85-909-14065

GROUND GEOPHYSICAL SURVEYS

FRENCH MINE PROPERTY

OSOYOOS MINING DIVISION NTS 92-H-8, 82-E-5

Latitude 49°20', Longitude 120°00'

Owned by: Golden North Resource Corporation Work by: Placer Development Limited

R.W. Cannon, P. Eng.

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October, 1985

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GEOLOGICAL BRANCH ASSESSMENT REPORT

14,065

STATEMENT OF EXPENDITURES - FRENCH MINE PROPERTY

		eophysical Survey	
	Days	Field Days	
		B. Ott, Aug. 26, 27, 28, 29, 30	
	7	Sept. 3, 5 $(1/2 \text{ day})$, 19 $(1/2 \text{ day})$	- ⁶
		R. Boyce, Aug. 27, 28, 29, 30	
	5.5	Sept. 3, 5 $(1/2 \text{ day})$	
	.5	R. Cannon, Sept. 19 (1/2 day)	
n/day:	13 man/da		
		ata Interpretation and Report Writing	
		R. Cannon - 3 days	
E 00	61 005 00	alaries and Benefits	
	\$1,225.00	R. Cannon 3.5 x \$350	
	1,750.00	B. Ott - 7 x $$250$	
2.50	1,512.50	R. Boyce 5.5 x \$275	
0.00	390.00	amp Cost @ \$30/day/man x 13	
		quipment Charges	
0.00	600.00	2 G-85 6 magnetometers @ \$400/wk. x 1.5	
0.00	150.00	l Kaypro computer @ \$100/wk. x l.5	
0.00	300.00	1 Geonics E.M16 @ \$200/wk. x 1.5	
		ransportation	
0.00	350.00	3/4 T. Chev Suburban @ \$50 x 7	
0.00	250.00	Fuel \$250	
0.00	500.00	lotting, drafting and computer work 2 x \$250	
0.68	3,110.68	ine cutting	
8.18	\$10,138.14	Total Expenditures	
а 1 1 1 1		R.W. Cannon, P. Eng. 85/11/18	
		R.W. Cannon, P. Eng.	

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Summary

The geophysical surveys on the French Mine ground were conducted during the latter part of August and the 1st week of September, 1985. A total of 28.84 km of line consisting of both N-S and E-W lines were marked at 20 m intervals along lines 100 m apart. VLF-EM readings were taken at 20 m stations while the magnetometer readings were at 10 m stations. The VLF survey detected several strong conductors while the magnetometer survey revealed four areas of somewhat elevated magnetic readings.

Introduction

This survey was conducted to see if any response related to the French Mine could be found. This would in turn help to identify subsequent anomalies. The western portion of the ground had N-S lines established and the eastern portion had E-W lines established. The grid was put in by Dividend Mountain-Mining, Exploration and Development of Keremeous, B.C.

Location and Access

The property is located on the north side of the Similkameen Valley, near Winters Creek. Access is by means of 2 wheel drive vehicle over a narrow gravel road which joins Highway 3 just east of Hedley, B.C. This road has many switchbacks and therefore access is slow. Many old mining roads, which branch off this road, make 4 wheel drive access easy throughout the property.



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Claim Ownership

A total of 16 Crown granted claims and mineral claims were optioned by Placer Development Limited from Golden North Resource Corporation and are as follows:

Name	Units	Anniv. Date
Bot	1	May 21st
Dry	1	11 11
Mayfly	1	11 11
Wasp Fr.	1	19 28
Centipede	1	15 11
Crown Grants	<u>s</u>	Lot No.
Oregon		703S
Savage		704S
Норе		112S
Tat		38705
Nal		3871S
Кеу		3872S
Two Sisters		38735
Oregon Fr.		38745
Winchester 1	Fr.	38758
Sun		38765
Moon		3877S

Geophysical Surveys

VLF-EM and magnetometer surveys were conducted along 28.84 kms of line.

The VLF-EM survey was carried out using the transmitting stations as listed:

N-S Lines Annapolis NSS 21.4 kHz E-W Lines Seattle NLK 24.8 kHz

The direction to the Seattle station was 227° and readings were taken facing 137° while the direction to the Annapolis station was 110° and readings were taken facing 020°, both at 20 m stations.

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Magnetometer readings were taken at 10 m stations and correction for drift and diurnal changes were made by use of a base station recording magnetometer.

Equipment Used

The magnetometer survey was conducted using two Geometrics G-856A portable proton magnetometers (memory-mags). One was used in the field mode (Ser. No. 27383) while the other was used in a base station mode (Ser. No. 27382). The internal clocks were synchronized before commencement of the survey and subsequent daily readings were dumped out to floppy disc in a Kaypro II portable computer. The data from the two magnetometers were merged and corrected for diurnal drift from an established base station value. The corrected results were plotted as field profiles and also stored on disc for eventual transfer to a Univac 1108 for final plotting.

The VLF-EM survey employed a Geonics EM-16 (Ser. No. 25) which used the Annapolis and Seattle transmitting stations. VLF readings were also entered onto Floppy disc in a Kaypro II computer and field profiles of In-phase, Quadrature and Fraser filter data were plotted. The stored data was transferred to a Univac 1108 for final processing and plotting.

Survey Results

The magnetometer survey results were plotted as plan maps of stacked profiles at a scale of 1:5,000 (see plate in folder at back of report).

The VLF-EM survey results were plotted as stacked In-phase, Quadrature and positive Fraser filter profiles on plan maps at a scale of 1:5000. The Fraser filter data was calculated as per the method put forth by D.C. Fraser (1969, Contouring of VLF-EM data: Geophysics, v.34, p. 958-967). See plate in the folder at the back of report.

Discussion of Results

Magnetometer Survey

Four areas of elevated magnetometer results are located on Plate 0001 at the back of this report. These areas are as listed.

AREA

- (1) Located within the intrusives and therefore is likely due to increased magnetite.
- (2) Corresponds to the French Mine area and is most likely due to pyrrhotite enriched skarn.
- (3) Lies immediatly south of small skarn zones located on the Good Hope Property and is entirely underlain by sediments. Most likely cause is pyrrhotite enriched skarn zones.

(4) Same as (2) above and is probably due to magnetite.

VLF-EM Survey

Numerous conductor axes which on E-W lines correspond to the regional fault and shear directions. One very strong conductor (No. 1) which traverses the entire N-S grid shows up as a prominent air photo lineament (see plate 0002).

Conclusions and Recommendations

It was concluded that the magnetic survey has located two skarn zones, one of which is the French Mine. It is recommended that if Zone 3 has a soil geochemical anomaly associated with it then detailed geological mapping of this area should be conducted.

P. Eng.

RWC/cs 11:14:85



