PE 86-11

PE-086-11

(6-10-4)

TO: Phil R. Holdsworth, Commissioner
Territorial Department of Mines

FROM: M. W. Jasper, Associate Mining Engineer

146°17'W
61°02'N

SUBJECT: Midas Copper Mine, Valdez District ✓+8648
Preliminary Report

Left Anchorage by car morning of August 13th, arriving that evening at Valdez. Mr. Max Wells of Valdez was not available for the trip and arrangements were made with Mr. David Vietti, associate of Mr. Wells, leaving at noon August 15th, 1953.

Stayed that night at the old hydro-electric plant formerly supplying the town of Valdez, which has been abandoned and is now in very poor state of repair. The plant and equipment was sold to a Mr. Sontag, and salvage of usuable equipment will be made.

Left the beach at 5:30 A. M. and returned at 8:30 P. M. on August 16th. Trip up to the Midas Mine workings near upper end of the Solomon Creek valley, an airline distance estimated at 4½ to 5 miles required 5½ hours and the return trip 4 hours. Old trail and "tote" road were grown over and the valley as a whole was covered with dense willow and alder growth. Solomon Creek - actually a small river - largely glacier fedd- is split up in numerous channels across the ¼ to ½ mile wide valley floor.

The dam built at head of steep narrow canyon an estimated 1 mile from the beach by the Granby Consolidated Mining, Smelting and Power Company just prior to World War 1, is at 630 foot elevation. The dam forms a lake an estimated 3/4 mile in length and a 1000 to 2200 in width. From upper end of lake to valley floor below the lower adit level has a relatively uniform gradient, and a difference of elevation 120 in the 2½ to 3 miles. (Elevations by Paulin altimeter).

A stream gauging station has been established at mouth of Solomon Creek and readings are being taken at regular intervals by the Government Hydrographic section.

Midas Mine Workings

Underground development and exploitation has been limited to west side of the valley so far as could be determined. The workings (as shown in pictures to be attached when returned from developers) are as follows:-

1. No. 1 Adit (Elev. 590 ft). This was (planned) main working level; the heavy electric power wire along north side and brackets attached to the timbered section suggested that trolley locomotives were planned or used during latter period of operation. This level is open for about 75 to 100 feet; however, debris at portal holds water to depth of 12 to 15 inches and this level was not examined. Flashlight shows some broken timbers (drift caps and lagging) at 60 to 75 feet from port and also indicated either a sharp turn to right or left or a "caved" section at about 100 feet from portal.

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The dump for this level is 130 feet in length, running more or less at right angles to slope of the mountain, and contains an estimated 750 to 1000 tons; it is 75 to 100 feet south of the aerial tramway bunker.

Examination of numerous pieces of dump material shows good chalcopyrite mineralization having an estimated 2 to 5% copper content. Associated minerals are pyrrhotite, some pyrite, and occassional arsenopyrite. Pyrrhotite is the predominate sulfide; limonite which is prominent on and in the dump (in places cementing the finer pieces of the mined material) is of recent development and doubtless was largely derived from the pyrrhotite rather than the pyrite. A "green" stain at several points on the dumps has more the appearance of garnierite than malachite; this with the predominate pyrrhotite suggests that the samples taken should also be checked for nickel.

A grab sample (No. 2 MI) of this dump was taken from numerous surface points.

This adit level is about 90 feet above the valley floor.

2. No. 2 Adit (Elev. 955 ft). Although No. 1 Adit (8 ft wide and 7 ft high clear of timbers) appears to have been planned as the main working level, the No. 2 adit dumps suggest that shipments of sorted ore carried to beach for distance of 4½ to 5 miles over the old tramline originated from and above this level in last stage of operations.

The waste or ore of too low grade to sort and ship appears to have been placed on dump along mountain slope to south of portal, while best grade of ore was confined to a dump leading straight out from the portal. In the former dump there is an estimated 300 to 500 tons and in the latter an estimated 500 to 700 tons.

The "ore" dump was apparently hand-sorted at its base, where a 10 to 15 foot face with hand shoveling plank platform was used to hand sort and load the best ore into wheel barrows, which were wheeled about 60 to 75 feet, thence dumped into a slide (or chute)and from there hand trammed to tramway bunker.

Examination of the material in this "ore dump" shows an estimated average value of 3 to 5% copper on the surface, while digging into the dump to depths of 6 to 12 inches shows higher grade material, suggesting that the average grade of the dump may be even higher.

Grab sample No. 3 Mi was taken from numerous pointsaround this dump from surface and to depths of 6 to 8 inches.

The No. 2 Adit portal was caved, but it is possible that clearing out for examination could be done within a few days.

3. No. 3 Adit (Elev. 1035 ft). Material on this dump suggests its length to be 150 to 200 feet. It portal is caved and overgrown with willow and alder brush.

Grab sample No. 4 Mi was taken from numerous points around the dump from surface and to depths of 6 inches. Examination of material in the dump shows an estimated 2 to 4 % copper. Mineralization and oxidation characteristics appear to be the same.

4. No. 4 Adit (Elev. 1175 ft). The portal here is also caved and overgrown with brush. This level is probably the original working and is approximately 100 feet below the only outcrop noted.

Material on dump and that which has has been carried down the steep slope suggests the length of this working was within limits of 100 to 150 feet.

Grab sample No. 5 Mi was taken from the dump. Chalcopyrite mineralization is not as strong nor is the pyrrhotite as abundant as found at the lower levels.

The copper content as noted in numerous pieces examined on the dump is lower grade - it is estimated at less than 2%.

5. Outcrop. The only outcrop seen is located at approximately 1250 foot elevation; time did not permit searching for others reported at around the 1500 foot elevation.

This outcrop is in a 15 to 20 foot bluff. The shear zone is 8 to 10 feet in width, with mineralization largely limited to a 28 inch section on hanging-wall side. Across this width the sulfides occur as irregular small lenses, as replacement of the warped and banded sediments. The amount of quartz present is negligible, and occurs here and there as short narrow veinlets and irregular very small lenses.

The copper content across the 28 inches sampled is estimated at 3 to 4%.

6. East Side of Valley. The ore occurrence in a second reported shear zone on east side of valley was not examined. A trench on a low slope, an estimated 1000 to 1200 S40E, and about 500 feet east of Solomon Creek and about 50 feet higher is visible from dump of No. 1 Adit; its elevation is also about 890 feet.

This trench (trending north-south) cross-cuts the reported strike of the shear zone, and is an estimated 50 to 75 feet in length. No other evidence of stripping, trenching, or underground development was noted in that relatively "open" area. This mineralized zone is reported in U. S. G. S. Bulletin 622 to be much wider but of lower grade than the shear zone developed on west side of Solomon Creek. This may be a faulted continuation of west side shear zone.

The west and east side shear zones occur in closely folded and faulted sediments, composed largely (in vicinity of the zones) of argillites, graywackes, cherts, light gray and greenish schists.

Although close folding and faulting is noted in the sediments and in the reported intrusive (nearby) greenstones and light colored "aphanitic" silicic dikes, the ~~the~~ strength of the shear zones, the great thickness of the sediments and their "competence" so far as the visible extent of the shear zone is concerned, suggest that there is reasonable expectation of the mineralization persisting greater distances both laterally and vertically than have been determined to date.

With the several dumps at the various Adit Levels showing copper values which are estimated to be of good milling grade, and the fact that values were considered (found to be) sufficient to hand sort and ship for a short period prior to (and during ?) World War I, it certainly appears that consideration should be given to cleaning out the levels (especially adits No. 1 and No. 2) sufficiently to permit a thorough examination and sampling of the old workings.

The records were examined inoffice of the U. S. Comissioner in Valdez; this search, however, did not reveal whether or not the claims of the Midas group had ever been patented or not. Further search in Anchorage government offices will be made.

Old records of the mining operations of Granby Consolidated Mining, Smelting & Power Company would be desirable to study, and would show whether or not development and exploitation under current copper prices were justified.

Inquiry of older residents in Valdez suggest that the Midas Group was probably patented, although they did not recall ever having heard of of it being done. If it is assumed (or known) that the Granby company bought the property from the owners, it is logical to assume that patent to the ground was obtained; however, search of the Valdez Commissioners records did not show transfer of title title to them, but does show the recording of annual assessment work up to about 1920. Determination of present status of the property is desirable, as two men indicated their desire to relocate the ground if it is now open.

While the property is close (4½ to 5 miles airline) to the beach, rehabilitation of the old road and/or tram line will prove costly.

Results of dump sampling, sketch map of old working locations, and pictures taken on the trip will be forwarded when received and when map can be completed.

Reference is made to U. S. G. S. Bulletin 693, pages 187-188.

Respectfully submitted,

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Associate Mining Engineer
Territorial Department of Mines

August 20, 1953
Anchorage, Alaska