# 2713

POLARIS MINES LTD. (N.P.L.)

Ron Claim Group

Exploration Report

on a

Geochemical Soil Sampling Program

and a

Ground Magnetometer Survey

by

Tri-Con Exploration Surveys Ltd.

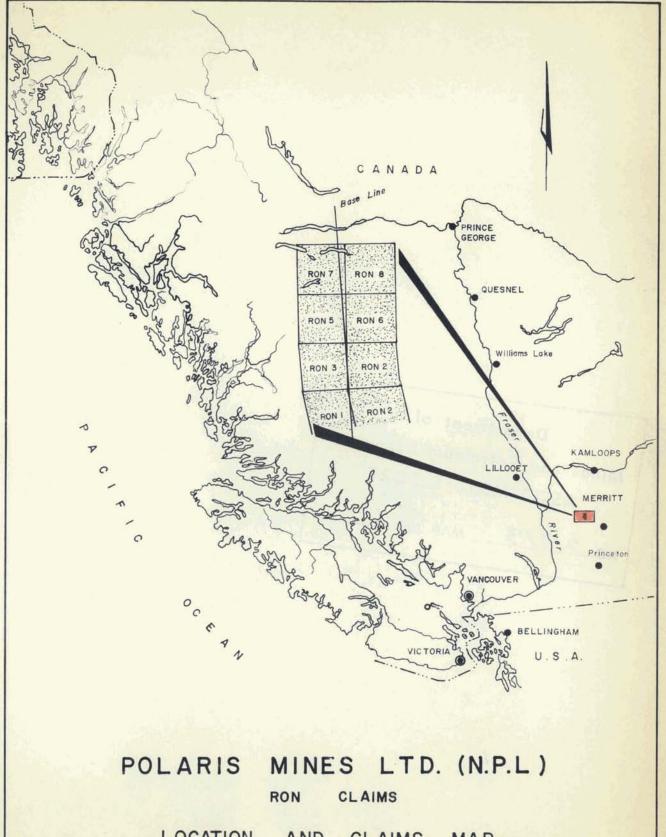
July 28, 1970

Department of Mines and Petroleum Resources ASSESSMENT REPORT

NO. 27/3 MAP

#### C O N T E N T S

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LOCATION AND CLAIMS MAP

SCALE LOCATION MAP I" = 40 MILES - CLAIMS MAP: I" = 3000 FEET Approx.



#### INTRODUCTION

During the period June 26 - July 1st 1970, Tri-Con Exploration Surveys Ltd. of North Vancouver, B.C. conducted a program of line cutting, geochemical soil sampling and ground magnetometer surveying over a group of claims known as the Ron Claim Group, Nicola Mining Division, Province of British Columbia. The survey was conducted on behalf of Polaris Mines Ltd. (N.P.L.).

The geochemical soil sampling program was conducted with the purpose of trying to locate any geochemical trends possibly indicative of copper bearing mineralization. The ground magnetometer survey was undertaken to try and delineate any magnetic patterns indicative of structure or lithology, which would aid in determining the significance of any located copper geochemical anomalies.

#### LOCATION AND ACCESS

The group of claims covered by this report is centered near latitude 50°14'N longitude 120° 59'W some eight miles by road northwest of Merritt B.C. N.T.S. 921/2

Access to the property is by logging road from the all weather road servicing the Craigmont Mine.

#### THE PROPERTY

The Ron Claim Group consists of 8 full sized contiguous claims located as Follows:

Ron	1	Survey Lot	5889
Ron	2	11 11	5890
**	3		5887
11	4	11	5888
71	5	FF FF	5893
	6	11	5894
***	7	11 19	5891
8.8	8	11 11	5892

#### SURVEY SPECIFICATIONS

#### Survey Grid

A chain and compass survey grid was established coincidentally with the soil sampling and ground magnetometer surveys. East-West traverse lines were turned off every 400 feet from a north-south baseline and flagged at 100 foot intervals.

#### THE GEOCHEMICAL SURVEY

Soil samples were taken by experienced field assistants using the chain and compass method. The samplers started from and tied into the baseline for control. Soil samples were taken at 200' intervals on these lines with there locations flagged and coded.

The sample holes were dug with a mattock and the samples were taken by hand and placed in a water resistant bag where they remained until analysis.

The samples were packaged and shipped to Chemex Laboratories Ltd. of North Vancouver, B.C. where drying, sieveing and analysis by atomic absorption was carried out under the supervision of professional chemists.

Two soil profiles taken on the property showed the "B" horizon at 5-10 inches to be the most likely sampling medium to give reliable geochemical readings. pH tests run on these profiles range from 5.1 to 5.5.

All soil samples were analysed for copper and the background value was found to be 40 p.p.m. The intensities range from 12 to 437 p.p.m. copper.

#### THE MAGNETOMETER SURVEY

The magnetometer survey was conducted using a Sharpe MF-1 Fluxgate magnetometer. This instrument measures the vertical component of the earth's magnetic field to an accuracy of 10 gammas. Corrections for diurnal variation were made by tying into previously established base stations at intervals not exceeding two hours. Readings were taken at 100 foot intervals along the traverse lines.

#### DATA PRESENTATION

The 211 geochemical soil samples taken were analyzed for copper and the results presented in Figure 2 as a copper trend map contoured at 40, 60, amd 80 p.p.m. Some 7.5 line miles of magnetometer surveying were conducted. The results are presented in Figure 3 in contour form at a contour interval of 200 gammas. The interpretation map, Figure 4, illustrates the general magnetic features and copper trends to be discussed. Figures 2, 3, and 4 are at a scale of 1 inch equals 200 feet.

#### DISCUSSION OF RESULTS

#### Geochemistry

The major copper anomalies shown on the copper geochemical map contain values of 5-10 times background. These anomalous areas are of considerable size and the intensity of copper within the soils of these areas is indicative of mineralization.

Notes taken during sampling indicate that the anomalous areas are predominantly strewn with angular rock within the soils. This would indicate proximity of bedrock. Other areas of the property are covered by glacial debris as noted by the round rock in the sample holes. This would indicate the possibility of the anomolous areas extending into the more highly overburdened areas.

#### Geophysics

The magnetic intensity showed moderate variations from a maximum of some 2158 gammas to a minimum of some -487 gammas. The magnetic patterns are biased strongly in a northeast-southwest direction and weakly in a northwest-southeast direction. Two magnetic linears  $A-A^1$  and  $B-B^1$  shown on the interpretation map (Figure 4) as inferred faults reflect these two magnetic trend directions.

Magnetic linear  $A-A^1$  and parallel linear  $C-C^1$  trend in a northwest-southeast direction and disrupt the strong northeast-southwest magnetic trends such as  $B-B^1$ . The magnetic high trends shown on Figure 4 are some 600 to 1000 gammas above a background of some 250 gammas.

These areas would appear to outline zones of higher magnetic susceptibility material within the Hybrid phase of the Guichon Batholith.

#### CONCLUSIONS

On contouring the magnetometer data strong trends showed definite northeast-southwest and northwest-southeast magnetic linears. These linears have been interpreted as fault zones and are of particular interest as they are overlain by or directly associated with geochemical copper anomalies. Although pH studies of the soils on the property indicate that the mobility factor of copper ions would be high, the relatively low relief on the property aids in substantiating the size of the anomalous areas shown on the interpretation map as lateral movement of the copper ions would be minimal.

The inferred fault zones would indicate techtonic activity and the coincidental high geochemical response at the intersections of the inferred fault zones present a favourable environment for significant mineralization.

#### RECOMMENDATIONS

- <u>Phase 1</u> 1. An induced polarization survey over the entire grid.
  - 2. A geological survey over the entire grid.
  - 3. Prepartion of a topographic control map.
- Phase 2 Based on the correlation of the magnetometer and geochemical data with the data obtained from phase 1 a trenching and diamond drilling program could be recommended.

Respectfully submitted,

TRI-CON EXPLORATION SURVEYS LTD.

Glen White, Chief Geophysicist

G. L. Anselmo, President

## INSTRUMENT SPECIFICATIONS MAGNETOMETER

#### A. Instruments

- (a) Type Fluxgate
- (b) Make Sharpe MF-1

#### B. Specifications

- (a) Measurement Vertical Magnetic Field
- (b) Range ±100 K gammas in 5 ranges
- (c) Sensitivity Maximum 20 gammas per scale division
- (d) Accuracy ±10 gammas

#### C. Survey Procedures

- (a) Method Two hour loops
- (b) Corrections (i) Base
  - (ii) Diurnal
- (c) Station relationship each station read for intensity of vertical magnetic field.

#### D. Presentation

(i) Contour maps of values in gammas

#### CERTIFICATION

#### TO WHOM IT MAY CONCERN:

- I, GLEN ELMO WHITE, of the City of Richmond in the Province of British Columbia hereby certify:
- 1. That I am a Geophysicist and reside at 112-641 Gilbert Road Richmond, B.C.
- 2. That I studied Geophysics and Geology and graduated from the University of British Columbia with the degree of Bachelor of Science.
- 3. That I have been engaged in Mining Exploration for eight years.
- 4. That I do not have, nor do I expect to receive, either directly or indirectly, any interest in the property, or in the securities of Polaris Mines Ltd. (N.P.L.)
- 5. That this report is based on information derived from a geochemical soil sampling program and a ground magnetometer survey carried out by Tri-Con Exploration Surveys Ltd.

Dated this 28 day of July 19 70

G. White, B.Sc.

Geøphysicist

#### STATEMENT OF QUALIFICATIONS

Name:

WHITE, Glen E.

Profession:

Geophysicist

Education:

B.Sc. Geophysics - Geology University of British Columbia.

Professional Associations:

Associate member of Society of Exploration

Geophysicists.

Active member B.C. Society of Mining Geophysicists

Experience:

Pre-Graduate experience in Geology-Geochemistry-Geophysics with Anaconda

American Brass.

Two years Mining Geophysicist with Sulmac Explorations 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 supervisor Airborne and Ground Geophysical Divisions, with Geo - X Surveys Ltd.

Presently Chief Geophysicist Tri-Con Exploration Surveys Ltd.

Active experience in all Geologic provinces of Canada.

#### CERTIFICATE

#### I, Garry L. Anselmo, DO HEREBY CERTIFY:

- That I am President of Tri-Con Exploration Surveys Ltd. with offices at Suite 200 1405 Hunter Street, North Vancouver, British Columbia, and a Consultant in Geochemical Exploration.
- That I studied Geology and Geochemistry at the University of British Columbia for three years and am a graduate of Simon Fraser University with the Degree of Bachelor of Arts.
- That I have been engaged in Mining Exploration for six years.
- That I have no direct, indirect or contingent interest in the Ron Property Polaris Mines Ltd. nor do I intend to receive any such interest.
- That this report dated July 28, 1970 is based on information derived from a geochemical soil sampling program and a ground magnetometer survey carried out by Tri-Con Exploration Surveys Ltd.

Dated at Vancouver, British Columbia, this 28th Day of July, 1970.

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TRI-CON EXPLORATION SURVEYS LTD.

G. L. Anselmo, B.A.

President

#### CERTIFICATE

I, William G. Stevenson, DO HEREBY CERTIFY:

- That I am a Consulting Geological Engineer with offices at Suite 209 Stock Exchange Building, 475 Howe Street, Vancouver 1, B.C.
- That I am a graduate of the University of Utah 1946, with a B.Sc. Degree.
- That I am a registered Professional Engineer in the Association in British Columbia.
- That I have practised my profession for 22 years.
- That I have no direct, indirect or contingent interest in the Ron Mineral Claims or in the securities of Polaris Mines Ltd., nor do I intend to receive any such interest.
- That I have reviewed a report dated July 28, 1970, based on work conducted by Tri-Con Exploration Surveys Ltd. under the supervision of Garry L. Anselmo, President; and Glen E. White, Chief Geophysicist.

DATED at Vancouver, British Columbia, this 28th day of July, 1970.

W. G. STEVENSON & ASSOCIATES LIMITED Consulting Geologists

W. G. Stevenson, P. Eng.

DOMINION OF CANADA:

PROVINCE OF BRITISH COLUMBIA.

To WIT:

#### In the Matter of

GEOPHYSICAL - GEOCHEMICAL SURVEYS

1. Glen E. White, Geophysicist of Tri-Con Exploration Surveys Ltd.

#200 - 1405 Hunter Street, North Vancouver, B.C. of

in the Province of British Columbia, do solemnly declare that the following is a true statement of cost of combined surveys for report attached.

PERSONNEL		PERIOD			MAN	DAYS	<u>.</u>	WA	GES/	DAY			TOTAL
Harlan Meade Tim Atkins John Bolechowsky Meals & Accommoda Analysis at \$1.20 Profiles and pH t Materials Geochemical-Geoph Secretarial	ation ) per tests 	at \$20/csample	day less 10	" " " " % on repo	rts	and m	naps	• • • •		• • • • •		•	\$450.00 360.00 360.00 360.00 227.88 23.76 100.00 800.00 50.00
										T	$\mathtt{OTAL}$	. ;	\$2731.64

Department of Mines and Petroleum Resources ASSESSMENT REPORT

And I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath and by virtue of the "Canada Evidence Act."

Declared before me at the City Voucoecce , in the

of

Province of British Columbia, this 29

Alen Sulto

A Commissioner for taking Affidavits within British Columbia or A Notary Public in and for the Province of British Columbia.

Sub-mining Recorder

#### INVOICE



CHEMEX LABS LTD. 212 BROOKSBANK AVE., NORTH VANCOUVER, B.C. TELEPHONE 985-0648/9

Tri-con Exploration Surveys Ltd.,

Suite 200 - 1405 Hunter St.,

North Vancouver, B. C.

DATE July 8/70

**INVOICE NO. 3180** 

**CERTIFICATE NO. 9226-9231** 

ATTN: Mr. G. Anselmo

		Alin; III. G. All	SCIMO
ITEM	DESCRIPTION	SUB-TOTAL	TOTAL
	211 samples analyzed for Copper @ \$1.00	\$211.00	
	211 samples prepared @ \$0.20	42.20	
		253.20	
	Less 10%	25,32	
			\$227.88
	Job # 107		
	TERMS—NET 30 DAYS		

#### INVOICE



CHEMEX LABS LTD. 212 BROOKSBANK AVE., NORTH VANCOUVER, B.C. TELEPHONE 985-0648/9

Tri-con Exploration Surveys Ltd.,

Suite 200-1405 Hunter St.,

North Vancouver, B. C.

DATE July 8/70

INVOICE NO. 3174

CERTIFICATE NO. 9066

ATTN: Mr. G. Anselmo

	<u> 1866 - Britan Britani, ar ann an Airean</u>	ATTN: MI. G. A	liseTino
ITEM	DESCRIPTION	SUB-TOTAL	TOTAL
	12 samples analyzed for Copper @ \$1.00	\$12,00	
	12 samples analyzed for PH @ \$1.00	12,00	
	12 samples prepared @\$0.20	2.40	
	Less 10%	26.40 2.64	
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	Job# 107		
	TERMS — NET 30 DAYS		



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TELEPHONE: 985-0648

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• GEOCHEMISTS

• ANALYSTS

• ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO.

9066

3174

TO: Tri-con Exploration Surveys Ltd.,

Suite 200, 1405 Hunter St.,

DATE RECEIVED

July 6/70

North Vancouver, B. C.

DATE ANALYSED

INVOICE NO.

July 8/70

ATTN: Mr. Angelmo

SAMPLE NO.:	РН	PPM Copper	
0-2N A <sub>O</sub>	5,5	18 18 18 18 18 18 18 18 18 18 18 18 18 1	
$\mathbf{A_1}$	5.5		
<b>B</b> -	5,3	14	
0-2N C	5.2	18	
20E 2N A	5.5	14	
$\mathbf{A_1}$	5.3		1.5
В	5.3		
20E 2N C	5.1	<b>18</b>	
20W A <sub>O</sub>	5.6		
A1	5.5	16	
В	5.3	13	
20W C	5.4		
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Certified by Both Trecor



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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 9226

TO: Tri-con Exploration Surveys Ltd.,

INVOICE NO. 3180

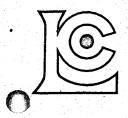
Suite 200-1405 Hunter St.

DATE RECEIVED July 6/70

North Vancouver, B. C.

DATE ANALYSED July 8/70

ATTN Mr. G. Anselmo		
SAMPLE NO.:	PPM	
	Copper	
EMR 1	40	
2	46	
3	36	
3 4 5	52	
	30	
6 7 8 9	58	
7	28	
<b>8</b>	36	
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TO: Tri-con Exploration Surveys Ltd., Suite 200-1405 Hunter St., North Vancouver, B. C.

CERTIFICATE NO.9227

INVOICE NO. 3180

DATE RECEIVED July 6/70

DATE ANALYSED July 8/70

ATTN: No. O. A.

	PPM	
SAMPLE NO.:	Copper	
EMR 41	41	
42		
43		
44		
45	120	1,
46	36	
47		
48		
40	224	
49	33	
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CERTIFICATE OF ANALYSIS

TO: Tri-con Exploration Surveys Ltd.,

Suite 200-1405 Hunter St.,

North Vancouver, B. C.

ATTN: Mr. G. Anselmo

CERTIFICATE NO. 9228

INVOICE NO. 3180

DATE RECEIVED July 6/70

DATE ANALYSED July 8/70

SAMPLE NO.:	РРМ	
	Copper	
EMR 81 82	46	
83	41	
	48	
84 85	40	
	88	
86 87	40	
0/	21 30	
88 89	44	
90	44 467	
91 92	40 56	
93	183	
93 94	114	
95	36	
96	31	
97	41	
98	28	
99	38	
100	24	
101	14	
102	124	
103	38	
104	194	
105	22	
106	31	
107	189	
108	51	
109	48	
110	10	
111	20	
112	21	
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114	24 38	
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117	36	
118	20	
119	16 34 52	
120	34	
Std., #22	52	

Certified by Don Rour



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TO: Tri-con Exploration Surveys Ltd., Suite 200 - 1405 Hunter St.,

North Vancouver, B. C.

CERTIFICATE NO. 9229

INVOICE NO. 3180

DATE RECEIVED July 6/70

DATE ANALYSED July 8/70

ATTN: Mr. G. Anselmo

SAMPLE NO.:	PPM	
	Copper	
EMR 121	18	
122	38	
123	13 · · · · · · · · · · · · · · · · · · ·	
124	18 a. 18	
125	26	
126	42	
127	163	
128	24	
129	30	
130	31	
131	41	
132	31	
133	12	
134	10	
135	48	
136	28	
137	22	
138 139	24	
139	21	
140	12	
141	30	
142	22	
143	30	
144	24	
145	44	
146	70	
147	58 36	
148	36	
149	12	
150	24	
151	51	
152	56 82 31	
153	82	
154	31	
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157	34	
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159 160	21 34 30 30 18	
	18	
Std., #22	52	



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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 9230

TO: Tri-con Exploration Surveys Ltd.,

INVOICE NO. 3180

Suite 200 - 1405 Hunter St.,

DATE RECEIVED July 6/70

North Vancouver, B. C.

DATE ANALYSED July 8/70

ATTN: Mr. G. Anselmo

SAMPLE NO.:	PPM	
EMR 161	Copper 16	
162	42	
163		
164	51	
165	36	
166	50	
167	72	
168	24	
169	26	
170	22 1 22 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	
170	38	
171	14 14 14 14 14 14 14 14 14 14 14 14 14 1	
172	24	
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178	60	
179	26	
180	28	
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200	40	
Std., #22	52	

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North Vancouver, B. C.

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INVOICE NO.

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3180

SAMPLE NO.:	PPM Copper		
MR 201	44		
202	31		
203	48		
204	28		
205	26		
206	18		
207	20		
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209	68 1 miles 4 de la in-		
210	40		
211	20		
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