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REPORT ON THE VANGORDA CREEK PROPERTY, YUKON TERRITORY,

FOR THE PERIOD NOVEMBER 1 TO DECEMBER 15, 1954

INTRODUCTION

From November 1 to December 15, 1954, 2849 feet of diamond drilling was done on the Vangorda Creek property. Of the total, 1360 feet was drilled in the southeast, or "bulldozer" zone in claim Wynne No.3; 1489 feet was drilled in the main zone on Vangorda Creek, on claims Ellemay No.'s 1 and 2, Wynne No.'s 1 and 2, and the Fin fraction.

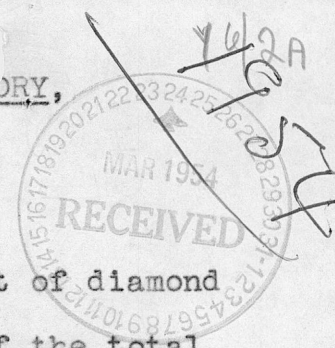
A transit survey of some of the outlying claims on the group was done by N.Firth; plans and records of this work have been submitted by him. The surveying was performed under difficult conditions due to the short period of daily light during November and December, the termination of employment of a helper and a disability incurred in the field by the replacement.

SUMMARY

The drilling has cut finely-associated pyrite, galena, sphalerite, chalcopryrite and silica which occur as a replacement in greyish-white sericite schist. White quartz and pyrrhotite also occur at the edges of the mineralization in some cases; pyrrhotite is also present in sections of the graphitic schist in the southeast zone.

Mineralized float in claim Wynne No.2, 750 feet W-SW of the campsite, extends downhill in a westerly direction for a distance of about 900 feet. The bedrock source of the float may be close to surface at the brow of the hill where it dips steeply, at about 29,300 N and 29,300 E.

The rust in the branch of Vangorda Creek, passing through claims Wynne No.'s 3 and 4 may have been carried as colloidal



iron hydroxide and precipitated as hydrated iron oxide along the edges of the creek. The south-east zone on which Holes 5, 8, 9, 11, 12 and 14 have been drilled is the probable source of the iron precipitate.

At the discovery zone on Vangorda Creek, planes formed by the basal points of the mineralization in Holes 1, 4, 6 and 7 have an average strike and dip of N29°E and 52°E. Subsequent holes, 10, 13 and 15, indicate that the dip flattens, eastward from the initial drilling. A syncline, plunging to the southeast, can be placed within the pattern of the mineralization cut to date on the main zone.

#### CONCLUSIONS

Insufficient drilling has been done to give foundation to any theories on the attitude of the mineralization. It is possible that the sulphides occur in tabular, flat-lying masses which have <sup>been</sup> guided to some extent by local contortions in the sericite schist; sharp changes in the strike and dip of the mineralization are indicated from the drilling in the southeast zone, and can be expected elsewhere.

#### RECOMMENDATIONS

1. Expand the area of mineralization cut by Holes 10 and 15, to the north and east of these holes. A regular grid pattern of vertical holes, with collar positions not closer than 200 feet, is recommended. This work can be done with the BBS-1 machines presently at the property, but heavier machines will be required on the overburden ridge to the south.

2. Continue the testing of the bulldozer zone, closing the gap between it and the main zone. A heavier drill is recommended for this work, as, following the next hole on which a set-up has been initiated, overburden will become deeper. Three vertical

holes, with collars not closer than 200 feet to each other and in an equilateral triangle pattern, are recommended on the southeast extension past Hole 9, for purposes of strike and dip determination. A light machine, similar to the ones now on hand, could do this work, as the overburden is not likely to be heavy.

3. A bulldozer trench at approximately 29,250 N, and 29,250 E, to check on the possibility that the mineralized float in this section has emanated from a source lightly covered by overburden. ~~at this point.~~ If bedrock were obtained, the depth estimate of the overburden on the ridge would be reduced considerably, eastward from here. The trenching could not be done until after winter frost has come out of the ground; if permafrost is present, the slow process of natural thawing, and blading about once a week, would not be as effective as drilling.

4. Perform the assessment on some of the outlying claims by trenching with bulldozer. As four drills operating on the property will require almost continuous servicing tasks by the cat, the trenching would have to be done by either another machine, or fitted in to short intervals between drill servicing. As the drilling will be on contract, "waiting-time" charges will have to be avoided by having a cat readily available to look after drilling requirements.

5. An askania magnetometer survey, in detail, of the ground on which the mineralized float lies, and on which the self-potential work has been done, should outline zones of pyrrhotite found in the drilling and in trenching on the bulldozer zone. This work can be done on snowshoes, on resumption of operations in 1954, with a view to possible guidance in drill-hole spotting.

## TOPOGRAPHY

The property is in an upland area between the Pelly River and Mye Mt. The topography is hilly and consists of glacial moraine, in which there are numerous small, swampy catch-basins from which rivulets feed Vangorda and Blind Creeks.

## DESCRIPTION OF FORMATIONS (In Drill Holes only)

The host rock of the sulphide mineralization, in the sections which contain consistent galena and sphalerite, is greyish-white, silicified sericite schist. In <sup>Some</sup> sections there is a higher development of sericite, usually in close proximity to the sulphide, and the greasy feel is suggestive of talc. The degree of alteration in the greyish-white sericite schist appears to be directly proportional to the intensity of the sulphide mineralization.

Below the greyish-white sericite schist, containing mineralization in Holes 10, 13 and 15 in the main zone, medium grey to greenish-grey sericite schist was drilled. This rock is quite fissile and the core can be easily broken in to buttons, with the fingers. This rock is free of sulphide mineralization.

Graphitic schist is present both in the main zone and in the bulldozer zone. There are sections containing silica banding which appear to be points of gradation from the graphitic schist to the sericite schist.

## MINERALIZATION

The contact zone between the graphitic schist and the sericite schist is not clearly defined but is possibly the favourable horizon for the sulphide mineralization. The graphitic schist is brittle relative to the sericite schist, and would serve as <sup>a</sup> suitable means of entry, for the sulphide mineralizing agencies. As the

carbonaceous, brittle and inert graphitic schist is not the type of rock amenable to replacement, the mineralizers migrated in to the adjoining medium-grey, argillaceous schist. Replacement of the schist by the mineralization produced the greyish-white sericite schist and talc-sericite schist in direct relationship to the introduced sulphides. Beyond the influence of the sulphide zone, as noted in Holes 10, 13 and 15, the sericite schist is medium-grey, unsilicified and barren of sulphide, as previously mentioned.

In some of the mineralized sections in the drill core, white quartz, followed by pyrrhotite blebs, and then pyrite and pyrrhotite from the outer edge inward indicate that the quartz and pyrrhotite likely formed early, and at a higher temperature than the remaining sulphides. The siliceous gangue containing the closely-associated pyrite, galena and sphalerite likely formed last at a lower temperature, and toward the centres of the mineralized zones. The paragenesis of these sulphides, as determined from polished section work, might be of use in interpreting the manner in which replacement took place, so that in future work on the property, the presence of one might be a clue toward the finding of others.

The graphitic schist and sericite schist were probably carbonaceous and argillaceous sediments which were highly sheared. The contact zone between the two types of schist is postulated as the favourable horizon for the sulphide mineralization which has worked in to the sericite schist in preference to the graphitic. Askania magnetometer work, designed to locate pyrrhotite horizons in the mineralization, should add to the picture in determining the attitude of the mineralization, outside of the two small sections drilled to date.

Toronto, Ontario,  
January 25, 1954

  
R.W. Baker