

# State Department of Geology and Mineral Industries

702 Woodlark Building  
Portland, Oregon

## GRAY BUTTE PROSPECT (Hg.)

Jefferson County

Owner: Federal land, administered by the Soil Conservation Service. Land was formerly owned by O. M. Cyrus.

Location: Near the center of the southeast quarter of sec. 13, T. 13 S., R. 13 E., at an elevation of about 3,600 feet. The prospect cuts are located on both sides of a small gulch on the northwest slope of a butte located a mile and a half northwest of Gray Butte. It is reached from Redmond by way of the Dalles-California Highway, twelve miles north, thence three miles by market road and about one mile by unimproved road. One may drive within 100 yards during the summer months.

History: This is a new prospect discovered in June, 1942 by Mr. J. E. Staley, Prineville, Oregon. The property was visited on December 1, 1942 at the request of the Soil Conservation Service from whom Mr. Staley desires to get a mining lease.

Development: Very little development work has been done. Three cuts, none of them over 2' in depth, have been dug along the "ore zone" exposing mineralization for an east-west distance of over 300'.

Geology: Gray Butte and the smaller eminences surrounding it which lie to the north and east of Crooked River are all composed of rocks assigned to the Clarno formation of Eocene age. The rocks of the Gray Butte group dip from  $2^{\circ}$  to  $30^{\circ}$  to the south and are composed of basalts, rhyolites, tuffs, and agglomerates.

The prospect is located just below the contact of a finely jointed, dense, somewhat glassy, gray to black basalt at least 300' in thickness, which overlies a coarse grained, yellow to white tuff, made up of individual rhyolitic fragments from a few millimeters to nearly a centimeter in diameter in a matrix of aphanitic ash.

Cinnabar colors are said to have been panned along this contact in a general east-west line paralleling the base of the steep slope of the butte for a distance of over a thousand feet. The richest concentrations, however, occur in

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GRAY BUTTE PROSPECT (continued) -2-

or near the gulch which trends northwest through the southeast quarter of sec. 13.

Cut No. 1 lies 50' east of this gulch at an elevation of about 3,600'.

The small cut, 2' in diameter and 2' deep, exposes an east-west trending minor vertical fault with hard silicified yellow tuff on the north, and soft purplish, altered, clayey tuff with extensive cinnabar mineralization on the south. (Specimen No. 1, P. 1066; Hg: ~~413~~<sup>413</sup>). Cut No. 2 lies 200' west of the gulch on the relatively flat top of a minor spur, and is 2' long and 1' deep in leached, coarse yellow tuff with thin crusts of cinnabar "paint" on the joint surfaces and infrequent cinnabar grains visible within the joint blocks (No. 2, P. 1067, Hg: ~~413~~<sup>413</sup>).

John Eliot Allen  
December 2, 1942

STATE DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES

ASSAY REPORT

Grants Pass, Oregon  
Baker, Oregon

*Gray Butte*

12/10/42. 19  

Sample submitted by J. E. Allen (for Staley)

Sample description: #1 - P 1066 purple Tuff & gouge CB 477

#2 - P 1067 yellow altered coarse Tuff CB 478

The assay results recorded below are made without charge as provided by Chapter 176, Section 10, Oregon Laws 1937, the sender having complied with the provisions thereof.

NOTICE: The assay results recorded below are from a sample furnished by the above named person. This Department had no part in the taking of the sample and assumes no responsibility, other than the accuracy of the assay of the material as furnished it by the sender.

Sample Number	GOLD		SILVER		Mercury		Percent	Value	Total Value
	Ounces per ton	Value	Ounces per ton	Value	Percent	Value			
CB 477					4.3				
CB 478					0.7				

Market Quotations:  
 Gold        \$       per oz.  
 Silver      \$       per oz.  
             \$       per lb.  
             \$       per lb.

STATE ASSAY LABORATORY  
*Hugh K. Lancaster*  
 Assayer

*86 lb/s  
and 14 lb/s*

# State Department of Geology and Mineral Industries

1069 State Office Building  
Portland 1, Oregon

Mercury  
Jefferson County

## GRAY BUTTE PROSPECT

Addendum to report Page 164 DOGAMI Bulletin 55.

In early 1965 a small rotary furnace (maybe 5 tons per day) was installed and a cabin was built. To date the furnace has been little used beyond testing during which a few pounds of mercury was recovered.

On the date of visit exploration work was in progress. A portion of the fault zone had been exposed to a depth of about 40-feet by an opencut; a shaft collared near the floor of the opencut extended eastward for 30 feet on a 25 degree incline giving another 12-feet of vertical depth.

The fault zone is well defined at depth, striking N 80°E and dipping 80°S. Part of the material may be intrusive. Intensity of alteration prevents confident hand specimen identification of the rocks involved. Mercury mineralization is sparse in exposed portions of the fault zone. Several channel samples were taken. See attached sketch for location of samples and assay results. Two samples were assayed for gold, silver, lead and zinc. Results were nil.

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Request exam. by: Howard C. Brooks  
July 28, 1965

GRAY BUTTE PROSPECT

NAME OLD NAMES PRINCIPAL ORE MINOR MINERALS

13S 13E 13 SE $\frac{1}{4}$   
T R S

PUBLISHED REFERENCES

..... Jefferson ..... COUNTY

..... AREA

..... ELEVATION

MISCELLANEOUS RECORDS

.7 miles by dirt road W. of ..... ROAD OR HIGHWAY  
U.S. Highway 26

..... DISTANCE TO SHIPPING POINT

PRESENT LEGAL OWNER (S) ..... Adrian Rodman .....  
..... Fred Lyons .....  
..... Larry Lyons .....  
.....

Address .....  
.....  
.....  
.....  
.....

OPERATOR .....

Name of claims	Area	Pat.	Unpat.
			X

Name of claims	Area	Pat.	Unpat.

EQUIPMENT ON PROPERTY

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## GRAY BUTTE PROSPECT

Jefferson County

Staley is one of the two foremost quicksilver prospectors in Oregon and has discovered a number of the central Oregon properties. In locating this prospect he traced cinnabar colors up the hill for nearly a mile from the flat to the north.

Development on the property is insufficient to give assurance of potential value but favorable factors which indicate that further prospecting and development work should be prosecuted are: 1) known mineralization extends for 300' along the zone. 2) high grade cinnabar enrichment occurs along minor faults, but cinnabar also occurs disseminated in the tuffs in minor amounts. 3) the mineralized tuff is immediately overlain by dense basalt which might act as a cap rock in spite of its being badly fractured at the surface.

I recommended to Mr. Stewart R. Twiss, Geologist for the Soil Conservation Service, 308 Pacific Building, Portland, that a lease be given Mr. Staley so as to safeguard him in any further development or mining. I recommended that Mr. Staley trench the zone to bedrock at intervals along the 300' of its proven length and further, and that channel samples be taken in these trenches across the zone.

John Eliot Allen  
December 2, 1942