PE-120-06

PRELIMINARY REPORT OF GOLD STANDARD GROUP,
HELM BAY, CLEVELAND PENINSULA, ALASKA
June 24, 1938

Location and Accessibility:

The Gold Standard group of 15 claims is located along the west shore of Helm Bay 3½ miles from the entrance. The group is joined on the north by the Free Gold group. The glory hole workings are located within 600 feet of tidewater and the Gold Standard workings are 2,000 feet back, therefore, this property is very accessible to salt water transportation.

Owners:

This property is now owned by the following, all of Ketchikan: Dr. and Mrs. Diskinson, Miss Glenmore and R. Knuckolls.

History:

The original discovery on this group was made in 1897 and since that time until the present date the property has been intermittently worked. The original discovery was placer gold found along the beach at the mouth of the creeks shown on claim map. This discovery led to the lode discoveries of the glory hole and the Gold Standard vein. In the year 1898 a rich shoot was found and $20,000 in gold was recovered by means of an arrastre.* A 5-stamp mill operated by water power and a camp were built the following year one-half mile inland from tidewater at the old mill location shown on claim map. This was connected with tidewater by a tramway. The mill operated the next year and considerable development was accomplished and at the close of the year work was suspended. Small-scale operations were carried on until 1906 when active development began. During this same year a small shipment of high grade ore was made and a good production from the mill was reported. Several short tunnels and shafts were reported constituting the development work. From 1906 to 1913 the title of the property was in dispute and it remained idle. During the year 1913 a few ounces of gold was obtained by placer mining below the workings. During 1914 Engineer Platte drilled three diamond drill holes 200 feet in length on a 45° angle in the vicinity of the glory holes. Only the center hole contained ore values. Later the mill was moved to its present site at tidewater and considerable mining of an intermittent nature was done in the glory hole workings. James Freeburn drove a tunnel below the glory hole and operated the mill for a short period. Intermittent mining and milling by lessors followed.

*U. S. G. S. Bull. 347, "Ketchikan and Wrangell Mining Districts, Alaska" by F. E. and C. W. Wright, 1908, pp. 153-155.

Of the lessors, J. Sahonovick, A. Walson and C. Hellum operated the property from 1932 to 1936. $50,000 was reported recovered during these four years. The milled ore was reported averaging $3 per ton (old price). In 1936 Mr. Tillie of Spokane optioned the property and operated the mill a few months, opened the Gold Standard workings, and mined 87 tons of ore from the lower level. (Note production sheets). The Gold Helm Mining Company was formed, however, operations ceased December 4, 1936 and the option was dropped. In March, 1937 John Folwarzny and associates leased the property and began operations. For the balance of the year a total of $3,000 in gold was recovered. This year to date only $800 in bullion has been sold and a few tons of concentrates are to be shipped.

Geology and Showings:

The general geology of this claim group and the surrounding area is well described in Prof. Paper No. 1, "The Ketchikan Mining District, Alaska" by A. H. Brooks, 1902, pp. 59-60, and Bull. 347.*

The formation noted within the claim boundaries consists of greenstone schists which have been folded and exist as a continuous band between slates on the east and intrusive stock to the west.

The two glory holes located 600 feet from the beach on claim No. 1 (note claim sketch) represents an orebody consisting of numerous quartz stringers intercalated in the greenstone schists. These stringers strike and dip with the schistosity, N. 20-25° W., have various dips to the east, and the apparent structure represents a limb of a fold. They vary in width up to 2 feet, and have various lengths. At the north end of the west glory hole a fault striking N. 55° E. and dipping 65° S. cuts off this stringer lode and the northern extension has not been found. This lode appears to continue south and its length is not known due to heavy overburden. The recent mining has been done on a continuation of this zone south of the west glory hole in an open stope. The total drifts and crosscuts under these glory holes, and the drift to the portal aggregates approximately 1,000 feet of underground work.

The Gold Standard workings are located on claim No. 15, 1800 feet west of the mill. These workings, which consist of a 150-foot incline shaft with four underground levels totaling nearly 1,000 feet with considerable stoping (refer to office map of Gold Standard workings in file), were not accessible on date of visit due to water and caved main tunnel. Only the 50-foot tunnel driven on the fault under the upper faulted segment of the Gold Standard vein was entered. This tunnel exposes the fault and vein intersection. This vein segment is exposed for 100 feet on the surface above this tunnel. (Note surface sketch). The vein averages 18 inches in width and extends from the tunnel level to 40 feet above. Sample 439 was taken across 22 inches at point shown on sketch and returns were obtained of 0.89 oz. gold and 0.20 silver per ton.

*Op. cit., p. 1.

It has been the impression of past operators that this vein segment represented another parallel vein to the Gold Standard vein and there has been some underground work in an effort to find this vein below the tunnel mentioned above. Cross section A-A', as shown on sketch, shows the fault movement and the existence of this segment.

Mineralization:

The metallic minerals noted in the Gold Standard and glory hole workings consist of pyrite with an occasional crystal of chalcopyrite and free gold. The gold is contained in the sulphides, and the latter are disseminated both in the quartz and schist. The gangue minerals consist of milky white quartz, calcite, chlorite and altered greenstone schists. Movement within the schists has strained and broken the pyrite crystals in numerous localities and these areas contain the higher gold values.

Machinery:

The present mill power is furnished by water taken from the creek and lake. This is flumed via a wooden flume to a point 300 feet west of the mill, thence a wooden pipe line 14 to 12 inches in diameter leads the water to the mill, making a vertical fall of 36 feet. The ore is trammed from the glory hole on the aerial tram to the ore bin and fed through grizzly bars of 1½-inch mesh. Fines drop to ore bin and larger material is broken up by hand and fed to an 8x12" Riddon crusher. From the ore bin the ore is fed to five 1050-pound Riddon stamps. Thence the flow passes over two 4x5 foot plates and thence over a standard Wilfley table. A $100 concentrate is made from the table. A 6-foot Pelton wheel operates the stamps and a Chicago Pneumatic 10x12" single compressor. A 36-inch Pelton operates the Wilfley table.

Timber and Water Power:

A greater amount of water power could be developed using the lake shown on claim map as a storage basin, however, large water power is lacking in the area. Timber on this property is small, but there is timber in abundance in the area.

The following sheets give costs of mining, milling and production of the Helm Bay Mining Company during the year 1936, as compiled by J. A. Herdlick.

PRODUCTION SHEET NO. 1,
GOLD STANDARD MINE,
NOVEMBER-DECEMBER, 1936,
By
GOLD HELM MINING COMPANY

Total tons milled - 87.23

Plate recovery, oz. 5.36 Value, plate $187.80 - $35.00 oz.

Table recovery, oz. 20.43 Table concentrate 660.19 - 32.31 oz.

Tailing loss, oz. 5.92

		Value
Plate heads, average	0.363 oz.	$12.70
Table heads, "	0.303 oz.	10.60
Table tails "	0.0703 oz.	2.46

	Recovered values			Total		
	Ounces	Rate	Total	Ounces	Rate	Total
Plate	0.0615	$35.00	$2.15	5.3659	$35.00	$187.80
Table	0.2340	32.31	7.56	20.4226	32.31	660.19
Total	0.2955		9.71	25.7985		847.99

Per cent recovery

Plate - 16.9 Table - 64.4 Total - 81.3 Concentration ratio. -

29.7 to 1

PRODUCTION SHEET NO. 2,
GOLD STANDARD GLORY HOLE,
AUGUST, SEPTEMBER, OCTOBER, 1936
By
GOLD HELM MINING COMPANY

Total milling days - 33 Total ore milled - 426.228 tons

Recovery, plates - 13.1214 oz. Value, plates - $459.25

" table - 16.0826 " " table - 519.60

Assay values:

	Ounces	Value @ $35 oz.
Plate heads, average -	0.0988	$3.45
Table " " -	0.0680	2.38
" tails -	0.0303	1.06
Concentrate -	4.3012	151.64

Recovered values:

	Ounces	Rate	Value	Ounces	Rate	Value
Plate	0.0308	$35.00	$1.07	13.1214	$35.00	$459.25
Table	0.0377	32.31	1.22	16.0826	32.31	519.60
Total	0.0684		2.29	29.2040		978.85

Percentage recovery:

Plate - 31.15

Table - 38.18

Total - 69.33

Concentrate ratio - 107.3 to 1

Tons per day, 16 hours - 12.91

COST SHEETS 1 and 2.

Mining, per ton mined - $1.78

Milling " " milled 1.99

Freight, nconcentrates, Ketchikan to Tacoma - $4 per ton

Marketing cost per ton milled - $0.11

Total costs:

Mining	- $1.78	per	ton
Milling	- 1.99	"	"
Marketing	0.11	"	"
Total cost	$3.88	"	"
Recovered	2.29	"	"
Loss	$1.59	"	"