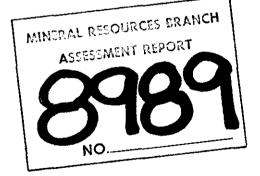
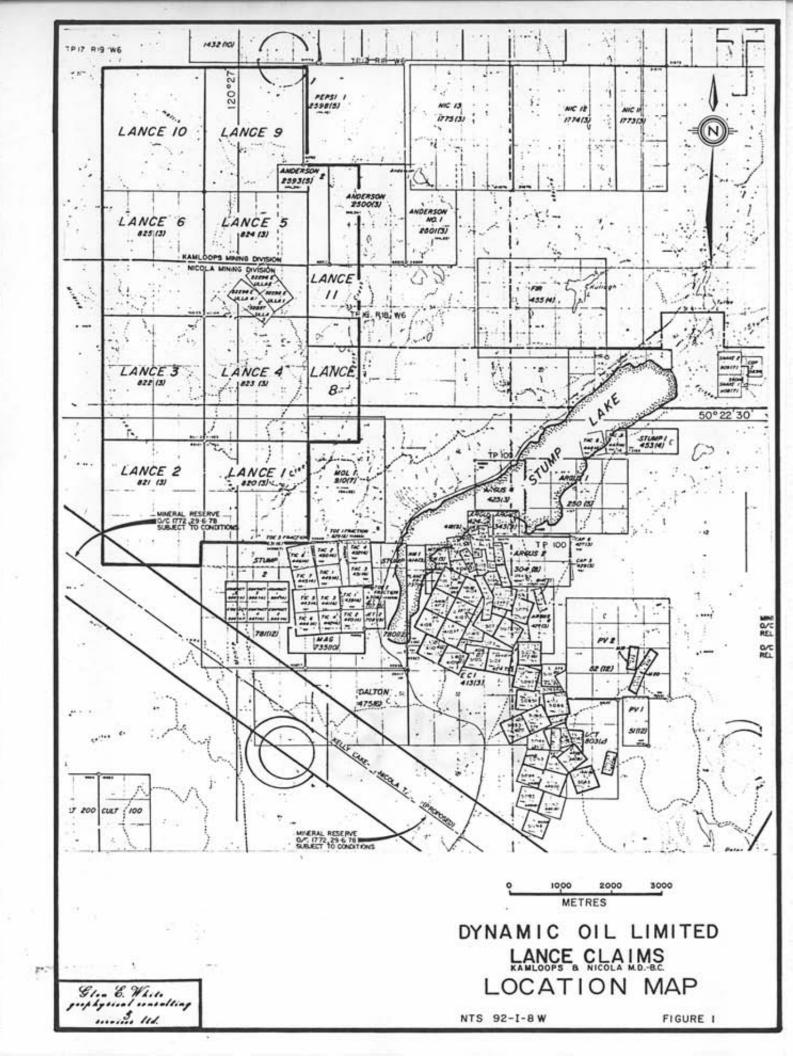
181-#185 # 8989

### GEOPHYSICAL REPORT on an Induced Polarization Survey on behalf of Dynamic Oil Ltd.

Lance 1-6, 8-11 claims Stump Lake Area Kamloops and Nicola Mining Divisions B.C. Lat. 50<sup>0</sup>22'N Long. 120<sup>0</sup>27'W N.T.S. 9218W

AUTHOR: Glen E. White, B.sc., P.Eng. DATES OF WORK: March 29-April 16, 23-27 May 30-June 2, 6-17, 20-30 July 15-24, August 6-19/80





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# Illustrations

Figure	1	Location and claims map
Figure	2	Induced polarization - chargeability
Figure	3	Induced polarization - apparent resistivity

----- Glen E. While GEOPHYSICAL CONSULTING & SERVICES LTD.

## INTRODUCTION

During the months March to August 1980 a program of linecutting and reconnaissance induced polarization surveying was completed on the Lance Mineral claims by Glen E. White Geophysical Consulting & Services Ltd. on behalf of Dynamic Oil Ltd.

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The purpose of the survey was to examine an area of granitic rocks which contained spotly showings of copper - molybdenum mineralization. The induced polarization method was used to try and locate any large chargeable source which could possibly relate to the spotly copper - molybdenum mineralization and a possible porphry copper - molybdenum deposit.

#### PROPERTY

The property consists of the Lance mineral claims listed as follows and illustrated on Figure 1.

CLAIM		RECORD #	# UNITS	RECORD DATE
Lance	1	820	20	March 26/80
Lance	2	821	20	March 26/80
Lance	3	822	20	March 26/80
Lance	4	823	20	March 26/80
Lance	5	824	20	March 26/80
Lance	6	825	20	March 26/80
Lance	8	926	10	August 8/80
Lance	9	2869	20	August 8/80
Lance	10	2870	20	August 8/80
Lance	11	943	12	August 26/80
	Tot	al Units	182	

### LOCATION AND ACCESS

The lance mineral claims are located some 5 km northwest of Stump Lake B.C. Lat. 50°22'N Long. 120°27'W N.T.S. 921 8W.

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Access into the claim area is by unimproved forestry access dirt roads from the western side of Stump Lake.

#### GENERAL GEOLOGY

The general geology of the area is illustrated on the Nicola map sheet, Map 886A, 92I east half. The claim blocks are shown as being underlain by the the Nicola Lake batholith of Jurassic age. Locally the granite batholith encompasses a small area of chlorite schist, quartz-mica schist and amphibolite, which can appear gneissic in composition. The mineral inventory map shows an old copper-molybdenum showing, known as the Brite Star which was located in claim Lance 11.

#### SURVEY GRID

The survey grid was laid out on a reconnaissance basis with lines spaced 250 m and 500 m apart. The lines are orientated in an east-west direction and controlled by a central north-south baseline. Some 112 km of survey grid was established.

#### INDUCED POLARIZATION SURVEY

A time domain Huntec MK lll receiver and a Lopo transmitter were deployed in the Wenner array for this survey. The data was obtained with an "a" spacing and traverse interval of 100 m. 64 km of surveying was conducted.

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The data recorded in the field consists of careful measurements of the current (I) in amperes flowing through electrodes  $C_1$  and  $C_2$ , the primary voltage ( $V_p$ ) appearing between electrodes  $P_1$  and  $P_2$  during the "current on" part of the cycle, and the secondary voltage ratios  $M_1$ ,  $M_2$ ,  $M_3$  and  $M_4$  appearing between electrodes  $P_1$  and  $P_2$  during the cycle.

The apparent chargeability (CV) in milliseconds, is calculated by  $T_p (M_1 + 2M_2 + 4M_3 + 8M_4) = CV$ , where  $T_p$  is the basic integrating time in tenths of seconds.  $M_1, M_2, M_3$  and  $M_4$  are the chargeability effects at various times on the voltage decay curve during the "current on" time. By the use of these factors, one can gain an estimate of the decay curve in terms of chargeability for the given time  $T_p$ . This gives a quantitative value to the data measured.

## DISCUSSION OF RESULTS

The chargeability map Figure 2 shows a large anomaly in mineral claim Lance 5 which reaches a high of 30 milliseconds above a background of some 4 milliseconds. This anomaly trends north-south into the Lance 4 and It forms a halo around a chargeability low 9 claims. in the middle of Lance 5. Preliminary investigation shows that this low appears to be coincident with an alaskite stock. An old shaft and tunnel occur on the eastern edge of this anomaly near line 3000N at 2000 E and old trenches are situated near 3400N-1900E. Malachite stain and molybdenum were noted on fracture faces. in both areas. Accessment work filed by Envoy Resources Ltd. on the Ulla claims shows a number of soil samples which gave between 200-1000 ppm copper.

The apparent resistivity data, Figure 3 shows variations from 50 to 10,000 ohm-meters across the property. The low values occur in areas covered with a clay bearing till and the high values in rugged areas of shallow overburden. Thus the induced polarization anomaly would appear to be largely overburden covered in claim Lance 4 and the south half of Lance 5. The higher apparent resistivity value in the north half of Lance 5 and claims Lance 6, 9 and 10 would indicate shallow overburden conditions. The geophysical crew reported that this area was difficult to survey due to the rugged topography and dense jackpine.

#### CONCLUSIONS

A reconnaissance induced polarization survey was conducted over the Lance mineral claims to try and detect any large chargeability anomalies which could be indicative of a porphyry copper-molybdenum deposit. The survey located a large horseshoe shaped zone of up to 30 milliseconds which appears to surround a small alaskite plug. Copper-molybdenum mineralization was noted on the east side of the horseshoe anomaly. The chargeability anomaly is open to the north where it appears to follow the contact between the Nicola batholith and the Nicola Volcanics. Thus the strong chargeability anomaly is likely due to a 5-10% increase in pyrite mineralization, with possibly associated copper-molybdenum minerals, in structure zones parallel to the contact which allowed the emplacement of the alaskite plug.

#### RECOMMENDATIONS

It is recommended that geological mapping and geochemical surveying be undertaken over the areas of high chargeability. The reconnaissance induced polarization surveying which outlined this feature, should be continued into claims Lance 9 and 10. Soil samples should also be taken coincident with the induced polarization work.

Respectful ubmitted. P.Eng.

Glen E. While GEOPHYSICAL CONSULTING & SERVICES LTD.

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## APPENDIX

## Instrument Specifications

A. Induced Polarization Receiver

(1) Type - Huntec MK III time domain (2) Sensitivity -  $V_p = 10^{-7}$  to  $10^{-6}$  volts 1% resolution

 $v_p = 10^{-6}$  to 10 volts 0.1% · resolution

- (3) Range 30 x  $10^{-6}$  to 10 volts
- (4) Self Potential  $\neq 1$  volt
- (5) M Factor 0.1%
- (6) Power 0.7 ampere at 12 volts Rechargeable batteries
- (7) Size  $-16" \ge 9" \ge 53/4"$

B. Induced Polarization Transmitter

- (1) Type Huntec LOPO M-3
- (2) Maximum Current 1.5 D.C.
- (3) Maximum Voltage 1,800 V D.C.
- (4) Load Power / 160 watts @ 75% efficiency
- (5) Load Current Continuously adjustable
- (6) Cycle time 2, 4, 8 or 16 seconds

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# STATEMENT OF QUALIFICATIONS

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NAME :	WHITE, Glen E., P.Eng.
PROFESSION:	Geophysicist
EDUCATION:	B.Sc. Geophysics - Geology University of British Columbia
PROFESSIONAL ASSOCIATIONS:	Registered Professional Engineer, Province of British Columbia
•	Associate member of Society of Exploration Geophysicists.
	Past President of B.C. Society of Mining Geophysicists
EXPERIENCE:	Pre-Graduate experience in Geology - Geochemistry - Geophysics with Anaconda American Brass
	Two years Mining Geophysicist with Sulmac Exploration Ltd. and Airborne Geophysics with Spartan Air Services Ltd.
	One year Mining Geophysicist and Technical Sales Manager in the Pacific north-west for W. P. McGill and Associates
	Two years Mining Geophysicist and super- visor Airborne and Ground Geophysical Divisions with Geo-X Surveys Ltd.
	Two years Chief Geophysicist Tri-Con Exploration Surveys Ltd.
	Ten years Consulting Geophysicist
	Active experience in all Geologic provinces of Canada

## COST BREAKDOWN

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PERSONNAL	DATES WORKE	<u>D</u>	WAGES	TOTAL
Linecutting				
J. Muir	03/29/80-04,	/16,23-27/80	\$145	\$2,755
M. Smyth	03/29/80-04,	/16,23-27/80	\$125	\$2 <b>,</b> 375
Induced Polari	zation			
J. Muir	05/30/80-06,	/2,6-17,20-30/80	\$145	\$3,190
O. Aarskjhold	05/30/80-06,	/2,6-17,20-30/80	\$125	\$2,750
B. Kitchen	05/30/80-06,	/2,6-17,20-30/80	\$110	\$2,420
				<u> </u>
J. McMillan	05/30/80-06,	/2,6-17,20-30/80	\$110	\$2,420
			\$110	\$2,420
J. McMillan Induced Polari M. Gray		inecutting	\$110 \$145	
Induced Polari	zation and L: 07/15-24/80	<u>inecutting</u> 08/6-19/80		ł
Induced Polari M. Gray	zation and L: 07/15-24/80 07/15-24/80	<u>inecutting</u> 08/6-19/80 08/6-19/80	\$145	\$3,480 \$3,050
<u>Induced Polari</u> M. Gray O. Aarskjhold	zation and L: 07/15-24/80 07/15-24/80	<u>inecutting</u> 08/6-19/80 08/6-19/80 08/6-19/80	\$145 \$125	\$3,480 \$3,050 \$2,640
<u>Induced Polari</u> M. Gray O. Aarskjhold B. Kitchen	zation and L: 07/15-24/80 07/15-24/80 07/15-24/80 07/15-24/80	<u>inecutting</u> 08/6-19/80 08/6-19/80 08/6-19/80 08/6-19/80	\$145 \$125 \$110	\$3,480 \$3,050 \$2,640 \$2,640
Induced Polari M. Gray O. Aarskjhold B. Kitchen B. Husar J. Behenna - S	zation and L: 07/15-24/80 07/15-24/80 07/15-24/80 07/15-24/80 Supervisor 10	<u>inecutting</u> 08/6-19/80 08/6-19/80 08/6-19/80 08/6-19/80	\$145 \$125 \$110 \$110 \$175	\$3,480 \$3,050 \$2,640 \$2,640 \$1,750
Induced Polari M. Gray O. Aarskjhold B. Kitchen B. Husar J. Behenna - S Meals & A	zation and L: 07/15-24/80 07/15-24/80 07/15-24/80 07/15-24/80 Supervisor 10 accomodations	<u>inecutting</u> 08/6-19/80 08/6-19/80 08/6-19/80 08/6-19/80 days @	\$145 \$125 \$110 \$110 \$175	\$3,480 \$3,050 \$2,640 \$2,640 \$1,750 \$9,100
Induced Polari M. Gray O. Aarskjhold B. Kitchen B. Husar J. Behenna - S Meals & A Vehicle 1	zation and L: 07/15-24/80 07/15-24/80 07/15-24/80 07/15-24/80 Supervisor 10 Accomodations ease 4X4 all	<u>inecutting</u> 08/6-19/80 08/6-19/80 08/6-19/80 08/6-19/80 days @ 65 man days @ \$35	\$145 \$125 \$110 \$110 \$175	\$3,480 \$3,050 \$2,640 \$2,640 \$1,750 \$9,100
Induced Polari M. Gray O. Aarskjhold B. Kitchen B. Husar J. Behenna - S Meals & A Vehicle 1 Instrumen	zation and L: 07/15-24/80 07/15-24/80 07/15-24/80 07/15-24/80 Supervisor 10 accomodations ease 4X4 all t lease	inecutting 08/6-19/80 08/6-19/80 08/6-19/80 08/6-19/80 days @ 65 man days @ \$35 inclusive	\$145 \$125 \$110 \$110 \$175	\$3,480 \$3,050 \$2,640 \$2,640 \$1,750 \$9,100 \$4,225 \$4,080

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