

PROSPECTORS AIRWAYS COMPANY LIMITEDREPORT ON THE VANGORDA CREEK GROUP, PELLY RIVER, YUKON TERRITORY, FOR 1955BY R.W.BAKER

Diamond drilling started on April 20th, 1955, with Hole 94. Drilling was carried on with one machine until May 17th, at which time the second drill started on Hole 102. The third drill, completing the complement of three stored at the property, started on Hole 106 on May 22nd. In sections of the property away from Vangorda Creek, starting time of the drilling was governed by the spring thaw which was needed to supply water for the drills. Drilling was terminated for the season with the completion of Hole 160 on September 15th.

Footage drilled on the property totalled 23,136 feet in 1955. With that drilled in 1953 and 1954, the cumulative total is 58,457. In addition to some detailed drilling on the main zone for further information on grade and attitude of the mineralization, some holes were drilled to test magnetic/gravity anomalies on Sheets 3, 5 and 6; the location of these holes is shown on the appended map of the property at a scale of 1 inch to 1000 feet.

In the 1955 drilling, the recovery in mineralization averages 80.2%. Recovery in the wall rock relative to the mineralization and in the schists away from the main zone is less than this due to the soft friable nature of the sericitic and graphitic rocks.

Large, permanent core racks were constructed during the season and all core obtained to date has been stored on these. The boxes have been tagged with stamped brass markers in order to have a permanent record of hole number and footage interval on each box. In order to conserve space on the racks, the boxes have been racked in pairs, which reduces by one-half the space needed for storage.

Askania magnetometer surveying was resumed on the property on April 27th. Control lines at 200 foot intervals were cut on Sheets 5 to 11 inclusive in the course of this work. The positions of these map sheets relative to the group

as a whole are shown on the appended map at 1 inch to 1000 feet. Sheets 10 and 11 are now being plotted and are in the course of completion.

The start of a gravity-meter survey on the property was delayed by late break-up conditions at the property. Some snow still remained, in patchy fashion, when the survey was started on June 9th. The stand for the gravity-meter is about 6 inches high, which permits operation in snow up to that depth. In connection with late breakup conditions, it is noted that the first rain shower of the season, rather than snow flurries, was on June 7th.

The gravity-meter survey was carried through the main zone, inclusive of the flanks, as well as in selected portions of Sheets 3, 5 and 6 relative to some magnetic anomalies. The survey by Radar Exploration was completed on July 9th. Additional sections of ground were done by the company, with the instrument under rental, in September and early October. Survey work was discontinued in the first week in October due to the advent of freeze-up and snow conditions. The areas covered by the gravity work are shown in orange hachuring on the appended map. These constitute about two complete map sheets and represent about 6 weeks field work.

A log building, 25 feet by 40 feet, was constructed at the end of the season adjacent to Vangorda Creek but about 1000 feet east of the present camp so as to be clear of the stripping area over the mineralization. This building will serve either as a cookery or a permanent storage point for the property.

OBSERVATIONS

The drilling did not disclose any new zones comparable to the main one, but important additions of lead-zinc mineralization were cut at several points on the edges of the latter one, expanding the outline from the previous season. Deep holes, to a depth of about 1000 feet, did not show any mineralization beneath the main zone or adjacent to it. The schists became less altered, and more sedimentary in appearance at depth, suggesting that the flat-lying mineralization has a halo of greater alteration surrounding it.

The magnetometer survey, on Sheets 1 to 11 inclusive, give good coverage to the trough of schists lying between the diorite on the southwest and the granite on

the northeast . The schists are also cut off by a biotite gneiss - diorite - granite complex to the northwest on Sheets 7 and 8, and by diorite on the southeast on Sheets 2 and 3. To the northwest on Sheets 5,6,7 and 8, several magnetic anomalies of moderate intensity were found, but none comparable in size or linear trend to the main zone were obtained. One cluster in the southeast portion of Sheet 6 was checked by gravity, and sections of it were drilled; some seams of pyrrhotite were found to be the cause of the anomalous conditions, with traces of sphalerite present.

The gravity survey proved to be a satisfactory method of locating sulphide on the property, when tested over the main zone. The combinations of gravity/magnetic or gravity/EM would appear to be good in a geophysical approach to locating mineralization. In each case, one method tends to eliminate the defects of the other. In the case of the gravity survey, on the Vangorda Cr. property, a residual gravity value of over 1 milligal can be considered important, - of interest between 0.5 and 1 milligal, but of minor importance below 0.5 milligal. However, this is in reference to the Vangorda type of massive mineralization only, as disseminated chalcopryrite of commercial grade in a basic intrusive might give less than a 0.5 residual.

RECOMMENDATIONS

1. The askania magnetometer survey has covered the potential host rock on the property, lying between the diorite and granite. Sheets 1 to 11 inclusive give a detailed assessment of the magnetics at line spacings of 200 feet, and no further work of this type is indicated for the property.
2. Making use of the existing control, with no further need for line-cutting, a complete gravity-meter survey of the property is recommended, expanding from the sections done to date, toward a complete coverage of Sheets 1 to 11. The line spacing of the gravity might be taken as 400 feet, with safety, and bracketing down to 200 feet in areas of interest. As to the sequence of work, the magnetics serve as a guide as to what sections should be done first, for possible testing with a drill. The coverage can be made in a field season with a gravity-meter as the instrument can be read at about the same speed as an askania magnetometer. The governing factor on speed is the levelling survey, and a surveyor and helper are

needed continuously on this work. The levelling has to be of good accuracy in gravity work, with periodic closures made.

Although snow conditions will likely still prevail on the property, by May 15th, 1956, the start of the survey is recommended for this time. If necessary, shovel work can be done at the set-up points for the short time before the snow disappears, but this early start is needed to get the property covered. The following sequence of work is advanced for consideration, with the best possible chances in mind for drilling:

(a) Sheet 6, northwest of the main zone, is considered the best ground, with special attention to be given to the large, moderately-high magnetic anomaly No. 72 in the south corner of the sheet.

(b) Sheet 10, on the southwest flank of the main zone, with special attention to magnetic anomalies 76 to 83, in proximity to the diorite.

(c) Sheet 7, - to include magnetic anomaly 75 in proximity to the granite. The proposed ground coverage has been cut off at anomaly 75, as sheets 7 and 8 are in the granite and diorite northwest of here, and are of little interest.

(d) Sheet 8 to follow 7.

(e) The remaining sheets in the following order, - 2, 4 (to include the re-entrant in to 1), 5, 9, 11.

3. Twelve diamond drill holes have been proposed and are lettered in red, a to l inclusive, on the appended map sheet. These are designed to check some moderate gravity anomalies, and collar positions can be revised dependent on results. The group b to l are in the section of gravity anomalies B, C, D noted in the report by D.R.S. Doal dated November 8, 1955. The holes are laid out on the grid pattern.

The start of the drilling is not recommended until the gravity work commences, as water is not available in this section before the middle of May, and time for the gravity to get a good start over the drilling is needed. The 12 holes would take about 6 weeks to drill, with one drill operating; in this period of time, considerable coverage can be done with the gravity-meter.

The initiation of drilling with only one machine is recommended as there is not

sufficient work for two, at least at the start of operations. Last year's drilling tested the existing outlying chances on the property, and the continuance this year is directly dependent on the gravity work.

4. With one drill in operation it will be possible for the resident geologist to do some geological mapping, of a detailed kind, on the existing map sheets at 1 inch to 100 feet. This work will serve to directly coordinate the gravity/magnetics with the geology.

5. The boat and barge need some caulking and possibly the replacing of timber in some small sections. This work should be done as soon as possible; as the snow goes in the river valley fairly soon, May 1st should not be too early. In addition to the caulking, the bolts need tightening or replacing around the propellor well as leaking is bad at this point. A new cooling tank for the engine is stored on the boat, and could replace the present one which leaks. The engine needs a tune-up, with valves ground, as it is not firing properly and lacks power.

Toronto, Ontario

November 17, 1955

Yours very truly,



R.W. Baker

ESTIMATED EXPENDITURES - 1956, PELLY RIVER, VANGORDA CREEK SECTION, YUKON TERRITORY

<u>Personnel</u>	<u>Rate</u>	<u>Time (mos.)</u>	<u>Food</u>	<u>Transportation</u>	<u>Totals</u>
Geologist(superv.)	500	5	600	500	3600
Core grabber & gen.duty	250	5	600	80*	1930
					5,530
Gravity Survey					
Operator	400	5	600	500	3100
Surveyor	350	5	600	500	2850
Rodman	250	5	600	80*	1930
					7,880
Kitchen					
Cook	350	5	600	80*	2430
Helper	250	5	600	80*	1930
					4,360
Woodcutters (fuel)					
2 Indians	9/day	$\frac{1}{2}$ month	120	Local	390
					390
Boatmen (casual hire)					
2 Indians	9/day	1 (est.)	240	Local	780
Boat repairs					
2 Indians	9/day	$\frac{1}{4}$	60	Local	186
Engine overhaul	12/day	$\frac{1}{4}$	30	-	114
-Boyles mech.					1,080
Road Maintenance (corduroy)					
2 Indians	9/day	$\frac{1}{2}$	120	Local	390
					390
Oil Haul, Pelly R. to camp.					
Cat Op.(Boyles)	12/day	$\frac{1}{3}$	40	-	160
Swamper	9/day	$\frac{1}{3}$	40	Local	130
					290
Maintenance on D-4 Cat and 4x4					
Boyles mech. (est.for season)	12/day	$\frac{2}{3}$	80	-	320
					320

 20,240

* Transportation from Whitehorse to Vangorda, and return by air, i.e. 1/5 of a charter spring and fall.

Estimated Expenditures, Pelly River, 1956

	20,240
Rental on Woodchuck, 425/mo. (2 months estimated)	850
Rental on gravity-meter (Worden) 5 months at 425 ⁴⁵⁰	2,250
Tent replacements, due to rotting. (None replaced in 1955). 2 at 200, with flys.	400
Assaying Est. for a footage of 5000 at 0.26 per foot.	1,300
Air freight on samples, Whitehorse to Haileybury	500
Equipment maintenance on radio, powersaw, lightplant, batteries, acetylene, oxygen etc.	300
Movement of supplies and equipt. by air, including diamond drillers. 6 trips, first month. 3 per month for last four months. : 18 trips at \$186	3,350
Telegrams	150
Legal fees)150) plus recording work on claims: 170 x 5	1,000
Loss on cookery re board for Boyles personnel: (Based on \$1.50 per man per day) Est. for 5 month period, 1 drill. 5 x 30 x 7 x 1.50	1,575
Fuel & lubricants for D-4, Lightplant, Powersaw, 4x4 truck.	550
Travel (consulting engineer)	1,500
Truck hire on Canol (to include possible movement out of drills)	2,000
Diamond Drilling 12 holes at 300 feet, at 5.83 per foot	21,000
(Footage estimate subject to revision as drilling and gravity work progress)	
Total	56,965