

87-7-15517
1/88

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

15,517

DRILLING REPORT ON

FILMED

GOLDEN PLUG CLAIM

FOR

Operator: GREEN LAKE RESOURCES

Owner: G.H. Rayner and Associates Ltd.

**SUB-RECORDER
RECEIVED
JAN 13 1987
M.R. # \$.....
VANCOUVER, B.C.**

Osoyoos, M.D.

Location: Lat. $49^{\circ} 18.3'$
Long. $119^{\circ} 46' W$

NTS 82E/5W *H/16*

By: W. C. Day
B.Sc. P.Geol.

January 8, 1987

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INTRODUCTION

The Golden Plug Property was explored during the mid 1970's primarily for its uranium potential. A large, moderately strong I.P. anomaly was located, associated with a rhyolite intrusive exhibiting brecciation on the surface.

In his report dated June 25, 1978, Mr. G.H. Rayner, P. Eng. recommended drilling of the I.P. response to determine the cause.

During the period of December 3, 1986 to December 11, 1986 a modest drill program was undertaken to assess the anomaly. The core recovered from this program is currently stored in Penticton, B.C.

LOCATION AND ACCESS

The property is located about 29 km to the southwest of Penticton, B.C. in the Interior Plateau of south central British Columbia. The small settlement of Olalla lies about 7 km. to the southwest. Specific co-ordinates would be $49^{\circ}19'$ North lat. and $119^{\circ}45'$ West long.

The Penticton-Keremeous highway passes about 2 km to the west and a well-maintained gravel road traverses the long axis of the property. A net of logging and ranch roads covers the eastern portion. Some areas of the western part of the property are precipitous and only accessible with difficulty.

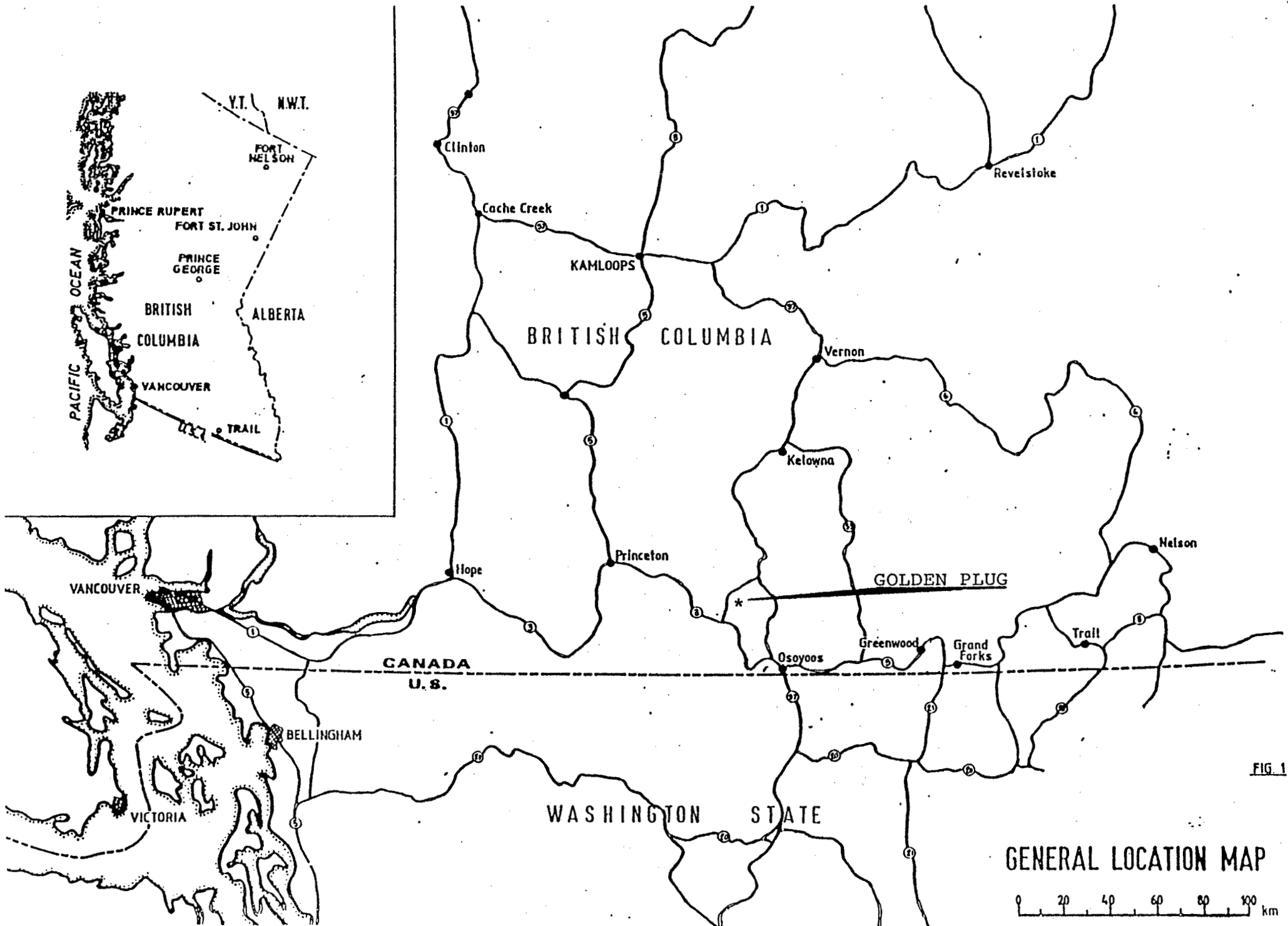
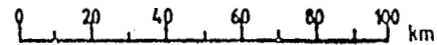


FIG. 1

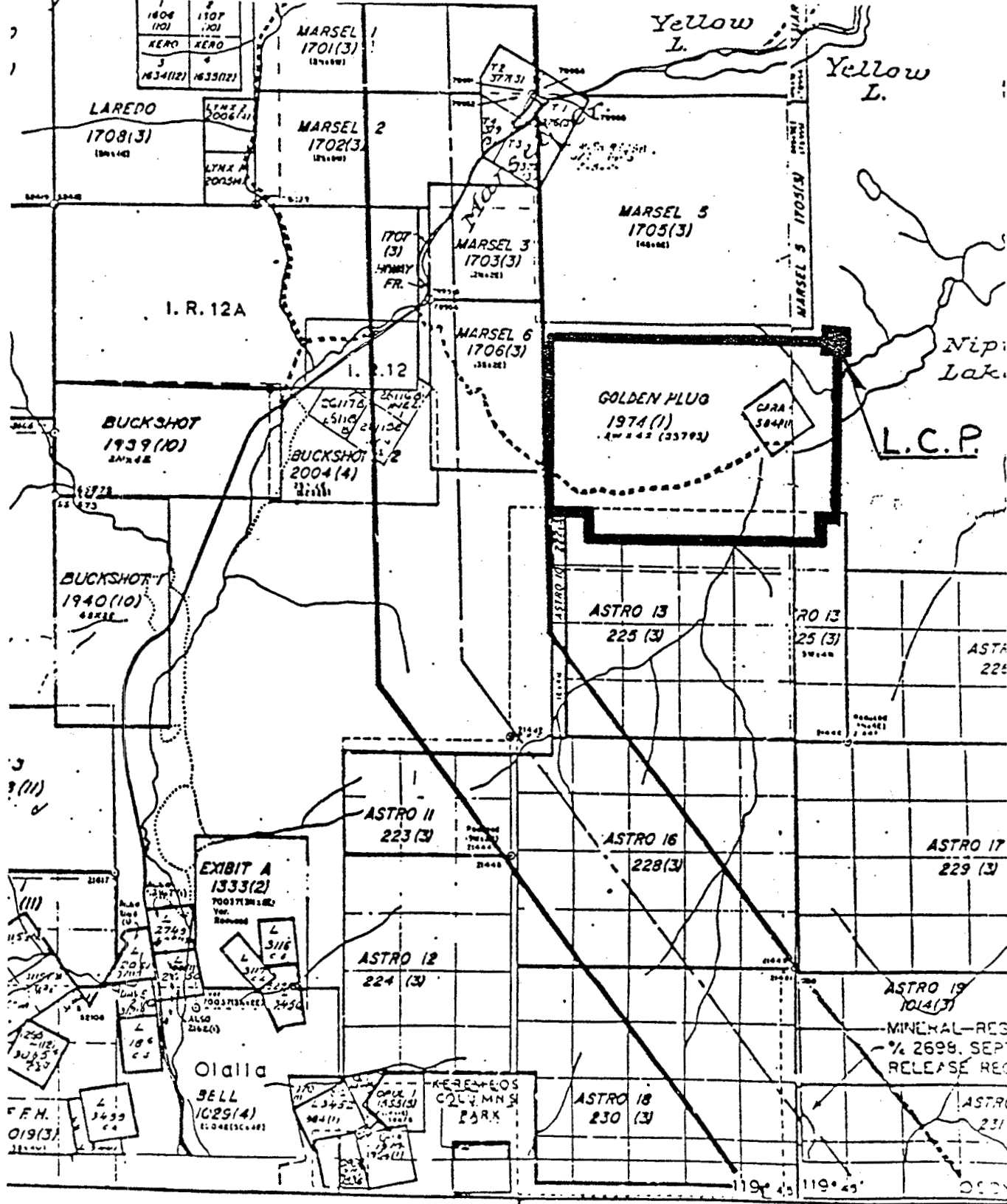
GENERAL LOCATION MAP



CLAIM DATA

The Golden Plug Property consists of one twenty unit claim, relevent data pertaining to which, follows:

<u>Claim</u>	<u>Record #</u>	<u># Units</u>	<u>Expiry Date</u>
Golden Plug	1974	20	January 26, 1987



SCALE
1:50 000



CLAIM MAP
GOLDEN PLUG CLAIM

Fig. 2

HISTORY

The property was first subjected to exploration in 1977 when Union Oil Company of Canada Ltd. conducted Induced Polarization and scintillometer surveys. This work was followed by a program of geological mapping, soil and stream sediment sampling and a regional scintillometer survey conducted in 1978. No further work was conducted on the property until the diamond drill program of subject in this report.

PROPERTY GEOLOGY

Springbrook Formation

The Springbrook Formation is the oldest unit exposed on the property. It is presumed by Church (1973) to be Middle Eocene in age. Mapping by Bostock (Bostock 1940, 1941) indicates that the Springbrook Formation underlies about 60 percent of the Tertiary rocks in the district. It was laid down on a pre-Tertiary terrain of considerable local relief and hence shows considerable variation in both thickness and lithology. Regionally the Formation is composed mainly of conglomerate with lesser shale, sandstone, tuff and some talus deposits.

Generally through the district the Springbrook Formation exhibits an increase in sorting and a decrease in fragment size from the bottom to the top of the section. These features are clearly shown in Springbrook exposures some 5 km south west of the property. Here thick beds of coarse unsorted conglomerate grade upward into well sorted fine conglomerate and sandstone and finally into a lamellar fine grained tuff. The total Springbrook section at this location is some 270 meters thick.

The exposures of Springbrook Formation on the Twin Claims are limited in extent and show only a small part of the range of lithologies known in the district. On the property the unit is confined to the western part of the claim. The full thickness of the Formation in this area is unknown as the base is never seen. The maximum exposed thickness is about 10 meters.

All of the exposures were of massive, unsorted conglomerate with a well indurated, distinctly silty matrix. The matrix has a pale chlorite-green colour indicating that its iron content has never been oxidized. Some cobbles are rusty and occasionally carry pyrite, but the sulphides clearly pre-date the formation of the conglomerate. Weak malachite was similarly noted on fractures in a cherty cobble.

The clastic material forming the conglomerate showed little variation between exposures. The average composition of pebbles and cobbles is estimated to be as follows:

<u>Rock Type</u>	<u>Percent by Volume</u>
Volcanics	45
Chert	35
Metamorphics	10
Other Seds	5
Intrusive	5

These percentages refer to the volume of materials but not to the number of clasts. Volcanic clasts (45% by volume) are less numerous than chert (35% by volume) but are distinctly larger and more angular. This may reflect a closer source for the volcanic material.

As noted above, the conglomerate matrix is both silty and well indurated. It would appear to be quite impermeable and clearly has not been affected by oxidizing groundwater.

The Springbrook has been affected by northerly and northwesterly trending faults that are not exposed. In general where these faults have affected the Springbrook they appear to be down-thrown to the west. This is in contrast to the generally easterly downthrown faults seen elsewhere on the property and reported through the district by Church. Although

the vertical movement on these faults is only a few tens of meters at the most they nevertheless make it difficult to predict the depth to the Springbrook subcrop beneath younger materials to the east of the observed exposures.

Marron Formation

The Marron Formation forms the bulk of the White Lake Complex overlying the Springbrook Formation. These volcanics are of Early Tertiary age and are generally intermediate in composition. Church (1973) has subdivided the Formation into five members of which the lower four are present on the Claim.

Yellow Lake Member

The Yellow Lake is the oldest member of the Marron Formation. Typically through the district this member is a massive, cliff-forming anorthoclase-augite porphyry. Thicknesses up to 500 m. have been reported (Church, 1973). Locally the base of the member is composed of about 100 m. of volcanic breccia with typical Yellow Lake porphyry overlying it and cutting it as irregular dykes and bodies. This basal volcanic breccia lies almost concordantly on the underlying Springbrook Formation. These two units are very similar in colour, texture and weathering characteristics. They are virtually indistinguishable at a distance. They are, of course, readily separated in outcrop since the Yellow Lake breccia is composed entirely of Tertiary volcanic fragments. Occasional narrow lenses of water-lain tuff were noted in the breccia.

Kitley Lake Member

Trachyte flows of the Kitley Lake Member underlie much of the area. These are massive resistant rocks and often form bluffs and cliffs. They are similar to the flows of the Yellow Lake Member in both colour and texture and also show a high radiometric background as does the Yellow lake. East of the Claim these rocks are exposed through a vertical range of about 300 m. but it is not certain that this represents a true thickness. The western outcrops representing the lower part of this unit are a distinctive biotite-feldspar porphyry.

Kearns Creek Member

The Kearns Creek Member is a basaltic andesite occurring above the Kitley Lake Member. It is a recessive unit forming subdued outcrops to the east of the claim. The Kearns Creek forms a distinctive reddish-brown regolith with many fine basaltic fragments. The mapped distribution of Kearns Creek is essentially the distribution of this regolith rather than of outcrops.

The unit tends to be strongly vesicular to scoriaceous. The vesicles are usually filled with amygdales of various secondary minerals.

Nimpit Lake Member

This unit was noted only to the east of the claims where Nimpit Lake trachyte flows from a prominent bluff about 80 m. high. The trachyte is weakly porphyritic with small phenocrysts of plagioclase and pyroxene. The exposure appears to dip at a low angle to the east.

Marama Formation

The Marama Formation overlies the Marron Formation and is composed of rhyolite and rhyodacite flows and pyroclastic materials. The largest exposure of this unit lie north east of the property. These exposures consists of white to light grey crystal tuff and tuff breccia. No good bedding attitudes were noted.

A group of outcrops on the east end of the claim have also been assigned to the Marama Formation in recent mapping. These rocks are believed to present a neck or feeder for the marama volcanics. The neck is 200 m. in diameter and appears to be roughly circular although the eastern portion was not mapped. It is composed of a pale bluff to white rhyolite which is often quite xenolithic. Flow banding is common at variable, usually steep attitudes. Small vuggy, silicious areas were sometimes noted, often is associated with fine rusty vods probably after sparce pyrite.

Although its contacts are not exposed the neck clearly transgresses Yellow Lake rocks through a vertical range in excess of 150 m.

The projected contact of this intrusive would coincide quite closely with the induced polarlization anomaly detected in 1977 under the valley flow to the south of the neck. It is possible that this anomaly may reflect pyrite associated with the margin of this small Marama intrusive.

DIAMOND DRILL PROGRAM Fig.3

The program consisted of three holes drilled from two setups. Holes GP86-1 and 86-2 were drilled from setup one, and GP86-3 and set up two. (HQ size).

Data pertaining to the holes follows:

<u>Hole</u>	<u>Azm</u>	<u>Declination</u>	<u>Casing</u>	<u>Coring</u>
GP-86-1	---	-90°	108' (33m)	446.5' (136m)
GP-86-2	270°	-50°	170' (52m)	286' (87m)
GP-86-3	270°	-50°	60' (18m)	276' (84m)

Hole logs are attached as appendix 1.

The core is stored on Rayner's property in Maramate, B.C.

PSEL 3
23(3)
(121)

MARSEL 5
1705(3)
(143.52)

N
4

MARSEL 5 17051

PSEL 6
06(3)
(121)

GOLDEN PLUG
1974(1)
27243 (23793)

CRA
584917

86-3
86-1
86-2

ASTRO 13
0108157

ASTRO 13
225(3)

ASTRO 13

GOLDEN PLUG CLAIMS
PLAN OF DRILL HOLES Fig.3

Scale ~ 1:23529

0 235.29 metres

CONCLUSIONS

The program was successful in determining the cause of the IP anomaly which appears to be a result of intense clay alteration. The vein of Zn, Cu, Ag and Au enrichment may have been remobilized from a source at depth. The most favourable rock unit that might host the source mineralization is considered to be the Springbrook Formation which consists dominantly of conglomerate, sandstone and tuff. The potential porosity of this unit may have been amenable to the transport of mineralization by the hydrothermal cell created by the rhyolite intrusion and subsequent mineral deposition along the intrusion margins.

RECOMMENDATIONS

It is recommended that another diamond drill hole be placed such that the Springbrook Formation can be tested. One hole, collared 100 meters to the west of the current drilling, should be considered. A nominal depth of 100 m in a vertical hole should adequately test the Springbrook. Should this hole give encouragement, then additional holes may be considered between the hole recommended above and those of subject in this report.

Respectfully Submitted

W. Caloy

STATEMENT OF EXPENDITURES

Personnel	
W.C. Day - Geologist	\$ 2,100.00
G.H. Rayner - Geologist	3,500.00
Room, Board & Expenses	662.57
Transportation	
Truck Rental	562.25
Connors Drilling	34,042.89
Analyses	<u>562.25</u>
	<u>\$41,429.96</u>

Cost Estimate

Diamond Drill Test - 1 hole

200 m at \$80/ \$16,000.

Engineering and Supervision 3,000.

Analyses 500.

19,500.

Contingencies 1,950.

\$21,450.

CERTIFICATE

I, William C. Day, of 258 West 24th Street, North Vancouver, B.C., do hereby certify that:

1. I am a Graduate of the University of British Columbia, (B.Sc. Geology).
2. I am a member in good standing of the Association of Professional Engineers, Geologist and Geophysicists of Alberta.
3. I have practised my profession since graduation.
4. This report is based on written material supplied by the Vendor of the property and from my personal supervision of the drill program of subject in this report.
5. I have no interest direct or indirect in Green Lake Resources Ltd. nor do I expect to have any.

Dated at North Vancouver, B.C., this 7th day of January, 1987.

W. C. Day

APPENDIX 1

Diamond Drill Log

Name of Client GREEN LAKE RESOURCES LTD
 Name of Contractor CONNORS DRILLING LTD

Area TWIN LAKES, B.C.	Latitude $49^{\circ} 19' N$	Bearing 0°	Date Started DEC 5/86	Hole No. GP 86-1
	Departure $119^{\circ} 45' W$	Inclination -90°	Date Completed DEC 7/86	Logged by WCD
Grid	Elevation	Section to	Total Length 169m	Date DEC 8/86

From	To	Length	Geological Description	Sample No.	From	To	Length				
0	32.92		Overburden								
32.92	42.98		Altered rhyolite with minor secondary quartz stringers	9641	34.59	35.51					
42.98	47.55		Lithic rhyolite, altered, with minor secondary quartz								
47.55	68.88		Highly altered and broken rhyolite, minor lithic fragments, abundant secondary quartz stringers, minor pyrite, minor carbonate lined vugs	9636	56.69	57.6					
				9637	57.91	59.74					
				9638	59.74	61.26					
				9639	54.56	55.47					
68.88	71.63		altered lithic rhyolite	9640	55.47	56.69					
71.63	84.12		Altered rhyolite with minor lithic fragments, very minor secondary quartz								
84.12	84.43		Contact zone, fault gouge								
84.43	93.27		Marron Fm., andesitic coarse pyroclastic, altered, minor sulphides (Py)	9635	90.83	91.44					
93.27	101.8		Marron Fm. as above								
101.8	102.4		Marron Fm. healed shear?, sphalerite, chalcopyrite, pyrite	9634	101.8	102.4					

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GEOLOGICAL BRANCH ASSESSMENT REPORT

Diamond Drill Log

Name of Client GREEN LAKE RESOURCES LTD

Name of Contractor CONNORS DRILLING LTD

Area <u>TWIN LAKES, B.C.</u>	Latitude <u>49° 19'</u>	Bearing <u>250°</u>	Date Started <u>Dec 9/86</u>	Hole No. <u>GP 86-3</u>
	Departure <u>119° 45'W</u>	Inclination <u>-50°</u>	Date Completed <u>DEC 10/86</u>	Logged by <u>WCD</u>
Grid	Elevation	Section	Total Length <u>102.41 m</u>	Date <u>Dec 10/86</u>

From	To	Length	Geological Description	Sample No.	From	To	Length				
0	18.29		Overburden								
18.29	71.32		Altered, oxidized rhyolite, minor lithic fragments,	9642	23.16	24.69					
			often broken	9643	24.69	26.21					
71.32	89.76		Altered lithic rhyolite								
89.76	90.68		Contact zone, gouge, broken								
90.68	102.41		Marron Fm.								

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GEOLOGICAL BRANCH
ASSESSMENT REPORT

APPENDIX 2

PROJECT NO:

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7N 1T2

FILE NO: 6-125E

ATTENTION: B.H. RAYNER

(604)980-5814 OR (604)988-4524

* TYPE ROCK GEOCHEM *

DATE: DEC 17, 1986

(VALUES IN PPM)	AG	AL	AS	B	BA	BE	BI	CA	CD	CO	CU	FE
9626	.3	6630	1	12	494	.4	4	1580	1.2	1	4	4650
9627	.3	4910	1	4	151	.9	3	1370	1.5	1	6	7070
9628	1.1	8740	14	15	207	4.1	5	18430	6.0	6	57	46270
9629	1.2	7930	50	13	129	4.9	6	21150	6.6	6	71	44500
9630	1.3	6460	97	15	137	7.1	11	9790	8.0	9	59	49860
9631	1.4	6550	102	12	132	6.5	11	13130	16.0	7	63	45340
9632	1.3	14800	21	14	416	4.4	4	18230	5.3	7	44	48260
9633	1.7	22060	58	21	108	6.0	9	30010	7.6	10	68	51160
9634	7.3	15680	117	23	133	8.6	11	18220	106.4	17	762	65880
9635	1.2	8370	53	11	311	5.5	10	30340	5.4	8	7	41540
9636	.6	3010	1	2	178	.3	3	3520	2.4	1	13	6350
9637	.6	2960	1	3	88	.7	3	4180	1.8	1	2	5850
9638	.6	2600	1	3	68	.8	2	8230	1.8	1	2	7690
9639	.6	3570	1	5	126	.8	2	5570	1.4	1	2	6030
9640	.6	2870	1	2	100	.8	2	4570	1.5	1	3	7860
9641	.5	2970	1	2	89	.9	2	3690	1.1	1	3	7590
9642	.6	4950	1	5	113	1.4	1	1870	2.4	2	7	10540
9643	.7	4760	1	6	113	1.1	1	2350	1.1	1	5	9810

PROJECT NO:

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2

FILE NO: 6-1285

ATTENTION: G.H. RAYNER

(604)980-5814 OR (604)988-4524

* TYPE ROCK GEOCHEM *

DATE: DEC 17, 1986

VALUES IN PPM	K	LI	MG	MN	MO	NA	NI	P	PB	SB	SR	TH
9626	1520	6	1120	397	2	340	3	50	23	1	35	1
9627	2000	2	1490	470	1	1030	4	70	26	1	48	1
9629	3370	5	12720	1067	7	490	14	1750	53	6	319	1
9629	2330	4	12710	1145	9	500	21	1790	60	7	394	2
9630	760	5	15230	1680	15	390	36	1910	80	12	241	2
9631	920	4	11900	1896	15	410	29	1900	94	10	322	3
9632	2550	7	11560	755	10	2670	29	2240	52	6	402	1
9633	380	12	20330	2050	10	480	47	3370	72	10	292	1
9634	590	10	16520	2278	26	490	54	3230	107	15	256	1
9635	530	5	17800	1449	11	560	33	2840	66	9	606	1
9636	1420	1	1800	316	2	940	7	100	19	1	38	1
9637	1340	1	2150	431	3	900	6	90	21	1	46	1
9638	1260	1	3980	899	3	840	4	120	26	1	62	1
9639	1750	1	2700	572	1	1200	7	90	21	1	59	1
9640	1390	1	2400	539	2	900	5	110	23	1	48	1
9641	1240	1	1960	583	2	880	5	50	25	1	39	1
9642	1180	2	1090	795	4	720	9	340	31	1	29	1
9643	1190	2	960	741	4	700	12	330	46	1	31	1

UNRECORDED GREEN LABEL RECORDED

NUMBER 1980 107 REGION

PROJECT NO:

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2

FILE NO: 6-1033

ATTENTION: S.H. FARMER

16041980-5814 OR 16041980-4524

* TYPE ROCK GEOCHEM *

DATE: DEC 17, 1980

VALUES IN PPM	U	V	ZN	AU-PPB
9626	1	.2	52	15
9627	1	2.4	34	2
9628	6	53.0	185	2
9629	7	64.9	235	4
9630	6	58.0	170	2
9631	7	57.4	459	3
9632	7	60.1	85	2
9633	6	86.4	88	5
9634	6	88.9	17517	213
9635	8	70.8	127	5
9636	2	2.9	158	2
9637	2	2.6	53	3
9638	2	2.4	85	1
9639	2	2.1	45	3
9640	2	2.7	63	2
9641	1	3.1	58	3
9642	1	7.1	163	3
9643	2	6.3	174	3