

GENERAL RESOURCES LTD. (NPL)

810748

CAL CLAIMS - HIGHLAND VALLEY, MERRITT, B.C.SUMMARY OF PROPOSED PROGRAM

The Cal Claims located 1 mile North of the Stellako discovery were staked in the summer of 1965. They contain a shallow lake, averaging 3-5 ft. depth.

An extensive program of bulldozing around the lake following geophoto and magnetometer targets revealed four parallel copper bearing zones. Twenty-two trenches totalling 4,680 ft. as deep as 33 ft. showed two main types of mineralization; - disseminated chalcopyrite largely to the East of the lake, and chalcocite, bornite and malachite in the heavily faulted and altered zones adjacent to and trending into the lake.

Following the freeze-up, lines were extended over the lake and magnetic and induced polarization surveys were carried out. Two anomalous zones were found. They are the main anomaly alongside and underlying the eastern edge of the lake with a length of 3500 ft. and average width of 400 ft. and the eastern anomaly - length 2000 ft., width 150 ft. with a gap between of 100-200 ft.

These anomalies coincided with magnetic lows and known copper zones found in the trenches. It is now proposed to diamond drill. A minimum of 2400 ft. of NX wireline drill hole in 4-6 holes from 400-600 ft. in length is required to determine the cause of the anomalies. The first two holes

should be from Line 85 setting up on the edge of the lake and drilling 45°W. Hole #3 would be on section 1430S at 45°W. Location of later holes would depend on results.

BUDGET

1.	Diamond Drill contract 2470 ft. of NXX wireline - hole including costs 1 drill 3 shifts	\$ 25,000.00
2.	Housing for drillers - 6 man cabin and cone shack, materials & labor	2,000.00
3.	Drill site preparation, road clearing, building site preparation	1,000.00
4.	Assaying, core boxes, materials	500.00
5.	Engineering supervision, core logging, part of time - engineer, geologist, samplers	3,500.00
6.	Vehicle operation, board, accommoda- tion for 36 months	600.00
7.	Contingencies, office costs, insurance	<u>2,200.00</u>
		<u>\$ 35,000.00</u>

Respectfully submitted,

B. B. Stokes, P. Eng.
Senior Engineer.

March 24, 1966.

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DRILLING - CAL GROUP

NX/WL

<u>Hole</u>	<u>Location</u>	<u>Bearing</u>	<u>Angle</u>	<u>Depth</u>
DDH #1	800S, 090E	West	-45°	600 ft.
DDH #2	800S, 520E	West	-45°	500 ft.
DDH #3	1450S, 030E	West	-45°	600 ft.
DDH #4	400S, 000E	West	-45°	500 ft.
DDH #5	400S, 600E	West	-45°	600 ft.
DDH #6	1200S, 150W	West	-45°	400 ft.
DDH #7	1200S, 240E	West	-60°	400 ft.
		Total Footage		3600 ft.

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REPORT ON THE CAL GROUP OF MINERAL CLAIMS

The Cal mineral claims occupy a pie-shaped piece of ground located immediately north of Foscoe Lake. The apex of the pie is at the edge of Foscoe Lake; the wedge widens to 2000 feet-6500 ft. to the NNE. A total of 12 claims have been located of which only Cals 3, 5, & 7 are full-sized claims.

The claims are accessible from the Spences Bridge-Merritt Highway via the Stellako Mining Camp road which leaves the highway 14 miles from Spences Bridge. Twenty-three miles up this road, at a point only one mile from the Stellako Camp, a rough road takes off for the Cal Group. The claims are approximately two miles off the main road and about one mile North of Stellako's showings.

The Cal claims occupy fairly flat, tree-covered plateau country averaging 5100 ft. in altitude. A small, shallow, north-south elongated lake occupies the geometric centre of the claim group. To the northern end of the group there is a fair percentage of outcrop. The rock forms ridges separated by swampy gulleys all trending N20°W. This is the main feature evident on air photographs; it is definitely of glacial origin.

Another highly interesting feature evident on air photographs is a strong scarp trending N15°E. This scarp coincides

with the eastern edge of Foscoe Lake and extends south directly through Stellako's high-grade copper showings. The scarp also extends to the north and passes through the eastern side of Deer Lake on the Cal Group. Stellako's showings are in quartz filled shears on the western border of a strong aplite dyke which has a trend parallel and coincident to the scarp. It appears that an important structural feature in Stellako's mineralization also occurs on the Cal Group.

Another feature visible on the air photographs is a set of lineations trending N60°E. One of these lineations intersects the main scarp near the centre of Deer Lake and another just south of the lake.

These two intersecting features, if they be faults or shears, could provide suitable "plumbing" and fracturing for a mineral deposit of possible economic interest on the Cal Group.

The Cal claims were staked in July and September, 1965 and work started in August, 1965.

Initial prospecting resulted in the discovery of copper only in the form of float. All outcrops were found to consist of a fresh, coarse-grained, hornblende quartz-diorite. In some of the outcrops the quartz-diorite grades into a variety containing large quartz clots or eyes. This quartz-eye, quartz-diorite is probably

a part of the Bethesda phase of the Gulchon Batholith.

Further preliminary work consisted of cutting and surveying an 11,200 foot base line and a grid system on the property. This grid was used to accurately tie in the Cal and surrounding mineral claims.

The most interesting areas on the property, to the East and South of Deer Lake, are all covered with overburden (mostly glacial), and could best be explored by bulldozing. A hydraulic ripper-equipped D8 bulldozer was contracted from Pooley Bros. Ltd. of Merrill to do the work. The machine was on the property from September 7 to November 4, 1965 and completed 13,000 ft. of new road and 22 trenches, totalling 4,680 feet in length. Initial bulldozer trenches were spotted on the basis of air photo study and magnetic lows. Further trenches were laid out by the same method and by following copper trends established in the initial trenches.

The 22 trenches have exposed three parallel north-south trending zones of alteration and copper mineralization. A fourth and possibly strongest zone apparently runs under the lake; however, it is incompletely explored. Deep overburden has prevented effective bulldozing on it and one trench (Trench 15) was abandoned at 30 feet depth because of the danger of cave-ins.

Immediately to the east of the lake there is an alteration

zone with accompanying copper mineralization apparently associated with north-south trending faults. Trenches 11 and 12 show the best exposures of this zone - both trenches cross cut 30 feet of fair copper mineralization. The main copper minerals in this zone are malachite and chalcocite; the chalcocite shows evidence it has replaced chalcopyrite - there are some remanent blebs of chalcopyrite in the centre of chalcocite blebs.

The main alteration in this zone is limonitic, chloritic and sericitic. Alteration minerals are fracture controlled as are copper minerals. Limonite replacement on fracture walls has given a "halo" appearance to the rock.

Several hundred feet to the east a third zone was discovered by its magnetic low. The zone apparently splits into two zones to the north - one zone goes west through trench 6 the other north through trench 10. The alteration in this zone is less intense than the other; and the copper minerals don't occur in the strongly altered rock.

The main copper minerals are chalcopyrite with lesser bornite and malachite and minor azurite. They occur as disseminated replacements (associated with mafic minerals) and as fracture fillings in a relatively fresh quartz-diorite. In general bornite favors the mafics and chalcopyrite favors the fractures. This zone can

be traced through trenches 10, 9 & 13 for an average width of 15 feet.

Alteration minerals in this zone are limonite, chlorite and biotite. There are also vein-like zones of potassium alteration in the form of potassium feldspar (apilite) and also fairly common sericite replacing plagioclase and combined with limonite in gouge seams.

Still further east there is a long narrow north-south swamp which has several showings in the sporadic outcrops along its east side. Trenches 17 to 21 were placed along the east side of the swamp in hopes of finding a continuous mineralized zone. No such zone was found. The mineralization, which consists of chalcopyrite and minor bornite disseminated in a fairly fresh quartz-diorite, appears to occur only in small sporadic shoots associated with the long swamp (fault?).

With the completion of 22 trenches, enough information was available to give the general structural picture on the Cal Group. It was decided to select further exploration targets by geophysics.

In early January, 1966, additional grid lines were cut 20S, 15E, 12S, 8E, 4E and at 0S. These new lines run true east-west and extend across the lake. They average 2500 ft. in

length and total 15,200 feet.

The lines across the lake ice enable the unknown under-lake ground to be prospected by Magnetometer and Induced Polarization (IP) surveys.

At present, these surveys are underway and preliminary results indicate a low anomaly beneath the lake. The known copper zones to the east of the lake may be helpful in interpreting the lake anomaly. From the initial lines run it appears the ground beneath the lake is giving slightly higher values than the zones exposed in the trenches. The fact that negligible pyrite is known on the property virtually eliminates one dimension of uncertainty from the IP interpretation.

A drilling program will likely be instituted to investigate any anomaly indicating an interesting sulphide body.

Respectfully submitted,

E.K. McKnight,
Geological Engineer.

February 18, 1966.