State Department of Geology and Mineral Industries

702 Woodlark Building Portland, Oregon

HUMBOLDT METALLICS CORPORATION, LTD.

OCHOCO DISTRICT JEFFERSON COUNTY

- Owners: President: W.L. Smith, Boise, Idaho. Local Address: Box 545 & 355, Mitchell. Superintendent: George M. Johnson.
- History: Located by Glenn Stevenson in 1955; sold to Norm Meisner, Mitchell; then to Pat O'Brien and James Page, then to present corporation. About 6 flasks were produced by these various parties with the small Champion rotary.
- Location: Section 35, T. 11 S., R. 19 E.; ½ mile north of Bear Creek in the extreme southeastern corner of Jefferson County. Reached from Mitchell-Prineville highway by road leaving about 10 miles west of Mitchell.
- Area: The present corporation bought two claims from O'Brien and Page; and have since staked fifteen more.
- Equipment: Rotary 24" Champion retort, (in poor condition) small Gardner-Denver compressor run by Chevrolet motor. Two cabins.
- <u>Development</u>: 200 feet of tunnel on two levels, with raise from upper level to glory hole at the surface. Perhaps a dozen pits have been dug within half a mile of the tunnels; but only one or two are said to pan. Well over a mile of road has been built; but only one or two are said to pan. Well over a mile of road has been built; not only to the workings, but up the hill to the north and west as well. This road has been leveled out with a buildozer, but not otherwise worked.
- <u>Geology</u>: An east-west band of grey sandy tuff, either steep dipping or vertical, parallels Bear Creek half a mile to the north, for perhaps 3/4 of a mile. This zone weathers to a soft grey to yellow sand, and near the surface is penetrated by a network of small secondary caliche stringers. The ridges north of Bear Creek have saddles in them resulting from erosion of this zone, and a line of springs mark its northern border.

Typical dark grey to black Clarno porphyritic andesite (with slender plagioclase laths and red secondary alteration in the vesicles) or basalt borders the tuff on the north and south. The tunnels lie within the andesite about 150 feet south of the tuff. A dense grey chalcedonic-appearing rhyolite also is found in places in the tunnels. State Department of Geology and Mineral Industries

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Mineralization with calcite and lesser amounts of quarts appear in numerous stringers with northwesterly strikes. Cinnabar is said to have occurred in faults which strike N. 35° W., 55° SW in the glory-hole on the surface; and N. 55° W., 35° SW in the lower tunnel. Other faults with similar altitudes but without cinnabar have been mapped. Although ore is said to occur in the lower tunnel, none has been removed, none was seen, and the tunnels seem to have been driven at random, as far as structural features in the andesite are concerned.

The upper tunnel was driven to get depth on the ore mined in the glory hole, and an ore shoot from this level to the surface, perhaps 10 feet long (or slightly over) and lying vertical in the plane of the fault, has been removed. The stope has caved into the tunnel and could not be visited.

The well-defined fault in the glory hole has an ore some perhaps two feet wide, composed of 1-3 inches of finely powdered white quarts, black powdery manganese oxide, and some calcite. The dark grey andesite is altered on either side of this vein for a distance of about a foot.

A small cut 85 feet south of the mouth of the lower tunnel is said to have panned well. Another cut  $\frac{1}{2}$  mile S.E. across Bear Creek is also said to have been panned. According to Thacker, who has lived nearby since before the property was discovered, these are the only other pannings.

<u>Miscellaneous</u>: The property is about 7 miles from the highway, in a fairly rugged terrane. Climate semi-arid, with Bear Creek drying up completely for several months. The road is nearly impassable for several months. Timber not abundant (juniper) but available nearby at Mitchell. Water either from small springs near the mine or pumped a quarter of a mile from Bear Creek.

Remarks: According to Mr. Johnson, the owners intend to clear out the workings in the upper tunnel as they have done in the lower; and try to develop ore, before putting in a large furnace. No definite plan of development was mentioned. No sampling has been done.

> April 20, 1941 John Eliot Allen Geologist

Name: Humboldt Metallies Corp., Ltd., Mitchell Box 395 + 355. Vetterson. Owners Autor #1 + 2 buying, from Pat O'Brien and Vin Page Norm Meisner, mitchell \_ glenn Stenvenson; orig. locator 1935 Pres. W.L. Smith, Boise produced & flashes (all Hure) Thackey. Sutrulendert george M. Johnson Sec. 135 7115, R19E Location ; 17 claims (2 Goreght). Areas : gardnes-Denver compressor (small) ver by Sebley motor. Equipment Rotary Champton retort, wood brune. when the start and the set of the Rhy ! have grey deres men E attit D'S250W-85' hole panied well. also panied across creek 1/4 m S 30°E. antisite  $\oplus$ <sup>#</sup> Raise + mice 85" in . Seam 1/2' wide. Turnel #2 vuns down 60° To S. Stoped out quite a lot on E-w ship (?) david Fresh andesite typical red-spotted basdeltie Clarub type to gray sand N350W-550 SW In Jack guey and - parpta-Slip 1-3" Wahrte gt2, dust E-W altered some lodyds + min, powder wide 150,30 N. of workings. Otted 1' in either side Runs 3/0 mill Spronge along N. sile

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January 2, 1941 Caldwell, Idaho

GEOGRAPHY: This property is located in the Sg of Sec. 35, T. 11 S., R. 19 E. in the Oshoco Mining district, about 2 of a mile north of Bear Creek, Jefferson County, State of Oregon. The property can be reached by U. S. Highway 28 from Vale to Mitchell, Oregon, about 10 miles west of Mitchell a road takes off to the right up a narrow gulch over a rolling plateau for 7 miles to a ranch house, after crossing Bear Greek, which is the most westerly contributor to John Day River, another road takes off to the right for about g mile which ends on the property.

The elevation at the portal of the lower tunnel is 3500 ft. which makes the climatical condition about the same as John Day. The property consists of 6 unpatented claims, some of which were located several years ago, and others recently.

DEVELOPMENT: The lower tunnel was started some years ago in the S.W. corner of the Humbolt No. 1 claim, on small seams of cinnabar out-cropping in a long, mosing-out hill, which strikes northwesterly, the tunnel follows the rake of the hill for 140 ft. with numerous raises and crosscuts. Unfortunately the main raise to the upper tunnel has caved in and filled the lower tunnel at the intersection some few months ago. So no examination could be made of the crosscuts and face of the tunnel. A 6 x 10 Single Stage Compressor driven by a Chevrolat motor in good condition, but a new reservoir tank is meeded to complete the plant for 100-150 cu. ft. capacity; a well-equipped Blacksmith shop is im the same building.

One Rotary Retort, almost new 24" x 10' long in good condition, about 2-ton capacity, is located about half-way between the upper and the lower tunnels, and ore has been fed to the retort from a glory hale near the mouth of the upper tunnel, wood was used for fuel during its operation. A Bunk House 14' x 24' frame structure in good condition with stoves and utensils is located 350 ft. northeasterly from the retort.

The upper tunnel as shown on the accompanying map is 100 ft. above the lower tunnel driven in a same general direction for a distance of 60 ft. Mostly in Phyolite and Porpheratic Andesite, the glory hole is near the portal of this tunnel where considerable amount of quicksilver was taken out of in the last year or so. Mumerous open cuts and pits have been opened up on the property which shows that the panning method of prospecting has been used.

<u>GEOLOGY</u>: The Magnatic outlet is quite in evidence of being driven from the highly elevated mountain range to the north, about 3 miles. The first flow consists of Andesite, about a mile north of the property a prominent sill of Andesite is exposed out of the over-lying Rhyolite. Following the Andesite floor which probably released the Hydrothermal pressure and which changed the composition to more Basic substance, a natural flow occurred in somewhat periodical performance probably due to the mud dams that slowed up the extraction and caused false resistance to the more pasty mass that followed the mud out-let. This also had the tendency of fracturing the structural rock during the silicification and may often be construed that a re-alteration has taken place. port On Humbolt Group of Claims.

No evidences were found of any thermal spring on the property, due probably to the fact that one major fault striking northwesterly from a point about 1,600 ft. East of the Bunk House, where uphemeral stream has developed. Another major fault is found on the west side of the property commencing in the S.W. corner of Sec. 35 with a northwesterly strike and to my opinion may be an extension of the Horse Havin fault, which is the main ore-maker in the Horse Havin Mine.

Both of these faults commenced developing at the end of the Rhyolite flow period, and the water was then only under a low hydorostatic pressure and went to its least resistance probably through the underlying pervious rocks or the Andesite tuff which may well be considered receptacle rock for mineral gathering, but none of the underground workings have not raised the expectation of suitable formation, about 3/4 mile north of the building, a great deal of round Opalite moodles (Geodes) are found, left by the erotion, which have been developed in the mud seams of the Rhyolite and which may indicate that the thermal waters went through there, under low pressure and most of them showed Mercury Sulfides in one form or another opened up.

The Horse Havin Mine located in Sec. 12, T. 10 S., R. 18 E. (El. 3250) or 8 miles N.W. of Humbolt which in 1934 came to be the third largest producer of quicksilver for that year in Oregon. There are lays in Opalite and Andesite tuff, the nearest mines in operation to the Southeast is Westerling's property on Johnson Creek, Sec. 15, T. 14, R. 20 E. Both of these mines are working on the theory that they are getting their best ore in the Clarno formation (Eccene). Several other small producers on Johnson Creek are getting their values in the Rhyalite.

RECOMMENDATION: The property is credited with a total production up to date, six flasks of quicksilver, which has mostly been taken out of the glory hole from surface prospecting. Flowered quick is found in various small seams or clay dams formed by the water erosion on the surface which indicates that a great deal of the Mercury Sulfides have been exposed to the sum and weather conditions that altered the mineral to its native state. It is therefore advisable to do more surface prospecting and development such as trenches and crosscuts rather than underground developments at the present time. I believe the surface mining with this small retort on the ground will help to pay for the underground exploration in a short time.

Particular attention should be payed to both of the major faults in prospecting along the trend of the fault both sides. So to not overlook any crossfractures or minor faults that may now be hid under erotional remains. If the ore is found on the surface it could be hauled on light trucks or any other conveyance to the retort without excessive cost. The general estimation of fuel capacity in that vicinity is 10 gal. of fuel cil to a ton of ore, this includes drying. The previous mentioned operation on the Humbolt property has been probably mostly dried by airiel condition and sunlight, which is much acceptable to the clay condition associated with the ore.

It is hard to estimate the actual cost of one production under such a development, as there is a certain amount of waste work that has to be done but to feed this small furnace will only require the highest grade of one which would pay good money while the operator is prospecting for larger deposits. This is commonly done in larger quicksilver producers and I believe the Humbolt property has a fair chance of finding a high-grade one in several places if carefully handled and should become a good average producer along the Ochoco mineral belt of Oregon.

> Respectfully submitted, (Signed): GEO. M. JOHNSON, Geologist.

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The mine maps submitted are of less than sketch accuracy, I found to my sorrow. I thought that I could use them to plot the geology on, but the scale is far off.

Is far as possible future production is concerned, the following factors may be listed:

- Favorable:
- 1. 6 flasks are reported to have been taken from one narrow short ore shoot.
- 2. Pannings <u>are said</u> to occur along the strike of the mineralized fault to the southeast.
- 3. Development along this fault has so far been negligible, most of the tunnels being crosscut.

Unfavorable:

- 1. The country-rock is usually fresh-altered zones being very narrow and irregular.
- 2. No change in formation or in fault attitudes which would act as traps could be seen.
- 3. No systematic assaying or panning has been done or seems to be contemplated.
- 4. Most of the underground work seems to be in barren ground.

In summary, I believe that there is little or no chance for the property to develope into a producer of any size. With careful work it might become a small high-grade property like the Plattner, and be worth while operating for two or three people, but the mineralization seems to be so restricted and the favorable features for ore-deposition so scarce that I certainly believe that any large investment would be entirely unjustified. I went through all the open workings and I saw absolutely no cinnebar, and the men could show me none, although they would say "It pans here". You can get a pretty good string of colors from 3-5 pound ore!

The present management stuck me as being rather impractical. They have taken a bulldozer and built roads all over the mountainside, whereas no panning have been found any distance from the workings up the hill. / They have staked out 15 new claims on the same basis, after buying the only two that had any showing.

If future development is contemplated, I suggest the following:

1. Sample all altered zones in the present workings and make an assay map.

2. Trench on the southeast extension of the fault, below the prethe present workings, where pamnings occur.

3. After an accurate survey, see if the ore shoot showing on the upper level and in the glory hole can be picked up on the lower level. I do not believe that they have cut the fault on this level, but they may be fairly close to it. Workings should probably be extended to the southwest to reach it.

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