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VANMETALS EXPLORATION LIMITED

FINAL REPORT ON THE WIT AND WAG CLAIMS

Chuchi Lake Area, Omineca Mining Division, B.C.

SUMMARY

In the following report the work already done is described and discussed, with a description of the known geology and of the showings. The latter consist of two zones mineralized with sphalerite and galena, and sulphide mineralization is also shown to be important in the adjacent volcanic rocks. Further work is recommended.

Introduction

The eight WIT claims were taken over under a 30 day working option from Mr. Ted H. Taylor, prospector, of R.R. #1, Winfield, B.C., at the beginning of October, 1964, after a visit to the property by R.B. Stokes, P. Eng.

A party including three prospectors and one geologist arrived on the property on October 11 and began a work program which was to include:

(a) Further trenching to augment that done earlier by Mr. Taylor, to facilitate proper examination of the showings.

(b) Drilling and blasting, preparatory to detailed sampling.

(c) Cutting of a baseline and a grid of cross-lines to act as control for geophysical and survey work.

(d) Geological mapping.

(e) An electromagnetic survey to be carried out by an independent contractor.

(f) Further staking.

(g) Laying out of a road route to the property.

Mr. A.F. Reeve, P. Eng., of Granger, Reeve and Company, arrived on October 24 to carry out the E.M. survey.

.../2

This work was of the nature of a crash program, since it was visualized that bad weather would force the party out of the field within two to three weeks. The full program had not in fact been completed when the party had to leave the Chuchi Lake camp on October 29.

The details of location, access and local conditions have been well covered in the report by R.B. Stokes, and are therefore not discussed again here.

References

R.B. Stokes, P. Eng. "Report on the Wit Claims, Chuchi Lake, Omineca Mining Division, B.C." October 14, 1964.

J.E. Armstrong. "Fort St. James Map Area, Cassier and Coast Districts, B.C." G.S.C. Memoir 252 Includes Map 907 A, (Scale: 1" = 6 miles) 1949.

G.S.C. Map 876 A. Manson Creek sheet (with descriptive notes) (Scale: 1" = 4 miles), 1946.

G.S.C. Map 971 A. Smithers - Fort St. James sheet (Scale: 1" = 8 miles), 1949. Has full "Index to Mining Properties".

Department of Lands and Forests Map No. 3 C, Stuart Lake sheet (Scale: 1" = 3 miles), 1957. Shows surveys.

Department of Mines and Technical Surveys Map 93 N. (Scale: 1:25000 or approx. 1" = 4 miles) 1957.

Geology of the Claims Area

Volcanics of the Takla Group, with some interbedded sediments, are shown on the Manson Creek sheet to underlie the area around the eastern end of Chuchi Lake, where the WIT and WAG claims are located. This section is mainly underlain by swampy ground and drift, but in the centre of the Wit claims a ridge exposes some outcrop. It is on this ridge that the showings are situated.

Without considerable stripping the structure of these volcanics will not be clear, since exposures are in general very poor. The pressure of other work during the short time available to the party before freeze-up precluded a full program of geological mapping, but some traverses were carried out North of the showings.

.../3

A wide diorite instrusive forms the northern margin of the central ridge. It is a compact medium-grained grey rock in which numerous small euhedral to subhedral felspar crystals lie close together in a finer-grained matrix. Some dark ferro-magnesian mineral is present. There is no sign of any metallic mineralization except tiny grains of magnetite. The rock is fairly homogeneous throughout a length of about 1200 feet. which was traversed. No direct association of this intrusive with the mineralization in the showings is known.

The volcanics seen in the ridge lie south of the diorite intrusive and form a series of purple, brown and green rocks. They are very variable, from fine grained to quite coarse, some homogeneous, some apparently porphyritic. Their true strike is not known. The Manson Creek map sheet shows nearby strikes to be E - W to slightly N. of E, with dips of 40° - 50° to the south. A lineation of about N45 E near the showings, where bands of agglomerate and tuff etc. alternate, may be due to an initial dip imparted during deposition. They seem to be overlapped here by other volcanics, perhaps by flows.

Some outcrop was noticed in the N.W. section of the Wag claims at the time they were being staked. This was not examined in any detail, but was seen to be of a volcanic nature. Diorite-type rocks, also, were reported from places both E and W along the base-line.

Showings

The showings consist of two zones. That in the West has a length of about 360 ft. with a strike of approximately E - W and a near vertical dip. The main feature is a band of quartz which appears to have been variously replaced by carbonate. Sphalerite and galena are associated with this replacement, and barite veins are also present and may even be closely linked with these sulphides.

In the upper trench at Station 7, the quartz/carbonate material averaged 2.06% Zinc and 0.40% Lead over 11 feet, while in the lower trench one assay covering 7 feet gave values of 2.32% Zinc and 1.07% Lead. Both the quartz and the quartz/carbonate material show some banding which is sometimes but not always concordant with the strike.

From the section of the quartz material which was visibly poor in sulphides values of 0.58% Zinc and Trace Lead over 4.5 feet were obtained. This was to the South of the quartz/carbonate,

.../4

while to the North there was 3 feet of volcanic material which ran 0.61% Zinc and 0.10% Lead. The sulphides in the quartz appear to be along fractures, while those in the volcanics are disseminated and may be products of replacement of original pyrite.

Silver assays from the main quartz/carbonate zone in this trench at Station 7 averaged 0.49 oz. Ag. over 11 feet.

To the West, a sample over 7.5 feet of this quartz band gave assays of 1.19% Zinc and 0.36% Lead. Most of this material appeared to be barren but near to its northern boundary some sphalerite and galena were present. This edge of the quartz zone is a vertical wall and a trench in the overburden alongside it did not reach bedrock.

At the East end of this western zone a trench was excavated which exposed a quartz band, (believed to be the same one), and its contact to the South with green volcanics. In this trench some apparently rich material, presumably from a pocket, was blasted out, and the sample across 10 feet was taken in what seemed to be poorly mineralized material, and gave assays of 1.26% Zinc and 0.10% Lead.

A dark-green basic intrusive is shown to lie almost parallel to and to the North of the quartz/carbonate zone and probably follows the same plane of weakness. It may cut through the quartz/carbonate zone in the area of Station 10, but the true relationship there is obscured by overburden. It apparently cuts off part of the zone in the lower trench at Station 7, but is separated from the zone in the upper trench by 3 feet of volcanics. At Station 6 it is again in contact with the quartz zone. Its relationship to the mineralization is not known. The basic intrusive itself is not visibly mineralized, but earlier sampling of a 1 foot width of quartz/carbonate in contact with it at Station 10 gave values of 9.16% Zinc and 1.17% Lead, with 0.03 oz. Gold and 0.3 oz. Silver.

The country rocks both North and South of the quartz and quartz/carbonate band are variously mineralized. To the South, the rocks are generally of fine-grained bluish, greenish or greyish material which may not be of volcanic but of sedimentary origin. The bluish phases regularly contain disseminated pyrite and occasionally a little galena and/or sphalerite. Both gold and silver values were minor in this material.

North of the West end of this band, at Station 11, a pit excavated into rather rusted fine-grained green volcanics showed mineralization of pyrite, sphalerite and galena, with a very little chalcopyrite.

.../5

The rock type is similar to that in the 3 feet of volcanics in the upper trench at Station 7, which is mineralized with sphalerite and assayed 0.61% Zinc and 0.10% Lead. The material from the pit was not assayed, but the material was locally heavily pyritized and the rock with sphalerite was, if anything, richer in zinc than the above sample.

The quartz/carbonate zone in the East is exposed in outcrop and trenches over a length of 160 feet. Its strike seems to be about N 60 W, with a vertical dip, but it is apparently cut off at the West end, though no evidence of faulting has been detected. Instead, as will be seen later, zone material seems to have diffused through the adjacent volcanics. The structure apparently continues under the overburden to the East.

The zone has gradational contacts, and the quartz/carbonate is banded in several places, with the bands highly contorted. Sphalerite and galena are present in parallel bands, as well as in pockets and as disseminated material. The initial sampling here gave assays averaging 3.77% Zinc and 1.63% Lead over a true width of 26 feet. Gold values were 0.01 oz/ton and silver values averaged 0.65 oz/ton over this 26 foot width.

Considerable stripping was done in this sector during the short work program at the end of October, but no time was available for drilling, blasting, and channel sampling of the new trench crossing the zone. However, rock trenching and sampling in the adjacent volcanics were carried out, since some sulphides had been noticed in this material, and values of 2.96% Zinc and 1.12% Lead over 12 feet were obtained. A grab sample taken at random from blasted material from this trench and assayed as a further check, assayed 4.60% Zinc and 1.22% Lead. Silver values averaged 0.39 oz/ton over 12 feet.

The onset of bad weather cut short the trenching program and further sampling of the two easternmost trenches of this East zone could not be carried out. Visually, however, the quartz/carbonate material from the trenches seemed to be as well mineralized as that to the West, sphalerite again being predominant.

In this East zone as well as in the West zone some barite is present in thin veins and pockets. Three of the earlier samples were grouped as a composite sample and given a spectrographic analysis. A value of 5% was obtained for barium.

This spectrographic analysis also gave values of 0.01% cadmium and 4.0% manganese. The quartz/carbonate material in both zones does in fact break down to a soft brownish-black mud,

.../6

but it is not known whether this is composed of manganese oxides or not.

Chemical assays were done for barium and cadmium. The initial sample across 26 feet true width of the East zone assayed 4.04% Ba SO_4 and 0.02% Cd.

Mineralization in Adjoining Areas.

The Chuchi Lake property lies between two major fault zones and is roughly 20 miles from each.

The Pinchi Fault Zone to the West is the site of numerous occurences of mercury mineralization. There is one gold-silver deposit cited.

The Manson Fault Zone in the East is characterised by carbonatization of the original Cache Creek sediments along it, and to a lesser extent along shear zones and subsidiary faults. A number of properties are situated in this area. Three types of mineral deposits have been noted. These are:

(a) deposits containing tetrahedrite,

(b) those with galena and sphalerite,

(c) those containing pyrite and galena.

The sphalerite-galena deposits are characterised by quartz veins and quartz-rich zones and have been presumed to originate from solutions related to the Omineca intrusives. The sphalerite-galena showings on the Chuchi Lake property show some similarities to those in the Manson Fault Zone, and may be in some way related to them.

According to the Manson Creek map sheet, a tongue of an Omineca intrusive body reaches to a point a little over a mile north of the property, while the greater mass of the intrusive lies a few miles west.

A little sporadic staking has been done in the Chuchi Lake area but apart from a copper showing (Klawli Copper) about 13 miles to the Northwest of the property, and an iron showing near the Southwest of Chuchi Lake, little information is available regarding mineralization in this belt of volcanic rocks.

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Geophysical Survey

As shown by the report from Granger, Reeve & Company, no strong anomalies were detected over the area covered by their E.M. survey, and only minor variations were picked up over the exposed mineralization. Granger, Reeve & Company found the survey inconclusive.

The sulphides in the rocks have so far been found in veins and pockets and as disseminated material, rather than as massive bodies, and this may have some bearing on the results of the survey, which was directed specifically at massive conductors. In addition, sphalerite, which forms the larger part of the sulphide present, is not a good conductor.

Road Location

No work was done on locating the proposed road but while staking was being done over the area some bad swamps were encountered. The initial routing might better be done using air photographs, so that the road can be laid out more effectively in the field. The major stream in the area is reputed to pass through a deep canyon in one section but could probably be forded at several places higher up.

Staking

To protect the eight WIT claims on which the showings are located, 28 new claims, called WAG 1 - 28, were staked right round the original group.

Discussion

It was unfortunate that weather conditions did not allow completion of the sampling job and that further trenching could not be carried out. Although trenching is a slow method, it has considerable value during the early stages of exploration before more costly phases of development are entered. Extension of the last trench in the east across both contacts would, for instance, have given information valuable at this early stage.

The values of zinc and lead in the quartz/carbonate zones are somewhat low. The Western zone, which has been examined more thoroughly, appears to be rather narrow, although this was not conclusively demonstrated. The Eastern zone appears to be considerably wider and, judging by the assays available, is richer in both zinc and lead.

.../8

Of possibly much greater importance is the fact that considerable sulphide mineralization is encountered in the adjacent volcanics, indicating that certain members of the volcanic series have been amenable to mineralization and that the quartz/carbonate structures have acted as "feeders" of sulphides into these rocks. The volcanic agglomerate in particular contains significant amounts of sulphides. Outcrops being few, relatively little is known about these volcanics, and it certainly seems possible that along the quartz/carbonate zones the country rocks could contain enough sulphides to constitute one or more orebodies. Further work in this area seems well justified.

Future Work

While the winter climate of the Chuchi Lake region is considered poor, since temperatures fall to around -40°F, and some difficulties would arise in the setting up of a camp, certain work could be done on the property during the winter months. Such work could include additional line-cutting, further geophysical surveys and trenching or sampling; also possibly the laying out of the proposed road. Diamond drilling would be possible during the Spring.

In order to acquire some idea of the character and "grain" of the rocks underlying the overburden and swamp areas, it is recommended that at an early stage a magnetometer survey should be carried out. The volcanic rocks carry a certain amount of magnetite and the different bands of volcanics should be shown up by this method. On the other hand the quartz/carbonate zones seem to be quite free of magnetic minerals and it should be possible to follow them under the overburden using their low magnetic values and to gain some idea of their dimensions.

It is hoped that some useful information can be obtained from aeromagnetic maps which include this area and which were recently compiled by Julian Mining Co.

An induced polarization survey is another possible method and, where the sulphides are not in the massive form, has a better chance of showing up anomalies than the E.M. method. However, the expected high cost of running an I.P. survey in the Chuchi Lake area militates against its use at this stage. Also, the country rocks contain locally high concentrations of disseminated pyrite which would undoubtedly be picked up and might be expected to render the results inconclusive again.

Geological mapping can be expected to give limited information, since so much of the area is underlain by drift and swamp. Mapping could not in any case be carried out until the snow has gone, in the Spring of 1965.

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It is not known how deep the overburden is away from the central ridge, but since zinc is highly mobile, geochemical surveys might be fairly successful in outlining zinc anomalies. However, geochemical methods would again have to wait until the snow has cleared in 1965. The paucity in number of streams and the prevalence of swamps will also hinder geochemical work on drainage channels, and may limit it to soil sampling over a grid.

Respectfully submitted,

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Geologist.

November 12, 1964.