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A
GEOPHYSICAL REPORT
ON
CANNOO - TASEKO PROJECT
IN
THE TASEKO RIVER AREA
OF
BRITISH COLUMBIA

LAT: 51⁰⁰'

LONG: 122⁰⁰'

MAY - DECEMBER, 1969

BY

D. R. DOAL

SCURRY-RAINBOW OIL LIMITED

UNDER THE SUPERVISION OF

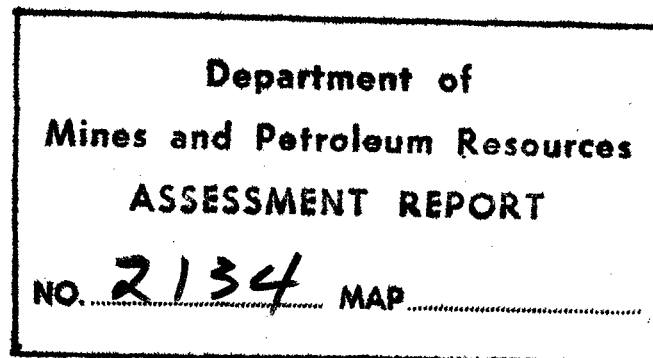
A. ALLAN, P. ENG.

CALGARY, ALBERTA

DECEMBER 15, 1969

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SUMMARY

During the months of May to December, 1969, an electromagnetic and a magnetometer survey was carried out on portions of the Empress Group and the Spokane Syndicate Group in the Taseko River Area - Clinton Mining Division.

GENERAL GEOLOGY (R. Somerville - Scurry-Rainbow Oil Limited)

The areas surveyed are underlain by plutonic rocks belonging to the coast batholithic intrusives. Immediately to the north of both areas, a belt of mixed sedimentary and igneous volcanic rocks outcrop. The intrusive contact appears to lie in the Taseko River Valley under heavy overburden.

Rock outcrops in about 25% of the area covered by the Spokane Syndicate survey and consists, for the most part, of granodiorite. Disseminated pyrite and chalcopyrite mineralization was noted between Line 6+00N and Line 22+00N within a few hundred feet of Baseline No. 2.

What little rock does outcrop in the Empress survey area is either a highly altered granodiorite or a contact metamorphised volcanic. Pyrite and magnetite, combined with disseminated chalcopyrite was noted in some sections, but no sulphide concentrations were noted in outcrops.

General Geophysics

Empress Group

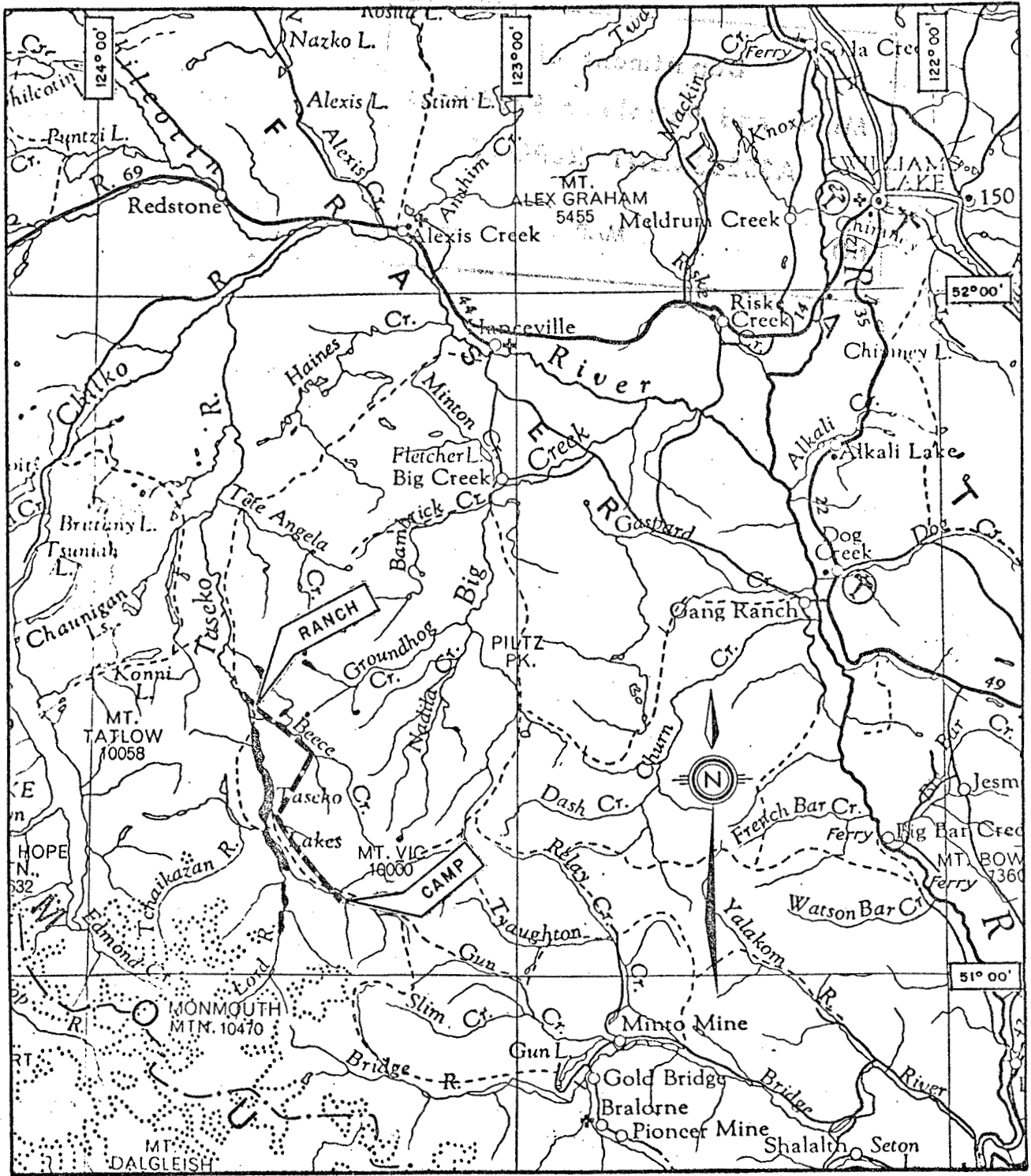
Several E.M. conductors were outlined on the Empress group. Three have been recommended for drilling. The magnetics established three strong E.W. trends to the rock formations. Several trenches have been opened up with a bulldozer and uncovered massive sections of magnetite with sparse chalcopyrite and pyrite mineralization. There appears to be direct association re magnetite sulphide distribution in this particular area.

Spokane Syndicate Group

The J.E.M. survey conducted on this group showed only minor conductivity, most of which can be attributed to conductive overburden. A weak negative response appears on Line 2+00S at 4+00E flanking a E.W. trending magnetic anomaly.

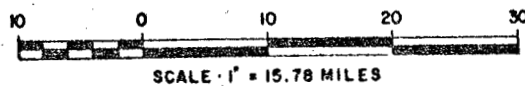
Spokane Syndicate Group (Continued)

The magnetics, for most part, indicated a N.S. trend to the rock formations except for a definite isolated magnetic anomaly trending E.W. with dimensions of 400' in width and a strike length of 500'. In this contained area a zone of disseminated chalcopyrite and pyrite has been outlined by trenching and diamond drilling.



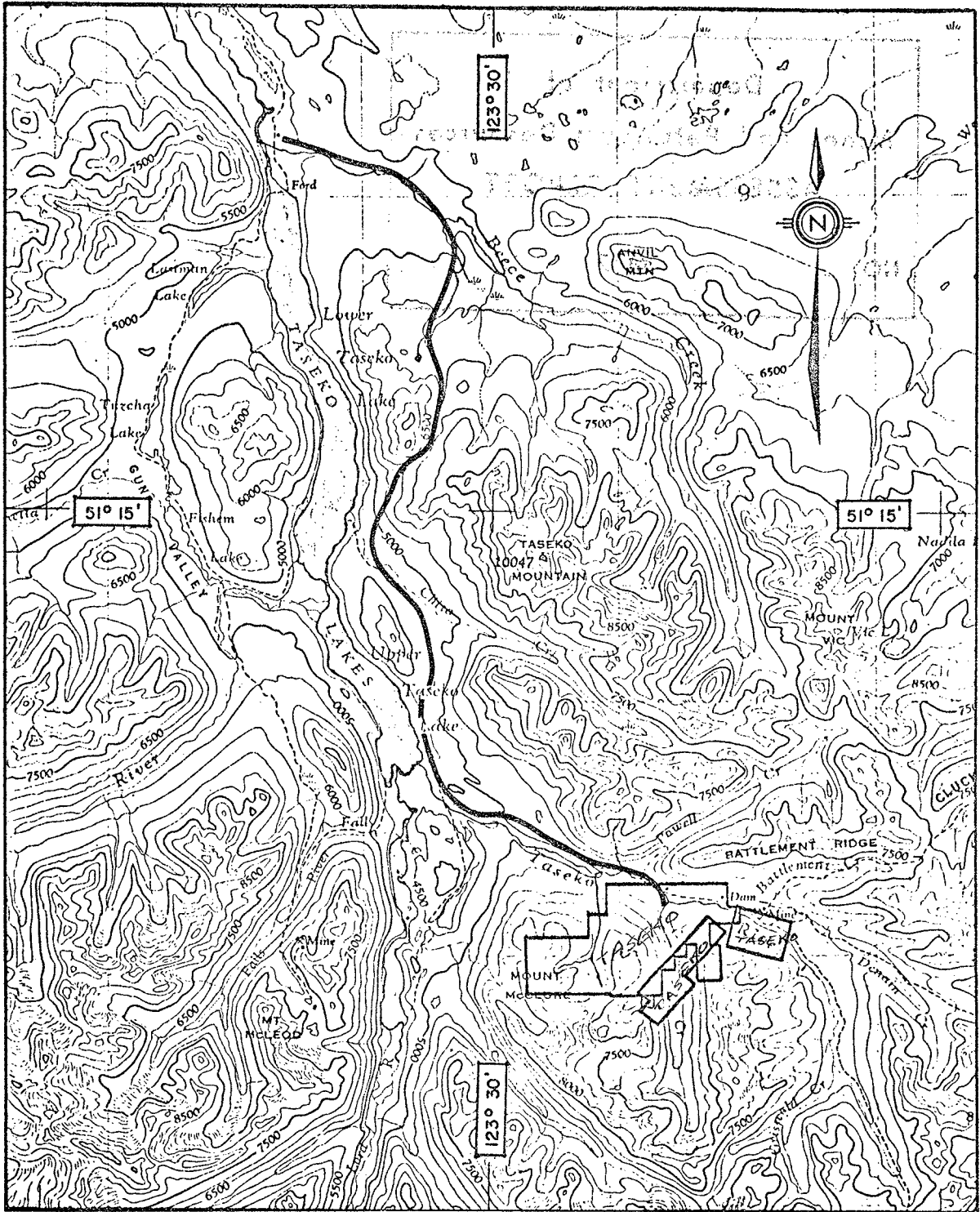
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PROPOSED CANNOO ROAD, TASEKO LAKE — — — — —



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ASSESSMENT REPORT

NO. 2134 MAP.....



TASEKO LAKES AREA

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NO. 2134 MAP

Location and Access

The claim groups are approximately 8 to 10 miles southeast of Taseko Lake. (See location sketch included with report.) Access is by (1) float or ski equipped plane to Taseko Lake and by tote road to the camp area or (2) from Williams Lake to Hanceville and southwest and south to the camp area by road, a distance of approximately 170 miles, of which some 60 miles can only be driven with four wheel drive vehicles.

LINE CUTTING

Empress Group

A east-west trending baseline was established some 450 feet south of Post #3 of the Old and Rare Claim, which forms part of the Empress Group. This line was cut 1,000 feet east and 1,000 feet west. Lines were turned off at 90° to the base line at 200 foot intervals and picketed every 100 feet north and south. Mileage for this group is crosslines - 5.04 miles, and baseline - 0.39 miles. A sketch is enclosed showing line layout and location.

Spokane Syndicate Group

A north-east (approximately 20°) trending baseline (Called B.L. #1) was established on the look-out claim of the Spokane group (See sketch for location). This line was cut south over a distance of 1,500 feet. Base Line #2 was turned off at 90° to 0+00, 1,000 feet east from Baseline #1. This new baseline was cut north 2,200 feet and south 1,500 feet. Crosslines at 90° to the baselines were established.

Lines were cut at 100' intervals from 0+00 to 1,500 south and at 200' intervals from 6+00 to 22+00N. These were picketed every 100 feet. Mileage - Baselines (1 & 2) -.99 miles; crosslines - 6.42 miles.

Types of Surveys Employed

- (1) J.E.M. Electromagnetic Survey
 - Separation 200 feet

- (2) M-700 Fluxgate
 - Magnetometer Survey
 - Stations 50' - 100' intervals

Method and Interpretation of Electromagnetic Results

The surveys were carried out with a J.E.M. unit, manufactured by Crone Geophysics of Toronto, Canada. This is a battery powered unit employing two coils and operating at frequencies of 1,800 C.P.S. and 480 C.P.S. This method is independent of receiver to transmitter alignment, distance of separation or elevation differences even on extremely rough terrain.

Electromagnetic readings were taken every 100 feet along pre-cut lines spaced 200 feet apart and 100 feet on part of the Spokane Syndicate Group. In areas of recorded conductivity readings were taken every 50 feet.

A 200 feet cut separation was used throughout the survey. H.F. readings were plotted on the right of the line, L.F. readings on the left of the line. Conductivity is measured from the ratio of maximum resultant angles of the high and low frequency employed. The shape and portion of the conductor can be measured from a profile of the J.E.M. results.

Method and Interpretation of Magnetometer Results

The magnetic surveys were carried out with a M-700 magnetometer which is a vertical field magnetometer employing the flux-gate system. The instrument is self-levelling and self-cancelling circuit permits rapid, accurate measurement of the earth's magnetic field from a meter without adjustments or calculations. The instrument can be adjusted electronically to measure vertical fields from plus 100,000 gammas to minus 100,000 gammas. Hence there is no need for auxilliary magnets or complicated latitude adjustments.

Magnetic readings were taken every 100 feet and 50 feet intervals where required, in lines spaced 100 and 200 feet apart. Baseline stations were recorded and used throughout the survey for diurnal correction. The magnetics are expressed by magnetic contours on the accompanying maps.

CONCLUSIONS

Empress Group

Several J.E.M. anomalies were recorded on the Empress group. Most of the anomalies are weak, probably reflecting conductive overburden or highly disseminated sulphides. Three of the anomalies show magnetic correlation and are recommended for further investigation.

The magnetic survey outlined three zones of highly magnetic material and are believed to be caused by magnetite zoning. Float reported from the area indicated high Cu content associated with massive magnetite assuming that there is a direct relationship, i.e. magnetite and sulphides. These magnetic zones should be tested by diamond drilling to depth.

Recommendations

Three anomalies on the Empress Group should be tested by diamond drilling. A break down of these anomalies are noted:

<u>No.</u>	<u>Location</u>	<u>Conductivity</u>	<u>Ratio</u>	<u>Dip</u>	<u>Magnetic Correlation</u>
1	Line 8+00E at 50+00N	Fair	Good	40-45 ⁰ South	Good
2	Line 8+00W at 0+50S	Fair	Good	45-50 ⁰ North	Fair
3	Line 2+00E at 3+00N	Poor	-	45-50 ⁰ North	Good

Possible Targets Include:

4.	Line 4+00N at 6+00N	Poor	?	50 ⁰ North	Good
5.	Line 0+00 at 6+50N	Fair	Good	-	Weak

(This anomaly may reflect a conductor to the west of the line or a broad disseminated area that should be investigated; probable outcrop)
Detail work in this area east and west should be done.

Proposed Drill Targets

	<u>Collar</u>	<u>Direction</u>	<u>Dip</u>	<u>Depth</u>
(1)	Line 8+00E at 1+50S	North On Line	45 ⁰	250 - 300'
(2)	Line 2+00E at 4+00N	South on Line	50 ⁰	200 - 250'
(3)	Line 8+00W at 0+30N	South on Line	60 ⁰	150 - 175'

On completion of above targets and ground investigation of condition on Line 0+00N, 6+50N and assuming results are favourable; the grid system should be extended to the East-Northeast and evaluated by magnetics and

E.M. Surveys. A vertical loop follow-up on the J.E.M. horizontal appears to be warranted for greater penetration and strike definition.

Spokane Syndicate

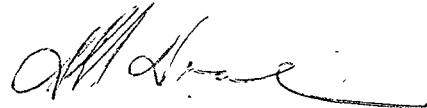
The J.E.M. Survey conducted on this group indicated only minor conductivity. A weak negative anomaly is located on Line 2+00S at 4+00E on the edge of an E.W. striking magnetic anomaly. The magnetics indicate a regional N.S. trend with an isolated E.W. anomaly (indicated on the enclosed maps).

Recommendations

The J.E.M. method utilized on this group does not show any conductor in the massive to semi-massive range and apparently is not amenable to the highly disseminated type of mineralization that is known to exist, especially in the E.W. magnetic expression where trenching and drilling has been done.

No further work is recommended using the J.E.M. horizontal loop method.

Respectfully Submitted:



D. R. Doal
Senior Engineer
Geophysical Department

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APPENDIX

- Map I Property Holdings 1" = 1,000'
- Map II Empress Group - Magnetometer Survey
Block V 1" = 100'
- Map III Empress Group - Magnetometer Survey
Block M 1" = 100'
- Map IV Empress Group - J.E.M. Survey
Block V 1" = 100'
- Map V Empress Group - J.E.M. Survey
Block M 1" = 100'
- Map VI Spokane Syndicate Group - J.E.M. Survey
Block AA-KK 1" = 200'
- Map VII Spokane Syndicate Group - Magnetometer Survey
Block AA-KK 1" = 200'

STATEMENT OF QUALIFICATIONS

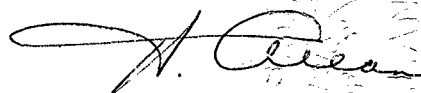
The following personnel were employed on the survey:

D. R. Doal	Senior Geophysical Survey
L. Kearney	Operator (Magnetics)
I. Loranger	Operator (Electromagnetics)

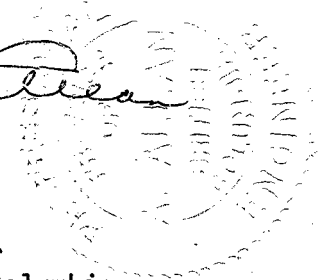
This report was prepared by Mr. D. R. Doal who also directed the work performed in the field.

Since his graduation from the Haileybury School of Mines, Mr. Doal has had twenty years of experience with all phases of applied geophysics, and has acted as a Geophysical Supervisor for such companies as Noranda, Newmont and Canadian John's Manville.

In my opinion, Mr. Doal is eminently qualified to perform the work covered by this report. The maps and field procedures have been examined by A. Allan, P.Eng. under whose signature this report is submitted.



A. Allan
Professional Engineer
Province of British Columbia
December 17, 1969



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