RECONNAISSANCE GEOCHEMICAL REPORT ON THE LARK #1 TO #8 CLAIMS GRAHAM ISLAND, QCI, B.C. SKEENA MINING DIVISION

Lat.53°32'N; Long.132°19'W.

for

AVANCE INTERNATIONAL INC. 1005 - 789 West Pender Street Vancouver, B.C.

by

J.P. ELWELL ENGINEERING LTD. 1026 - 510 West Hastings Street Vancouver, B.C.

August 6th, 1981

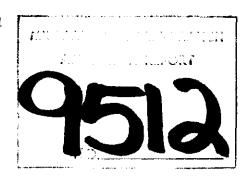


TABLE OF CONTENTS

<u>Page</u>
SUMMARY
MAPS
Location Map of Lark Claims follows page 2 1:10,000 scale map of Geochemical Results in pocke
APPENDICES
And the property of the second

- 'A' Letter Report by Harold M. Jones, P.Eng.
- 'B' Copies of Assay Certificates
- 'C' Copies of Invoices

RECONNAISSANCE GEOCHEMICAL REPORT ON THE LARK #1 TO #8, GRAHAM IS., Q.C.I., B.C.

SUMMARY

The Lark group of 8 located claims is situated in the Mamin River Valley of Graham Is. Q.C.I. Geologically they are underlain by the Masset Formation of volcanics and related tuffs consisting of both basaltic and rhyolite rock types.

In April and May, 1980 a reconnaissance geochemical sampling program was conducted over the claims, with all samples being analysed for arsenic and mercury, and those with significant mercury values being run for gold, the objective being to determine if there was an area within the claims favourable for a Cinola type gold deposit.

The wide spaced lines resulted in no anomalous areas, but an analysis of the results indicated that further geochemical sampling might be justified.

INTRODUCTION

In April and May, 1980, a reconnaissance examination and soil sampling program was carried out on the Lark #1 to #8 mineral claims, located on Graham Is. Q.C.I. The fieldwork was done by M. Boyles Mining Contractor Ltd. on behalf of Avance International Inc. who had entered into a joint venture agreement with Suzie Mining Corp., Gold Cup Resources Ltd., Sunatco Development Corp., and Rockerfeller Investment Corp., to share the cost of the program on a pro-rata basis, each company being responsible for one fifth of the total cost.

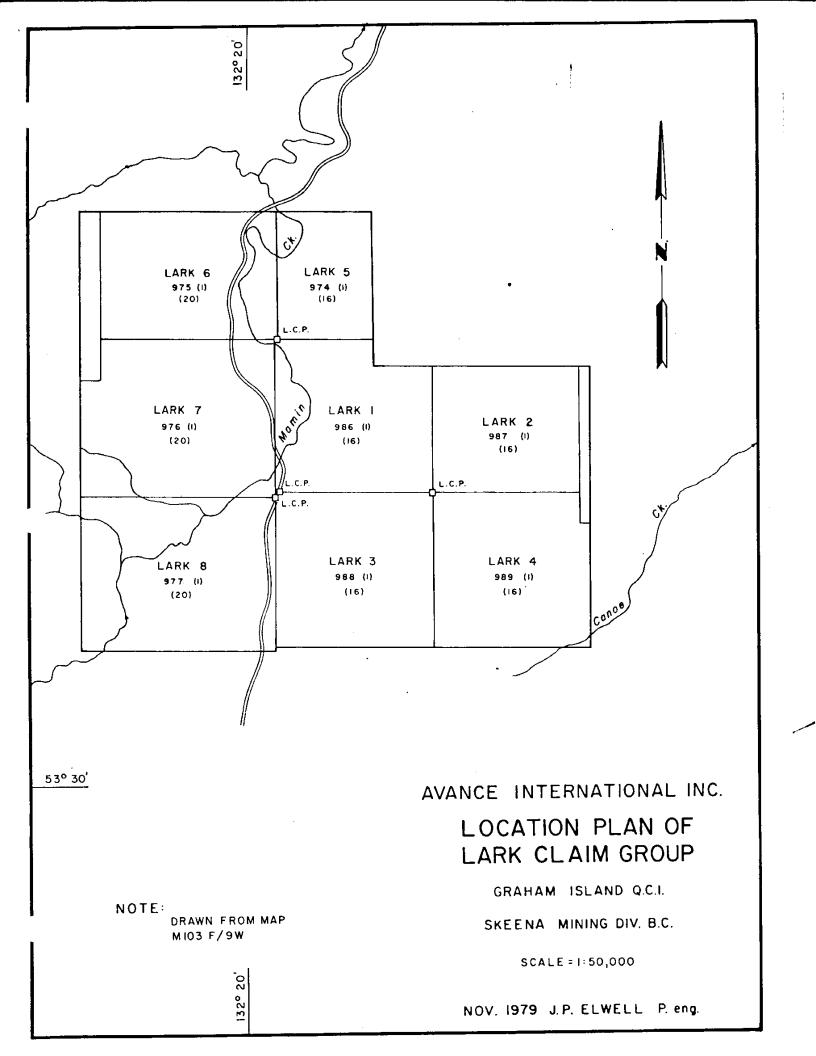
The writer visited the property in the period May4th-6th, 1980 to review the progress of the work, and subsequently compiled an evaluation report on the results.

LOCATION AND ACCESS

The claims straddle the Mamin River Valley to the north of Pam Lake, and to the south of Blackwater Creek, the approximate geographic center of the block being Lat.53°32'N; Long. 132°19'W.

Access to the property is by way of main highway from Masset to Queen Charlotte City via Port Clements, the distance from Port Clements to about the center of the claims being approximately 24 km. From the main highway, there are a number of old logging roads branching off in both directions which make most part of the valley area reasonably accessible.

A location map drawn from Mineral Claim Map M103F/9W accompanies this report.



TOPOGRAPHY, TIMBER, ETC.

The topography of the claim area varies from moderate to rugged, with some precipitous bluffs and escarpments, the average elevation of the central axis of the claims which forms the Mamin River Valley, being about 300 feet. The ground rises to the west to about 1000 feet, and to the east, a north-south trending ridge rises to nearly 2000 feet with an average elevation of around 1000 feet.

Most of the more accessible part of the claim has been logged off in recent years, and is now covered with fairly dense young second growth spruce, fir, etc. along with considerable old logging debris which makes prospecting difficult. The old logging roads however, are mostly passable to four wheel drive vehicles, and the rock exposures on the road cuts would aid in the geological mapping.

Overburden is fairly complete in the river valley, but light on the hillsides, with numerous outcrops at the higher elevations.

The Mamin River and several small creeks would supply ample water for exploration purposes.

PROPERTY

According to the data examined, the property consists of eight metric claim blocks totalling 140 units. The details are as follows:

Name	Record No.	Units	Date of Record
Lark #1 Lark #2 Lark #3 Lark #4 Lark #5 Lark #6 Lark #7 Lark #8	986 987 988 989 974 975 976	16) 16) 16) 16) 16) 20) 20)	July 25, 1979

REGIONAL AND LOCAL GEOLOGY

Mapping by A. Sutherland Brown (Bull. #54, B.C. Dept. of Mines) shows the claim area to be entirely underlain by the Masset Formation, consisting of a number of volcanic and pyroclastic rocks of indefinite age, but generally believed to extend from Paleocene to Middle Eocene age. A small outcropping of the Jurassic Yakoun formation of andesitic flow rocks and altered sediments may occur on the southern edge of its block.

In comparison, the rocks vary from a basic type classified as basalt, but grading into andesite, to acid rhyolite types, and intermixture of both acid and basic types. The basalts consist of massive flows with columnar jointing and also as breccias with fragments up to 2 or 3 inches in size and occasionally larger. They are dark brown to black in color and weather to a light grey on the surface.

The second most abundant rock type is the acidic rhyolites, dark to light grey in colour, variably porphyritic, and often banded and highly silceous.

Interbedded with the flow rocks are tuffs and ash beds containing volcanic bombs and lapilli with chalcedony fillings.

The reconnaissance examination made by the writer in April indicated that the rock types vary greatly from place to place, changing from dark green to black basalts, to light grey rhyolites with frequent interbedding of ash beds and tuffs, but a detailed program of geological mapping would be required to determine the extent and location of the different rock types within the claim area.

FIELD PROGRAM AND GEOCHEMICAL SURVEY

The initial part of the field program consisted of locating the claim corners, flagging the perimeter of the block, and preparing a base map to a scale of 1:10,000 showing the roads and creeks which cross the property.

A total of 252 samples were taken during the preliminary soil sample program in 1980. The samples were collected from cut lines around the perimeter of the Lark 1, 2, 3, 4 and 8 claims; in an east-west direction across the Lark 8 and the common boundary of the Lark 1, 2, 3 and 4 claims. Silt samples were taken from some of the minor run-off streams and along roads drainage ditches.

The samples were sealed in standard soil sample envelopes and submitted to Chemex Labs Ltd. of North Vancouver for analyses. All samples were anlaysed for arsenic and mercury, and those indicating 100 ppm Hg or higher were also run for gold.

ANALYSIS PROCEDURE

Gold - A 5 g sample was ashed for 1 hour at 800°C and digested with aqua regia. A gold bromide complex was extracted with MIBK and analysed by the atomic absorption method with the results expressed in p.p.b.

<u>Arsenic</u> - A 1 g sample was digested with nitric acid and perchloric acid, and a portion reduced with potassium iodide and analysed with standard flameless A.A with borohydrate reduction.

<u>Mercury</u> - A 1 g sample was digested with nitric and hydrochloric acid and analysed by standard flameless A.A. using stannous sulphate reducing agent.

DISCUSSION OF RESULTS

The geochemical data was plotted on the 1:10,000 scale map which accompanies this report. The arsenic results were all very low, and there appeared to be no correlation between the arsenic and mercury values. Gold values were predominantly less than 10 p.p.b. with a few in the 10-20 ppb range.

The data was further reviewed by Harold M. Jones, P.Eng. a specialist in geochemistry and geology. After an analysis of the results obtained on the Lark claims, and a study of the geochemical and geological data on the Consolidated Cinola property about 1.5 km to the east, he came to the following conclusions:

- 1. The Cinola property is related to a prominent fault system, and it has been found that mercury geochemical values greater than 200 ppb, and gold values greater than 40 ppb are considered possibly anomalous.
- 2. There is no topographic evidence of a similar fault structure on the Lark claims.
- 3. There are no areas of co-incident mercury-arsenic-gold values on the Lark claims, but the lines are so widespread that no definite conclusions as to the meaning of the results can be drawn at this time.
- 4. Further detailed geochemical sampling is recommended.

The full text of Mr. Jones' report is attached as Appendix "A".

J.P. ELWEDL ENGINEERING LTD.

August 6th, 1981

J.P. DOWELL, P. Eng.

STATEMENT OF COSTS

Contract fieldwork - M. Boyles Mining Contractor	\$ 28,000.00 *
Assaying	1,946.50 *
J.P. Elwell, P.Eng field examination and consulting services	1,562.93 *
	\$ 31,509.43

^{*}Copy of invoice attached.

APPENDIX 'A'

Letter Report by Harold M. Jones, P.Eng.

G. A. NOEL & ASSOCIATES INC.

CONSULTING GEOLOGISTS

822-SIO W. HASTINGS ST.

VANCOUVER, B. C.

V68 1L8

TELEPHONE: (604) 689-5533

June 30, 1980

Mr. J.P. Elwell, P.Eng. 1026 - 510 West Hastings Street Vancouver, B.C. V6B 118

Dear Jim:

I reviewed the geochemical data on the Lark claims as requested, then researched the available literature on the Consolidated Cinola gold property located $1\frac{1}{2}$ - 2 miles to the east.

It is readily apparent that the Consolidated Cinola property is related to a fault which parallels the sandspit fault and is probably a part of that system. It is also related to a rhyolite porphyry stock which intrudes the fault system. Mineralization, while occuring in all rock types on the property, is terminated by the "footwall fault" and weakens along the strike and to the east.

Mercury geochemical soil sample assays are very high over the mineralized zone, with some having values >1% Hg. Gold content in soils is also high.

Sanders (President, Consolidated Cinola-personal communication) said that values in mercury greater than 200 ppb. were considered "of interest" as were values in gold greater than 40 ppb. Gold in soils in the range 10 - 20 ppb. are widespread well beyond the known mineral deposit and are not considered of interest.

On the Lark claims soil sample assay results show a wide range in mercury values with an appreciable number greater than 200 ppb. Unfortunately, sample lines are too widespread to indicate any trend.

Some of the higher mercury assays are from stream silts. This is most likely due to the concentrating of mercury fines which have a high specific gravity and do not necessarily represent anomalous conditions.

Other than a few scattered 20 ppb. Au, all gold assays are very low. No areas are considered anomalous in gold.

Arsenic soil samples are mostly very low. There are no areas of coincident Hg-As-Au anomalous values, which one would expect if exploring in the vicinity of a gold deposit.

Mr. J.P. Elwell, P.Eng. June 30, 1980 Page two

Known geology on the Lark claims is restricted to the higher ground which exposes volcanic flows of the Tertiary Masset formation. No rhyolite porphyry or fault structures have been identified. If present, they must be in the lower, drift-covered areas (On the Consolidated Cinola property the fault structure is well defined on surface by a scarp).

CONCLUSIONS

The Lark claims are located at least 1.5 miles west of the known mineralized structure on the Consolidated Cinola property. For this property to be of interest, it may need a similar fault structure. If one is present, it is not obvious.

The geochemical data does not give sufficient coverage to draw any conclusions other than that some areas have relatively high mercury content in the soils. These values could be meaningful or may indicate widespread mercury in the Tertiary volcanic flows. The latter is suspected. This is partially substantiated since there are no areas of coincident mercury-arsenic-gold anomalous values.

It is concluded that the Lark claims are not favourably situated on the Sandspit fault system and that the widely variable mercury soil values may be normal for the Tertiary volcanics in the claims area. However, insufficient work has been done to substantiate the geological and geochemical conclusions. For this reason a modest program is recommended.

RECOMMENDATIONS

- 1) Soil sample all logging roads at 100 metre sample intervals. Take all samples away from and on the high side of the road to prevent contamination from local traffic.
- 2) Lay out and soil sample small soil grids in the following areas:
 - a) At the southwest corner of Lark 8 to check area of anomalous arsenic samples.
 - b) At southern boundary of Lark 3 to check area of high mercury in silt samples.

Assuming a maximum of 400 soil samples, this work should be completed by two men in approximately one week at an estimated cost of \$6,500.

Respectfully Submitted,

HAROLD M. JONES, P.Eng.

Hoold to Jones

HMJ:mam

APPENDIX 'B'

Copies of Assay Certificates



212 BROOKSBANK AVE. NORTH VANCOUVER, B.C. V7J 2C1 CANADA TELEPHONE: 984-0221 AREA CODE: 604 04-352597 TELEX:

· ANALYTICAL CHEMISTS

• GEOCHEMISTS

• REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 52814

MR. James Elwell TO:

INVOICE NO.

1030-510 W. Hastings St.

Vancouver, B.C.

RECEIVED

May 5/80

35753

V6B 1L8

'N:			ANALYSED	May 15/80
AMPLE NO. :	PPM	PPB		
AMPLE NO	As	Hg Hg		
RA SS #1	1	70		
2	1	70		
3	1	170		
4	1	90		
5	4	180		
6	2	80		
7	1	70		
8	1	70		
9	3	70		
RA SS #10	2	70		
R11 SS #1	1	40		
2	1	40		
3	1	50		
4	1	50		
5	<u>_</u>	70	<u></u>	
6		430		
7	ī	80		
8	1	70		
9	5	120		
10	1	60		
11	1	50		
12	ī	130		
13	6	160		
14	1	80		
R11 SS 15	· 1	80		
ML SS #1	5	190		
2	2	250		
3	4	210		
ML SS #4	1	100		
NML 9 SS #1	1	70		
WML SS #1	3	140		
R7 SS #1	8	340		
R7 SS #2	i	680		
8B3 #1	1	230		
R8B3 #2	ī	120		
CL 1	4	220		
2	9	410		
4	í	180		
5	9	360		
CL 6	Ó	380		

CERTIFIED BY: ...



212 BROOKSBANK AVE. NORTH VANCOUVER, B.C. CANADA V7J 2C1 **TELEPHONE:** 984-0221 AREA CODE: 604 TELEX: 04-352597

• ANALYTICAL CHEMISTS

• GEOCHEMISTS

• REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO: J.P. Elwell

1030-510 W. Hastings St.

Vancouver, B.C.

V6B 1L8

· ATTN:

52815 CERTIFICATE NO.

INVOICE NO.

35753

RECEIVED

May 5/80

ANALYSED

May 15/80

ni in.			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	-22, 15,00
SAMPLE NO. :	PPM	PPB	· · · · · · · · · · · · · · · · · · ·	
	As	<u>Hg</u>		
CL 7	10	390		
8	10	310		
9	7	290		
10	6	310		
11	1	100		
12	7	180		
13	3	240		
14	5	130		
15	2	60		
16	1	80		
17	1	80		
18	ī	110		
19	ī	260		
20	î	120		
20 21	* * * * * * * * * * * * * * * * * * *	160		
22	2	230		
	1			
23		60		
24	2	100		
25	2	40		
CL 26		80		
158 lw	4	350		
2	6	100		
3	2	90		
4	1	50		
5	1	70		
6	1	120		
7	4	90		
8	2	90		
9	10	40		
10	1	130		
11	1	270		
12	4	160		•
13	6	130		
14	7	150		
15	ì	60		
16	16	120		
17	1	60		
15s 17+30w	3	90		
אטכדוז פעד ארב	1	20		
MCD IM	1			
NCB 1W NCB 2W	1	20		

MEMBER

ASSOCIATION

CERTIFIED BY: ...



212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

• ANALYTICAL CHEMISTS

• GEOCHEMISTS

• REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO.52816

TO: J.P. Elwell

INVOICE NO.

1030-510 W. Hastings St.

.

Vancouver, B.C.

RECEIVED May 5/80

ATTN: V6B 1L8

ANALYSED

May 15/80

35753

AMPLE NO. :	PPM	PPB
	As	Hg
NCB 3W	1	30
4	1	20
5	1	50
6	1	70
	1	90
8	1	20
9	1	40
10	1	40
11	1	40
12	1	70
13	1	80
14	1	20
15	1	30
16	1	120
	1	20
18	1	30
19	ī	40
19 Silt Sample	ī	30
20	ī	70
21	1	190
22	1	450
23	- 1	350
24	ī	190
25	1	200
26	î	190
27	1	170
	3	130
28	1	10
29	1	60
30	2	
31	1	130
32	1	280
33 24	2	230
34	2	
35	3	120
36		
37	4	290
NCB 38W	4	290
WCB lN Silt Sample	Ţ	80
WCB 1N	1	230
WCB 2N	1	120

CERTIFIED BY:



212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

· ANALYTICAL CHEMISTS

• GEOCHEMISTS

• REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO.

52817

TO: J.P. Elwell

ATTN:

INVOICE NO.

35753

1030-510 W. Hastings St. Vancouver, B.C.

RECEIVED

May 5/80

V6B 1L8

ANALYSED

May 15/80

SAMPLE NO. :	PPM	PPB
	As	Hg
WCB 3N	2	90
4	4	100
5	2	80
6	4	100
7	1	190
8	1	90
9	1	140
10	1	160
11	1	110
12	1	90
13	1	170
14	1	150
15	1	320
16	1	230
17	1	120
18	2	320
19	1	340
20	1	140
21	2	70
22	2	80
23	1	100
24	2	50
25	1	60
26	1	110
27	1	60
28	1	90
29	2	50
30		100
31	ī	110
31 Silt Sample	2	60
32	1	100
32 Silt Sample	3	50
33	ĩ	60
34	î	80
35	2	40
36	1	40
30 37	1	100
38	1	90
39	2	60
WCB 40 N	3	150
WCD 4U N		

CERTIFIED BY: Hart Sielle



212 BROOKSBANK AVE. NORTH VANCOUVER, B.C. CANADA V7J 2C1 TELEPHONE: 984-0221 604 AREA CODE: 04-352597 TELEX:

. ANALYTICAL CHEMISTS

• GEOCHEMISTS

• REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 52819

J.P. Elwell TQ:

INVOICE NO.

35753

1030-510 W. Hastings St. Vancouver, B.C.

RECEIVED

May 5/80

V6B 1L8

ANALYSED

May 15/80

,	Δ	71	۲N	

SAMPLE NO. :	PPM	PPB	
SANIFLE NO	As	Hg	
SCB 29E	2	160	
30	1	250	
31	3	180	
32	1	80	
33	1	200	
34	1	180	
35	1	370	
36	1	460	
37	2	400	
38	1	110	
39	1	210	
40E	1	190	
OW	5	290	
1	4	220	
2		380	
3	1	320	
4	1	190	
5	1	220	
6	2	60	
7	1	210	
8	1	220	
9	1	180	
10	ī	120	
11	1	340	
13	<u>1</u>	300	
14	2	80	
15	ī	140	
16	2	90	
17	3	110	
18	10	100	
19	16	100	
SCB 20W	30	110	

CERTIFIED BY:

APPENDIX 'C'

Copies of Invoices

M. Boyles Mining Contractor

- LTD. -

Specializing in all Underground Developments, Diamond Drilling and Assessment Work

311Room **202**- 543 Granville Street
VANCOUVER, B. C

June 15, 1980

Advance International Inc.,
Gold Cup Resources Ltd
1005- 789 West Pender Street
Vancouver, B.C.

Billing for the Lark 1 to 8 in the Queen Charlottes in the Skeena Mining Division.

ogram of some line cutting, soil sampling and stream sediments and prospecting

which has been supervised and authorised by J. P. Elwell P. Eng.

\$28,000.00

ONE: 682-2120

922-2551

1030 - 510 W. HASTINGS ST. VANCOUVER, B.C. V6B 1L8

July 9th., 1980

Avance International Inc., 1005-789 West Pender Street, Vancouver, B.C.

STATEMENT OF ACCOUNT

J.P. Elyck, P. Eng

The pear.

COPY

INVOICE



CHEMEX LABS

212 BROOKSBANK AVE. NORTH VANCOUVER, B.C. CANADA V7J 2C1 TELEPHONE: 984-0221 AREA CODE: 604

TELEX:

04-352597

• ANALYTICAL CHEMISTS

• GEOCHEMISTS

• REGISTERED ASSAYERS

TO: J. P. Elwell 1030 - 510 W. Hastings St. Vancouver, B.C. V6B 1L8

CERTIFICATE NO. 52814 to 52819

INVOICE NO.

35753

DATE

May 16/80

AIIN:	IN:		May 16/80		
	DESCRIPTION		SUB-TOTAL	TOTAL	
232 232	Analyzed for As & Hg @ \$6.50 Prepared @ \$0.50		\$1508.00 116.00	s	
234		,		\$1624.00	

TERMS-NET 30 DAYS

11/2 % Per Month (18% Per Annum) Charged on Overdue Accounts

78-040

INVOICE



CHEMEX LABS LTD.

212 BROOKSBANK AVE. NORTH VANCOUVER, B.C. CANADA V7J 2C1 TELEPHONE: 984-0221 AREA CODE: 604 TELEX: 04-352597

ANALYTICAL CHEMISTS

• GEOCHEMISTS

REGISTERED ASSAYERS

TO:

Gold Cup Resources

CERTIFICATE NO.

53279 - 53281

1005 - 789 W. Pender St.

INVOICE NO.

360**53**

Vancouver, B.C.

DATE

ATTN: Validot	iver, b.c.	June 6/80	
	DESCRIPTION	SUB-TO	TAL TOTAL
	(J.P. Elwell)		
85	Analysed for Au @ \$3.75	\$322.	50
			\$322.50
			}

TERMS—NET 30 DAYS

11/2 % Per Month (18% Per Annum) Charged on Overdue Accounts

78-040

