

LITTLE GIANT MINE (gold)

Area
Greenhorn District
~~Grant County~~

Owner: Judge Norbourne Berkeley, Pendleton, Oregon.

Location: NW $\frac{1}{4}$ of Section 4, T 10 S, R 35 E; 1 mile up mining-ditch road from 1.3 mile north of Greenhorn. *Near Head of Spring Creek, at elevation of 5,911 feet. Located in 1898.*

History: Operated about 1899 by an English concern who built a \$60,000, 20 stamp mill. It has not been operated since 1905-6. W. W. Gardner says that the lower tunnel missed the ore at depth by 100'.

Equipment: None left; all buildings are down. Mill was destroyed.

Geology: Elevation about 5500'. Country rock argillite ^{diorite,} and serpentine. *In location cut,* Ore occurs as an argillite breccia, angular fragments lie in quartz. The latter shows open cavities with botryoidal chalcedony. Green malachite is the only other visible mineral. Ore on the dump next to the entrance of the lower tunnel consists of massive pyrite, gray quartz and assays 0.02 oz. in gold and no silver.

Development: ^{40'} Discovery shaft at an elevation of about ⁶²⁴⁰ 6075' is completely caved. 375' N 75° W and 75' below, a tunnel has been driven ^{to tap} the ore beneath the shaft; this tunnel is caved also. 1000' down the hill to the northwest and just above the creek, a tunnel now filled with 2' of water apparently trends S 50° E; this at an elevation of about 5800'. ~~From the size of the dump this tunnel is at least 500' long.~~ ^{300' with 200' of drift} This tunnel is ^{at} ~~least 500'~~ ^{850'} long. Although it is mostly in argillite, there is some andesite on the dump, indicating that a dike has been cut.

Miscellaneous: ^{but had not tapped the main vein.} The elevation, inaccessibility, and amount of snow are unfavorable factors to developing this property. Transportation to a railroad would be difficult.

Remarks: As the property underground was inaccessible, no definite estimate of its potential value was possible.

June 28, 1938

John Eliot Allen

John Eliot Allen
Field Geologist

It is reported that a 3 foot vein ^{was cut} 300 feet from the mouth, which strikes ENE and dips ^{to} 15° S.E. and another 800 feet in, This vein carries pyrite & arsenopyrite, & is from 1 to 2 feet wide.

LITTLE GIANT MINE.- At the foot of Greenhorn Mountain, near the head of Spring Creek, is located the Little Giant Mine. The elevation is 5,911 feet. The road from Alamo, which is 6 miles distant, follows up Spring Creek through thick timber. Through placers were formerly worked in this creek, no quartz vein had been found until in 1898, when this mine was uncovered. The following year it was sold for \$30,000. according to report; developments were begun and a 20-stamp mill was ordered. On account of various financial vicissitudes, all work was suspended in the summer of 1900, though later on work in the lower tunnel has been resumed.

The developments consist of a 40-foot shaft on the croppings (elevation 6,240 feet) and an upper tunnel 80 feet lower down; this is a cross cut for 300 feet and the ledge has been drifted upon for 200 feet. The lower tunnel, 350 feet below the croppings, is at present 850 feet long, but had not, when visited, reached the vein.

Along Spring Creek, the prevailing rock is serpentine and diorite; but at the mill is a contact, and the whole east side of the gulch is composed of dark-gray, massive argillite. The vein strikes due northeast, while its dip is as yet unknown. The croppings do not show prominently, but are well exposed by means of trenches. Good pay is reported all along the surface for 600 feet northeast. Toward the southwest the serpentine contact is not far away and the vein does not seem to be traceable across it.

In the upper tunnel the usual character of veins in argillite is shown. It is a belt of crushed argillite, in places reaching 20 feet

in width, filled with quartz seams and locally crushed and clayey. Much of the quartz is stained green by chromium mica, the metal probably being derived from the adjoining serpentine. No pyrite is visible in the decomposed quartz. The seams, as usual, show clearly defined comb structure, indicating deposition in open space, and the argillite is not much silicified.

The lower tunnel, as stated, has not yet cut the main vein, but has encountered two others, not known on the surface, which is covered by debris. The first of these was found 300 feet from the portal, strikes northeast, is vertical, and consists of the usual quartz-cemented argillite, 3 feet wide. It is said to carry good value. The next 800 feet from the entrance, strikes east-northeast and dips 45 S.E. It is 1 to 2 feet wide and carries much pyrite and arsenopyrite.

Judge Berkley