

PRELIMINARY REPORT OF EL PRIMERO MINING & MILLING COMPANY  
(Granite Mine)  
PORT WELLS, VALDEZ GLACIER MINING DISTRICT  
September 23, 1936.

Location:

The property of the El Primero Mining and Milling Company consists of a group of four claims located on the west side of Port Wells, directly opposite Esther Passage, between Hobo Bay and Harrison Lagoon.

Owners:

This is a privately owned Alaskan corporation mainly owned and operated by Mr. L. N. Carvey and associates.

History:

The original discovery, a vein 150' in length, was found on July 19, 1912 by M. L. Tatum and Jonathan Irving. A shaft was sunk on the vein at that time and some development work was done. It was known as the Tatum property. In 1913 the property was bonded to B. F. Millard and was incorporated as the Granite Gold Mining Company. A mill was erected in 1913 and 14 and considerable development was done. Details of discovery and development work is given in Bulls. 592 and 622, "Mineral Resources of Alaska" by A. H. Brooks, pp. 230 and 136-138, respectively.

In 1923 the present company was incorporated and has been actively engaged in mining and milling the last three seasons.

Development:

This mine operates during the season from the last of April to the middle of October. This year a force of 16 men were employed and development work with some stoping was carried on mainly in the 110 and 210 levels. This year on the 110' level, El. 505', above which has been mined and is not worked, 300' of drifting and 125' of crosscutting and some stoping was done. On the 210' level 30' of drifting and 50' of crosscut was done. The mill was run intermittently during the season and a total of 300 tons was milled.

### Machinery & Equipment:

A new Westinghouse equipped hydroelectric power plant that cost \$51,000 was installed three years ago, a mile north of the property. This includes 4250' of pipe line, 20" reduced to 17" with a 340' head and a 140 pound pressure, a 7' Pelton wheel for double capacity, a 150 KVA. generator and exciter complete with glass incased automatic and safety switches. This develops 22,000 volts stepped down to 110 over a 6,200' of 3-phase power line to mine. This is an all-year-round power as water was measured three years prior. A Laidlow-Dunn 18x12x12 double cylinder compressor run by a 100 H. P. Westinghouse motor, delivers 1,000 cu. feet per minute for the mine. The mill machinery consists of a Blake crusher 8"x10" jaws, run by a 25 H. P. motor, ten Joshua Hendy 1050 pound stamps run by a 35 H. P. motor, two Wilfley tables run by a 5 H. P. motor. The ore is crushed, fed to stamps with inside amalgamation, through 40 mesh screen over three lengths of plates and over Wilfley tables. The recovery from battery and tables was reported 80% average and concentrates ran 75 to \$100 a ton. These concentrates are shipped to smelter at a freight rate cost of \$6 to \$6.50 per ton in 100 ton lots. An Ingersoll Rand steel sharpener No. 50 is used with oil burner furnace. Ingersoll Rand leynars No. 75 are used in the mine. Auxiliary power complete for both mill and mine is installed consisting of the original power for operation before hydroelectric power. This consists of Chicago Pneumatic single, No. N-502 semi-diesel compressor, that delivers 450 cu. feet per minute. 30 H. P. Fairbanks Morse horizontal diesel for operating mill. 8 H. P. V-type gas engine for crusher and a 3 H. P. V-type gas engine for lights.

Several buildings make up the camp over 100' above the mill. There are also houses and storage buildings on the beach. A good road is built to the mill over which a Ford truck is operated, and a wagon road a few hundred feet extends from the mill up to camp. The mill is less than a quarter mile back from the beach at an elevation of 320'. These buildings are old, built at the time the mine was operated under the Granite Gold Mining Company. They have been kept in fair repair. The company owns and operates a large gasoline driven cannary tender boat for service between the mine and Valdez.

### Geology & Veins:

A good description of the geology in the vicinity of the mine and further a description of the main fissure vein is given in Bull 622, "Mineral Resources of Alaska, 1914" by A. H. Brooks, pp. 136-138. This gives the condition as a contact between a light gray to greenish gray granite and interbedded graywacke, blue-black slates and argillites. The fissures vary in strike N. 50° W. to N. 70° W.,

variation due to faulting and dip  $45^{\circ}$  to  $60^{\circ}$  N. The main fissure is given as having an average width of 3 to  $3\frac{1}{2}$  feet.

A parallel vein to the main fissure and a few feet away has an average width of 12 to 14" and is somewhat larger and stronger in the granite. Both veins cross the contact at a slight angle following the contact for several feet. The notable feature is the difference in character of the vein. When they enter the slates, both become narrower and banded, and they have been found to carry better values in the slates. The veins were not mined in the granite as it was reported they contained low and spotty values and could only be mined and milled at a profit with a larger mill capacity.

The new vein found this year is a small vein, 4 to 12" in width, averages about 7", has a developed length of 150'. It lies wholly within the slates between a hundred and a hundred fifty feet from contact. It has a strike N.  $49^{\circ}$  W. and dips  $65^{\circ}$  N. This vein is highly banded with free walls showing a milky white quartz with numerous graphitic bands. Considerable free gold is showing. This vein was being mined at the time of visit. The ore was sacked and trammed to mill.

Some small veins strike toward the contact but are narrow and not of great length. Since these veins and the old workings are well described in above report, they are not described here. The new workings have been wholly within the slates on the continuation of the fissures and crosscutting into the slates away from the contact. Thus this new vein was discovered.

#### Mineralization:

The mineralization consists of pyrite, galena, sphalerite, arsenopyrite, stibnite, chalcopyrite and free gold. The gold appears to be associated with galena and sphalerite mainly, with smaller amounts of pyrite, arsenopyrite and stibnite.

The gangue minerals are quartz, calcite, graphite, chlorite, pieces of slate in the slate and pieces of granite within the granite. The veins in the granite show refilling with large angular pieces of wall rock. The movement shows a nearly vertical upthrust with a str action that appears to be later than the granite.

No samples were taken in the mine. Gold was seen in several places in the veins in the slate. One small block of ore was mined last year that occurred as a separate block about 15' long, 12' and 18" to 2' in width from which several thousand dollars were made. One piece of the new vein was brought back for collection in ore.

## Additional references to

Granite Mine. - (Port Wells)

U.S.G.S.

Bulletin No. year

pp.

Remarks

662 - 1916 187-188 -

Operations described -  
New intersecting vein  
discovered etc.

642 - 1915 141-142

New 800 ft x cut tunnel  
& other dev. work done.

692 - 1917 149 -

Property worked until 6/30  
& then closed - until  
waterpower plant installed.

813 - 1928 18 -

Property acquired by  
new Co. - & plans  
to reopen.

824 - 1929 22 -

Crew of 20 men put on  
by "Port Wells Granite  
Mines" & hydro plant  
installed.

868-a - 1934 22 -

Oper. by El Primero Co.

880-a 1935 - 25 -

Moffitts resume'