

PRELIMINARY REPORT OF ORACLE MINE, SUMMIT CREEK,
MOOSE PASS-HOPE DISTRICT, KENAI PENINSULA, ALASKA
October 5, 1937.

Location and Accessibility:

The Oracle Mine is located 16 miles via road from Moose Pass. Fifteen miles via Moose Pass-Hope road and one mile via road up Summit Creek, makes the property easily accessible.

History and Development:

The original discovery was made by R. B. Heaston in 1921. Since this time there has been intermittent development work. Two claims were patented, the Oracle No. 2 and the Oracle Extension. This mine was known as the Heaston mine. W. S. Dunkle optioned the property in 1929 and the following year the Alaska Oracle Corporation was formed. Extensive development followed by this company. An old mill was erected and some of the ore was milled, mainly for a test run. This mill was operated by a water wheel. This corporation dropped the option and for a short period following no work was done. The claim above the Oracle No. 2 was not a patented claim and during the lapse of time was staked by Mr. Lindsley. This claim represents the top of the ore lense, of which part has been eroded away. Mr. Lindsley is at present engaged in operating an arrastre run by a water wheel. He is mining from short tunnels and hauling his ore to the arrastre with a small caterpillar tractor. It was reported he had recovered 81 ounces of gold this season. The property, however, was not visited.

Mr. Ralph Reed obtained the lease on the property, the two patented claims and five placer claims below, two years ago and since has been engaged in developing and in the erection of the new milling plant.

The total underground development consists of three tunnel openings, totaling 917 feet of crosscuts, 550 feet of drifts, 200 feet of raises and 12 feet of winze. The main working or mill level represents the lowest development with a 917-foot crosscut which intersects the vein. South from this point of intersection a drift has been driven on the vein a distance 130 feet. In this drift at a point 30 feet south of the intersection, a raise is up 65 feet. The vein pinches in this raise at 35 feet above this level. Near the end of the drift a small 12-foot winze was sunk on the vein and a 15-foot raise extends above the winze. The north drift has a length of 150 feet, at the end of which the vein pinches to a 2-inch seam. At a point 90 feet north of the intersection a raise up 120 feet on the vein connects up with the upper level. A few feet below the upper level a flat dip of the vein made an ore width of 3 feet, some of which has been stoped.

A slide made from a sample of fresh vein quartz taken from the center of the vein at the intersection of the crosscut and vein on the lower level, shows two generations of quartz. The second generation is contained in the fractures of the first. The mineralization is found in fractures and bands cutting both quartz generations. This shows the mineralization to be the last introduced of the solutions. However, both second generation of quartz and fine mineralization, the latter less than one percent by volume, represent a rather weak penetration. This fineness of the mineralization presents a difficult milling problem.

The minerals contained in the ore consist of arsenopyrite, pyrite, galena, sphalerite, chalcopyrite, pyrrhotite and stibnite. Gold also occurs in a very fine nature free and with the sulphides. Generally the mineralization is of a very fine nature with arsenopyrite and pyrite, the largest in size, and containing the most perfectly developed crystals. The gangue minerals consist of a milky white quartz banded in nature with calcite, graphite and wall rock pieces.

Mineralization:

The orebody is in the form of a lens that has a length of 160 to 170 feet and varies from a few inches to 3 feet in width. This lens takes to the southwest at an angle of 45°, corresponding to the movement of the hanging wall. Numerous stringers and gasb veins occur in the walls enclosed in the slates and graywackes. The quartz occurs in lenticular form and is of a banded nature.

The vein strikes parallel with the cleavage of the interbedded slate-graywacke formation. This strike is N. 150° E. In dip the vein cuts the cleavage at an approximate angle of 45°. The cleavage which appears to be the bedding dips 75° E. The vein, which has a variable dip, and to the south flattens rapidly, has an average dip of 60° N. over most of its developed length. The vein occurs in a fault fissure, which shows movement of the hanging wall to the southwest at a 45° take. This fissure appears to have been formed during the complex major folding of these sediments. As a result of movement on this fissure, the opening was formed on a flexure and the ore lens was formed with its banded nature, and movement has occurred during and after ore deposition.

Geology and Showings:

The upper tunnel level was driven on the vein and has a total length of 170 feet. A total of 100 feet of this length shows reported ore with comparatively narrow widths. The raise from the lower level connects up in the tunnel at a point approximately 30 feet back from the raise. Forty feet south of this raise in the drift, a raise is up 25 feet and the vein pinches to a thin seam. From the portal of this tunnel and across the creek on the south side a tunnel was driven on the vein. This tunnel had a reported length of 120 feet, but was caved and inaccessible on date of visit.

Assay Values:

No samples were taken by the writer, since the exposed ore has been extensively sampled. Along the drift in the lower level Mr. Jim McDonald was reported to have sampled the vein at 5-foot intervals over a length of 150 feet. The average sample width was 18 inches and the results were \$45 in gold per ton. Much higher values were reported on the upper level. From the surface outcroppings which are now staked and held by Mr. Lindsley several thousand dollars worth of ore was taken out during development. There is approximately \$50,000 worth of ore in sight between the two levels. This should pay for the new milling equipment and mining expenses with a margin of profit, providing good recovery is made. Development further will necessitate shaft sinking to develop the ore at a greater cost. Many factors will have to be taken into consideration before further development, however, the mineralogical character of the ore and the structure, point to continuity in depth.

Machinery:

The powerhouse and mill are combined in a new building and located 200 feet from the portal of the lower crosscut tunnel. The ore is dumped through a grizzly and run through a United Iron Works 12"x18" jaw crusher into a small ore bin. Below the bin a Moile Dodge 6"x8" jaw crusher crushes it to 1/2-inch size. Here a 60-ton bin holds the ore. A turntable feeder feeds a new Spaulding Airplane ball mill, 25-ton size. Specifications are shown on the attached circular by Kirk-Hillman Company. The mill grinds to 100-mesh and the pulp is fed to a Moir rotary amalgamator. Tailings from the amalgamator are fed to an Eclipse concentrator. The mill machinery is run by a 25-H. P. semi-diesel Fairbanks Morse engine. Air is furnished by a 2-cylinder Rex portable compressor run by a gasoline motor. This mill was ready on date of visit to begin operations. Whether or not it has been a success has not been learned. This is the only mill of this type in Alaska at the present time.

Timber and Water Power:

Timber is abundant below the mine along the road and on the placer claims that are held. A small water power for lights is to be developed from the water of Summit Creek above the mine.

SUPPLEMENTARY REPORT OF THE ORACLE MINE
(To be added to Preliminary Report of October, 1937)
October 5, 1938.

The Oracle mine operated during the season of 1938 and closed October 6. Four miners working under contract made up the total underground crew, and three men were employed in the mill. In October, 1937 40 tons of ore was stoped above the upper tunnel. This was near the surface and the stope caved. The following spring the mouth of the upper tunnel caved. This level is still accessible via raise and stope from the main level. On the main level south drift no further work was done.

In the north drift at a point 20 feet north of the intersection of the long portal crosscut in No. 1 raise, the ore was encountered 30 feet above the level. Thus a stope was mined between No. 1 and No. 2 raises, a distance of 40 feet. A stope to the south of No. 2 raise was also worked. The miners stoped and sorted the ore, did the necessary timbering, and delivered the ore to the mill at four dollars per ton, with all necessities furnished. A total of 590 tons of ore was mined and milled during the 1937 and 1938 seasons. This season closed early due to the wearing out of the compressor. New parts were ordered and the wrong parts were sent.

In the mill the new Spaulding Airplane mill proved inadequate for this hard ore, which requires fine grinding. A new Crescent mill was installed this season and the Spaulding mill is used as a rough grind ahead of the Crescent mill. A recovery of 60 per cent is made in the Crescent mill which has inside amalgamation. An additional 30 per cent is recovered in the concentrates from the concentrator and 35 feet of corduroy below the concentrator. Two shifts were worked in the mine and one shift in the mill.

NOTED
10-10-38

NOW AVAILABLE

THE NEW SPAULDING AIRPLANE BALL MILL

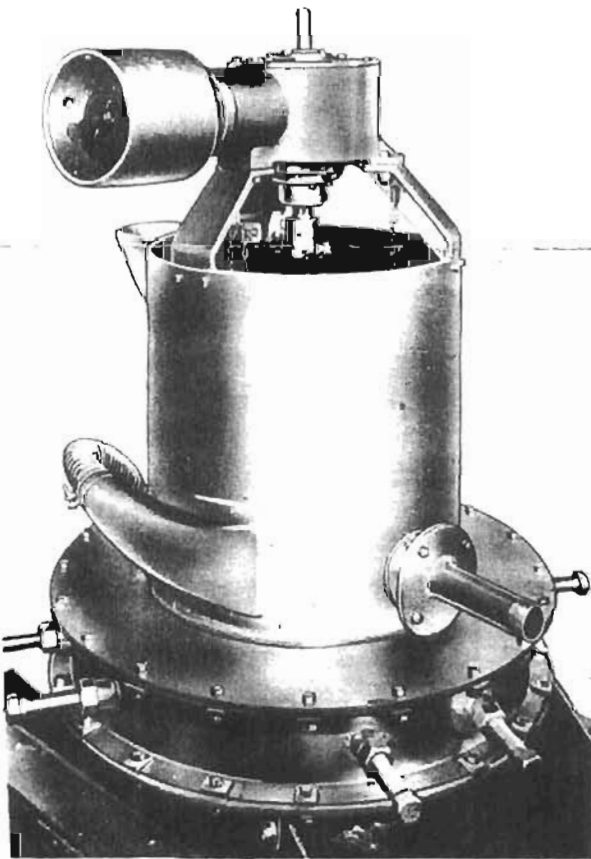
A Complete Grinding, Circulating and Classifying Unit combining these advantages:

- Light weight.
- Low first cost.
- Low power consumption.
- Heavy foundation not required.
- Classification without screens or separate classifiers.
- Low steel consumption.

This remarkable development finally solves the problem of developing and putting in paying production innumerable properties where the high costs and heavy weight of the conventional Mill has been the retarding factor.

A rugged, complete grinding, circulating and classifying unit now highly developed and offered in a 15-25 ton capacity machine. Smaller and larger machines are in process of production.

This comparatively high-speed, wet grinding unit, employing a pumping element for rapid circulation and quick elimination of fines, shows a phenomenal low ball and liner consumption. (Liners good for approximately 1200 to 1600 tons wear).



APPLICATION

- For Pilot Mills.
- For Milling Plants.
- For large Mills for use as regrinding units.
- For giving you additional capacity quickly, positively and economically.
- For isolated and inaccessible places and Dredge clean-ups.

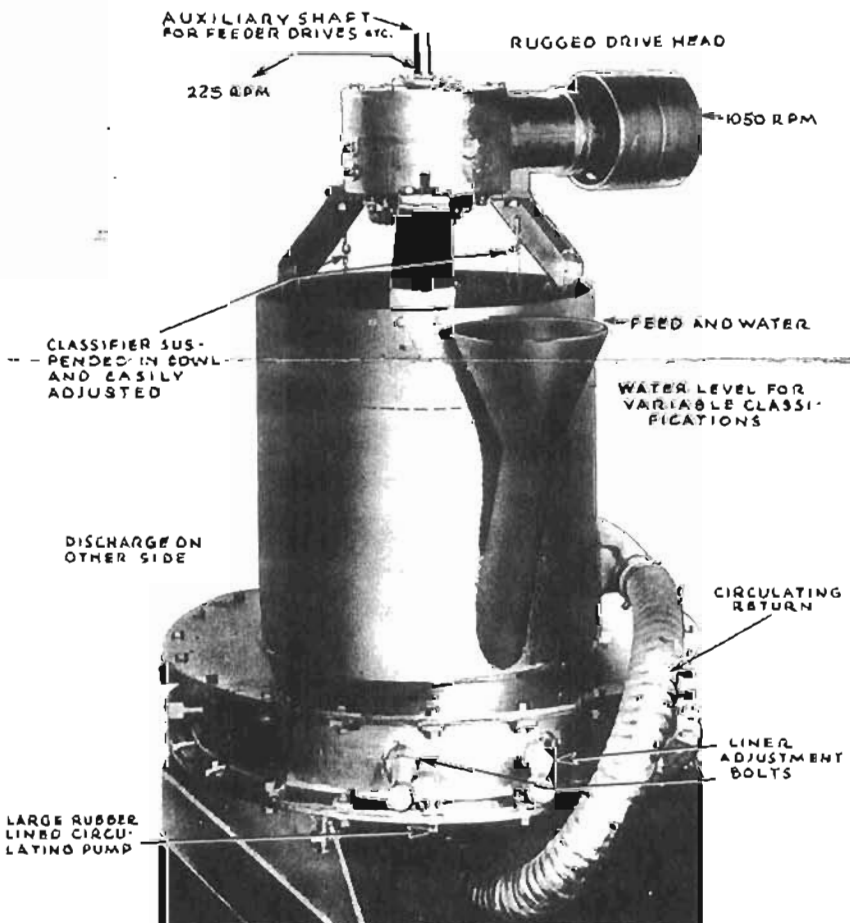
A sturdy rugged unit which can be broken down, allowing transportation by airplane or taken over the narrow trails with pack animals.

The self-contained classifier allows flexibility to grind extremely fine, average, and coarse. At bottom of unit, space is allowed for mercury to trap fine gold.

Tested and proven in the field.

See this revolutionary new Ball Mill Unit working on our floor where we have a complete Test Plane from Crusher to Concentrating Table.

Working in your ore samples and grinding problems.

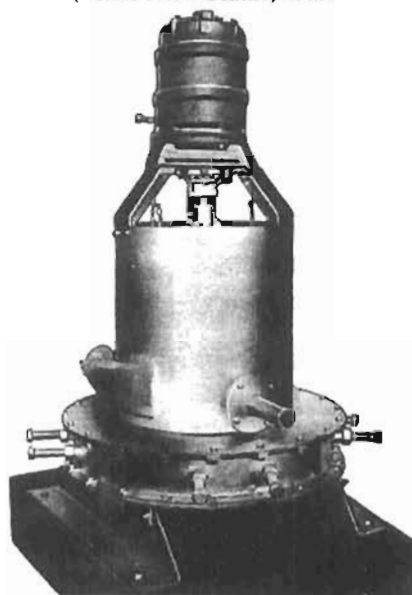


Specifications

Weight—2800 lbs.
Capacity—20 tons through 60 mesh
1/2" medium hard rock feed.
Weight of liners—460 lbs.
Weight of Ball Charge—360 lbs. (11 6" Balls).
Weight of heaviest piece—300 lbs.
Steel construction, chrome steel liners and forged steel balls.
Horsepower required—14.

PRICE

Belt Drive \$1480.00
Vertical Motor Drive \$1700.00
(Prices f.o.b. Seattle, Wash.)



Vertical Motor Drive

CHLORIDE QUEEN MINING & SMELTING CO., INC.

Nighthawk, Washington

May 13, 1937

Sundfelt Equipment Co.
Seattle, Wash.
Gentlemen:

In reply to your letter of May 11, we are pleased to report that the Spaulding Mill is still functioning most satisfactorily. At the present time we are feeding ore at the rate of 3100 pounds per hour. This is obviously nowhere approaching the maximum capacity, but until we can get more water we will not be able to increase. As you possibly know, we are using flotation cells and they require a definite percentage of ore and water.

Am mailing you a small sample of the mill discharge, as per your request.

Very truly yours,

(Signed) Austin L. Ward.

Note following comments and screen test of above samples:

CERTIFICATE

Laucks Laboratories, Inc.
314 Maritime Bldg.
Seattle

May 13, 1937.

(Report No. 39804—Chloride Queen Ore.
1/4" Feed, Medium Hard Silver Ore.)

Sundfelt Equipment Co.
3315 First Ave. South
Seattle, Washington.
Gentlemen:

We hereby certify that we have tested the sample of

PULP

submitted to us by you, and have to report as follows:

Screen Test—

On 20 Mesh	None
30 Mesh	None
40 Mesh	0.05%
60 Mesh	7.27%
80 Mesh	11.12%
100 Mesh	13.21%
200 Mesh	29.29%
Through 200 Mesh	39.06%

Respectfully submitted,

LAUCKS LABORATORIES, INC.

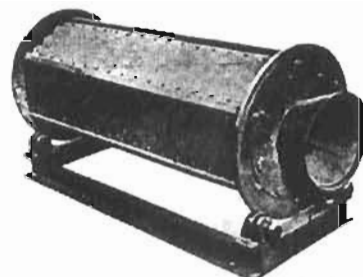
By (signed) L. L. Hefferline.



A number of new proven developments are incorporated in the Spaulding Ball Mill including improved pneumatic drive, large self-contained rubber lined pump, and easily adjusted liners.

The use of centrifugal force in grinding plus ideal hydraulic suspension of pulp and simple positive variable classification gives this unit tremendous merit.

NEW TITAN ROTARY AMALGAMATOR for DREDGES PLACER or QUARTZ



Test runs have proven this new Amalgamator's wonderful extraction ability. Results have shown recovery up to 92% of free gold content.

Operated by 1 1/2 HP Gas Engine or 1 HP Electric Motor, light weight and efficient. Write for complete information. Prices \$730.00 and \$850.00.

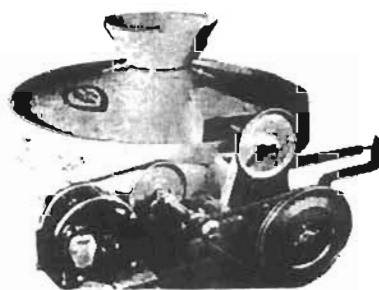
THE TITAN MERCURY FEEDER



Automatically feeds Mercury, any predetermined quantity, from pin point bead to two ounces every seven and one-half minutes.

Positive feed—no needle valves—tried and proven in the field. F.o.b. Seattle \$75.00. Weight 25 lbs.

THE ECLIPSE CONCENTRATOR



The ECLIPSE provides continuous concentration of all fines, saving the values, producing clean, high grade concentrates.

Not Necessary to Shut Down for Cleanup

The circular bowl is oscillated opposite to the rotation of the plows, which produces a relative stillness, allowing unhindered settling and producing rapid and positive concentration of values around the rim of the bowl.

Capacity of this new but proven in the field Concentrator far exceeds that of any recognized table.

3' Model—Concentrates approximately 3 tons per hour of fines 1/4" down.

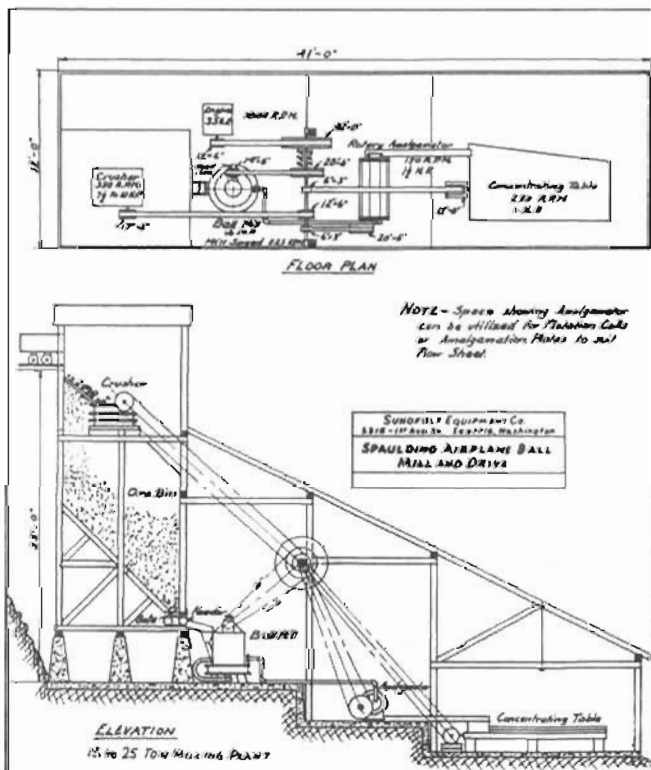
Weight 300 lbs. Price \$325.

7' Model—Concentrates 10 to 30 tons per hour of fines 1/4" down.

Weight 2400 lbs. Price \$750.

These Concentrators must be inspected to appreciate the remarkable efficiency, compactness and low HP requirements (1/2 HP to 2 HP)

SEND FOR PARTICULARS



Typical Installation of Spaulding Airplane Ball Mill and Drive

Let us quote you on Crushers, Feeders, Engines, Flotation Equipment, Amalgamators, Concentrating Equipment, Ore Cars, etc., etc.

WRITE · PHONE · WIRE

SUNDFELT EQUIPMENT COMPANY

3315 First Avenue South

Seattle, Washington