodies of granitic-textured igneous rocks intrude the pre-Nevadan units in the mapped area. The two largest intrusive masses are situated in the drainage areas of Myrtle Creek in the central part of the county and of Applegate and Coffee Creeks in the south-central part of the county. Smaller, unmapped bodies of similar rock are genetically related to the larger bodies although the map scale requires that they be treated as part of the units which they intrude.

The igneous rocks postdate the Galice, Rogue, and Applegate Formations and much of the Jurassic volcanic rock unit of this report. They are interpreted to have been formed during the Late Jurassic Nevadan Orogeny. Lithologically they range in composition from gabbro to granite, and texturally they range from fine-grained rocks to pegmatites. They constitute the heat source for fluids which mineralized the older rocks of the Klamath Mountains Province.

Serpentinite and minor peridotite (sp): Ultramafic\* bodies in the county are limited to the pre-Tertiary terrain and form two discontinuous bands which extend northeasterly through the central and southern parts of Douglas County. The northern body extends from the Cow Creek area about 10 miles

\* See glossary.



## GEOLOGY AND MINERAL RESOURCES OF DOUGLAS COUNTY

west of Riddle to the Peel area on Little River. The southern exposures extend from the headwaters of Quines Creek to the Tiller area.

✓ Serpentine is a dark greenish rock composed of minerals of the serpentine group which include antigorite, chrysotile, and lizardite. The minerals are hydrated derivatives of parent ultramafic rocks which include peridotite (harzburgite) and dunite. Relict crystals and small bodies of these rocks are preserved locally within the serpentinite masses.

The age and origin of these ultramafic rocks are difficult to define since they may have been emplaced over an extended period of time. Presumably the serpentinite in Douglas County represents part of the Mesozoic upper mantle which emerged along an ancestral sea floor rise and was rafted eastward to become incorporated into the continent. (Coleman, 1971) The actual time and mode of alteration of the parent ultramafic rocks to form serpentinite is uncertain. In addition, some of the serpentinite was tectonically remobilized along steep faults after its initial emplacement, further obscuring the critical features regarding its origin.

✓ The serpentinite and associated ultramafic rocks are important host rocks for several mineral resources including chromite, nickel, gold, silver, copper, and platinum. Industrial minerals such as asbestos, talc, and olivine also may be recovered locally.

### Coast Range Province

The Coast Range Province consists of Tertiary submarine lavas and marine sediments. The region is less deformed than the Klamath Mountains Province and exhibits lower relief. Nonetheless, the terrain is rugged in places owing to the resistance to erosion of many of the sandstone interbeds and small intrusive bodies. Major peaks include Bear Mountain (3,178), Old Blue (2,536), and Roman Nose Mountain (2,856). Mineral wealth of the area is limited to a few unworked deposits of impure coal, localized quarry rock, and sand and gravel.

Basalt of the Umpqua Formation (Teb): The Umpqua Formation was defined by Diller (1898) in mapping of the Roseburg quadrangle. The formation consists of a thick series of rhythmically bedded sandstones and siltstones underlain by a basement of submarine basalt. The basalt is here treated as an individual unit and is termed "basalt of the Umpqua Formation (Teb)."

Basalt low in the Umpqua section is exposed at Mt. Yoncalla and Dickinson Mountain, and is extensively exposed in the area surrounding and extending northeast from Roseburg. The elongate bodies occupy the axes of northeast trending anticlines and are faulted locally. The basalt is commonly pillowed and fine grained. Compositionally the basalts are calc-alkalic and range in composition from tholeiitic to olivine-rich. They are comparable to the basalts of the early Eocene Siletz River Volcanics to the north and to those which make up the floor of the present day Pacific Ocean.

The basalts are overlain conformably by the sedimentary rocks of the Umpqua Formation. To the west in Coos County, Paleocene foraminifera have been recovered from sedimentary rocks interbedded with the basalt. Locally Cretaceous strata are interpreted to conformably underlie the basalt in Coos County (Baldwin and Beaulieu, in preparation).

Umpqua sedimentary rocks (Teu): Sedimentary rocks within the Umpqua Formation consist of three rhythmically bedded sequences of sandstone and siltstone, each of which is underlain locally by basal conglomerate or pebbly sandstone (Baldwin, 1965). The rocks form a 10- to 20- mile-wide northeasterly trending band from the southwestern to north central parts of the county.

On the basis of extensive field mapping the sedimentary rocks were subdivided into three unconformity-bounded sequences by Baldwin (1965), which he termed the lower member, middle member, and upper member of the Umpqua Formation. Strata of the lower member are conformable over the basalts of the Umpqua Formation and are much more deformed than the strata of the two younger sequences. Although a composite thickness of 15,000 feet is estimated for the three sequences, the thickness of the rocks at any one particular locality is considerably less than this.

Based on fossils and stratigraphic position the three sequences taken as a whole range in age from early Eocene to middle Eocene.

The lithology of the three units is remarkably uniform and the distinction between them is based



## GENERAL GEOLOGY

primarily on detailed stratigraphic relationships. The three sequences are treated as one unit (Teu) in this report and on the geologic map.

In the Roseburg and Glide quadrangles basalt of the lower member of the Umpqua Formation is thrust over sedimentary strata of the lower member of the Umpqua Formation along the northeast-trending Bonanza fault. Significant quicksilver mineralization occurred along this fault, probably in late Eocene time or later (Baldwin, 1964). The Bonanza and Nonpareil mines and other quicksilver prospects are situated on this structure.

A few sandstone quarries are located within the lower part of the Umpqua Formation in the vicinities of Oakland and Sutherlin. Also, a few clay pits are situated near Roseburg. Sand and gravel is quarried locally from the lower part of the middle member of the Umpqua Formation. In the Olalla area small amounts of placer gold in present-day streams apparently originated from the lower conglomerate of the middle member. Small quantities of coal are reported in the Glide area by Diller (1898) and in the Melrose and Camas Valley area.

Tyee-Elkton Formation (Tet, Tee): The Tyee Formation was described and defined by Diller (1898) in the Roseburg quadrangle. Baldwin (1961) assigned the finer-grained siltstones which comprise the upper parts of the section to the Elkton siltstone member (Tee) of the Tyee Formation. Subsequently Thoms (1965) and Bird (1967) proposed elevating the unit to formational status in their respective theses. Lovell (1969) treats the unit as a formation. To date, however, no formal definition of the Elkton siltstone as a formation has been forthcoming.

The Tyee-Elkton unit blankets much of the northwestern part of Douglas County. The Tyee Formation (Tet) is composed of flat-lying to gently folded, rhythmically bedded, buff to greenish-gray sandstone and dark siltstone. The sandstone interbeds range in thickness from a few inches to 10 feet or more and characteristically form bold outcrops and cliffs. Tyee Ridge bordering Lookingglass Valley is composed of sandstone interbeds of the Tyee Formation. In general the sandstone is medium- to coarse-grained and micaceous. Total thickness for the Tyee-Elkton unit is approximately 7,000 feet.

Upsection the Tyee Formation grades into finer-grained siltstone in which sandstone interbeds are rare or lacking. Most exposures are restricted to the area southwest of the Umpqua River near the community of Elkton and are treated as the Elkton siltstone member of the Tyee Formation.

The Tyee Formation contains important coal beds in the Eden Ridge syncline in Coos County and some coal has also been found in the formation farther to the north in the Elkton area of Douglas County. Large blocks of massive Tyee sandstone have been quarried along the north bank of the Umpqua River east of Reedsport for experimental use as jetty rock.

Late Eocene sedimentary rocks (Tes): Assigned to this unit are exposures of the Spencer Formation in the north-central part of Douglas County, exposures of Coaledo Formation along the coast, and exposures which Baldwin (1961) termed the Coaledo(?) in west-central Douglas County overlying the Elkton siltstone member of the Tyee Formation. The Spencer Formation was defined by Turner (1938) and the Coaledo Formation was defined by Diller (1899).

The Spencer Formation consists of a massive, arkosic, micaceous, semi-friable sandstone with interbeds of light-colored, fissile siltstone and fine tuff. Locally the formation contains thin beds of impure coal and pebbly conglomerate. The Spencer Formation is only about 600 feet thick in the Comstock area, but thickens to 2,000 feet north of Douglas County in the Eugene area.

The Spencer Formation overlies the Tyee Formation unconformably and was probably derived in part from that unit. The lower contact marks the boundary between the Coast Range Province and the Western Cascades Province in northern Douglas County.

Exposures of Coaledo Formation along the coast are limited in extent and represent the northernmost tip of larger exposures of that unit to the south. In Coos County the Coaledo Formation consists of several thousand feet of marine arkosic sandstone separated by a prominent middle member of siltstone. In Coos County estimated reserves of recoverable coal exceed 50 million tons.

Beds assigned to the Coaledo(?) by Baldwin (1961) in west-central Douglas County and adjacent Coos County consist of micaceous, locally coal-bearing, deltaic sandstone with a total thickness of approximately 1,200 feet. The unit overlies the Elkton siltstone conformably in places and with slight angular unconformity in others. It contains megafossils characteristically found in the Tyee Formation.

## METALLIC MINERAL RESOURCES

### Chromite

Chromite, a heavy black metallic mineral, is the only commercial source of chromium. It is a complex oxide of chromium, iron, magnesium, and aluminum. The percentage of oxides in chromite can vary widely, and their variation determines the use specifications of the ore. High-chromium ores containing 46 percent and greater  $\text{Cr}_2\text{O}_3$  and having a Cr:Fe ratio of 2:1 or more are classed as metallurgical grade. High-iron ores containing 40 to 46 percent  $\text{Cr}_2\text{O}_3$  and a Cr:Fe ratio of less than 2:1 are used for chemical purposes. High-alumina ores containing 20 percent or more  $\text{Al}_2\text{O}_3$ , 60 percent or more  $\text{Cr}_2\text{O}_3$  and  $\text{Al}_2\text{O}_3$  combined, and not more than about 12 percent Fe, are used in refractories.

Chromite is found exclusively in the ultramafic rock peridotite and its alteration product, serpentinite. In Douglas County these rocks occur only in the Klamath Mountains Province. Chromite may occur either as discrete mineral grains scattered through the rock or as massive accumulations in layers or pods. It is usually an early mineral to crystallize in the cooling process of an ultramafic magma and the mechanisms of segregation are as varied as the history of the origin and emplacement of the rock. Banded or streaked-out disseminated chromite is believed to have formed during emplacement of the ultramafic rock when it reacted as a plastic mass. Stratiform or uniformly layered chromite is believed to have developed by crystal settling in the upper mantle where the crystallizing magma was undisturbed.

Chromite is highly resistant to weathering processes, and because of this property most of the known occurrences were discovered by tracing surface float ore uphill to its source.

Current theories of plate tectonics involving impingement of oceanic crust with a continental front resulting in either subduction or obduction (under-thrusting or over-riding) of the oceanic crust and the accompanying complex folding and faulting may help to explain why most ultramafic bodies appear to have been emplaced tectonically as "cold intrusives" from their place of origin, the upper mantle. The resultant tearing-apart and distortion of what may have been uniform layers of massive chromite to form scattered, strung-out, lense-shaped pods has complicated the search for buried chromite ore bodies.

A number of occurrences of chromite in Douglas County were described by Ramp, (1961, p. 119-126). All of these deposits are small, and total known production for the county is estimated to be about 1,500 long tons. The largest producer in the county is the Black Boy mine, No. 15, of the Starvout Group, located on Quartzmill Peak at the head of Starvout Creek. This mine reportedly produced about 900 tons (19 freight carloads) during World War I (1916).

Chromite production in Oregon has been restricted to periods of high incentive price brought on by war-time demands and the more recent government stockpiling program of 1951 to 1958.

Chromite mines and prospects in Douglas County are listed below alphabetically and described briefly. Numbers refer to map locations on Figure 4.



## METALLIC MINERAL RESOURCES

BLACK BOY MINE (STARVOUT GROUP) (No. 15)

- Location: SW. 1/4 NW. 1/4 sec. 5, T. 33 S., R. 4 W., at about 4,000 feet elevation on the south-east flank of Quartzmill Peak. Black Boy and June Bug mining claims.
- Development: Two large open cuts 50 feet apart are about 100 feet long, 20 feet wide and 30 or more feet deep at the back ends. Also several small cuts and a 50-foot tunnel driven south from the end of the upper open cut.
- Geology: Lenses of massive chromite having a maximum thickness of 6 feet occur in a zone perhaps 2,000 feet long which trends about N. 20° E. and dips steeply SE. The country rock is a highly sheared dark greenish-black serpentinite.
- Production: 19 freight carloads were reportedly shipped in 1916; some shipped in 1937; about 20 tons in 1955; and 20 tons in 1956. Total about 1,000 tons. Average grade was about 45 percent  $\text{Cr}_2\text{O}_3$  and 12 percent Fe.
- References: Allen (1941) Ramp (1961)  
Diller and others (1921) Thayer and Ramp (1969)

This is now The # 7  
of The "SIERRA group" mines



Sept. 24, 1981

COMMODITY LISTING

NATIONAL DEFENSE STOCKPILE OF STRATEGIC & CRITICAL MATERIALS

( ) 001 Aluminum Oxide Fused Crude Abrasive Grade	( ) 211 Feathers and Down
( ) 011 Aluminum	( ) 221 Fluorspar Acid Metallurgical
( ) 016 Antimony	( ) 231 Graphite Natural Ceylon & Amorphous Natural Malagasy
( ) 021 Asbestos Amosite Chrysotile	( ) 266 Iodine
( ) 041 Bauxite Jamaica Surinum Refractory	( ) 271 Jewel Bearings
( ) 061 Beryle Ore	( ) 281 Lead
( ) 062 Beryllium Metal Copper Matter Alloy	( ) 286 Magnesium
( ) 071 Bismuth	( ) 291 Manganese ST Chemical Electrolytic Dioxide Battery Natural Dioxide Battery Synthetic Ferro High Carbon Ferro Low Carbon Ferro Medium Carbon SDT Ferro Silicon SDT Metallurgical
( ) 091 Cadium	( ) 331 Mercury
( ) 096 Castor Oil	( ) 336 Mica Muscovite Block, stained & Bette MB--Muscovite Film, 1 st. and 2nd Quality MF--Muscoviet Splittings MS--Phlogopite Block PB--Phlogopite Splittings
( ) 101 Celestite	( ) 366 Molybdenum Ferro Disulphide
( ) 106 Chromite & Chromium Chromite--Chemical Metallurgical Refractory SDT Chromium--Ferro High Carbon Ferro Low Carbon Ferro Silicon Metal	( ) 376 Nickel
( ) 141 Cobalt	( ) 386 Opium Alkaloids and Salts Gum
( ) 156 Columbite & Columbium Columbium--Ferro Carbide Powder Metal Powder Oxide	( ) 401 Platinum Group Metals Iridium Palladium Platinum
( ) 161 Copper	( ) 436 Pyrethrum
( ) 166 Cordage Fiber Abaca Sisal	( ) 446 Quartz
( ) 191 Diamonds Gems KT Industrial Crushing Bort Dies, Small Industrial Stoner	( ) 451 Quinidine and Quinine

- ( ) 471 Rubber
- ( ) 476 Rutile
- ( ) 481 Ruby and Sapphire
- ( ) 491 Shellac
- ( ) 496 Silicon Carbide
- ( ) 507 Silver
- ( ) 516 Talc
  - Block
  - Lump
- ( ) 521 Tantalum and Tantalite
  - Carbide Powder
  - Metals
  - Minerals
- ( ) 526 Thorium Nitrate
- ( ) 531 Tin
- ( ) 536 Titanium Sponge
- ( ) 546 Tungsten
  - Ores and Concentrates
  - Carbide Powder
  - Metal Powder
  - Ferro
- ( ) 556 Vanadium
  - Pentoxide
  - Ferro
- ( ) 566 Vegetable Tannin
  - Chestnut
  - Quebracho
  - Wattle
- ( ) 581 Zinc



To: Bonny-L-Mining Co.  
P.O. Box 124  
Azalea, OR. 97410

Page 1 of 1  
Date: 10-11-82

Order No: letter-Bonny-L  
Invoice No: 00162 # 3

**REPORT OF ANALYSIS:** (all results are expressed in ppm or as otherwise indicated)

Sample No:	Silver Ag	Aluminum Al	Chromium Cr	Cr <sub>2</sub> O <sub>3</sub> (calc)%	Cobalt	Copper Cu	Iron Fe	Nickel Ni
	oz/t	%	%				%	
#1	.029	.133	23.3	34.0	3.41	18.3	10.1	107
#2						35.7		375

2 samples

Dear Mr. Webb

Your # 1 Sample is mostly Chromite. We sent it to a Mineralogy Professor and we are attaching his report as well.

On that sample your Cr<sub>2</sub>O<sub>3</sub> to FeO ratio is calculated as about 2.6.

It appears that most of the black Iron is attached to the chrome to make the Chromite. Only a fraction of the green material is divalent Iron also.

The # 2 Sample, (the apple green coating) is mostly divalent Iron with a little Ni and Cu. We did not tested for Vanadium we think it is unlikely. If you wish however we still can test for that.

We think that it is a fairly good Chromite sample, I hope you have a lot of it.

If we can be of further help please write.

Thanks for the nice envelope.

Sincerely

B. Leung  
Chief Chemist

BDL = Below Determination Limit

1 ppm = 0.0001 %

1 Tr.oz/ton = 34.21 ppm = 0.0034 %

**R<sub>L</sub>** Reiner Laboratories Inc.  
533 UNION St. NE.  
Salem, Oregon, 97301.  
503/363-2456

To: Bonny-L-Mining Corporation  
P.O.Box 124, Azalea, OR. 97410.

Page 1 of 1 #4  
Date: 4/30/84

Order No: letter-Foelkner  
Webb  
Invoice No: 00539

**REPORT OF ANALYSIS:** (all results are expressed in ppm or as otherwise indicated)

Sample No:	Cu	Co	Ni	Cr	Fe	Al
WSG-01	16.0	13.1	352	26.64%	11.70%	6.68%
WSG-03	8.9	35.0	.10%	18.01%	8.28%	5.05%
WSG-05	17.9	85.3	.19%	3.55%	7.20%	1.39%
WSG-06	24.9	86.6	.12%	.43%	6.40	2.15%
WSG-08	2.83%	243	.14%	.29%	18.65%	2.50%
WSG-09	109	22.9	428	22.34%	13.63%	5.31%

6 samples

Copy of the Report sent to Earth Services, 1480 Jacobs Drive, Eugene, OR. 97402.

  
Chief Chemist

BDL = Below Determination Limit

1 ppm = 0.0001 %

1 Tr.oz/ton = 34.21 ppm = 0.0034 %

**R<sub>L</sub>** Reiner Laboratories Inc.  
533 UNION St. NE.  
Salem, Oregon, 97301.  
503/363-2456



# Assay Office

A Division of GOMIL CHEMICAL CO.  
MINERS' EXCHANGE BUILDING

432 WEST MAIN STREET - QUINCY, CALIFORNIA 95971

PHONE 916-283-2280

CABLE ADDRESS

"TRANSPIRE"

QUINCY, U.S.A.

## MEMORANDUM OF QUALITATIVE SPECTROGRAPHIC ANALYSIS

MADE FOR Burnetta Long DATE Dec. 15, 19883

LESS THAN 0.01%	.01 TO .10%	.10 TO 1.0%	1.0 TO 10.0%	MAJOR
Lithium-Trace	Silver .0041	Strontium .48	Aluminum 4.5	Carbon, Silica
Antimony-Trace		Titanium .20	Calcium 4.0	81.9508 %
Arsenic-Trace		Barium .36	Iron 1.6	
Bismuth-Trace		Sulfur .51	Magnesium 1.5	
Cobalt-Trace			Sodium 2.0	
			Manganese 1.8	
			Copper 2.6	

ASSAY NO. ....

BY

WILLIAM E. MILLER, ASSAYER.

CHARGES \$ 15.00 Paid WEM

CHEMISTRY Touches EVERYTHING

5 #

# METALLURGICAL LABORATORIES, INC.

1142 HOWARD STREET

SAN FRANCISCO, CALIFORNIA 94103

AREA CODE 415 863-8

## Qualitative Spectrographic Analysis

Submitted by

Ms. Bonnie Long  
2416 Ramona Street  
Pinole, California 94564

Date July 16, 1982

Sample of Mineral

P. O. No.

Lab. No. 3442

### METALS FOUND AND PERCENTAGE RANGE

SAMPLE MARK	LESS THAN 0.01%	.01 TO .10%	.10 TO 1.0%	1.0 TO 10.0%	MAJOR
Chromite	Lead Molybdenum Strontium Boron Silver	Vanadium Cobalt Potassium	Manganese Copper Nickel Titanium Sodium	Magnesium Aluminum Calcium	Iron Silicon Chromium

REMARKS:

METALLURGICAL LABORATORIES, INC.

By \_\_\_\_\_  
SPECTROCHEMIST



7/27

142 HOWARD STREET

SAN FRANCISCO, CALIFORNIA 94103

AREA CODE 415 863-857

## REPORT OF ASSAY

Submitted by

Ms. Bonnie Long  
2416 Ramona Street  
Pinole, California 94564

Date July 16, 1982

Sample of Minerals

P. O. No.

Lab. No. 3442

SAMPLE MARK	GOLD, PER TON OF 2,000 LBS.		SILVER, PER TON OF 2,000 LBS.		Chromic Oxide %		
	TROY OUNCES	VALUE	TROY OUNCES	VALUE			
Serpentine + Calcite	Trace		N11		17.49		

METALLURGICAL LABORATORIES, INC.

By \_\_\_\_\_

#7

# Assay Office

A Division of GOMIL CHEMICAL CO.  
MINERS' EXCHANGE BUILDING

432 WEST MAIN STREET - QUINCY, CALIFORNIA 95971

PHONE: 916-283-2280

CABLE ADDRESS: "TRANSPIRE"

QUINCY, U.S.A.

## MEMORANDUM OF QUALITATIVE SPECTROGRAPHIC ANALYSIS

MADE FOR Burnetta Long DATE Oct 15, 1982

LESS THAN 0.01%	.01 TO .10%	.10 TO 1.0%	1.0 TO 10.0%	MAJOR
NOTE: Ozs. per Ton (2000 lbs.)				
Barium-Trace	Sulfur .05 16 ozs.	Sodium .50 160 ozs.	Aluminum 4.5 1340 ozs.	Carbon, Silica  82.0 %
Lithium-Trace	Phosphorus .01 3.2 ozs.	Sulfur .21 67.2 ozs	Iron 2.1 672 ozs.	
Nickel-Trace	Strontium .04 12.8 ozs.		Calcium 2.0 640 ozs.	
Silicath-Trace	Titanium .02 6.4 ozs.		Chrome 7.1 2,272 ozs.	
Fluorite-Trace	Manganese .07 22.4 ozs.		Magnesium 1.4 448 ozs.	
Arsenic-Trace				
Antimony-Trace				
	RARE EARTHS			
	None			

NO. 104262

BY William E. Miller  
WILLIAM E. MILLER, ASSAYER.

CHARGES: 15.00  
Over Wt. Grinding 8.00  
Ozs. Cost. 5.00  
28.00

CHEMISTRY Touches EVERYTHING



#8

**METALLURGICAL LABORATORIES, INC.**

SPECTROGRAPHERS

1142 HOWARD STREET

SAN FRANCISCO, CALIFORNIA 94103

AREA CODE 415 863-8575

**Qualitative Spectrographic Analysis**

Submitted by

Ms. Burnetta Long  
2416 Ramona Street  
Pinole, California 94564

Date September 3, 1982

Sample of Mineral

P. O. No.

Lab. No. 3879

**METALS FOUND AND PERCENTAGE RANGE**

SAMPLE MARK	LESS THAN 0.01%	.01 TO .10%	.10 TO 1.0%	1.0 TO 10.0%	MAJOR
#2	Lead Zirconium Molybdenum Potassium Strontium Boron Silver	Vanadium Cobalt Copper	Sodium Nickel Manganese Titanium	Aluminum Calcium	Magnesium Silicon Chromium Iron

REMARKS:

METALLURGICAL LABORATORIES, INC.

By \_\_\_\_\_  
SPECTROCHEMIST

# Metallurgical Laboratories, Inc.

Chemists · Assayers · Spectrographers

142 HOWARD STREET

SAN FRANCISCO, CALIFORNIA 94103

AREA CODE 415 · 863-8575

## REPORT OF ANALYSIS

Submitted by

Ms. Burnetta Long  
2416 Ramona Street  
Pinole, California 94564

Date September 3, 1982

Sample of Mineral

P. O. No.

Lab. No. 3879

SAMPLE MARK

PERCENTAGES

#2

Chromium

16.44

METALLURGICAL LABORATORIES, INC.

By



432 WEST MAIN STREET - QUINCY, CALIFORNIA 95971

QUINCY, U.S.A

# MEMORANDUM OF ASSAY

MADE FOR Burnetta Long DATE Oct 15, 1968

[illegible]

ASSAY NO. ....

CHARGES \$ 40.00 Paid WEM

BY

WILLIAM E. MILLER, ASSAYER.

**CHEMISTRY** *Touches* **EVERYTHING**

9



To: Mr. Richard Webb c/o Bonny-L-Mining  
P.O. Box 124  
Azalea, OR 97410

Date: 1-28-83 **#10**Order No: letter-WebbInvoice No: 00257**REPORT OF ANALYSIS:** (all results are expressed in ppm or as otherwise indicated)

Sample No:	Au	Ag	Pt	Ni	Mn	Fe	Cu	Co
	oz/t	oz/t	oz/t			%		
#1	BDL	BDL	BDL	306	193	10.50	10.8	6.7
	Cr	Cr O						
	%	2 3						
#1	26.46	39.43						

1 sample

A Good "Chromite" Sample.

*B. Reiner*  
 Chief Chemist

BDL = Below Determination Limit

1 ppm = 0.0001 %

1 Tr.oz/ton = 34.21 ppm = 0.0034 %

**R<sub>L</sub>** Reiner Laboratories Inc.  
 533 UNION St. NE.  
 Salem, Oregon, 97301.  
 503/363-2456





500 3,000 4500 7500  
GEOMORPHIC DIVISIONS OF OREGON

Coastal Plain - Unconsolidated sands and gravels of Quaternary age deposited as a thin veneer on the eroded surfaces of older Coast Range rocks. Marine terraces extend along coast at elevations from a few feet to 1500 feet above sea level.

Coast Range - A structural anticlinorium which has its main north-south axis superimposed on earlier folds trending northeast to east. Northern part is composed of submarine volcanic rocks, mainly pillow lavas and palagonitic tuffs and breccias, flanked by Tertiary marine sandstones, tuffaceous shales, and mudstones. Total thickness of volcanics is at least 10,000 feet. Most of the sedimentary rocks are of Eocene and Oligocene ages. Thickness varies from a few feet to 7000 feet. Intrusive rocks are of late Oligocene to Miocene age and are mostly gabbroic sills from a few tens to 3000 feet thick with dikes from 5 to 50 feet wide. Crest of Coast Range averages about 1500 feet in elevation. Marys Peak, the highest point, is 4097 feet. Topography generally rugged, especially in the volcanic areas.

Klamath Mountains - A region of rugged topography with elevations from sea level to 7500 feet. Streams are numerous, canyons deep, and ridges narrow. A core of pre-Triassic schists underlies a thick sequence of interbedded marine and nonmarine Mesozoic volcanic and sedimentary rocks (Applegate Group; Dothan, Rogue, and Galice Formations) which are tightly folded, faulted, intruded by ultramafic to acid plutonics, and uplifted. Low-grade regional metamorphism is widespread.

Willamette Valley - A valley flood plain with isolated hills, lying between the Cascade and Coast ranges. Underlain by marine Eocene and Oligocene sandstones and shales. Formations dip eastward from Coast Range foothills, crop out in hills within the valley, and again along parts of Cascade foothills. Silts and gravels deposited by Willamette River and major tributaries have filled the valley up to several hundred feet.

Cascade Range - Divisible into Western Cascades and High Cascades and best described as a great pile of volcanic rocks. The older Western Cascades are maturely dissected. Rocks range in age from late Eocene to possibly early Pliocene. Eocene to lower Miocene rocks are chiefly pyroclastics with interbedded lava flows and lenses of waterlaid sediments. Middle Miocene rocks are predominantly basaltic lavas which cap higher ridges and may be remnants of shield-type volcanoes. Younger rocks vary from pyroclastics to basalts.

The High Cascades are the majestic volcanic peaks, cinder cones, and relatively undissected lavas on east side of Range. Original constructional form of most central vent volcanoes has been severely modified by glaciation. Most peaks are Plio-Pleistocene in age; Recent flows and cinder cones are common. Lavas are dominantly basaltic andesites and olivine basalts. Some rhyolite and obsidian flows are present. Pumice blankets large areas. Intracanyon basalts of Pliocene age extend into Western Cascades from High Cascades. Highest peak is Mount Hood, 11,235 feet.

Deschutes-Umatilla Plateau - A north-sloping lava plateau or monocline bounded on north by Columbia River. Elevation 600 to 3000 feet above sea level. Surface deeply dissected by youthful streams separated by broad, gently rolling interstream areas. Scabland channels eroded by glacial flood waters occur in northern part.

High Lava Plains - Young, uneroded surface with few established streams; largely interior drainage. Elevation 3500 to 6000 feet above sea level. Quaternary rocks blanket western part and consist of lavas, pumice, obsidian, and many small cinder cones. Tertiary rocks include basaltic, andesitic, and rhyolitic lavas; tuffs; welded tuffs.

Basin-Range - Young fault-block mountains separated by broad graben valleys with interior drainage; occasional volcanic peaks. Elevation 4000 to 9000 feet above sea level. Shallow alkaline lakes and playas in graben valleys are remnants of much larger Quaternary lakes. Faults of the typical Basin and Range topography trend northeast and northwest. Occasional undissected Recent volcanic cones and flows are found in the northern part.

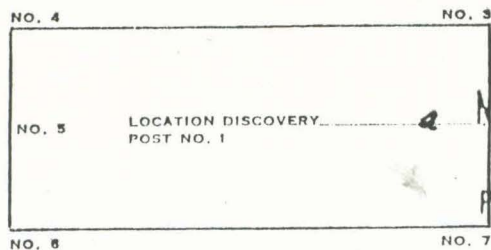
Owyhee Upland - Moderately to highly dissected surface with few perennial streams. Elevation 2000 to 6000 feet above sea level. Late Quaternary lavas of limited extent occur north and west of Jordan Valley. Major faulting of middle Tertiary formations is generally north-south with typical fault block structures developed. Merges into the Basin and Range region to the south and west. Northern border sharply defined where it lies on the intensely deformed pre-Tertiary rocks of the southern Blue Mountains.

Blue Mountains - A complex region of mountain ranges and mountainous areas, canyons, plateaus and basins. Elevations range from 2000 to 10,000 feet. High mountains glaciated. Region drained by John Day River and other streams tributary to Columbia and Snake rivers. In many places pre-Tertiary rocks occur as islands surrounded by Tertiary lavas and pyroclastics. In northern, western, and extreme southern parts: largely Tertiary pyroclastics and lavas from central vents and fissures. Tertiary rocks warped by large, broad, probably deep-seated folds. Major faults are common.

Joseph Upland - Underlain almost exclusively by a thick succession of essentially flat-lying Miocene basalts with but few thin sedimentary interbeds. Deeply eroded by numerous streams draining for the most part northward in narrow canyons with steep gradients. Elevations on upland surface average between 3000 and 5000 feet.

Snake River Canyon - The Snake River has carved a deep (5652 feet at Hat Point), narrow, V-shaped, and locally precipitous canyon with an average gradient of approximately 10 feet per mile over an airline distance of 110 miles. It has cut through basalts of Joseph Upland and on into basement rocks of Blue Mountains to reveal a narrow, ribbon-like exposure of pre-Tertiary rocks throughout nearly entire course of canyon bottom. Older formations are principally Permo-Triassic metasediments and metavolcanics.





THIS DIAGRAM EXPLAINS METHOD OF DESCRIPTION OF CLAIM.

FILED

NOV 12 7 30 AM '81

## Notice of Mining Location

STATE OF OREGON,

PORTLAND, OREGON

County of Douglas

Medford

Mining District

NOTICE HEREBY IS GIVEN that the undersigned locators, each a citizen of the United States or one who has declared his intention to become such, have discovered a vein or lode of mineral bearing rock in place upon the unappropriated public domain of the United States within the State of Oregon and said Mining District; and, in accordance with the laws of the United States, of the State of Oregon and the regulations of said Mining District, have located and do hereby locate a claim upon such vein or lode by posting this notice of such discovery and location on a substantial post at the point of discovery, marked Post No. 1. The name of the claim is Sierra Six Claim, further described as follows:

Commencing at a post marked No. 1 (Discovery Post), from thence 200 feet in a North direction to an end post marked No. 2, thence 300 feet in a West direction to a corner post marked No. 3, thence 1500 feet in a South direction to a corner post marked No. 4, thence 300 feet in a East direction to an end post marked No. 5, thence 300 feet in a East direction to a corner post marked No. 6, thence 1500 feet in a North direction to a corner post marked No. 7, thence 300 feet in a West direction to said end post marked No. 2.

The locators claim 1300 feet in a South direction from point of discovery to the West <sup>4</sup> South end line and 200 feet in the opposite direction from point of discovery to the 2<sup>nd</sup> North end line and 300 feet on each side of the middle of said vein or lode, further claiming all the surface rights, privileges and minerals, with all dips, spurs, angles and variations, and other rights granted by existing laws and customs. This claim is further described as being \_\_\_\_\_ feet from a natural object or permanent monument in the vicinity, to-wit: \_\_\_\_\_ (use township and range, if possible)

T33S R4W Sec 5

SW 1/4 NW 1/4

(The old Black Boy mine)

The general course or strike of the vein or lode as nearly as may be determined is \_\_\_\_\_ with reference to the natural object or permanent monument described above. The adjoining claims are \_\_\_\_\_

Sierra Seven

This notice is placed at discovery post No. 1; posts are placed at each corner and both center ends, and the name of this vein or lode and date of location are placed on all posts so that the boundaries of the claim may be readily traced. In construing this location notice, the singular includes the plural and vice versa, where the context so requires.

Located this

6<sup>th</sup>

day of

Nov

1901

Richard Light



517.010. Location of mining claims upon veins or lodes. (1) Any person, a citizen of the United States, or one who has declared his intention to become such, who discovers a vein or lode of mineral-bearing rock in place upon the unappropriated public domain of the United States within this state, may locate a claim upon such vein or lode by posting thereon a notice of such discovery and location. The notice shall contain:

- The name of the lode or claim.
- The names of the locators.
- The date of the location.
- The number of linear feet claimed along the vein or lode each way from the point of discovery, with the width on each side of the lode or vein.
- The general course or strike of the vein or lode as nearly as may be, with reference to some natural object or permanent monument in the vicinity, and by defining the boundaries upon the surface of each claim so that the same may be readily traced.

(2) Such boundaries shall be marked within 30 days after posting of such notice by six substantial posts, projecting not less than three feet above the surface of the ground, and not less than four inches square or in diameter, or by substantial mounds of stone, or earth and stone, at least two feet in height, to wit: one such post or mound of rock at each corner and at the center ends of such claims.

517.030. Recording copy of discovery notice; fee. The locator shall, within 60 days from the posting of the location notices by him upon the

lode or claim, file for record with the recorder of conveyances, if there is one, who shall be the custodian of mining records and miners' liens otherwise with the clerk of the county where the claim is situated, a copy of the notice posted by him upon the lode or claim and shall pay the recorder or clerk a fee of \$1 for such record, which sum the recorder or clerk shall immediately pay over to the treasurer of the county and shall take his receipt therefor, as in case of other county funds coming into the possession of such officer. The recorder or clerk shall immediately record the location notice.

517.040. Abandoned claims. Abandoned claims are unappropriated mineral lands, and titles thereto shall be obtained as specified in ORS 517.010 to 517.030, without reference to any work previously done thereon.

517.060. Correcting defective notice of location. If at any time a individual who has located a mining claim within the meaning of ORS 517.010 or 517.044, or his assigns, apprehends that the original notice of location of the mining claim was defective, erroneous, or that the requirements of the law had not been complied with before the filing of the notice, such locator or assigns may post and file for record in the manner now provided by law, an amended notice of the location which shall relate back to the date of the original location; provided, that the posting and filing of the amended notice of location shall not interfere with the existing rights of others at the time of posting the amended notice.

The following is a quotation from information furnished the publisher by the State of Oregon Department of Geology and Mineral Industries.

#### Necessary steps in locating a vein or lode claim.

- Post notice of location at point of discovery.
- Stake claim within 30 days of date of discovery.
- File copy of notice of location with county clerk or recorder for the county in which the claim is located. Filing fee is \$1.00 per claim. Notice may be mailed in for recording. Notice should be recorded within 60 days from the posting of the notice on the claim.

#### Area and shape of a vein or lode claim.

A vein or lode claim can be not more than 1500 feet in length and can extend not more than 300 feet on either side of the vein or lode (Fig. 1-A). A full sized vein or lode claim embraces an area of slightly more than 20½ acres. Although most claims are rectangular they may have a variety of shapes, the only requirement being that the end-lines be parallel. In the case of non-rectangular claims it should be noted that the end-lines need not be limited to 600 feet in length (Fig. 1-B).

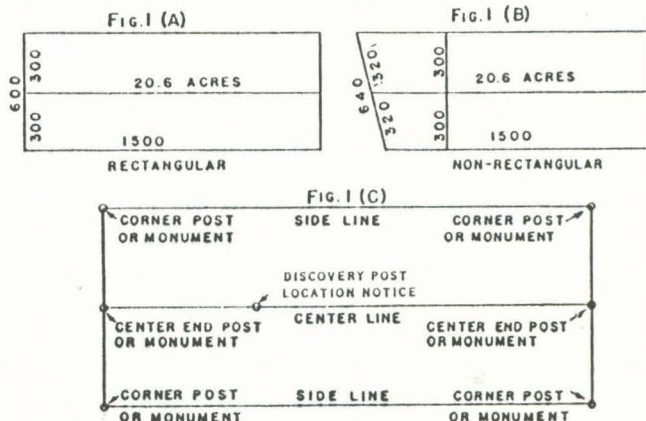
#### Requirements of a vein or lode claim (Fig. 1-C).

- Location notice posted at or near point of discovery.
- Four claim corner posts, or monuments, and two center end posts, or monuments. All posts must be at least 4 inches square or in diameter, and must project at least 3 feet above the ground. Monuments of stone, or earth and stone, must be at least 2 feet in height.

#### Vein or lode or placer location.

Vein or lode claims are located where minerals are in place in veins or lodes. Most metal mines are vein or lode locations.

Placer claims are located where minerals have been derived from rocks or veins to form deposits such as stream gravels and gold-bearing alluvium. Massive deposits of nonmetallic minerals such as limestone, building stone and pumice are generally located as placer claims.



## Mining Location

### VEIN OR LODGE

(FORM No. 830)

STEVENS-NESS LAW PUB. CO., PORTLAND, ORE.

Sierra Six

Name of Claim.

Burnett Long  
Richard Webb

Locators.

AFTER RECORDING RETURN TO

SPACE RESERVED

FOR

RECORDER'S USE

STATE OF OREGON

COUNTY OF DOUGLAS

STATE OF OREGON, } SS.

I, DORIS E. WADSWORTH, COUNTY CLERK } SS.

AND RECORDER OF CONVEYANCES, IN AND FOR } SS.

SAID COUNTY, DO HEREBY CERTIFY THAT THE } SS.

WITHIN INSTRUMENT WAS RECORDED THIS DAY:

at ..... o'clock ..... M., and recorded

in book/reel/volume No. ....

or as document/fee/file

Instrument/microfilm

Record of

of said County

DOUGLAS COUNTY

BY County Attested Seal

DEPUTY

NAME

NO.

By

FEE

300

25

325

Deputy

81-14122

NOTICE HEREBY IS GIVEN that the undersigned locators, each a citizen of the United States or one who has declared his intention to become such, have discovered a vein or lode of mineral bearing rock in place upon the unappropriated public domain of the United States within the State of Oregon and said Mining District; and, in accordance with the laws of the United States, of the State of Oregon and the regulations of said Mining District, have located and do hereby locate a claim upon such vein or lode by posting this notice of such discovery and location on a substantial post at the point of discovery, marked Post No. 1. The name of the claim is Sierra Seven Claim, further described as follows:

Commencing at a post marked No. 1 (Discovery Post), from thence 200 feet in a north direction to an end post marked No. 2, thence 300 feet in a west direction to a corner post marked No. 3, thence 1500 feet in a south direction to a corner post marked No. 4, thence 300 feet in a west direction to an end post marked No. 5, thence 300 feet in a east direction to a corner post marked No. 6, thence 1500 feet in a north direction to a corner post marked No. 7, thence 300 feet in a west direction to said end post marked No. 2. The locators claim 1300 feet in a south direction from point of discovery to the 5<sup>th</sup> south end line and 200 feet in the opposite direction from point of discovery to the 4<sup>th</sup> north end line and 300 feet on each side of the middle of said vein or lode, further claiming all the surface rights, privileges and minerals, with all dips, spurs, angles and variations, and other rights granted by existing laws and customs. This claim is further described as being \_\_\_\_\_ feet from a natural object or permanent monument in the vicinity, to-wit: \_\_\_\_\_ (use township and range, if possible)

T33S R4W Sec 5

Sully NW 1/4

The general course or strike of the vein or lode as nearly as may be determined is \_\_\_\_\_ with reference to the natural object or permanent monument described above. The adjoining claims are \_\_\_\_\_

Sierra Six

This notice is placed at discovery post No. 1; posts are placed at each corner and both center ends, and the name of this vein or lode and date of location are placed on all posts so that the boundaries of the claim may be readily traced. In construing this location notice, the singular includes the plural and vice versa, where the context so requires.

Located this

6

day of

Oct  
Nov

1981

Burnett Long  
Richard Webb

Locator(s).

Caution: The laws of nearly all western states contain special requirements for location notices. These requirements differ from state to state. The Oregon requirements appear on the reverse hereof. If the claim for which this form is used is situated outside of Oregon, change the name of the state above and, before recording, carefully check the foregoing location notice with the laws of the state and the regulations of the mining district in which the claim is situated to ensure that the notice contains all things required.



517.010. Location of mining claims upon veins or lodes. (1) Any person, a citizen of the United States, or one who has declared his intention to become such, who discovers a vein or lode of mineral-bearing rock in place upon the unappropriated public domain of the United States within this state, may locate a claim upon such vein or lode by posting thereon a notice of such discovery and location. The notice shall contain:

- (a) The name of the lode or claim.
- (b) The names of the locators.
- (c) The date of the location.
- (d) The number of linear feet claimed along the vein or lode each way from the point of discovery, with the width on each side of the lode or vein.
- (e) The general course or strike of the vein or lode as nearly as may be, with reference to some natural object or permanent monument in the vicinity, and by defining the boundaries upon the surface of each claim so that the same may be readily traced.

(2) Such boundaries shall be marked within 30 days after posting of such notice by six substantial posts, projecting not less than three feet above the surface of the ground, and not less than four inches square or in diameter, or by substantial mounds of stone, or earth and stone, at least two feet in height, to wit: one such post or mound of rock at each corner and at the center ends of such claims.

517.030. Recording copy of discovery notice; fee. The locator shall, within 60 days from the posting of the location notices by him upon the

lode or claim, file for record with the recorder of conveyances, if there is one, who shall be the custodian of mining records and miners' liens, otherwise with the clerk of the county where the claim is situated, a copy of the notice posted by him upon the lode or claim and shall pay the recorder or clerk a fee of \$1 for such record, which sum the recorder or clerk shall immediately pay over to the treasurer of the county and shall take his receipt therefor, as in case of other county funds coming into the possession of such officer. The recorder or clerk shall immediately record the location notice.

517.040. Abandoned claims. Abandoned claims are unappropriated mineral lands, and titles thereto shall be obtained as specified in ORS 517.010 to 517.030, without reference to any work previously done thereon.

517.060. Correcting defective notice of location. If at any time an individual who has located a mining claim within the meaning of ORS 517.010 or 517.044, or his assigns, apprehends that the original notice of location of the mining claim was defective, erroneous, or that the requirements of the law had not been complied with before the filing of the notice, such locator or assigns may post and file for record in the manner now provided by law, an amended notice of the location which shall relate back to the date of the original location; provided, that the posting and filing of the amended notice of location shall not interfere with the existing rights of others at the time of posting the amended notice.

The following is a quotation from information furnished the publisher by the State of Oregon Department of Geology and Mineral Industries.

**Necessary steps in locating a vein or lode claim.**

1. Post notice of location at point of discovery.
2. Stake claim within 30 days of date of discovery.
3. File copy of notice of location with county clerk or recorder for the county in which the claim is located. Filing fee is \$1.00 per claim. Notice may be mailed in for recording. Notice should be recorded within 60 days from the posting of the notice on the claim.

**Area and shape of a vein or lode claim.**

A vein or lode claim can be not more than 1500 feet in length and can extend not more than 300 feet on either side of the vein or lode (Fig. 1-A). A full sized vein or lode claim embraces an area of slightly more than 20½ acres. Although most claims are rectangular they may have a variety of shapes, the only requirement being that the end-lines be parallel. In the case of non-rectangular claims it should be noted that the end-lines need not be limited to 600 feet in length (Fig. 1-B).

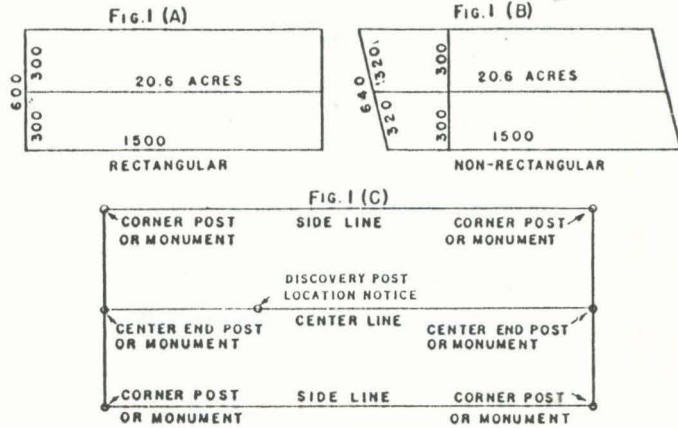
**Requirements of a vein or lode claim (Fig. 1-C).**

1. Location notice posted at or near point of discovery.
2. Four claim corner posts, or monuments, and two center end posts, or monuments. All posts must be at least 4 inches square or in diameter, and must project at least 3 feet above the ground. Monuments of stone, or earth and stone, must be at least 2 feet in height.

**Vein or lode or placer location.**

Vein or lode claims are located where minerals occur in place in veins or lodes. Most metal mines are vein or lode locations.

Placer claims are located where minerals have been derived from rocks or veins to form deposits such as stream gravels and gold-bearing alluvium. Massive deposits of nonmetallic minerals such as limestone, building stone, and pumice are generally located as placer claims.



**Mining Location**  
**VEIN OR LODE**  
(FORM No. 830)  
STEVENS-NESS LAW PUB. CO., PORTLAND, ORE.

Sierra Seven  
Name of Claim.

Bernstein Long  
Richard Webb  
Locators.

AFTER RECORDING RETURN TO

STATE OF OREGON )  
COUNTY OF DOUGLAS ) ss.

STATE OF OREGON,  
I, DORIS L. WADSWORTH, COUNTY CLERK } ss.  
AND RECORDER OF CONVEYANCES, IN AND FOR  
SAID COUNTY, DO HEREBY CERTIFY THAT THE  
WITHIN INSTRUMENT WAS RECORDED THIS DAY: \_\_\_\_\_, 19\_\_\_\_,  
at \_\_\_\_\_ o'clock \_\_\_\_\_ M., and recorded  
in book/reel/volume No. \_\_\_\_\_ on  
page \_\_\_\_\_ or as document/fee/file/  
instrument/microfilm No. \_\_\_\_\_,  
Record of \_\_\_\_\_  
DOUGLAS COUNTY  
BY \_\_\_\_\_ Witness my hand and seal of  
Deputy  
NO. \_\_\_\_\_ FEE \$300  
DOUGLAS COUNTY OFFICIAL RECORDS



NOTICE HEREBY IS GIVEN that the undersigned locators, each a citizen of the United States or one who has declared his intention to become such, have discovered a vein or lode of mineral bearing rock in place upon the unappropriated public domain of the United States within the State of Oregon and said Mining District; and, in accordance with the laws of the United States, of the State of Oregon and the regulations of said Mining District, have located and do hereby locate a claim upon such vein or lode by posting this notice of such discovery and location on a substantial post at the point of discovery, marked Post No. 1. The name of the claim is Sierra Eight Claim, further described as follows:

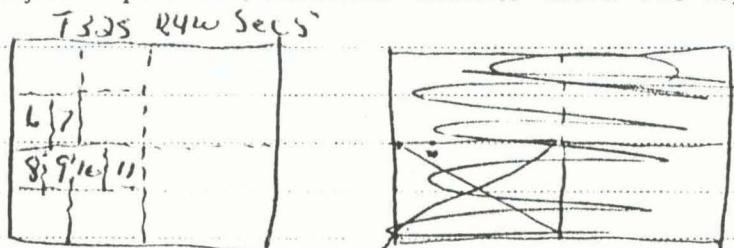
Commencing at a post marked No. 1 (Discovery Post), from thence  
10 feet in a NORTH direction to an end post marked No. 2, thence  
300 feet in a West direction to a corner post marked No. 3, thence  
1500 feet in a SOUTH direction to a corner post marked No. 4, thence  
300 feet in a East direction to an end post marked No. 5, thence  
300 feet in a East direction to a corner post marked No. 6, thence  
1500 feet in a North direction to a corner post marked No. 7, thence  
300 feet in a West direction to said end post marked No. 2.

The locators claim 10 feet in a NORTH direction from point of discovery to the NORTH (2 post) end line and 1490 feet in the opposite direction from point of discovery to the SOUTH (1/2 S post) end line and 300 feet on each side of the middle of said vein or lode, further claiming all the surface rights, privileges and minerals, with all dips, spurs, angles and variations, and other rights granted by existing laws and customs. This claim is further described as being \_\_\_\_\_ feet from a natural object or permanent monument in the vicinity, to-wit: \_\_\_\_\_ (use township and range, if possible)

1335 R4W Sec 5  
~~W1/2 NW1/4 SW1/4~~ W1/2 NW1/4 SW1/4

The general course or strike of the vein or lode as nearly as may be determined is N/S with reference to the natural object or permanent monument described above. The adjoining claims are

Sierra 6  
Sierra 9  
Sierra 2



This notice is placed at discovery post No. 1; posts are placed at each corner and both center ends, and the name of this vein or lode and date of location are placed on all posts so that the boundaries of the claim may be readily traced. In construing this location notice, the singular includes the plural and vice versa, where the context so requires.

Located this Jan day of 30<sup>th</sup>, 1982.

Melody Webb  
~~Robert Webb~~  
Jack Long  
~~Frank Nantz~~

~~Carol Webb~~  
Richard Webb  
Burnett Long  
~~Mark Long~~

Locator(s).

Caution: The laws of nearly all western states contain special requirements for location notices. These requirements differ from state to state. The Oregon requirements appear on the reverse hereof. If the claim for which this form is used is situated outside of Oregon, change the name of the state above and, before recording, carefully check the foregoing location notice with the laws of the state and the regulations of the mining district in which the claim is situated to ensure that the notice contains all things required.



become such, who discovers a vein or lode of mineral-bearing in place upon the unappropriated public domain of the United States in this state, may locate a claim upon such vein or lode by posting on a notice of such discovery and location. The notice shall contain:

- 1) The name of the lode or claim.
- 2) The names of the locators.
- 3) The date of the location.
- 4) The number of linear feet claimed along the vein or lode each from the point of discovery, with the width on each side of the lode in.
- 5) The general course or strike of the vein or lode as nearly as may with reference to some natural object or permanent monument in vicinity, and by defining the boundaries upon the surface of each so that the same may be readily traced.
- 6) Such boundaries shall be marked within 30 days after posting of notice by six substantial posts, projecting not less than three feet to the surface of the ground, and not less than four inches square diameter, or by substantial mounds of stone, or earth and stone, at two feet in height, to wit: one such post or mound of rock at corner and at the center ends of such claims.

7.030. Recording copy of discovery notice; fee. The locator shall, within 60 days from the posting of the location notices by him upon the

otherwise with the clerk of the county where the claim is situated, a copy of the notice posted by him upon the lode or claim and shall pay the recorder or clerk a fee of \$1 for such record, which sum the recorder or clerk shall immediately pay over to the treasurer of the county and shall take his receipt therefor, as in case of other county funds coming into the possession of such officer. The recorder or clerk shall immediately record the location notice.

517.010. Abandoned claims. Abandoned claims are unappropriated mineral lands, and titles thereto shall be obtained as specified in ORS 517.010 to 517.030, without reference to any work previously done thereon.

517.060. Correcting defective notice of location. If at any time an individual who has located a mining claim within the meaning of ORS 517.010 or 517.041, or his assigns, apprehends that the original notice of location of the mining claim was defective, erroneous, or that the requirements of the law had not been complied with before the filing of the notice, such locator or assigns may post and file for record in the manner now provided by law, an amended notice of the location which shall relate back to the date of the original location; provided, that the posting and filing of the amended notice of location shall not interfere with the existing rights of others at the time of posting the amended notice.

The following is a quotation from information furnished the publisher by the State of Oregon Department of Geology Mineral Industries.

Steps in locating a vein or lode claim.

Post notice of location at point of discovery.

Stake claim within 30 days of date of discovery.

File copy of notice of location with county clerk or recorder for the county in which the claim is located. Filing fee is \$1.00 per claim. Notice must be mailed in for recording. Notice should be recorded within 60 days from the posting of the notice on the claim.

Size and shape of a vein or lode claim.

A vein or lode claim can be not more than 1500 feet in length and cannot be more than 300 feet on either side of the vein or lode (Fig. 1-A). A rectangular vein or lode claim embraces an area of slightly more than 20 1/2 acres. Although most claims are rectangular they may have a variety of shapes, the only requirement being that the end-lines be parallel. In the case of non-rectangular claims it should be noted that the end-lines need not be limited to 600 feet in length (Fig. 1-B).

Requirements of a vein or lode claim (Fig. 1-C).

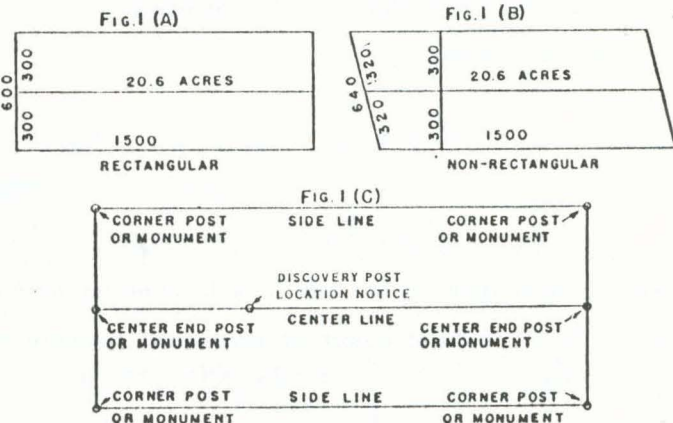
Location notice posted at or near point of discovery.

Four claim corner posts, or monuments, and two center end posts, or monuments. All posts must be at least 4 inches square or in diameter, must project at least 3 feet above the ground. Monuments of stone, or concrete, or iron, or steel, or wood, or metal, or any other material, or any combination thereof, must be at least 2 feet in height.

Location of a vein or lode or placer location.

Vein or lode claims are located where minerals occur in place in veins or lodes. Most metal mines are vein or lode locations.

Placer claims are located where minerals have been derived from rocks or veins to form deposits such as stream gravels and gold-bearing alluvium. Massive deposits of nonmetallic minerals such as limestone, building stone, and pumice are generally located as placer claims.



STATE OF OREGON )  
COUNTY OF DOUGLAS ) SS.

**Mining Location**  
VEIN OR LODGE  
(FORM No. 830)

STEVENS-NESS LAW PUB. CO., PORTLAND, ORE.

Sierra Eight  
Sierra Eight  
Richard Webb  
Burnett Long

Name of Claim.

Locators.

AFTER RECORDING RETURN TO

BY

NO.

SPACE RESERVED

1962 MAR 12 FOR RECORDER'S USE AM 9 54

DEPUTY

DOUGLAS COUNTY CLERK

DEPUTY

NAME

TITLE

Deputy

STATE OF OREGON,  
County of \_\_\_\_\_ } SS.

I certify that the within instrument was received for record on the \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_, at \_\_\_\_\_ o'clock \_\_\_\_\_ M., and recorded in book/reel/volume No. \_\_\_\_\_ on page \_\_\_\_\_ or as document/fee/file/instrument/microfilm No. \_\_\_\_\_, Record of \_\_\_\_\_ of said County.

Witness my hand and seal of County affixed.

HAILED

DOUGLAS COUNTY OFFICIAL RECORDS

82-02435



NOTICE HEREBY IS GIVEN that the undersigned locators, each a citizen of the United States or one who has declared his intention to become such, have discovered a vein or lode of mineral bearing rock in place upon the unappropriated public domain of the United States within the State of Oregon and said Mining District; and, in accordance with the laws of the United States, of the State of Oregon and the regulations of said Mining District, have located and do hereby locate a claim upon such vein or lode by posting this notice of such discovery and location on a substantial post at the point of discovery, marked Post No. 1. The name of the claim is Sievan Mine, Claim, further described as follows:

Commencing at a post marked No. 1 (Discovery Post), from thence  
90 feet in a North direction to an end post marked No. 2, thence  
300 feet in a ~~South~~ West direction to a corner post marked No. 3, thence  
1500 feet in a ~~South~~ South direction to a corner post marked No. 4, thence  
300 feet in a East direction to an end post marked No. 5, thence  
300 feet in a East direction to a corner post marked No. 6, thence  
1500 feet in a North direction to a corner post marked No. 7, thence  
300 feet in a West direction to said end post marked No. 2.

The locators claim 90 feet in a North direction from point of discovery to the North 2<sup>nd</sup> post (end line and 1410 feet in the opposite direction from point of discovery to the South (5<sup>th</sup> post) end line and feet on each side of the middle of said vein or lode, further claiming all the surface rights, privileges and minerals, with all dips, spurs, angles and variations, and other rights granted by existing laws and customs. This claim is further described as being feet from a natural object or permanent monument in the vicinity, to-wit: (use township and range, if possible)

1335 R4w Sec 5 E 6  
E 1/2 NW 1/4 SW 1/4 SE 1/4 SW 1/4 NW 1/4  
NE 1/4 SE 1/4

The general course or strike of the vein or lode as nearly as may be determined is S/W with reference to the natural object or permanent monument described above. The adjoining claims are

Sievan 8 - Sievan 7 - Sievan 10  
Quartz mill post to the N/W.

This notice is placed at discovery post No. 1; posts are placed at each corner and both center ends, and the name of this vein or lode and date of location are placed on all posts so that the boundaries of the claim may be readily traced. In construing this location notice, the singular includes the plural and vice versa, where the context so requires.

Located this 30 day of Jan, 1982.

Richard Webb,  
Burnetta Long.

Locator(s).

Caution: The laws of nearly all western states contain special requirements for location notices. These requirements differ from state to state. The Oregon requirements appear on the reverse hereof. If the claim for which this form is used is situated outside of Oregon, change the name of the state above and, before recording, carefully check the foregoing location notice with the laws of the state and the regulations of the mining district in which the claim is situated to ensure that the notice contains all things required.

...state, may locate a claim upon such vein or lode by posting notice of such discovery and location. The notice shall contain:  
the names of the locators.  
the date of the location.  
the number of linear feet claimed along the vein or lode each  
the point of discovery, with the width on each side of the lode  
the general course or strike of the vein or lode as nearly as may  
reference to some natural object or permanent monument in  
ity, and by defining the boundaries upon the surface of each  
that the same may be readily traced.  
each boundaries shall be marked within 30 days after posting of  
ce by six substantial posts, projecting not less than three feet  
surface of the ground, and not less than four inches square  
meter, or by substantial mounds of stone, or earth and stone, at  
feet in height, to wit: one such post or mound of rock at  
or and at the center ends of such claims.  
0. Recording copy of discovery notice; fee. The locator shall,  
days from the posting of the location notices by him upon the

the recorder or clerk a fee of \$1 for each location notice.  
order or clerk shall immediately pay over to the treasurer of the county  
and shall take his receipt therefor, as in case of other county funds  
coming into the possession of such officer. The recorder or clerk shall  
immediately record the location notice.  
517.010. Abandoned claims. Abandoned claims are unappropriated  
mineral lands, and titles thereto shall be obtained as specified in ORS  
517.010 to 517.030, without reference to any work previously done thereon.  
517.060. Correcting defective notice of location. If at any time an  
individual who has located a mining claim within the meaning of ORS  
517.010 or 517.041, or his assigns, apprehends that the original notice of  
location of the mining claim was defective, erroneous, or that the re-  
quirements of the law had not been complied with before the filing of  
the notice, such locator or assigns may post and file for record in the  
manner now provided by law, an amended notice of the location which  
shall relate back to the date of the original location; provided, that the  
posting and filing of the amended notice of location shall not interfere  
with the existing rights of others at the time of posting the amended  
notice.

following is a quotation from information furnished the publisher by the State of Oregon Department of Geology  
eral Industries.

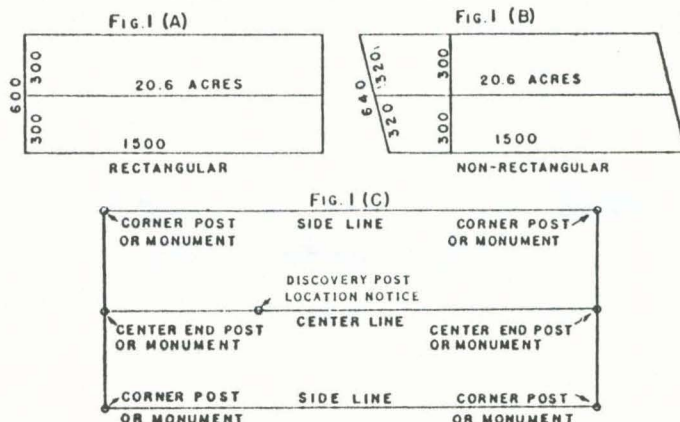
steps in locating a vein or lode claim.  
notice of location at point of discovery.  
claim within 30 days of date of discovery.  
copy of notice of location with county clerk or recorder for the  
which the claim is located. Filing fee is \$1.00 per claim. Notice  
ailed in for recording. Notice should be recorded within 60 days  
posting of the notice on the claim.

shape of a vein or lode claim.  
a or lode claim can be not more than 1500 feet in length and can  
ot more than 300 feet on either side of the vein or lode (Fig. 1-A).  
ed vein or lode claim embraces an area of slightly more than 20 1/2  
though most claims are rectangular they may have a variety of  
the only requirement being that the end-lines be parallel. In the  
non-rectangular claims it should be noted that the end-lines need  
nited to 600 feet in length (Fig. 1-B).

ents of a vein or lode claim (Fig. 1-C).  
ation notice posted at or near point of discovery.  
or claim corner posts, or monuments, and two center end posts,  
ments. All posts must be at least 4 inches square or in diameter,  
project at least 3 feet above the ground. Monuments of stone, or  
stone, must be at least 2 feet in height.

lode or placer location.  
or lode claims are located where minerals occur in place in veins  
Most metal mines are vein or lode locations.

Placer claims are located where minerals have been derived from rocks  
or veins to form deposits such as stream gravels and gold-bearing alluvium.  
Massive deposits of nonmetallic minerals such as limestone, building stone,  
and pumice are generally located as placer claims.



STATE OF OREGON )  
COUNTY OF DOUGLAS ) ss.

**Mining Location**  
VEIN OR LODGE  
(FORM No. 830)  
STEVENS-NESS LAW PUB. CO., PORTLAND, ORE.

Name of Claim. Sierra Nine

Locators. Richard Webb  
Wendell A. King

AFTER RECORDING RETURN TO  
No. 82-02438

STATE OF OREGON,  
County of DOUGLAS } ss.  
I certify that the within instru-  
ment was received for record on the  
..... day of ....., 19.....,  
at ..... o'clock .. M., and recorded  
in book/reel/volume No. .... on  
page ..... or as document/fee/file/  
instrument/microfilm No. ....  
Record of .....  
of said County.  
Witness my hand and seal of  
..... county affixed.

1982 MAR 12 AM 9 56  
RECORDED  
FOR  
RECORDER'S USE  
DOUGLAS COUNTY CLERK  
DEPUTY  
FEE 3.00  
3.37

DOUGLAS COUNTY OFFICIAL RECORDS  
By ..... NAME ..... TITLE Deputy

HANDED



Nedford

Mining District

NOTICE HEREBY IS GIVEN that the undersigned locators, each a citizen of the United States or one who has declared his intention to become such, have discovered a vein or lode of mineral bearing rock in place upon the unappropriated public domain of the United States within the State of Oregon and said Mining District; and, in accordance with the laws of the United States, of the State of Oregon and the regulations of said Mining District, have located and do hereby locate a claim upon such vein or lode by posting this notice of such discovery and location on a substantial post at the point of discovery, marked Post No. 1. The name of the claim is Sierra Ten. Claim, further described as follows:

Commencing at a post marked No. 1 (Discovery Post), from thence

50 feet in a North direction to an end post marked No. 2, thence  
300 feet in a West direction to a corner post marked No. 3, thence  
1500 feet in a South direction to a corner post marked No. 4, thence  
300 feet in a East direction to an end post marked No. 5, thence  
300 feet in a East direction to a corner post marked No. 6, thence  
1500 feet in a North direction to a corner post marked No. 7, thence  
300 feet in a West direction to said end post marked No. 2.

The locators claim 50 feet in a North direction from point of discovery to the North ("discovery") end line and 1450 feet in the opposite direction from point of discovery to the South ("discovery") end line and 300 feet on each side of the middle of said vein or lode, further claiming all the surface rights, privileges and minerals, with all dips, spurs, angles and variations, and other rights granted by existing laws and customs. This claim is further described as being \_\_\_\_\_ feet from a natural object or permanent monument in the vicinity, to-wit: \_\_\_\_\_ (use township and range, if possible)

1335 R4W Sec 5  
W 1/2 NE 1/4 SW 1/4

The general course or strike of the vein or lode as nearly as may be determined is SW/NE with reference to the natural object or permanent monument described above. The adjoining claims are Sierra Sig. This claim lies SE of  
Quartz mill peak.

This notice is placed at discovery post No. 1; posts are placed at each corner and both center ends, and the name of this vein or lode and date of location are placed on all posts so that the boundaries of the claim may be readily traced. In construing this location notice, the singular includes the plural and vice versa, where the context so requires.

Located this 30 day of Jan, 1982.

Richard Webb  
Burnetta Long

Locator(s).

Caution: The laws of nearly all western states contain special requirements for location notices. These requirements differ from state to state. The Oregon requirements appear on the reverse hereof. If the claim for which this form is used is situated outside of Oregon, change the name of the state above and, before recording, carefully check the foregoing location notice with the laws of the state and the regulations of the mining district in which the claim is situated to ensure that the notice contains all things required.



517.010. Location of mining claims upon veins or lodes. (1) Any person, a citizen of the United States, or one who has declared his intention to become such, who discovers a vein or lode of mineral-bearing rock in place upon the unappropriated public domain of the United States within this state, may locate a claim upon such vein or lode by posting thereon a notice of such discovery and location. The notice shall contain: (a) The name of the lode or claim. (b) The names of the locators. (c) The date of the location. (d) The number of linear feet claimed along the vein or lode each way from the point of discovery, with the width on each side of the lode or vein. (e) The general course or strike of the vein or lode as nearly as may be, with reference to some natural object or permanent monument in the vicinity, and by defining the boundaries upon the surface of each claim so that the same may be readily traced. (2) Such boundaries shall be marked within 30 days after posting of such notice by six substantial posts, projecting not less than three feet above the surface of the ground, and not less than four inches square or in diameter, or by substantial mounds of stone, or earth and stone, at least two feet in height, to wit: one such post or mound of rock at each corner and at the center ends of such claims. 517.030. Recording copy of discovery notice; fee. The locator shall, within 60 days from the posting of the location notices by him upon the

lode or claim, file for record with the recorder of conveyances, if there is one, who shall be the custodian of mining records and miners' liens, otherwise with the clerk of the county where the claim is situated, a copy of the notice posted by him upon the lode or claim and shall pay the recorder or clerk a fee of \$1 for such record, which sum the recorder or clerk shall immediately pay over to the treasurer of the county and shall take his receipt therefor, as in case of other county funds coming into the possession of such officer. The recorder or clerk shall immediately record the location notice. 517.040. Abandoned claims. Abandoned claims are unappropriated mineral lands, and titles thereto shall be obtained as specified in ORS 517.010 to 517.030, without reference to any work previously done thereon. 517.060. Correcting defective notice of location. If at any time an individual who has located a mining claim within the meaning of ORS 517.010 or 517.044, or his assigns, apprehends that the original notice of location of the mining claim was defective, erroneous, or that the requirements of the law had not been complied with before the filing of the notice, such locator or assigns may post and file for record in the manner now provided by law, an amended notice of the location which shall relate back to the date of the original location; provided, that the posting and filing of the amended notice of location shall not interfere with the existing rights of others at the time of posting the amended notice.

The following is a quotation from information furnished the publisher by the State of Oregon Department of Geology and Mineral Industries.

Necessary steps in locating a vein or lode claim.

1. Post notice of location at point of discovery.
2. Stake claim within 30 days of date of discovery.
3. File copy of notice of location with county clerk or recorder for the county in which the claim is located. Filing fee is \$1.00 per claim. Notice may be mailed in for recording. Notice should be recorded within 60 days from the posting of the notice on the claim.

Area and shape of a vein or lode claim.

A vein or lode claim can be not more than 1500 feet in length and can extend not more than 300 feet on either side of the vein or lode (Fig. 1-A). A full sized vein or lode claim embraces an area of slightly more than 20½ acres. Although most claims are rectangular they may have a variety of shapes, the only requirement being that the end-lines be parallel. In the case of non-rectangular claims it should be noted that the end-lines need not be limited to 600 feet in length (Fig. 1-B).

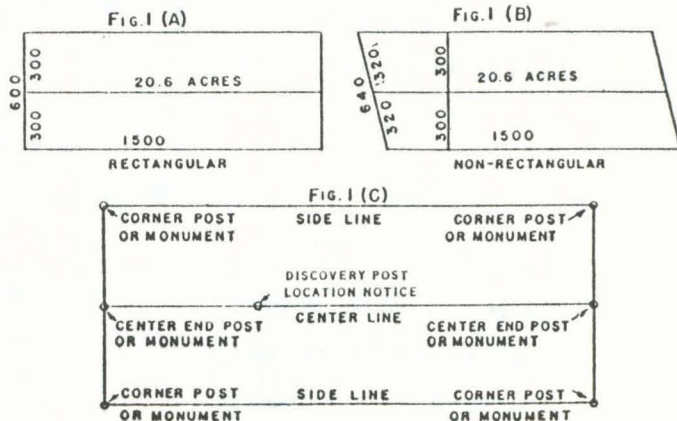
Requirements of a vein or lode claim (Fig. 1-C).

1. Location notice posted at or near point of discovery.
2. Four claim corner posts, or monuments, and two center end posts, or monuments. All posts must be at least 4 inches square or in diameter, and must project at least 3 feet above the ground. Monuments of stone, or earth and stone, must be at least 2 feet in height.

Vein or lode or placer location.

Vein or lode claims are located where minerals occur in place in veins or lodes. Most metal mines are vein or lode locations.

Placer claims are located where minerals have been derived from rocks or veins to form deposits such as stream gravels and gold-bearing alluvium. Massive deposits of nonmetallic minerals such as limestone, building stone, and pumice are generally located as placer claims.



Mining Location

VEIN OR LODE  
(FORM No. 830)

STEVENS-NESS LAW PUB. CO., PORTLAND, ORE.

STATE OF OREGON )  
COUNTY OF DOUGLAS ) SS.

I, DORIS L. WADSWORTH, COUNTY CLERK  
AND RECORDER OF CONVEYANCES, IN AND FOR  
SAID COUNTY, DO HEREBY CERTIFY THAT THE  
WITHIN INSTRUMENT WAS RECORDED THIS DAY:

Sierra Ten

Name of Claim.

Richard Webb  
Benjamin King

Locator

1988 MAR 12 AM 5:55

RECORDER'S USE

AFTER RECORDING RETURN BY

NO.

FEE

3.00  
5.00 copy  
3.50 fee

DOUGLAS COUNTY OFFICIAL RECORDS

STATE OF OREGON,

County of \_\_\_\_\_ } SS.

I certify that the within instru-  
ment was received for record on the  
\_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_\_,  
at \_\_\_\_\_ o'clock \_\_\_\_\_ M., and recorded  
in book/reel/volume No. \_\_\_\_\_ on  
page \_\_\_\_\_ or as document/tee/file/  
instrument/microfilm No. \_\_\_\_\_,  
Record of \_\_\_\_\_  
of said County.

Witness my hand and seal of  
County affixed.

NAME \_\_\_\_\_ TITLE \_\_\_\_\_  
By \_\_\_\_\_ Deputy



ORMC # 62901 #21

83- 7078

BOOK 850 PAGE 858

Notice of Mining Location  
VEIN OR LODE CLAIM

STATE OF OREGON,

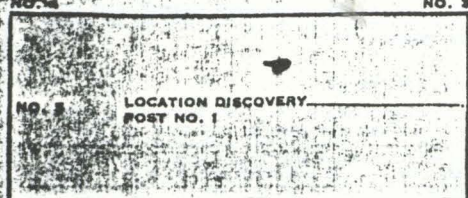
JUN 22 9 30 AM '83

County of Douglas

STATE OFFICE  
PORTLAND, OREGON

Medford

Mining District



THIS DIAGRAM EXPLAINS METHOD OF  
DESCRIPTION OF CLAIM.

NOTICE HEREBY IS GIVEN that the undersigned locators, each a citizen of the United States or one who has declared his intention to become such, have discovered a vein or lode of locatable mineral bearing rock in place upon the public domain of the United States which is open to mineral entry and location within the above state, county and mining district; and, in accordance with the laws of the United States and of the State of Oregon, have located and do hereby locate a claim upon such vein or lode by posting this notice of such discovery and location on a substantial post or monument at the point of discovery, marked Post No. 1. The name of the claim is:

Sierra 21

Claim, further described as follows:

Commencing at a post marked No. 1 (Discovery Post), thence

750 feet in a NORTH

direction to an end post marked No. 2, thence

300 150 feet in a WEST

direction to a corner post marked No. 3, thence

1500 feet in a SOUTH

direction to a corner post marked No. 4, thence

300 150 feet in a EAST

direction to an end post marked No. 5, thence

300 150 feet in a EAST

direction to a corner post marked No. 6, thence

1500 feet in a NORTH

direction to a corner post marked No. 7, thence

300 150 feet in a WEST

direction to said end post marked No. 2.

The locators claim 750 feet in a NORTH

direction from point of discovery to the NORTH (#2 post) end line and 750

feet in the opposite direction from point of discovery to the SOUTH (#5 post) end line and

300 feet on each side of the middle of said vein or lode, further claiming all the surface rights, privileges

and minerals, with all dips, spurs, angles and variations, and other rights granted by existing laws and customs. This

claim is further described as being 1320 feet from a natural object or permanent monument in the vicinity,

to-wit: 4th POST (BRASS CAP) OF SEC. 5

West line

The general course or strike of the vein or lode as nearly as may be determined is

with reference to the natural object or permanent monument described above.

This claim is situated in the NW (designate quarter section) of Section 5, Township

33S Range 4-W of the Willamette Meridian, as surveyed by the U.S. Government

or protracted if the land is unsurveyed

The end lines of the claim are parallel to each other. The adjoining claims are

Sierra group G. 7 & 9.

W. 1/2 S. 1/2 Sec. 5, North

This notice is placed conspicuously at discovery post No. 1; posts are placed at each corner and both center ends.

The location of this claim is distinctly marked on the ground so that the boundaries of the claim may be readily traced.

During this location notice the singular includes the plural and vice versa, where the context so requires.

located MARCH 30th, 1983

Burnett Long

Locator(s).

Bonny Mining Corp  
P.O. Box 124  
Azalea, Or. 97410

83- 7078

BOB L. WADSWORTH, COUNTY CLERK  
AND RECORDER OF CONVEYANCES, IN AND FOR  
SAD COUNTY, DO HEREBY CERTIFY THAT THE  
OPTIONAL INSTRUMENT WAS RECORDED THIS DAY

1983 JUN 15 AM 9:00

CHRIS L. WADSWORTH  
DOUGLAS COUNTY CLERK

Maryland

DOUGLAS COUNTY OFFICIAL RECORDS



Sec. 23—"\*\*\* A mining claim \*\*\* may equal, but shall not exceed, one thousand five hundred feet in length along the vein or lode; but no location of a mining claim shall be made until the discovery of the vein or lode within the limits of the claim located. No claim shall extend more than three hundred feet on each side of the middle of the vein at the surface \*\*\*. The end lines of each claim shall be parallel to each other."

Sec. 23—"\*\*\* The location must be distinctly marked on the ground so

that its boundaries can be readily traced. All records of mining claims \*\*\* shall contain the name or names of the locators, the date of the location, and such a description of the claim or claims located by reference to some natural object or permanent monument as will identify the claim.\*\*\*"

Sec. 34—"The description of vein or lode claims upon surveyed lands shall designate the location of the claims with reference to the lines of the public survey, but need not conform therewith \*\*\*."

Excerpts from Chapter 517, Oregon Revised Statutes Re: Location—Vein and Lode Claims

517.010. Location of mining claims upon veins or lodes. (1) Any person, a citizen of the United States, or one who has declared his intention to become such, who discovers a vein or lode of mineral-bearing rock in place upon the unappropriated public domain of the United States within this state, may locate a claim upon such vein or lode by posting thereon a notice of such discovery and location. The notice shall contain:

- The name of the lode or claim.
- The names of the locators.
- The date of the location.
- The number of linear feet claimed along the vein or lode each way from the point of discovery, with the width on each side of the lode or vein.
- The general course or strike of the vein or lode as nearly as may be, with reference to some natural object or permanent monument in the vicinity, and by defining the boundaries upon the surface of each claim so that the same may be readily traced.

(2) Such boundaries shall be marked within 30 days after posting of such notice by six substantial posts, projecting not less than three feet above the surface of the ground, and not less than four inches square or in diameter, and by substantial mounds of stone, or earth and stone, at least two feet in height, to wit: one such post or mound of rock at each corner and at the center ends of such claims.

**CAUTION:** The laws of nearly all western states contain special requirements for location notices. These requirements differ from state to state. The Oregon requirements are used for this form. If the claim for which this form is used is situated outside of Oregon, change the name of the state on the reverse side and, before locating the claim, carefully check this location notice with the laws of the state and the regulations of the mining district in which the claim is located to ensure that the notice contains all things required.

CLAIM INFORMATION

Necessary steps in locating a vein or lode claim.

- Make a discovery of a valuable mineral deposit on federal land that is open to mineral entry and location.
- Post a completed notice of location at the point of discovery on a post or monument.
- Stake claim within 30 days of date of posting notice.
- File copy of notice of location with county clerk for the county in which the claim is located. Filing fee is as set by ordinance of the county governing body. Notice may be mailed in for recording. Notice must be recorded within 60 days from the posting of the notice on the claim.
- Record the claim with the BLM state office within 90 days after the date of location of the claim. If record by mail, obtain a return receipt.

Area and shape of a vein or lode claim.

A vein or lode claim can be not more than 1500 feet in length and can extend not more than 300 feet on either side of the vein or lode (Fig. 1-A). A full sized vein or lode claim embraces an area of slightly more than 20½ acres. Although most claims are rectangular they may have a variety of shapes, the only requirement being that the end-lines be parallel. In the case of non-rectangular claims it should be noted that the end-lines need not be limited to 300 feet in length (Fig. 1-B).

Requirements of a vein or lode claim (Fig. 1-C).

- Location notice posted at or near point of discovery.
- At a minimum, four claim corner posts, or mounds of stone, and two center end posts, or mounds of stone. All posts must be at least 4 inches square or in diameter, and must project at least 3 feet above the ground. Mounds of stone, or earth and stone, must be at least 2 feet in height.

**IMPORTANT NOTICE:** A mining claim is deemed abandoned under 43 U.S. Code Sec. 1744 unless a copy of the official record of the notice of location is filed with the state office of the Bureau of Land Management in Portland within 90 days after the date of location of the claim. Because BLM recordation regulations change periodically, you should obtain recordation regulations from your local BLM office to determine effective requirements for recordation of notices of location, affidavits of annual assessment work, and notices of intention to hold a mining claim. Additional regulations of the BLM and the Forest Service may apply to the conducting of mining operations on national forest and BLM administered lands.

517.030. Recording copy of location notice; fee. The locator shall, within 60 days from the posting of the location notices by him upon the lode or claim, file for record with the clerk of the county where the claim is situated, who shall be the custodian of mining records and miners' liens, a copy of the notice posted by him upon the lode or claim and shall pay the clerk a fee as set by ordinance of the county governing body for such record, which sum the clerk shall immediately pay over to the treasurer of the county and shall take his receipt therefor, as in case of other county funds coming into the possession of such officer. The clerk shall immediately record the location notice.

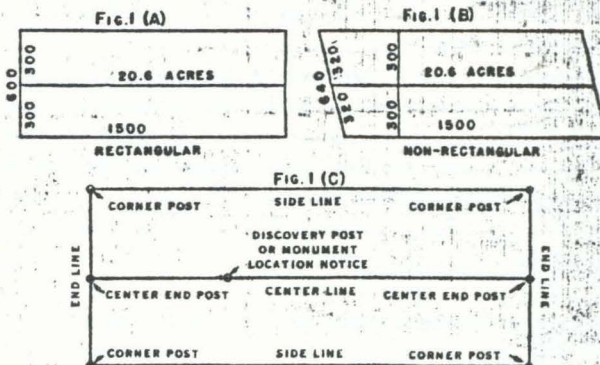
517.040. Abandoned claims. Abandoned claims are unappropriated mineral lands, and titles thereto shall be obtained as specified in ORS 517.010 to 517.030, without reference to any work previously done thereon.

517.060. Correcting defective notice of location. If at any time an individual who has located a mining claim within the meaning of ORS 517.010 or 517.044, or his assigns, apprehends that the original notice of location of the mining claim was defective, erroneous, or that the requirements of the law had not been complied with before the filing of the notice, such locator or assigns may post and file for record in the manner now provided by law, an amended notice of the location which shall relate back to the date of the original location; provided, that the posting and filing of the amended notice of location shall not interfere with the existing rights of others at the time of posting the amended notice.

Vein or lode or placer location.

A placer discovery will not sustain a lode location, nor will a lode discovery sustain a placer location. Vein or lode claims are generally located where minerals occur in place in veins or lodes. For a lode claim there must be " \*\*\* veins or lodes of quartz or other rock in place bearing gold, silver, cinnabar, lead, tin, copper or other valuable deposits \*\*\*." 30 U.S. Code Sec. 23.

Placer claims are generally located where minerals have been derived from rocks or veins to form deposits such as stream gravels and gold-bearing alluvium.



MINING LOCATION  
VEIN OR LODGE

(FORM No. 830)

Sierra #21

Name of Claim

Burnett's lode

Locators

AFTER RECORDING RETURN TO

STATE OF OREGON,

County of \_\_\_\_\_ } ss.

I certify that the within instrument was received for record on the \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_\_, at \_\_\_\_\_ o'clock \_\_\_\_\_ M., and recorded in book/reel/volume No. \_\_\_\_\_, on page \_\_\_\_\_ or as fee/file/instrument/microfilm/reception No. \_\_\_\_\_, Record of \_\_\_\_\_ of said County.

Witness my hand and seal of County affixed.

NAME

TITLE

By \_\_\_\_\_ Deputy



OL

83-13846

NO. 4

NO. 3

BOOK

864

PAGE 282

# Notice of Mining Location

## VEIN OR LODE CLAIM

STATE OF OREGON,

County of Douglas

NOV 8 1 00 PM '83

STATE OFFICE  
PORTLAND, OREGON

NO. 5

LOCATION DISCOVERY  
POST NO. 1

NO. 2

NO. 6

THIS DIAGRAM EXPLAINS METHOD OF  
DESCRIPTION OF CLAIM.

NO. 7

ORINC 67509

Mining District

NOTICE HEREBY IS GIVEN that the undersigned locators, each a citizen of the United States or one who has declared his intention to become such, have discovered a vein or lode of locatable mineral bearing rock in place upon the public domain of the United States which is open to mineral entry and location within the above state, county and mining district; and, in accordance with the laws of the United States and of the State of Oregon, have located and do hereby locate a claim upon such vein or lode by posting this notice of such discovery and location on a substantial post or monument at the point of discovery, marked Post No. 1. The name of the claim is:

Sierra 421

Claim, further described as follows:

Commencing at a post marked No. 1 (Discovery Post), thence

750	feet in a	West	direction to an end post marked No. 2, thence
360	feet in a	South	direction to a corner post marked No. 3, thence
1440	feet in a	East	direction to a corner post marked No. 4, thence
300	feet in a	North	direction to an end post marked No. 5, thence
300	feet in a	North	direction to a corner post marked No. 6, thence
1440	feet in a	West	direction to a corner post marked No. 7, thence
300	feet in a	South	direction to said end post marked No. 2.

The locators claim 220 feet in a West direction from point of discovery to the 2nd post West end line and 220

feet in the opposite direction from point of discovery to the U.S. post East end line and 300

feet on each side of the middle of said vein or lode, further claiming all the surface rights, privileges and minerals, with all dips, spurs, angles and variations, and other rights granted by existing laws and customs. This claim is further described as being \_\_\_\_\_ feet from a natural object or permanent monument in the vicinity, to-wit: \_\_\_\_\_

5 1/2 Sec 4 NW 1/4

The general course or strike of the vein or lode as nearly as may be determined is NE/SW with reference to the natural object or permanent monument described above,

This claim is situated in the N. 1/2 (designate quarter section) of Section 5, Township 33S, Range 4W, of the Willamette Meridian, as surveyed by the U.S. Government or protracted if the land is unsurveyed \_\_\_\_\_

The end lines of the claim are parallel to each other. The adjoining claims are \_\_\_\_\_

"Sierra group"6-7-8-9-10.

This notice is placed conspicuously at discovery post No. 1; posts are placed at each corner and both center ends.

Location of this claim is distinctly marked on the ground so that the boundaries of the claim may be readily traced. This location notice, the singular includes the plural and vice versa, where the context so requires.

1983Burnetta Long

83-13846

HANDED

Locator(s).

I, DORIS L. WADSWORTH, COUNTY CLERK AND RECORDER OF CONVEYANCES, IN AND FOR SAID COUNTY, DO HEREBY CERTIFY THAT THE WITHIN INSTRUMENT WAS RECORDED IN THE

1983 NOV -4 AM 10:29

DORIS L. WADSWORTH  
DOUGLAS COUNTY CLERKMaryland

DEPUTY

DOUGLAS COUNTY OFFICIAL RECORDS

BY

NO.



Sec. 23—"\*\*\* A mining claim \*\*\* may equal, but shall not exceed, one thousand five hundred feet in length along the vein or lode; but no location of a mining claim shall be made until the discovery of the vein or lode within the limits of the claim located. No claim shall extend more than three hundred feet on each side of the middle of the vein at the surface \*\*\*. The end lines of each claim shall be parallel to each other."

Sec. 28—"\*\*\* The location must be distinctly marked on the ground so

that its boundaries can be readily traced. All records of mining claims \*\*\* shall contain the name or names of the locators, the date of the location, and such a description of the claim or claims located by reference to some natural object or permanent monument as will identify the claim.\*\*\*"

Sec. 34—"The description of vein or lode claims upon surveyed lands shall designate the location of the claims with reference to the lines of the public survey, but need not conform therewith \*\*\*."

Excerpts from Chapter 517, Oregon Revised Statutes Re: Location—Vein and Lode Claims

517.010. Location of mining claims upon veins or lodes. (1) Any person, a citizen of the United States, or one who has declared his intention to become such, who discovers a vein or lode of mineral-bearing rock in place upon the unappropriated public domain of the United States within this state, may locate a claim upon such vein or lode by posting thereon a notice of such discovery and location. The notice shall contain:

- The name of the lode or claim.
- The names of the locators.
- The date of the location.
- The number of linear feet claimed along the vein or lode each way from the point of discovery, with the width on each side of the lode or vein.
- The general course or strike of the vein or lode as nearly as may be, with reference to some natural object or permanent monument in the vicinity, and by defining the boundaries upon the surface of each claim so that the same may be readily traced.

(2) Such boundaries shall be marked within 30 days after posting of such notice by six substantial posts, projecting not less than three feet above the surface of the ground, and not less than four inches square or in diameter, or by substantial mounds of stone, or earth and stone, at least two feet in height, to-wit: one such post or mound of rock at each corner and at the center ends of such claims.

CAUTION: The laws of nearly all western states contain special requirements for location notices. These requirements differ from state to state. The Oregon requirements are used for this form. If the claim for which this form is used is situated outside of Oregon, change the name of the state on the reverse side and, before locating the claim, carefully check this location notice with the laws of the state and the regulations of the mining district in which the claim is situated to ensure that the notice contains all things required.

CLAIM INFORMATION

Necessary steps in locating a vein or lode claim.

- Make a discovery of a valuable mineral deposit on federal land that is open to mineral entry and location.
- Post a completed notice of location at the point of discovery on a post or monument.
- Stake claim within 30 days of date of posting notice.
- File copy of notice of location with county clerk for the county in which the claim is located. Filing fee is as set by ordinance of the county governing body. Notice may be mailed in for recording. Notice must be recorded within 60 days from the posting of the notice on the claim.
- Record the claim with the BLM state office within 90 days after the date of location of the claim. If record by mail, obtain a return receipt.

Area and shape of a vein or lode claim.

A vein or lode claim can be not more than 1500 feet in length and can extend not more than 300 feet on either side of the vein or lode (Fig. 1-A). A full sized vein or lode claim embraces an area of slightly more than 20½ acres. Although most claims are rectangular they may have a variety of shapes, the only requirement being that the end-lines be parallel. In the case of non-rectangular claims it should be noted that the end-lines need not be limited to 600 feet in length (Fig. 1-B).

Requirements of a vein or lode claim (Fig. 1-C).

- Location notice posted at or near point of discovery.
- At a minimum, four claim corner posts, or mounds of stone, and two center end posts, or mounds of stone. All posts must be at least 4 inches square or in diameter, and must project at least 3 feet above the ground. Mounds of stone, or earth and stone, must be at least 2 feet in height.

IMPORTANT NOTICE: A mining claim is deemed abandoned under 43 U.S. Code Sec. 1744 unless a copy of the official record of the notice of location is filed with the state office of the Bureau of Land Management in Portland within 90 days after the date of location of the claim. Because BLM recordation regulations change periodically, you should obtain recordation regulations from your local BLM office to determine effective requirements for recordation of notices of location, affidavits of annual assessment work, and notices of intention to hold a mining claim. Additional regulations of the BLM and the Forest Service may apply to the conducting of mining operations on national forest and BLM administered lands.

517.030. Recording copy of location notice; fee. The locator shall, within 60 days from the posting of the location notices by him upon the lode or claim, file for record with the clerk of the county where the claim is situated, who shall be the custodian of mining records and miners' liens, a copy of the notice posted by him upon the lode or claim and shall pay the clerk a fee as set by ordinance of the county governing body for such record, which sum the clerk shall immediately pay over to the treasurer of the county and shall take his receipt therefor, as in case of other county funds coming into the possession of such officer. The clerk shall immediately record the location notice.

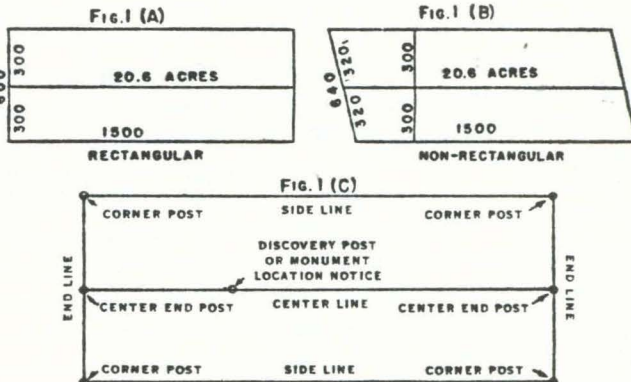
517.040. Abandoned claims. Abandoned claims are unappropriated mineral lands, and titles thereto shall be obtained as specified in ORS 517.010 to 517.030, without reference to any work previously done thereon.

517.060. Correcting defective notice of location. If at any time an individual who has located a mining claim within the meaning of ORS 517.010 or 517.040, or his assigns, apprehends that the original notice of location of the mining claim was defective, erroneous, or that the requirements of the law had not been complied with before the filing of the notice, such locator or assigns may post and file for record in the manner now provided by law, an amended notice of the location which shall relate back to the date of the original location; provided, that the posting and filing of the amended notice of location shall not interfere with the existing rights of others at the time of posting the amended notice.

Vein or lode or placer location.

A placer discovery will not sustain a lode location, nor will a lode discovery sustain a placer location. Vein or lode claims are generally located where minerals occur in place in veins or lodes. For a lode claim there must be "\*\*\* veins or lodes of quartz or other rock in place bearing gold, silver, cinnabar, lead, tin, copper or other valuable deposits \*\*\*." 30 U.S. Code Sec. 23.

Placer claims are generally located where minerals have been derived from rocks or veins to form deposits such as stream gravels and gold-bearing alluvium.



MINING LOCATION  
VEIN OR LODE  
(FORM No. 830)

Sierra 521  
Name of Claim  
BURNETT Long  
Locators

AFTER RECORDING RETURN TO

SPACE RESERVED  
FOR  
RECORDER'S USE

STATE OF OREGON,  
County of \_\_\_\_\_ ss.

I certify that the within instrument was received for record on the \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_\_, at \_\_\_\_\_ o'clock \_\_\_\_\_ M., and recorded in book/reel/volume No. \_\_\_\_\_, on page \_\_\_\_\_ or as fee/file/instrument/microfilm/reception No. \_\_\_\_\_, Record of \_\_\_\_\_ of said County.

Witness my hand and seal of County affixed.

NAME \_\_\_\_\_ TITLE \_\_\_\_\_  
By \_\_\_\_\_ Deputy



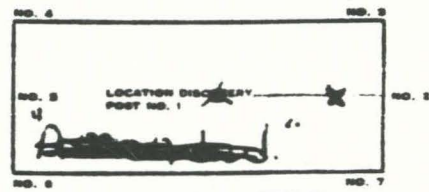
#23

Form No. 220—NOTICE OF VEIN OR LODE LOCATION—OREGON.

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83-13845

BOOK 864 PAGE 281



THIS DIAGRAM EXPLAINS METHOD OF DESCRIPTION OF CLAIM.

# Notice of Mining Location VEIN OR LODE CLAIM

STATE OF OREGON.

County of Douglas  
Medford

ORMC 68787

Mining District

NOTICE HEREBY IS GIVEN that the undersigned locators, each a citizen of the United States or one who has declared his intention to become such, have discovered a vein or lode of locatable mineral bearing rock in place upon the public domain of the United States which is open to mineral entry and location within the above state, county and mining district; and, in accordance with the laws of the United States and of the State of Oregon, have located and do hereby locate a claim upon such vein or lode by posting this notice of such discovery and location on a substantial post or monument, at the point of discovery, marked Post No. 1. The name of the claim is:

Sierra 22

Claim, further described as follows:

Commencing at a post marked No. 1 (Discovery Post), thence  
140 feet in a EAST direction to an end post marked No. 2, thence  
300 feet in a NORTH direction to a corner post marked No. 3, thence  
1440 feet in a WEST direction to a corner post marked No. 4, thence  
300 feet in a SOUTH direction to an end post marked No. 5, thence  
300 feet in a SOUTH direction to a corner post marked No. 6, thence  
1440 feet in a EAST direction to a corner post marked No. 7, thence  
300 feet in a NORTH direction to said end post marked No. 2.

The locators claim 2220 feet in a WEST direction from point of discovery to the U.S. post end line and 140 feet in the opposite direction from point of discovery to the U.S. post end line and 300 feet on each side of the middle of said vein or lode, further claiming all the surface rights, privileges and minerals, with all dips, spurs, angles and variations, and other rights granted by existing laws and customs. This claim is further described as being feet from a natural object or permanent monument in the vicinity.  
to-wit:

The general course or strike of the vein or lode as nearly as may be determined is N. 1/2 S. with reference to the natural object or permanent monument described above.

This claim is situated in the NW (designate quarter section) of Section 5 Township 38S Range 4W of the W. 11. M. & M. L. Meridian, as surveyed by the U.S. Government or protracted if the land is unsurveyed

The end lines of the claim are parallel to each other. The adjoining claims are NW 1/4 Sec 4 North

This notice is placed conspicuously at discovery post No. 1; posts are placed at each corner and both center ends. The location of this claim is distinctly marked on the ground so that the boundaries of the claim may be readily traced. This location notice is singular includes the plural and vice versa, where the context so requires.

1983 NOV -4 AMO 283  
DOUGLAS COUNTY OFFICIAL RECORD  
BY Mary Beth  
DOUGLAS COUNTY OFFICIAL RECORD

1983

Burnetta Long

83-13845

HANDLED

Locator(s).



OL

BOOK

883

PAGE

725

CN

NO. 4

84- 7355

NO. 3

## Notice of Mining Location

VEIN OR LODE CLAIM

ORMC 69 304

STATE OF OREGON,

County of

Douglas

Clendale

Mining District

NO. 5

LOCATION DISCOVERY  
POST NO. 1

NO. 2

NO. 6

NO. 7

THIS DIAGRAM EXPLAINS METHOD OF  
DESCRIPTION OF CLAIM.

NOTICE HEREBY IS GIVEN that the undersigned locators, each a citizen of the United States or one who has declared his intention to become such, have discovered a vein or lode of locatable mineral bearing rock in place upon the public domain of the United States which is open to mineral entry and location within the above state, county and mining district; and, in accordance with the laws of the United States and of the State of Oregon, have located and do hereby locate a claim upon such vein or lode by posting this notice of such discovery and location on a substantial post or monument at the point of discovery, marked Post No. 1. The name of the claim is:

Sierra #23

Claim, further described as follows:

Commencing at a post marked No. 1 (Discovery Post), thence

660 feet in a NORTH

direction to an end post marked No. 2, thence

300 feet in a WEST

direction to a corner post marked No. 3, thence

1320 feet in a SOUTH

direction to a corner post marked No. 4, thence

300 feet in a EAST

direction to an end post marked No. 5, thence

300 feet in a EAST

direction to a corner post marked No. 6, thence

1320 feet in a NORTH

direction to a corner post marked No. 7, thence

300 feet in a WEST

direction to said end post marked No. 2.

The locators claim

660

feet in a

South

direction from point of discovery to the #2 post

South

end line and

660

feet in the opposite direction from point of discovery to the #5 post

North

end line and

300

feet on each side of the middle of said vein or lode, further claiming all the surface rights, privileges and minerals, with all dips, spurs, angles and variations, and other rights granted by existing laws and customs. This claim is further described as being

to-wit:

W 1/2 Secty NE 1/4

The general course or strike of the vein or lode as nearly as may be determined is

with reference to the natural object or permanent monument described above.

This claim is situated in the NE 1/4 (designate quarter section) of Section 5, Township

33 S, Range 4 W, of the WILLAMETTE Meridian, as surveyed by the U.S. Government

or protracted if the land is unsurveyed

The end lines of the claim are parallel to each other. The adjoining claims are

Sierra group lode claims

This notice is placed conspicuously at discovery post No. 1; posts are placed at each corner and both center ends.

The location of this claim is distinctly marked on the ground so that the boundaries of the claim may be readily traced.

In construing this location notice, the singular includes the plural and vice versa, where the context so requires.

Located

1. DORIS L. WADSWORTH, COUNTY CLERK  
AND RECORDER OF CONVEYANCES, IN AND FOR  
SAID COUNTY, DO HEREBY CERTIFY THAT THE  
WITHIN INSTRUMENT WAS RECORDED THIS DAY  
1984 JUN 11 AM 11:35

DORIS L. WADSWORTH  
DOUGLAS COUNTY CLERK

BY

NO.

FEE

DOUGLAS COUNTY OFFICIAL RECORDS

19

1984

Bonny-L-Mining Corp

Locator(s).

84- 7355

500-4124  
ALALCO



OL 84- 7354

BOOK 883 PAGE 724 #25

NO. 4 NO. 3

Amended

NO. 5 LOCATION DISCOVERY POST NO. 1 NO. 2

NO. 6 NO. 7

THIS DIAGRAM EXPLAINS METHOD OF DESCRIPTION OF CLAIM.

# Notice of Mining Location

VEIN OR LODE CLAIM ORMC 74116

STATE OF OREGON,

County of Douglas,

Elendale Mining District

NOTICE HEREBY IS GIVEN that the undersigned locators, each a citizen of the United States or one who has declared his intention to become such, have discovered a vein or lode of locatable mineral bearing rock in place upon the public domain of the United States which is open to mineral entry and location within the above state, county and mining district; and, in accordance with the laws of the United States and of the State of Oregon, have located and do hereby locate a claim upon such vein or lode by posting this notice of such discovery and location on a substantial post or monument at the point of discovery, marked Post No. 1. The name of the claim is:

SERRA 24

Claim, further described as follows:

Commencing at a post marked No. 1 (Discovery Post), thence

500 feet in a EAST direction to an end post marked No. 2, thence  
300 feet in a NORTH direction to a corner post marked No. 3, thence  
1000 feet in a WEST direction to a corner post marked No. 4, thence  
300 feet in a SOUTH direction to an end post marked No. 5, thence  
300 feet in a SOUTH direction to a corner post marked No. 6, thence  
1000 feet in a EAST direction to a corner post marked No. 7, thence  
300 feet in a NORTH direction to said end post marked No. 2.

The locators claim 500 feet in a EAST direction from point of discovery to the HARPER EAST end line and 500 feet in the opposite direction from point of discovery to the H.S. POST WEST end line and 300 feet on each side of the middle of said vein or lode, further claiming all the surface rights, privileges and minerals, with all dips, spurs, angles and variations, and other rights granted by existing laws and customs. This claim is further described as being \_\_\_\_\_ feet from a natural object or permanent monument in the vicinity, to-wit: \_\_\_\_\_

52 NEW Nuby

The general course or strike of the vein or lode as nearly as may be determined is \_\_\_\_\_ with reference to the natural object or permanent monument described above. This claim is situated in the Nuby (designate quarter section) of Section 5, Township 33N, Range 4E, of the WILLAMETTE Meridian, as surveyed by the U.S. Government or protracted if the land is unsurveyed \_\_\_\_\_

The end lines of the claim are parallel to each other. The adjoining claims are \_\_\_\_\_

SERRA group # 22 - 7

This notice is placed conspicuously at discovery post No. 1; posts are placed at each corner and both center ends. The location of this claim is distinctly marked on the ground so that the boundaries of the claim may be readily traced. In complying with this location notice, the singular includes the plural and vice versa, where the context so requires.

STATE OF OREGON ) SS.  
COUNTY OF DOUGLAS )  
I, DORIS L. WADSWORTH, COUNTY CLERK  
AND RECORDER OF CONVEYANCES, IN AND FOR  
SAID COUNTY, DO HEREBY CERTIFY THAT THE  
WITHIN INSTRUMENT WAS RECORDED THIS DAY  
1984 JUN 11 AM 11:22  
DORIS L. WADSWORTH  
DOUGLAS COUNTY CLERK

BY Mary L. Seal DEPUTY  
NO FEE 304  
DOUGLAS COUNTY OFFICIAL RECORDS

1984

Bonny-L-Mining Corp

Locator(s).

84- 7354

Rob Box 124  
A2alen



NO. 4 84-5904 NO. 5

NO. 5 LOCATION DISCOVERY POST NO. 1

NO. 6 THIS DIAGRAM EXPLAINS METHOD OF DESCRIPTION OF CLAIM.

# Notice of Mining Location

VEIN OR LODE CLAIM

BOOK 880 PAGE 890 ORMC 74116

STATE OF OREGON,

County of Douglas

Glendale

Mining District

NOTICE HEREBY IS GIVEN that the undersigned locators, each a citizen of the United States or one who has declared his intention to become such, have discovered a vein or lode of locatable mineral bearing rock in place upon the public domain of the United States which is open to mineral entry and location within the above state, county and mining district; and, in accordance with the laws of the United States and of the State of Oregon, have located and do hereby locate a claim upon such vein or lode by posting this notice of such discovery and location on a substantial post or monument at the point of discovery, marked Post No. 1. The name of the claim is:

"Sierra" 24

Claim, further described as follows:

750 Commencing at a post marked No. 1 (Discovery Post), thence  
 241.5 feet in a EAST direction to an end post marked No. 2, thence  
 1500 feet in a NORTH direction to a corner post marked No. 3, thence  
 241.5 feet in a WEST direction to a corner post marked No. 4, thence  
 241.5 feet in a SOUTH direction to an end post marked No. 5, thence  
 1500 feet in a SOUTH direction to a corner post marked No. 6, thence  
 241.5 feet in a EAST direction to a corner post marked No. 7, thence  
 241.5 feet in a NORTH direction to said end post marked No. 2.

The locators claim 750 feet in a EAST direction from point of discovery to the #2 post EAST end line and 750 feet in the opposite direction from point of discovery to the #5 post WEST end line and 241.5 feet on each side of the middle of said vein or lode, further claiming all the surface rights, privileges and minerals, with all dips, spurs, angles and variations, and other rights granted by existing laws and customs. This claim is further described as being 5 feet from a natural object or permanent monument in the vicinity, to-wit: BLM ROAD 32-4-33

The general course or strike of the vein or lode as nearly as may be determined is NE/SW with reference to the natural object or permanent monument described above. This claim is situated in the NW (designate quarter section) of Section 5, Township 33S, Range 4W, of the Willamette Meridian, as surveyed by the U.S. Government or protracted if the land is unsurveyed 52 NEW NW 1/4 EXTENDING INTO THE

The end lines of the claim are parallel to each other. The adjoining claims are "Sierra group" 1-22-23

This notice is placed conspicuously at discovery post No. 1; posts are placed at each corner and both center ends. The location of this claim is distinctly marked on the ground so that the boundaries of the claim may be readily traced. In consequence of this location notice, the singular includes the plural and vice versa, where the context so requires.

STATE OF OREGON )  
 COUNTY OF DOUGLAS )  
 I, DORIS L. WADSWORTH, COUNTY CLERK AND RECORDER OF CONVEYANCES, IN AND FOR SAID COUNTY, DO HEREBY CERTIFY THAT THE WITHIN INSTRUMENT WAS RECORDED THIS DAY OF MAY 14, 1984, AM 11:22.  
 DORIS L. WADSWORTH  
 DOUGLAS COUNTY CLERK  
 BY *Maryland* NO. 372  
 DOUGLAS COUNTY OFFICIAL RECORDS

1984  
 Bunny L. Mining Corp.  
 Locator(s).  
 84-5904  
 HANDED



OL

84- 8017

#26

NO. 4

NO. 5

LOCATION DISCOVERY POST NO. 1

NO. 6

NO. 7

# Notice of Mining Location

BUREAU OF LAND MANAGEMENT VEIN OR LODE CLAIM

ORMC 75069

1984 JUL 10 AM 10:30  
STATE OF OREGON,  
OREGON STATE OFFICE  
PORTLAND, OR County of Douglas

THIS DIAGRAM EXPLAINS METHOD OF DESCRIPTION OF CLAIM.

glendale Mining District

NOTICE HEREBY IS GIVEN that the undersigned locators, each a citizen of the United States or one who has declared his intention to become such, have discovered a vein or lode of locatable mineral bearing rock in place upon the public domain of the United States which is open to mineral entry and location within the above state, county and mining district; and, in accordance with the laws of the United States and of the State of Oregon, have located and do hereby locate a claim upon such vein or lode by posting this notice of such discovery and location on a substantial post or monument at the point of discovery, marked Post No. 1. The name of the claim is:

Sierra #25

Claim, further described as follows:

Commencing at a post marked No. 1 (Discovery Post), thence

750 feet in a NORTH direction to an end post marked No. 2, thence  
300 feet in a WEST direction to a corner post marked No. 3, thence  
1320 feet in a SOUTH direction to a corner post marked No. 4, thence  
300 feet in a EAST direction to an end post marked No. 5, thence  
300 feet in a EAST direction to a corner post marked No. 6, thence  
1320 feet in a NORTH direction to a corner post marked No. 7, thence  
300 feet in a WEST direction to said end post marked No. 2.

The locators claim 750 feet in a NORTH direction from point of discovery to the #2 post NORTH end line and 750 feet in the opposite direction from point of discovery to the #5 post SOUTH end line and 300 feet on each side of the middle of said vein or lode, further claiming all the surface rights, privileges and minerals, with all dips, spurs, angles and variations, and other rights granted by existing laws and customs. This claim is further described as being feet from a natural object or permanent monument in the vicinity, to-wit: CONTACTS BLM Road 32-4-33.

The general course or strike of the vein or lode as nearly as may be determined is NE / SW with reference to the natural object or permanent monument described above. This claim is situated in the NE (designate quarter section) of Section S, Township 33 S, Range 4 WEST, of the WILLAMETTE Meridian, as surveyed by the U.S. Government or protracted if the land is unsurveyed.

The end lines of the claim are parallel to each other. The adjoining claims are YAUKE

STATE OF OREGON )  
COUNTY OF DOUGLAS ) ss.

I, DORIS L. WADSWORTH, COUNTY CLERK AND RECORDER OF CONVEYANCES, IN AND FOR SAID COUNTY, DO HEREBY CERTIFY THAT THE WITHIN INSTRUMENT WAS RECORDED THIS DAY, 29th

Located 1984 JUN 22 AM 11:41, 1984

DORIS L. WADSWORTH  
DOUGLAS COUNTY CLERK

Bonny-L-Mining Corp

BY Marcel Beal  
DEPUTY  
NO. 1 FEE 300

P.O. Box 124, Azalea, Or. 97101  
Locator(s).



OL

NO. 4

83- 8382

NO. 3

NO. 5

LOCATION DISCOVERY  
POST NO. 1

NO. 2

NO. 6

NO. 7

THIS DIAGRAM EXPLAINS METHOD OF  
DESCRIPTION OF CLAIM.Notice of Mining Location  
VEIN OR LODE CLAIM

STATE OF OREGON,

County of

Douglas

Medford

STATE OFFICE

PORTLAND, OREGON

Mining District

JUL 21 1 00 PM '83

NOTICE HEREBY IS GIVEN that the undersigned locators, each a citizen of the United States or one who has declared his intention to become such, have discovered a vein or lode of locatable mineral bearing rock in place upon the public domain of the United States which is open to mineral entry and location within the above state, county and mining district; and, in accordance with the laws of the United States and of the State of Oregon, have located and do hereby locate a claim upon such vein or lode by posting this notice of such discovery and location on a substantial post or monument at the point of discovery, marked Post No. 1. The name of the claim is:

MILL SITE #2

Claim, further described as follows:

Commencing at a post marked No. 1 (Discovery Post), thence

feet in a

direction to an end post marked No. 2, thence

feet in a

direction to a corner post marked No. 3, thence

feet in a

direction to a corner post marked No. 4, thence

feet in a

direction to an end post marked No. 5, thence

feet in a

direction to a corner post marked No. 6, thence

feet in a

direction to a corner post marked No. 7, thence

feet in a

direction to said end post marked No. 2.

The locators claim

feet in a

direction from point of discovery to the

end line and

feet in the opposite direction from point of discovery to the

end line and

feet on each side of the middle of said vein or lode, further claiming all the surface rights, privileges and minerals, with all dips, spurs, angles and variations, and other rights granted by existing laws and customs. This claim is further described as being feet from a natural object or permanent monument in the vicinity, to-wit:

T 33 S - R 4 W - Sec 5 S 1/2 lot no 4 NW 1/4

The general course or strike of the vein or lode as nearly as may be determined is

with reference to the natural object or permanent monument described above,

This claim is situated in the N.W. (designate quarter section) of Section 5, Township

33 S, Range 4 W, of the Willamette, Meridian, as surveyed by the U.S. Government or protracted if the land is unsurveyed.

S ACVE Non-mineral mill site

The end lines of the claim are parallel to each other. The adjoining claims are Sierra 637

Beginning at post no 1 thence east 600 feet to corner no 2

thence south 362 feet to corner no 3 thence west

600 feet to corner no 4 the quarter 1/4 corner to said

Section 5 bears south 1320 feet and west 600 feet.

This notice is placed conspicuously at discovery post No. 1; posts are placed at each corner and both center ends. The location of this claim is distinctly marked on the ground so that the boundaries of the claim may be readily traced. In compliance with this location notice, the singular includes the plural and vice versa, where the context so requires.

STATE OF OREGON ) ss.  
COUNTY OF DOUGLAS )

I, DONIS L. WADSWORTH, COUNTY CLERK

AND RECORDER OF CONVEYANCES, IN AND FOR

SAID COUNTY, DO HEREBY CERTIFY THAT THE

WITHIN INSTRUMENT WAS RECORDED THIS DAY

1983 JUL 14 AM 8:53

DOUGLAS COUNTY CLERK

DOUGLAS COUNTY CLERK

DOUGLAS COUNTY CLERK

DOUGLAS COUNTY CLERK

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DOUGLAS COUNTY CLERK

DOUGLAS COUNTY CLERK

Bonny-L-mining Corp.

P.O. Box 124

Azalea, Or

97410

Locator(s).

83- 8382



Sec. 23—"\*\*\* A mining claim \*\*\* may equal, but shall not exceed, one thousand five hundred feet in length along the vein or lode; but no location of a mining claim shall be made until the discovery of the vein or lode within the limits of the claim located. No claim shall extend more than three hundred feet on each side of the middle of the vein at the surface \*\*\*. The end lines of each claim shall be parallel to each other."

Sec. 28—"\*\*\* The location must be distinctly marked on the ground so

that its boundaries can be readily traced. All records of mining claims \*\*\* shall contain the name or names of the locators, the date of the location, and such a description of the claim or claims located by reference to some natural object or permanent monument as will identify the claim.\*\*\*"

Sec. 34—"The description of vein or lode claims upon surveyed lands shall designate the location of the claims with reference to the lines of the public survey, but need not conform therewith \*\*\*."

Excerpts from Chapter 517, Oregon Revised Statutes Re: Location—Vein and Lode Claims

517.010. Location of mining claims upon veins or lodes. (1) Any person, a citizen of the United States, or one who has declared his intention to become such, who discovers a vein or lode of mineral-bearing rock in place upon the unappropriated public domain of the United States within this state, may locate a claim upon such vein or lode by posting thereon a notice of such discovery and location. The notice shall contain:

- The name of the lode or claim.
- The names of the locators.
- The date of the location.
- The number of linear feet claimed along the vein or lode each way from the point of discovery, with the width on each side of the lode or vein.
- The general course or strike of the vein or lode as nearly as may be, with reference to some natural object or permanent monument in the vicinity, and by defining the boundaries upon the surface of each claim so that the same may be readily traced.

(2) Such boundaries shall be marked within 30 days after posting of such notice by six substantial posts, projecting not less than three feet above the surface of the ground, and not less than four inches square or in diameter, or by substantial mounds of stone, or earth and stone, at least two feet in height, to-wit: one such post or mound of rock at each corner and at the center ends of such claims.

**CAUTION:** The laws of nearly all western states contain special requirements for location notices. These requirements differ from state to state. The Oregon requirements are used for this form. If the claim for which this form is used is situated outside of Oregon, change the name of the state on the reverse side and, before locating the claim, carefully check this location notice with the laws of the state and the regulations of the mining district in which the claim is situated to ensure that the notice contains all things required.

CLAIM INFORMATION

Necessary steps in locating a vein or lode claim.

- Make a discovery of a valuable mineral deposit on federal land that is open to mineral entry and location.
- Post a completed notice of location at the point of discovery on a post or monument.
- Stake claim within 30 days of date of posting notice.
- File copy of notice of location with county clerk for the county in which the claim is located. Filing fee is as set by ordinance of the county governing body. Notice may be mailed in for recording. Notice must be recorded within 60 days from the posting of the notice on the claim.
- Record the claim with the BLM state office within 90 days after the date of location of the claim. If record by mail, obtain a return receipt.

Area and shape of a vein or lode claim.

A vein or lode claim can be not more than 1500 feet in length and can extend not more than 300 feet on either side of the vein or lode (Fig. 1-A). A full sized vein or lode claim embraces an area of slightly more than 20½ acres. Although most claims are rectangular they may have a variety of shapes, the only requirement being that the end-lines be parallel. In the case of non-rectangular claims it should be noted that the end-lines need not be limited to 600 feet in length (Fig. 1-B).

Requirements of a vein or lode claim (Fig. 1-C).

- Location notice posted at or near point of discovery.
- At a minimum, four claim corner posts, or mounds of stone, and two center end posts, or mounds of stone. All posts must be at least 4 inches square or in diameter, and must project at least 3 feet above the ground. Mounds of stone, or earth and stone, must be at least 2 feet in height.

**IMPORTANT NOTICE:** A mining claim is deemed abandoned under 43 U.S. Code Sec. 1744 unless a copy of the official record of the notice of location is filed with the state office of the Bureau of Land Management in Portland within 90 days after the date of location of the claim. Because BLM recordation regulations change periodically, you should obtain recordation regulations from your local BLM office to determine effective requirements for recordation of notices of location, affidavits of annual assessment work, and notices of intention to hold a mining claim. Additional regulations of the BLM and the Forest Service may apply to the conducting of mining operations on national forest and BLM administered lands.

517.030. Recording copy of location notice; fee. The locator shall, within 60 days from the posting of the location notices by him upon the lode or claim, file for record with the clerk of the county where the claim is situated, who shall be the custodian of mining records and miners' liens, a copy of the notice posted by him upon the lode or claim and shall pay the clerk a fee as set by ordinance of the county governing body for such record, which sum the clerk shall immediately pay over to the treasurer of the county and shall take his receipt therefor, as in case of other county funds coming into the possession of such officer. The clerk shall immediately record the location notice.

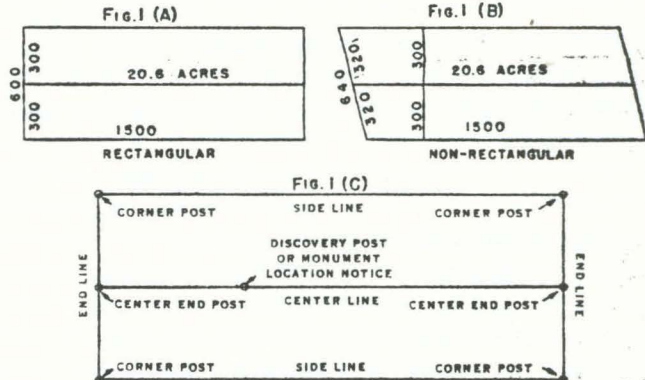
517.040. Abandoned claims. Abandoned claims are unappropriated mineral lands, and titles thereto shall be obtained as specified in ORS 517.010 to 517.030, without reference to any work previously done thereon.

517.060. Correcting defective notice of location. If at any time an individual who has located a mining claim within the meaning of ORS 517.010 or 517.044, or his assigns, apprehends that the original notice of location of the mining claim was defective, erroneous, or that the requirements of the law had not been complied with before the filing of the notice, such locator or assigns may post and file for record in the manner now provided by law, an amended notice of the location which shall relate back to the date of the original location; provided, that the posting and filing of the amended notice of location shall not interfere with the existing rights of others at the time of posting the amended notice.

Vein or lode or placer location.

A placer discovery will not sustain a lode location, nor will a lode discovery sustain a placer location. Vein or lode claims are generally located where minerals occur in place in veins or lodes. For a lode claim there must be "\*\*\* veins or lodes of quartz or other rock in place bearing gold, silver, cinnabar, lead, tin, copper or other valuable deposits \*\*\*." 30 U.S. Code Sec. 23.

Placer claims are generally located where minerals have been derived from rocks or veins to form deposits such as stream gravels and gold-bearing alluvium.



MINING LOCATION  
VEIN OR LODGE

(FORM No. 830)

Benny - L. Mining Corp.  
MILL SITE Name of Claim

Benny - L. Mining Corp.  
MILL SITE  
Benny - L. Mining Corp. Locators

AFTER RECORDING RETURN TO

SPACE RESERVED  
FOR  
RECORDER'S USE

STATE OF OREGON,  
County of \_\_\_\_\_ } ss.

I certify that the within instrument was received for record on the \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_\_, at \_\_\_\_\_ o'clock \_\_\_\_\_ M., and recorded in book/reel/volume No. \_\_\_\_\_, on page \_\_\_\_\_ or as fee/file/instrument/microfilm/reception No. \_\_\_\_\_, Record of \_\_\_\_\_ of said County.

Witness my hand and seal of County affixed.

NAME TITLE  
By \_\_\_\_\_ Deputy



OL

83-14795

Mill SITE

ORMC # 70072 #2

Notice of Location of ~~Placer Claim~~STATE of OREGON, County of DOUGLAS Mining District.

NOTICE HEREBY IS GIVEN That the undersigned locators, each a citizen of the United States or one who has declared his intention to become such, have discovered a placer deposit of locatable minerals upon the public domain of the United States which is open to mineral entry and location within the above state, county and mining district; and, in accordance with the laws of the United States and the State of Oregon, have located and hereby do locate a placer claim of 5 acres by posting this notice of location on a post or monument in a conspicuous place inside the boundaries of the claim. The claim is named the MILL SITE #3

Claim, which is described as follows (fill out one of the two sections below):

(1)  
If claim is on surveyed land:

This claim comprises the E 1/2 S 1/2 NW 1/4 NW 1/4 of Section 5, Township 33S, Range 4W, of the WILLAMETTE Meridian,

(2)  
If claim is on unsurveyed public land or if on surveyed land, and it is not practicable to describe claim by legal subdivisions:

The distance between posts may not exceed 1,320 feet. The number of posts will vary depending on the size of the claim.

The location of this claim is distinctly marked on the ground so that the boundaries of the claim may be readily traced: Starting at \_\_\_\_\_

(If possible, name some government survey corner; otherwise describe some natural object or permanent monument in the vicinity)

\_\_\_\_\_ direction \_\_\_\_\_ feet, more or less, to the beginning point of the description of the placer claim hereby located, to-wit: a substantial post set in the ground, marked Post No. 1;

thence 383 feet in a NORTH direction to a post marked No. 2;

thence 600 feet in a WEST direction to a post marked No. 3;

thence 363 feet in a SOUTH direction to a post marked No. 4;

thence 600 feet in a EAST direction to a post marked No. 5;

thence \_\_\_\_\_ feet in a \_\_\_\_\_ direction to a post marked No. 6;

thence \_\_\_\_\_ feet in a \_\_\_\_\_ direction to a post marked No. 7;

thence \_\_\_\_\_ feet in a \_\_\_\_\_ direction to a post marked No. 8;

thence \_\_\_\_\_ feet in a \_\_\_\_\_ direction to the post marked No. 1.

This claim is situated in the \_\_\_\_\_ (quarter section) of Section \_\_\_\_\_, Township, \_\_\_\_\_ Range \_\_\_\_\_, of the \_\_\_\_\_ Meridian, either as surveyed by

the U.S. Government or protracted if the land is unsurveyed,

The locators intend to hold and work the above described claim as provided by the laws of the United States and the State of Oregon and claim all of the rights and privileges granted by existing laws and customs. In construing this location notice, the singular includes the plural and vice versa if the context so requires.

The adjoining claims are Donna group

Located

STATE OF OREGON )  
COUNTY OF DOUGLAS ) SS.

I, DORIS L. WADSWORTH, COUNTY CLERK, DO HEREBY CERTIFY THAT THE SAID COUNTY, DO HEREBY CERTIFY THAT THE WITHIN INSTRUMENT WAS RECORDED THIS DAY

1983 NOV 30 AM 8:15

DORIS L. WADSWORTH  
COUNTY CLERK

BY Margaret J. Smith  
DEPUTY

NO 360  
FEE 3.00  
DOUGLAS COUNTY OFFICIAL RECORDS

Bonny-L-Mining Corp

Locators.\*

83-14795

PO BOX 124  
AZALEA, OR 97110



Dense underbrush, Vine Maple, small Fir, Hazel and

Mountain Laurel and Chinquapin, 79.50 chs.

September 20, 1893.

---

North, 4'W. between secs. 5 and 6.

Va. 19\*10'E

Ascend mountain spur 25 ft. to

1.00 Top of spur, bears West.

Descend 100 ft. to

7.00 Ravine, bears West.

Ascend 50 ft. to

11.50 Top of spur, bears West.

Descend 50 ft. to

14.90 Ravine, bears West

Descent 250 ft. to

17.00 Ravine and foot of descent , bears West.

Ascend mountain.

32.00 Trail, bears E. and W.

→ 34.80 A Y. Pine, 2 ft. diam., on line, marked with 2 notches  
on N. and S. sides.

→ 40.00 Set a basaltic stone, 24 x 10 x 10 ins., 18 ins. in a  
mound of stone and earth for  $\frac{1}{4}$  sec. cor. marked  $\frac{1}{4}$  on  
W. face, from which

A Y. Pine, 18 ins. diam., bears N.66\*E., 98 lks.  
dist., marked  $\frac{1}{4}$  S B T.

A Y. Pine, 2 ft. diam., bears S.2\*W., 72 lks. dist.,  
marked  $\frac{1}{4}$  S B T.

41.00 Summit of main divide, bears NW. and SE., 700 ft. above  
ravine at 14.90 chs.

Descend mountain rapidly on North W. slope.

50.00 Ravine, 10 ft. deep, bears NE.

→ 63.20 A Fir, 24 ins. diam., on line, marked with 2 notches

74.42 Intersect 7th Standard Parallel South 800 ft. below summit  
of mountain divide at 41.00 chs. Marked point for  
closing cor. to secs. 5 and 6.

Thence I run

West on 7th Standard Parallel South.

Va.  $18^{\circ}40'E$

Ascend mountain.

15.28 Intersect the Standard  $\frac{1}{4}$  sec cor. on South boundary of  
sec. 31 and T 32 S R 4 N.

Which is a post 12 ins. above ground 3 ins. sq., marked  
S C  $\frac{1}{4}$  S. on N. face, from which

A Fir, 18 ins. diam., bears N.  $30^{\circ}E$ ., 19 lks. dist.,  
with well defined blazes.

A Fir, 18 ins. diam., bears S.  $27^{\circ}W$ ., 18 lks. dist.,  
with well defined blazes.

I returned to point for closing cor. to secs. 5 and 6 and  
set a basaltic stone, 12 x 7 x 7 ins. 8 ins. in the  
ground, for closing cor. to secs. 5 and 6 marked with  
5 notches on E. and 1 notch on W. edges, from which

A Fir, 10 ins. diam., bears S.  $25^{\circ}E$ ., 40 lks. dist.,  
marked T 33 S R 4 W S 5 B T.

A Fir, 8 ins. diam., bears S.  $72^{\circ}W$ ., 33 lks. dist.,  
marked T 33 S R 4 W S 6 B T.

A Fir, 6 ins. diam., bears N.  $62^{\circ}E$ ., 71 lks. dist.,  
marked T 33 S R 4 W C C S 5 and 6 B T.

Land, mountainous, broken, rough, high sloping West

first 40.00 chs and NE. for last 34.42 chs.

Soil, gravelly, rocky, 4th rate.

Heavy timber, Fir, Cedar, Pine and Yew.

Dense underbrush, small Fir, Hazel, Mountain Laurel,

Chinquapin and Yew, 74.42 chs.

September 21, 1893.





Sept. '83

REPORT: 013-1762

PROJECT:

plotted

PAGE 1

NOTES

SAMPLE NUMBER	ANALYSEMENT ppb	Pb UNITS	Cu PPM	Zn PPM	Co PPM	Ni PPM	Cr PPM	Hg PPM	
1 400			77	618	133	2080	12310	<0.2	
2 127			29	354	145	979	20000	<0.2	
3 429	<5	<2	15	80	133	1650	3345	<0.2	
4 430	<5	<2	27	200	157	1920	>20000	<0.2	
5 431	<5	<2	5	293	158	1450	>20000	<0.2	

Black  
Grey Bay Mine

- 429 - 10' chip sample right face (towards back)  
430 - grab sample of dump outside adit  
431 - grab sample from bucket

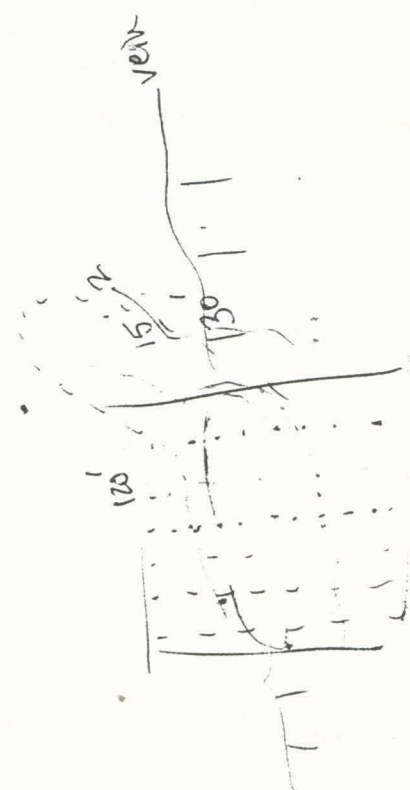
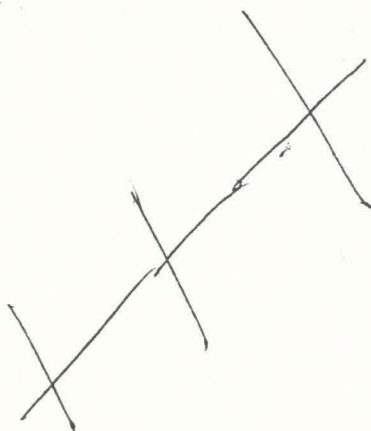
$$1000 \text{ ppm} = 1\%$$

$$1000 \text{ ppb} = 1 \text{ ppm}$$

$$429 \approx 1.6\% \text{ Ni}$$

$$430 \approx 2\% \text{ Ni}$$

$$431 \approx 1.5\% \text{ Ni}$$





1#35

assaying  
geologic studies  
referrals

1480 jacobs drive, eugene, oregon 97402

(503) 689-4490

GEOLOGY, STRUCTURE AND ECONOMIC MINERAL POTENTIAL  
OF THE  
SIERRA CLAIM GROUP, DOUGLAS COUNTY, OREGON

INTRODUCTION:

This report was commissioned in April of 1984 by the Bonnie-L Mining Corporation of Azalea, Oregon. It's primary purpose is to examine the metallic and other mineral resources of a series of claims known most recently as the Sierra group. Data contained herein is derived from: published literature on history and production, a thorough field inspection of the surface geology and mine workings, geochemical analyses for selected elements, and hand sample data. These data are treated empirically, and are the major supporting criteria for exploration and development recommendations.

Location and Accessibility:

The Bonnie-L Mining Corp. currently controls ~~seven~~<sup>10</sup> mutually adjacent claims located on the east-flanking ridge of Quartzmill Peak near the juncture of Douglas, Josephine and Jackson county lines. The claims, layed out parallel to section boundaries, comprise a  $\frac{1}{4}$  section in the east half of section 5, T 33 S, R 4 W. The property is easily accessible along Bureau of Land Management forest roads, a well graded spur to the millsite, and a somewhat steeper spur up to the main workings. (general locale, Figure 1)

Regional Geology:

The following is a very brief outline of the regional geology and structure of the area in which the Sierra group is located. The reader should immediately appreciate the complexity and challenge that confronts any mineral exploration program. No attempt has been made to completely explain the intricate processes responsible for the present configuration of rocks or the geometry of structures.

The study area is located in the northern reaches of Oregon's Klamath Mountain province. The geology of the province is decidedly complex. Metasediments, metavolcanics, serpentinites and their parent ultramafics, and granitic intrusive rocks make up the bulk of the lithologies. These rocks are intensely folded, faulted and altered, and intimately intermingled both regionally and locally. Figure 2 is a regional geologic map of the entire province.



## Regional Geology (continued):

Regional structures consist of four imbricate thrust sheets; oldest in the east growing successively younger westward. The Western Paleozoic and Triassic belt and the Western Jurassic belt are prominent in Oregon, the older belts being confined almost entirely to California.

Large masses of ultramafic rocks (peridotite and dunite), often partially or completely altered to serpentinites, are scattered throughout the province. Most of these masses were emplaced during low-angle fault movement (thrusting)--the primary agent responsible for serpentinitization and deformation. The largest serpentinite body is called the Josephine Peridotite, and underlies much of the Kalmiopsis Wilderness in Oregon.<sup>1</sup>

Serpentine is characterized by its softness and slippery feel (talc is a serpentine mineral). Where peridotite is usually dark green to black and very hard, serpentinitization gives it a yellowish-, bluish-, or olive green color. Because of the weak atomic bonding along certain planes of the serpentine mineral structure these rocks are often highly sheared and "slickensided".

Chromite is common to varying degrees in ultramafic rocks depending on the composition of the parent magma. Many occurrences have been located, and some exploited, in the Klamath Mountain province. These occurrences are generally low to moderate grade and exist as pods and small, inconsistent bodies, or disseminated throughout their parent ultramafics. Some banded ore occurs where the parent rocks have not been deformed or severely altered.

Other metallic and nonmetallic mineral resources commonly associated with these rocks, particularly in the general area of the Sierra group are: nickel, cobalt, asbestos and talc. Relatively low-grade precious metal deposits occur in the district associated with granitic intrusive rocks. Their occurrence in the claim group has not been firmly established.

## History and Development:

The Sierra group was originally part of a larger package of claims and mines known as the Starveout group; because of their location near the headwaters of Starveout creek. Names such as Black Boy, Grey Boy, June Bug, Warner, Puzzler and Forget-me-not are still used to refer to specific properties. With the exception of the first three these mines were exploited to varying degrees for gold and silver. At this writing there exist no actively producing lode mines.

The Black Boy, Grey Boy and June Bug were mined for chromite. A total of about 1000 tons of metallurgical-grade ore were mined from the Black Boy from its discovery early in this century to the mid-1950's. An average grade of about 45 per cent  $\text{Cr}_2\text{O}_3$  and 12 per cent Fe was reportedly shipped during this period. (4)

The main workings of the Black Boy, central to the Sierra claim group consist of a 50-foot adit developing to the southwest, dog-legging due west after about 30 feet. Numerous cuts and test pits are scattered through the area. A millsite has been established, and concentrating facilities are under construction down-slope to the north about  $\frac{1}{4}$  mile from the main workings.



## History and Development (continued):

A few other sites which may be referred to in this report are the L & M Copper prospect near the southeastern boundary of the claim group, and some unnamed prospect workings downslope from the L & M, just outside the group boundary.

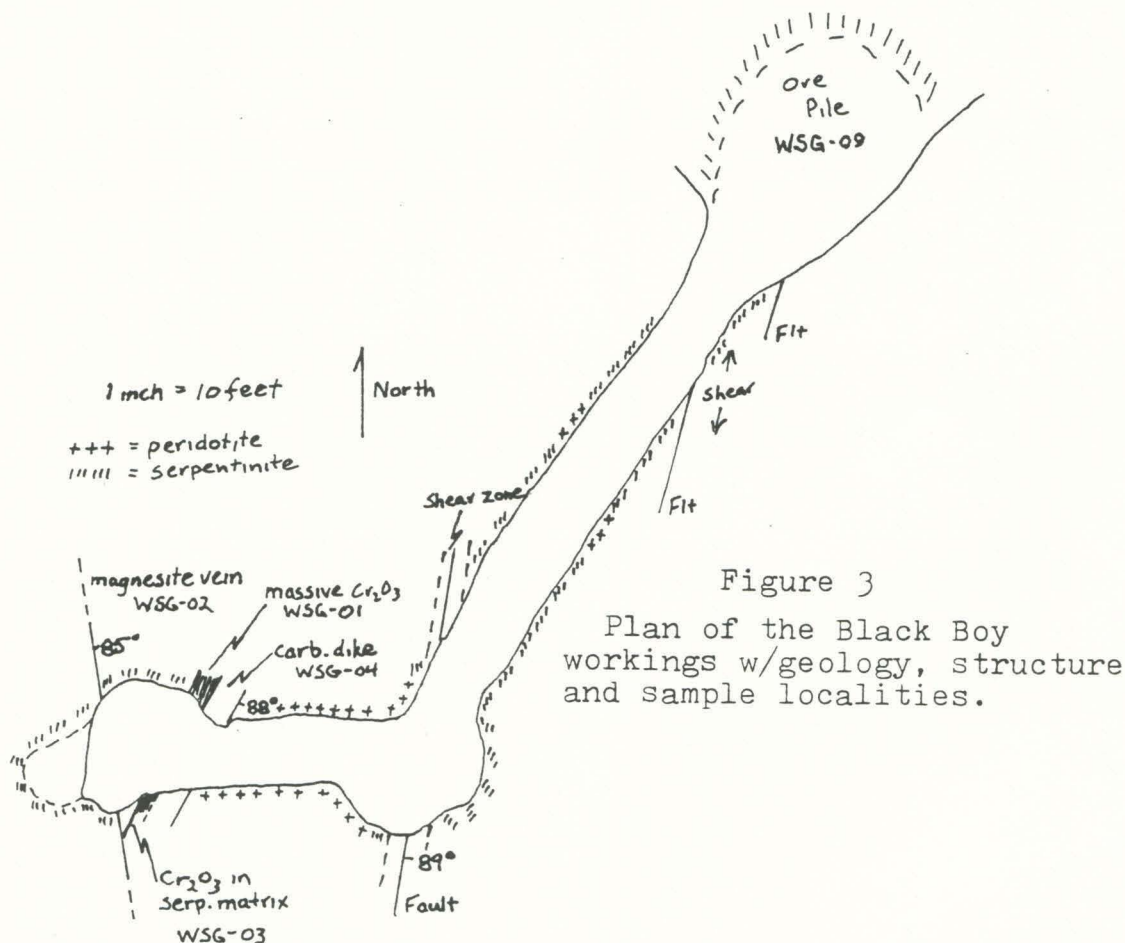
## Field Sampling and Analytical Data:

Samples were cut from inside the main adit, from an ore pile of at least 500 tons just outside the portal, and at various selected points around the claim group. These samples were prepared and analyzed for a variety of metals using atomic absorption spectrometry and fire assay techniques. Sample localities are shown in figures 3 and 4, hand sample descriptions and analytical results can be found in the appendix and Table 1, respectively.

Figure 3 is a plan map of the Black Boy workings, geology and structures. The sketch was prepared by this writer from tape and compass traverse.

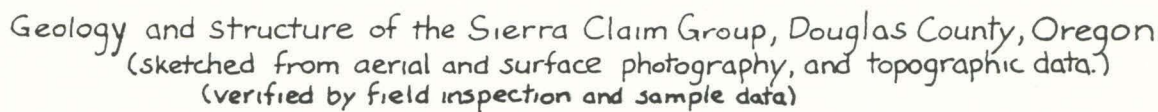
Figure 4 is a cross-sectional interpretation of the orebody and its limiting structures. The view is toward the south west. This sketch was derived from direct field observations, aerial photography and long-distance photography.

The appendix following the main body of the report gives lithologic descriptions and sample localities. Not all of the samples taken were subjected to analysis.





SE ← → NW



 Proved Chrome  
ore
  Probable  
ore
  Possible  
ore

Sample No:	Cu	Co	Ni	Cr	Fe	Al	Au/Ag	Pt-Pd
							troy oz./av. ton	
WSG-01	16.0	13.1	352	26.64%	11.70%	6.68%	trace/0.10	none
WSG-03	8.9	35.0	.10%	18.01%	8.28%	5.05%		
WSG-05	17.9	85.3	.19%	3.55%	7.20%	1.39%		
WSG-06	24.9	86.6	.12%	.43%	6.40	2.15%		
WSG-08	2.83%	243	.14%	.29%	18.65%	2.50%	0.03/0.10	none
WSG-09	109	22.9	428	22.34%	13.63%	5.81%		

Columns 1 thru 6: AA Spectrometry performed by Reiner Labs, Salem, Oregon.



## Results:

The ultramafic rocks which dominate the Sierra claim group are composed primarily of peridotites and dunites, highly sheared, broken and altered in places to serpentinite. Leucocratic (light-colored) carbonate-rich dikes and magnesite ( $\text{MgCO}_3$ ) veins are abundant in these rocks especially around the main workings. The carbonates fluoresce under ultraviolet light. Major and minor faults and some of the more distinct veins cut the dikes and a prominent lens of massive chromitite underground and in the cuts around the adit portal.

The ultramafic body as a whole was structurally emplaced--being bounded by major faults on the northwest and southeast. The interior of the body has been faulted and deformed by structures with similar attitudes, but with great variations in scale. Subsequent (and continuing) periods of movement are responsible for the abundance of shear zones, serpentinitization and the present geometry of the ultramafic mass and its associated orebody.

Less sheared and altered peridotites crop out along the ridge above the main workings, and down the other side (the southwest slope). Banded, low-grade chromite occurs sporadically, in the small saddle atop the ridge and down the southwest slope approximately in line with the main workings and structural trends. The bands and richer pods seem to crosscut the general trend of the major structures. See figs 3 & 4.

An interesting copper anomaly occurs at the L & M Copper prospect. Analysis shows better than two percent Cu on selected samples. Malachite and a little garnierite (secondary Cu and Ni, respectively) occur along unoriented fracture surfaces at the fault contact between the ultramafic and metavolcanic rocks. Cobalt also shows anomalously, but to a much lesser degree.

Below the L & M prospect, along the claim group boundary, are several exploratory cuts and a small adit that expose the major faults at this level, thus confirming their continuity and limiting characteristics.

Dropping down further, to the main forest road along strike of the southeastern limiting fault is a tunnel. The portal is in the road cut, and it reportedly extends 100 feet or more into the mountain. A cursory examination of the first dozen feet or so (these workings are very unsafe!) led to the discovery of a very persistent chrysotile (asbestos) and talc vein. This vein averaged better than six inches in width, two inches of bluish, low-grade chrysotile above four or more inches of apparently high-grade talc. The attitude of the vein is essentially horizontal.

## Conclusions and Recommendations:

Analyses show that the peridotite/serpentinite rocks are moderately chromite-rich, with minor amounts of nickel and cobalt. The ore can be considered economical if raw grades do not fall much below twenty per cent, and only because processing of the raw ore should produce metallurgical grade concentrates (i.e., essentially pure chromite with  $\text{Cr}_2\text{O}_3$ :Fe ratios better than 2:1).



## Conclusions and Recommendations (cont.):

Massive chromite such as is found in the main workings will probably occur intermittently, and in small, irregular pods and lenses. Therefore, exploration should target the higher grades of disseminated chromite in serpentinite--similar to the ore found in the mine's ore pile.

A diamond drilling program should be undertaken to improve the ore reserves before major production facilities are completed. Such a program should seek to place outer limits on viable ore--limits that most likely be in the form of "assay walls" along the trend of the major structures, and probably sharper orebody contacts in a perpendicular direction.

Lateral limits of exploration should be confined within the limiting structures, unless future evidence warrants broader study. Depth limitations are not precise, but the occurrence of the chrysotile/talc vein below the group boundary seems to indicate proximity to a low-angle thrust fault, if not the fault plane itself. Photography also shows that sparse vegetation, a very common indicator to underlying ultramafic rocks, begins to disappear at about this level (i.e., the ground becomes increasingly more forested).

There have been some verbal suggestions as to the presence of precious metals in the serpentinites in the claim group. The two samples assayed for Au/Ag/Pt did show some low levels of gold and silver. These results, the occurrence of magnesite veins and the secondary copper at the L & M prospect are all clues that suggest mild hydrothermal activity in the past. The large number of lode prospects and placer operations in the district are further supporting evidence. It is important to pay close attention to clues unearthed by a sub-surface investigation, but it is unlikely that precious metals will be more than by-products at surface levels.

-----

Extreme caution must be exercised when estimating ore reserves from surface data, especially in chromite deposits of this type. The nature of these "podiform" type chrome deposits is such that very high grade ore (massive chromitite) only occurs in pods and lenses that are usually small and not largely persistent. An advantage here is that ore occurs also as disseminations in serpentinite. The following estimates focus primarily on this type of ore, and do not directly consider high-grade bodies. It is extremely likely that high-grade bodies will occur, and these will certainly increase the value of the orebody.

Conservatively, in the ore pile and mine workings of the Black Boy, there are approximately 1000 tons of raw ore. At an average grade of about 22 per cent, this represents over 200 tons of high-grade concentrates.

Using an average of 20 per cent, a calculated density representing a rock of 80 per cent peridotite, 20 per cent chromite, and a volume estimate, roughly based on the probable ore zone in figure 4, of 4.3 million cubic meters, calculated probable ore reserves are in the neighborhood of 15 million metric tons. After processing, about 3.0 million metric tons should be available for shipment, (Note: 1 metric ton=1000 kg=2,205 lbs).

It must be stressed that these figures are very approximate,

## Conclusions and Recommendations (cont.)

based only on surface data and probable, unproven reserves. To determine the true economic potential of this deposit mining, processing and shipping expenses must be calculated and weighed against the current market potential for chromium ores. These factors do not enter into the scope of this report, but if the probable reserves prove out, a favorable market is found for the processed ore, and processing technique and shipment expense do not much exceed reasonable levels the property could be mined at a profit.

As a closing note, it has come to this writer's attention that the Bureau of Mines Research Center at Albany, Oregon has recently completed a series of metallurgical processing experiments on low-grade chrome ores that could greatly enhance recoveries, and economize on processing expenditures. Details have not been published, but information is readily available from the Research Center.(5)

Dated: 15 May, 1984

Investigator:

T. J. Foelker  
Geologist, assayer  
Earth Services

## References:

- 1) Baldwin, E.M., Geology of Oregon, Kendall/Hunt Pub. Co., 1976, pp. 71-82.
- 2) Hotz, P.E., U.S. Geological Survey Prof. Paper 684-B.
- 3) Thayer, T.P., Chromite Deposits of Grant County, Oregon, U.S. Geological Survey Bulletin 922-D, 1940.
- 4) Allen, J.E., Oregon Dept. of Geol. and Min. Ind., Bulletin #9.
- 5) Siemens, R.E., Personal Communication, Bureau of Mines Albany Metallurgical Research Center, P.O. Box 70, Albany, OR 97321.
- 6) Brooks, H.C. and Ramp, L., Gold and Silver in Oregon, Oregon Dept. of Geol. and Min. Ind., Bulletin 61, 1968.



## APPENDIX

Sample No.	Description	Location
WSG-01	Massive, fine-grained to granular chromitite. Non-magnetic, good brown streak, chocolate-brown to black color. Host rock: serpentinitized (antigorite, talc) peridotite with minor carbonate (magnesite-siderite).	Channel sample from north rib of main adit, 5 feet from face. Lenticular to tabular chromitite body 18" wide, striking N60 E, SE 88.
WSG-02	Medium-coarse crystalline magnesite ( $MgCO_3$ ) vein. 1 to 3 centimeters wide, cuts WSG-01 at the south rib. Presence of carbonate may indicate an association of hydrothermal fluid penetration with low grade metamorphism. Fluoresces.	Selected from face, chest-level. This late stage vein strikes N81 W, dips SE 85. Some movement along plane of vein.
WSG-03	Chromite-rich serpentinite. Lower grade than WSG-01, much diluted by country rock. Originally part of WSG-01 body, now cut and displaced by WSG-02.	Channel sample across strike on south rib opposite WSG-01.
WSG-04	Soft, light-green, leucocratic dike of indeterminate bulk composition. Contains talc, carbonate, some serpentine, possibly epidote. Very fine-grained texture. May be co-genetic with WSG-02, but somewhat later occurring. Contains small spherules of chromite.	Contact on SE side of chromitite body, north rib. Strike and dip parallel to body (WSG-01).
WSG-05	Spotted, banded ore. Bands moderately magnetic (High-Fe). Bands closely spaced, less than 0.5 cm in width, and grading to coarsely disseminated chromite in peridotite/serpentinite matrix.	Cut from bedrock just above and below road on SW side of mtn. Closely on strike of structure and ore trend inferred from workings thru mtn.
WSG-06	Banded ore. Weak to moderate magnetism. Bands several mm to 1 cm, closely spaced in peridotite/serpentinite matrix. Sample site shows weak fault structure, lineations (bands) slightly deformed, some slickenside surfaces.	From below 3 feet of overburden in notch of small saddle. Several hundred feet vert. above main workings.
WSG-07	Banded ore in serpentinite matrix. Network of bands show a general lineation rather than lamination. High-Fe chromite bands, 1 to 3 mm, stand out well on whitish weathered surface.	Close to strike of main workings and WSG-05, -06. Much further downslope on SW. Bedrock sparse, possibly float.
WSG-08	Black serpentinite with garnierite (Ni) and malachite (Cu) on fracture surfaces. Weak to moderate magnetism. Not extremely dense, probably low-grade, high-Fe chromite ore. Nickel and copper minerals worthy of note.	From shear zone at L&M copper prospect. Some proximal meta-volcanic rocks were noted at the site. Fault is likely ultramafic body boundary.
WSG-09	Chrome bearing serpentinite from ore pile at old workings.	

To: Bonny L. Mining Corp.  
P.O.Box 124  
Azalea, OR 97410

Date: 8/22/84

Order No: verbal - Webb

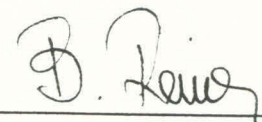
Invoice No: 00600/ D

**REPORT OF ANALYSIS:** (all results are expressed in ppm or as otherwise indicated)

Sample No:	Au	Ag	Pt	Cd	Co	Cu	Be	Fe
	oz/ton	oz/ton	oz/ton					%
?	.83	.17	BDL	1.5	82.6	54.4	BDL	2.97
	Pb	Zn	Mn	Ni	Cr	Ti	SiO <sub>2</sub>	
				%	%		%	
?	8.9	14.7	897	.12	.22	493	32.17	

1 sample

It appears that this sample is an excellent choice for Gold recovery with possible combinative technics such as table-ing and cyanide leaching. It appears that many other so called "poisons" for Cyanide Leaching are in a low concentration so they may not present problems. The clayish substance however may need considerable preparation (cement and aggregate additions) before leaching to be accomplished.

  
 Chief Chemist

BDL = Below Determination Limit

1 ppm = 0.0001 %

1 Tr.oz/ton = 34.21 ppm = 0.0034 %

**R<sub>L</sub>**  
 2015 MARKET ST  
 NE.  
 Reiner Laboratories Inc.  
~~533 UNION ST. NE.~~  
 Salem, Oregon, 97301.  
 503/363-2456