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**ROTARY DRILLING REPORT**  
**ON THE**  
**PINELODE GOLD PROSPECT**  
**ATLIN MINING DIVISION, B.C.**

**RECEIVED**  
 MAR 03 1995  
 Gold Commission Office  
 VANCOUVER, B.C.

N.T.S. 104 N/11, 12

BY

FILMED

A.G. TROUP, ~~C.E.~~ **GEOLOGICAL BRANCH**  
 January 31, 1993 **ASSESSMENT REPORT**

23,831

CLAIMS WORKED			
CLAIM NAMES	UNITS	RECORD NUMBERS	ANNIVERSARIES
YAM-2	20	2343	Aug. 10,
YAM-3	20	2344	Aug. 10,
<b>LOCATION:</b> 59°43' North Latitude 133°29' West Longitude <b>OWNERS OF RECORD:</b> D.G.S. Purvis, Cream Silver Mines Ltd. <b>OPERATOR:</b> Surprise Lake Exp. Ltd. Partnership <b>CONTRACTORS:</b> Archean Engineering Ltd. Connolly Enterprises Ltd. MacKay Faulkner and Associates. Midnight Sun Drilling Co. Ltd. J.W.R. Smith			

**REPORT ON THE  
PINELODE GOLD PROSPECT  
ATLIN MINING DIVISION, B.C.  
N.T.S. 104 N/11, 12**

**SUMMARY:**

The Pinelode gold prospect is located 12 kilometres east of the community of Atlin in northwestern British Columbia. The property, comprised of 64 mineral units and 21 two post claims, overlies the head of the Pine Creek and Gold Run placer deposits and was staked to cover the suspected lode source of the placer gold.

In November and December 1992, an induced polarization survey was carried out over the head of the placer pay channel along Pine Creek. The results of the survey defined two zones of anomalous chargeability response near the faulted contact between an ultramafic intrusive and adjacent Cache Creek Group andesites. The anomalies were believed to be reflecting zones of listwanite alteration along this contact.

In November and December 1994, the two anomalies were tested with 300 metres of reverse circulation drilling in four holes. Results of the drill program showed the geophysical anomalies to be caused by zones of disseminated pyrite and pyrrhotite. The sulfides are associated with quartz-carbonate stockworks and silicified alteration zones developed along the margin of a sill-like serpentinite body. No significant gold mineralization was encountered by the four drill holes.

**REPORT ON THE  
PINELODE GOLD PROSPECT  
ATLIN MINING DIVISION, B.C.  
N.T.S. 104 N/11, 12**

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**REPORT ON THE  
PINELODE GOLD PROSPECT  
ATLIN MINING DIVISION  
NTS 104 N/11,12**

**1.0 INTRODUCTION:**

The Pinelode Property is a lode gold prospect located in the historic Atlin placer gold camp in northwestern British Columbia (Figure 1). The property overlies the head of the Pine Creek and Gold Run placer deposits and was staked over the suspected lode gold source of the placers. The property is located two kilometres east of the Yellowjacket prospect where previous drilling intersected gold values of up to 0.5 oz/t, over widths of 3.0 metres, within a 30.0 metre wide listwanite alteration zone.

The Pinewood property has previously been explored by ground magnetometer and induced polarization surveys. The survey results defined three anomalies with changeability, resistivity and magnetic responses similar to those demonstrated by gold bearing listwanitic alteration zones. Two of these zones were situated along the faulted contact between an ultramafic intrusive body and adjacent Cache Creek Group andesite volcanics.

In November and December 1995, the two targets were tested with 300 metres of reverse circulation drilling in four holes. The results of this work are discussed in this report.

**1.1 LOCATION AND ACCESS:**

The Pinelode property is located approximately 12 kilometres east of Atlin, B.C. The claims, centred at latitude 59°43' and longitude 133°29' on N.T.S. Map Sheets 104 N/11 and 12, are accessible by the all-season Atlin-Surprise Lake gravel road. Numerous cat trails and the Birch Creek placer mining road give additional access to the bulk of the property. Due to this access and the sparsely vegetated nature of the valley floor little disturbance was required for drill site preparation.

SURPRISE LAKE EXPLORATION SYNDICATE

PINELODE PROPERTY

ATLIN MINING DIVISION, B.C.

NTS: 104 N/11 & 12

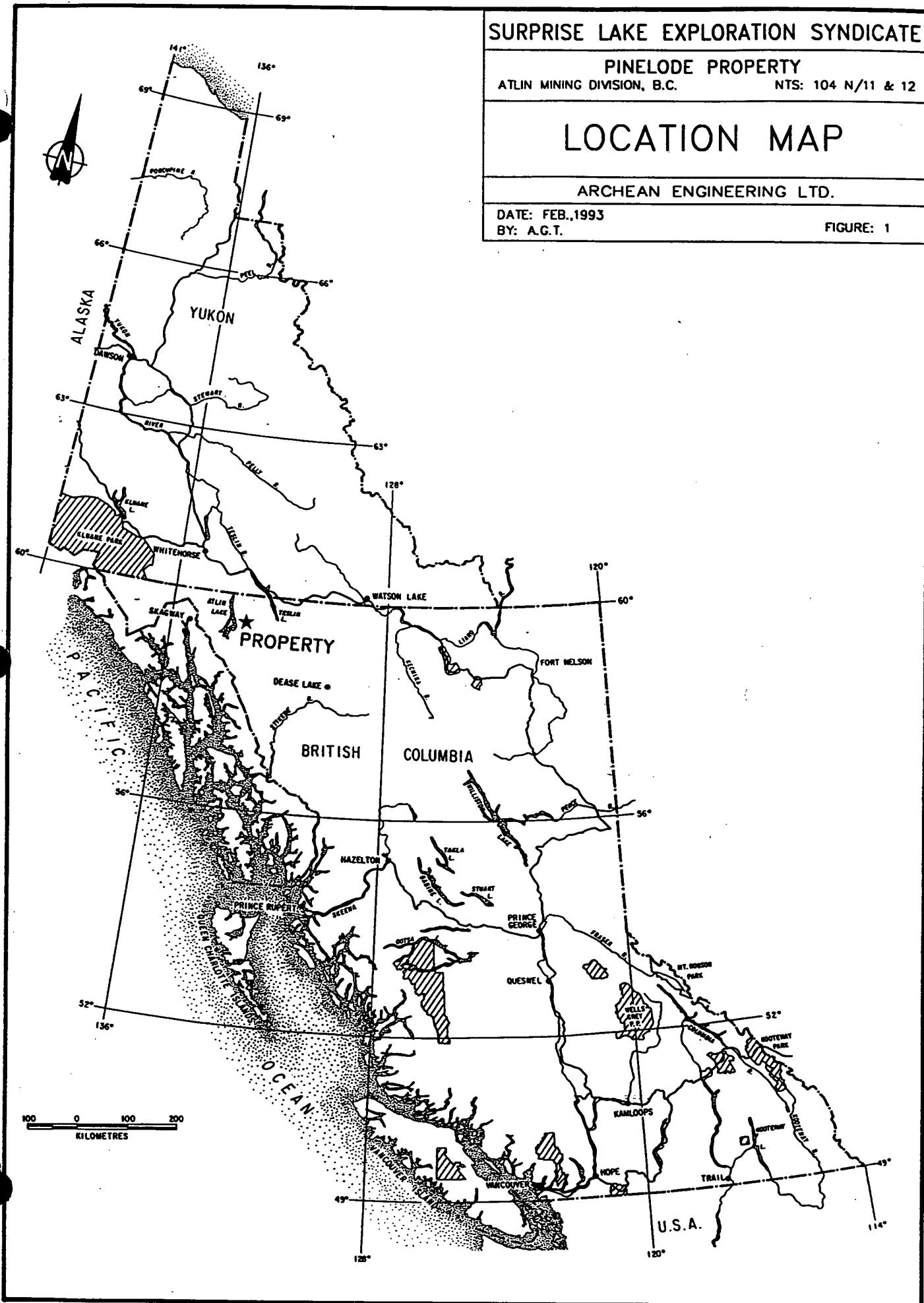
LOCATION MAP

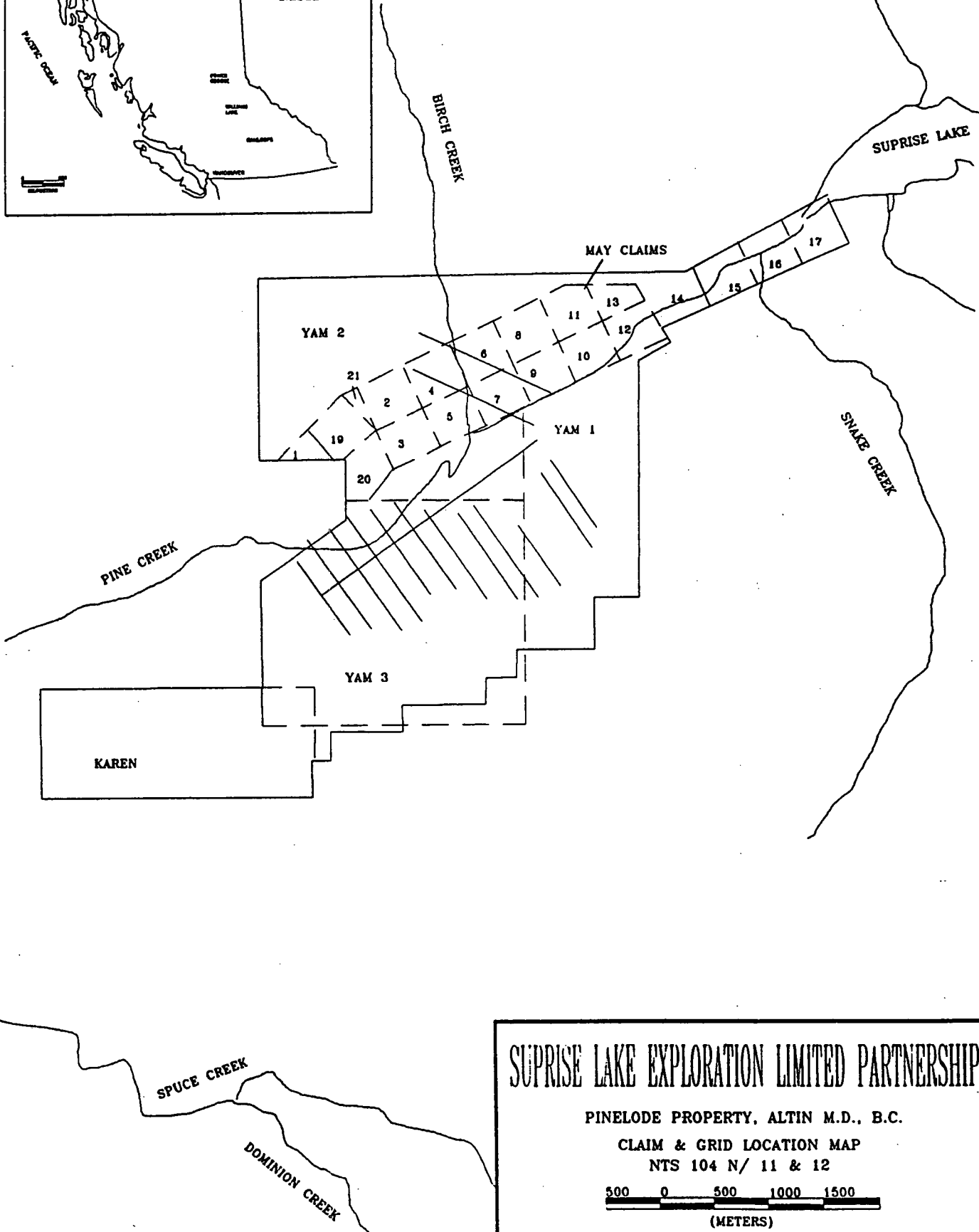
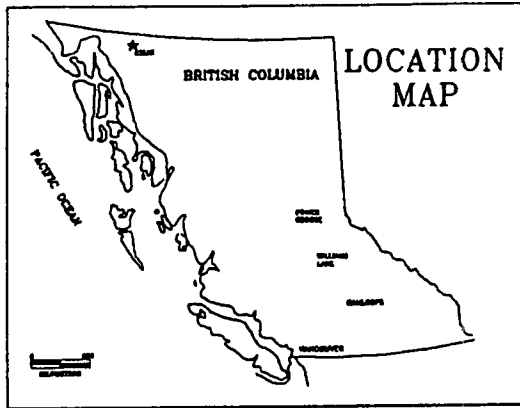
ARCHEAN ENGINEERING LTD.

DATE: FEB., 1993

BY: A.G.T.

FIGURE: 1





**SUPRISE LAKE EXPLORATION LIMITED PARTNERSHIP**  
PINELODE PROPERTY, ALTIN M.D., B.C.  
CLAIM & GRID LOCATION MAP  
NTS 104 N/ 11 & 12  
500 0 500 1000 1500  
(METERS)

## 1.2 PHYSIOGRAPHY, VEGETATION AND CLIMATE:

The Atlin area is located just east of the Coast Mountains on the Teslin Plateau. The town of Atlin lies on the east shore of Atlin Lake, the largest natural lake in British Columbia, at an elevation of 900 metres. The topography is moderately rugged with slopes of up to 30° rising from the Pine Creek valley floor at an elevation of 900 metres to mountain tops at well over 1,900 metres. Most of the property lies on the Pine Creek valley bottom where topography is very gentle (900 - 950 metres); however, the southern edge of the claim block runs along the northwestern flank of Spruce Mountain where slopes are greater than 30° and topography reaches a maximum of 1300 metres. Till cover is thin or non-existent above the valley floor, giving way to felsenmeer and outcrop at higher elevations. On the valley bottom the property is covered by glacial till varying in thickness from 2 to more than 20 metres in thickness.

The tree line is at approximately 1,100 metres on north facing slopes and 1,200 metres on south facing slopes. Below 1,100 metres, the valleys are forested with lodgepole pine, black spruce, aspen and dwarf birch. Mountain alder and willow grow near streams with stunted buckbrush covering the hills above tree line.

Atlin enjoys a pleasant summer climate with temperatures averaging 20°C and little precipitation. Winter temperatures average -15°C in January with moderate snowfall. Total annual precipitation has been measured at 279.4 millimetres of moisture. Winter conditions can be expected from October to April.

### 1.3 CLAIM INFORMATION:

The property is located in the Atlin Mining Division and consists of four modified grid claims totalling 64 units and 21 two-post claims. See Table 1 below for more claim details.

**TABLE 1**

**LIST OF CLAIMS**

CLAIM NAMES	UNITS	RECORD NUMBERS	ANNIVERSARIES
KAREN	10	202266	August 25
MAY 1 - 21	21	202176-196	April 28
YAM-1 - 3	54	202107-109	August 10

### 1.4 HISTORY:

Placer gold was first discovered in the Atlin area in 1897 by Fritz Miller while en route to Dawson. The first workings were on Pine Creek and by the end of 1898, more than 3,000 people were camped in the Atlin area. Eight Creeks - Spruce, Pine, Birch, Boulder, Ruby, Otter, Wright and McKee - have been important producers in the Atlin camp. Gold production from these creeks is estimated at 1,000,000 ounces. Pine and Spruce Creeks were the richest producers, accounting for almost 60% of total placer gold production.

Gold-bearing quartz veins were first discovered in the Atlin area in 1899 and by 1905 most of the known showings had been discovered. Although the original showings have been repeatedly worked and re-examined there is no record of regional exploration for lode mineralization from 1905 to 1981.

In 1981, Yukon Revenue Mines Ltd. acquired and re-examined the old Lakeview property. Yukon Revenue reported low-grade gold values over an extensive but delicate stockwork of carbonatized and silicified andesite adjacent to a serpentinite intrusive. The discovery by Yukon Revenue Mines Ltd. created a renewed interest in the camp especially where silicified and carbonatized ultramafics occur in the vicinity of major placer gold producing creeks.

The claims forming the subject property were later staked separately by Cream Silver Mines Ltd. and D.G.S. Purvis (Surprise Lake Exploration Limited Partnership) and eventually combined to form the Pinelode property. The claims cover the head of Gold Run, the rich placer pay streak developed along the



Pine Creek valley. Placer miners reported recovering an unusual quantity of angular gold, often still attached to quartz, carbonatized andesite or serpentine, over this area.

#### **1.5 WORK DONE BY SURPRISE LAKE EXP. LTD. PARTNERSHIP IN 1994:**

During the period from November 27 to December 16, 1995 three hundred metres of reverse circulation drilling was completed in four holes on the property. The drill program was carried out by a four person crew working out of the Atlin Inn in Atlin B.C. The program was planned and supervised by A.G. Troup of Archean Engineering Ltd. in Vancouver B.C. Field work was supervised by Gordon MacKay of MacKay, Falkner & Associates, in Whitehorse Yukon. Drilling was done by Midnight Sun Drilling Co. Ltd. of Whitehorse, Yukon. Drill sites were located by chain and compass survey by J.W.R. Smith and assistant. Access and drill pads were prepared by Connolly Enterprises of Atlin B.C.

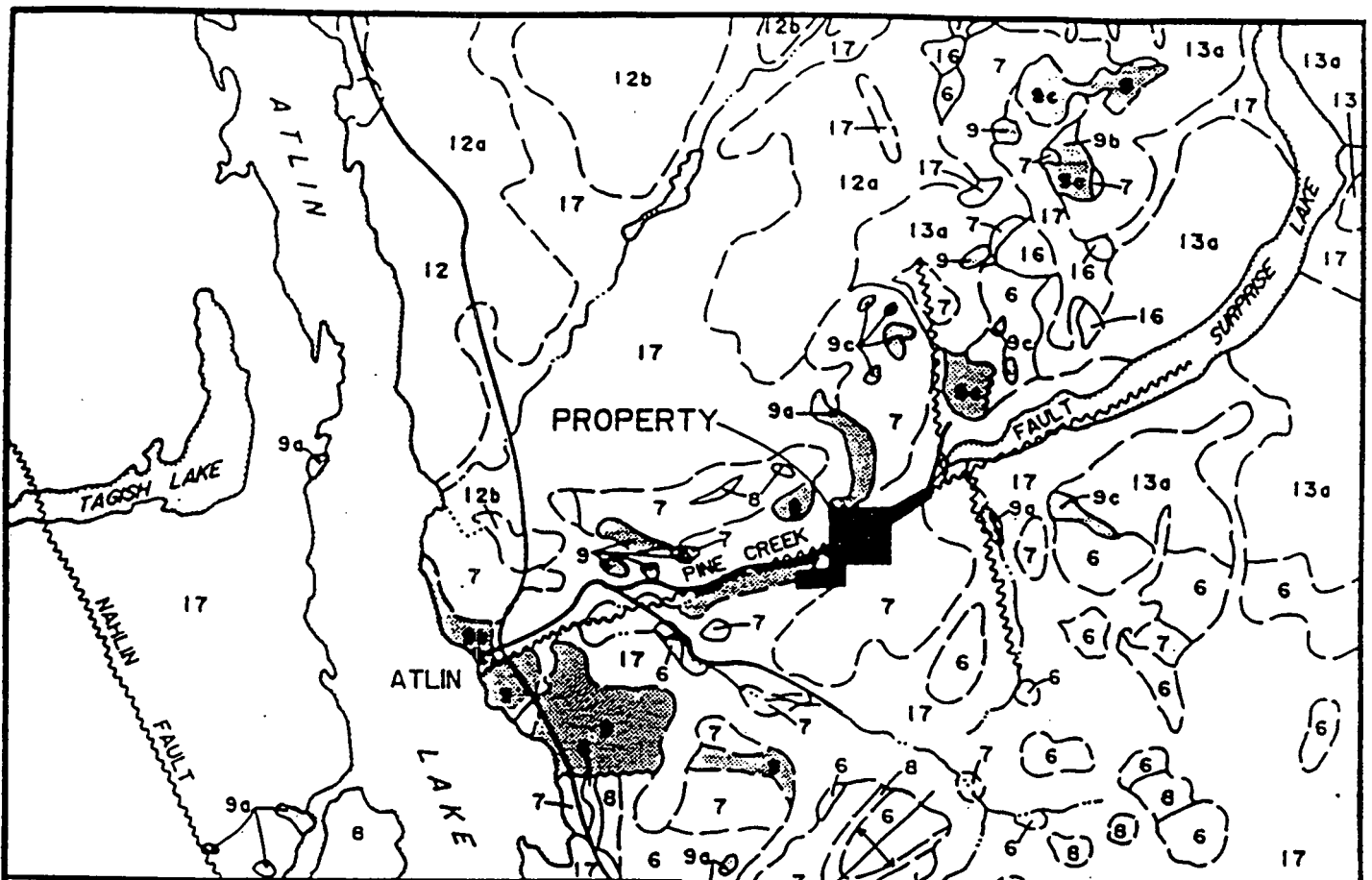
## **2. GEOLOGY:**

### **2.0 REGIONAL GEOLOGY:**

Geologic mapping of this area was undertaken in 1951-55 by J.D. Aitken of the Geological Survey of Canada (G.S.C.) and compiled as Map 1082A (Figure 4). In 1966-68, J.W.H. Monger, also of the G.S.C., selectively mapped the Atlin area and published his findings in G.S.C. Paper 74-47.

The Atlin region is located in a eugeosynclinal area composed of three distinct northwest striking tectonic belts; the St. Elias and Insular Belt, Coast and Cascades Belt and Intermontane Belt. The rocks of the area belong to the Atlin Terrane, which correlate with the Cache Creek Group rocks of southern and central British Columbia. The Atlin Terrane consists of upper Paleozoic age radiolarian cherts, pelites, carbonates, volcanics and ultramafics. These rocks are intruded by Mesozoic granite, alaskite and quartz monzonite. The youngest rocks of the Atlin Terrane are composed of Tertiary and Quaternary volcanics. Till deposited by receding Pleistocene glaciers extensively covers the valleys.

The Atlin Terrane is bounded on the northeast by a northwest striking vertical fault and on the southwest by a northwest striking reverse fault. Structurally, the terrane is characterized by compressional deformation which is similar in style and trend to the southwest bounding faults (Monger, 1975). Minor fold axes generally strike northwest or trend southwest.



**LEGEND**

**QUATERNARY**

17 GLACIAL DRIFT ALLUVIUM

**TERTIARY**

16 OLIVINE BASALT

**CRETACEOUS**

13 ALASKITE

**JURASSIC**

12 UNDIFFERENTIATED GRANITIC ROCKS

**PENNSYLVANIAN & PERMIAN ATLIN INTRUSIONS**

PERIDOTITE

SERPENTINITE

CARBONITIZED SERPENTINITE

TALC BEARING (STEATTITIZED) ULTRAMAFIC ROCKS

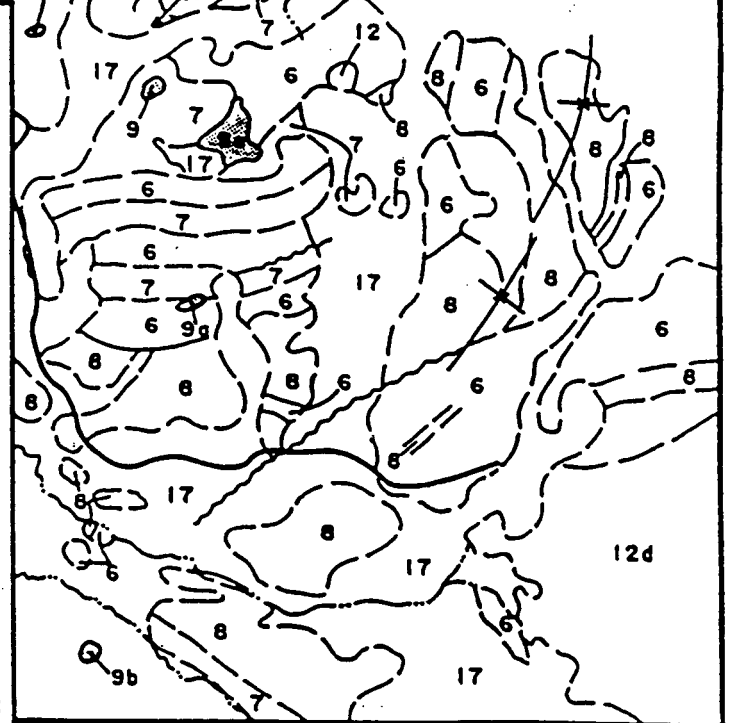
**CACHE CREEK GROUP**

6 CHERT, ARGILLITE, CHERT PEBBLE CONGLOMERATE

7 GREENSTONE, GREYWACKE, DERIVED AMPHIBOLITE

8 LIMESTONE, LIMESTONE BRECCIA

GRAVEL ROAD FAULT



REVISED

**PINELODE**

**REGIONAL GEOLOGY**

PROJ. No. 349

SURVEY BY: \_\_\_\_\_ DATE: MAY 1990

N.T.S. 104 N/12

DRAWN BY: HANDEBERG SCALE: 1:250,000

DWG. No.

**SURPRISE LAKE EXP. LTD. PARTNERSHIP.**

## 2.1 PROPERTY GEOLOGY:

A thick sequence of glacial till covers the property below 1,200 meters elevation; therefore outcrop exposure is scarce and is confined to the steeper southern edge of the property. Large piles of placer tailings occur on the western portion of the property and consist mainly of glacial gravels with minor fragments of local bedrock.

The claims are underlain by Cache Creek Group sediments and volcanics that have been intruded by Pennsylvanian and Permian ultramafics. Along the southern edge of the claim block Cache Creek sediments, consisting of light grey fetid limestone interbedded with dark grey to black argillite and light grey quartzite, are seen in outcrop. Over the northwestern portion of the property small outcrops and angular float of Cache Creek volcanics are seen. The volcanics consist mainly of light green, fine grained andesite and 1-2% disseminated pyrite. Ultramafics outcrop along the southern edge of the property and consist of dark green-blue waxy serpentinite. The outcrops exhibit weak to moderate carbonatization. To the north of these outcrops large angular fragments of quartz-carbonate altered serpentinite are common in the placer tailings along Gold Run and Pine Creek.

## 2.2 ECONOMIC GEOLOGY:

Within the Atlin Terrane large ultramafic intrusives similar to the serpentinite on the Pinelode property form a northeasterly trending belt. These intrusive bodies commonly exhibit intense listwanite alteration (silica-carbonate-mariposite) along their margins. This alteration is believed to be caused by northeasterly trending thrust faults that have emplaced these ultramafics within the Cache Creek Group rocks (C.H. Ash and R.L. Arskey, 1989).

The majority of known lode gold deposits in the Atlin area are associated with these quartz-carbonate altered ultramafics in contact with the Cache Creek Group volcanics. The alteration zones show up as distinct linear magnetic lows in contrast to the relatively high magnetic response of the unaltered ultramafics.

The most significant deposit discovered to date is the Yellowjacket prospect, situated in the Pine Creek fault zone, two kilometres west of the Pinelode property. Drilling by Homestake Exploration Ltd. from 1986 to 1989 gave gold intersections of up to 0.5 oz/t over widths of 3.0 metres. A drill inferred reserve of 300,000 tons grading 0.33oz/t was reported in 1988. The gold mineralization is associated with a

30 metre wide quartz stockwork developed in carbonatized andesite in fault contact with a serpentinite body.

### 3.0 DRILLING:

Four reverse circulation holes totaling 304 metres were drilled to test two geophysical anomalies, Zones A & B, on the Pinelode property. The two zones exhibited I.P. chargeability and resistivity characteristics that have elsewhere been demonstrated to be indicative of gold bearing listwanitic alteration zones.

Zone A, the longest and strongest of these anomalies is associated with a prominent magnetic low situated along the faulted margin of a serpentinite intrusive body. The center of this zone was tested with 208 metres of drilling in a fence of three holes.

Zone B is a chargeability and resistivity anomaly that coincides with a magnetic gradient situated over the above mentioned serpentinite intrusive. This anomaly was tested with 96 metres of drilling in a single hole.

The drill hole information is summarized in Table 2 below.

TABLE 2

#### DRILL HOLE INFORMATION

HOLE	CO-ORDINATES	AZMUTH	ANGLE	DEPTH
SLRC 94-01	99+65 N. 99+35 E.	0°	-60°	100 m.
SLRC 94-02	100+07 N. 99+55 E.	0°	-60°	58 m.
SLRC 94-03	100+45 N. 99+90 E.	0°	-60°	50 m.
SLRC 94-04	98+00 N. 97+00 E.	0°	-60°	96 m.

The holes were sampled at one metre intervals throughout their entire length. The samples were riffle split in the field with 25% of each sample sent for analysis and 50 stored on site for possible future use.

The samples were sent to Chemex Laboratories Ltd. in North Vancouver, B.C. where gold analysis was done by standard fire assay. Analyses for an additional 32 elements were obtained by conventional ICP methods. Ten chrome and nickel rich sample from hole SLRC 94-04 were subsequently analyzed for platinum and palladium.

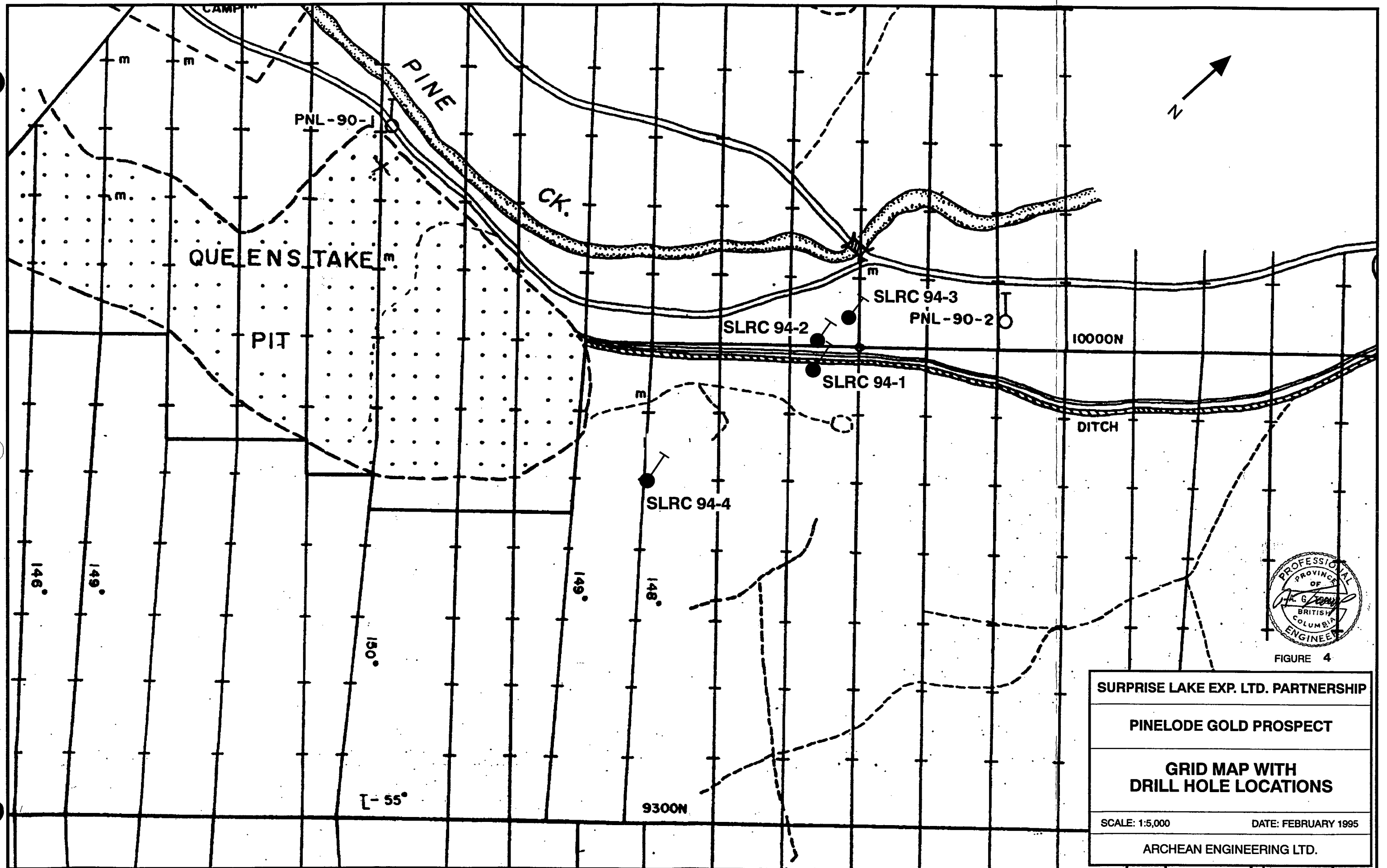


FIGURE 4

SURPRISE LAKE EXP. LTD. PARTNERSHIP	
PINELODE GOLD PROSPECT	
<b>GRID MAP WITH DRILL HOLE LOCATIONS</b>	
SCALE: 1:5,000	DATE: FEBRUARY 1995
ARCHEAN ENGINEERING LTD.	

### 3.1 DRILL RESULTS:

Drilling over Zone A intersected an interbedded sequence of mafic volcanics and argillite belonging to the Cache Creek group. These rocks were locally silicified and carried 1-3% pyrite and pyrrhotite as disseminations and fracture fillings.

Drilling over Zone 2 intersected a 55 metre thick, sill-like, body of serpentinite overlying mafic volcanics. The serpentinite carried 1-3% disseminated pyrite and pyrrhotite. The underlying mafic volcanic unit was bleached and extensively veined with a quartz-carbonate stockwork that locally comprised up to 25% of the rock volume.

Drill logs for the four holes are given in Appendix 1.

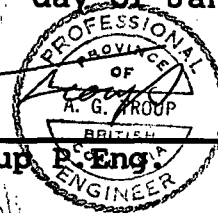
Fire assay and ICP analyses are given in Appendix 2. The results show only background gold concentrations for all four holes. ICP analyses also show only background concentrations for pathfinder elements such as arsenic, antimony, lead, zinc and copper. The ultramafic section in hole SLRC 94-04 carried chrome and nickel concentrations of up to 1,000 ppm but only trace concentrations of platinum and palladium.

### 4.0 DISCUSSIONS AND CONCLUSIONS:

The results of the present program suggest that the I.P. anomalies over Zones A & B are caused by disseminated sulfides occurring within and adjacent to the serpentinite intrusive body. The complete absence of gold and gold related pathfinder minerals suggests that the two zones tested by the present drill program are unlikely to be the source of the rich placer gold pay streak along Pine Creek.

Submitted at Vancouver, B.C.  
this 31<sup>st</sup> day of January 1995.

A. G. Troup



**5.0 REFERENCES:**

- Aitken, J. C., 1960, Geology, Atlin, Cassiar District, British Columbia: Geological Survey of Canada, Map 1082A, Scale 1:253,440.
- Ash, C. H. and Arskey, R.L., 1990, Tectonic Setting of Listwanite Lode Gold Deposits in the Atlin Area Northwestern B.C., NTS 104N/12 B.C. Ministry of Energy Mines and Petroleum Resources, Open File 1990-22.
- Bloodgood, M.A., Rees, C.J. and Lefebvre, D.V., 1989, Geology and Mineralization of the Atlin Area, Northwestern B.C. (104N/11W and 12E), B.C. Ministry of Energy, Mines and Petroleum Resources, Paper 1989-1.
- Diment, R., 1990, Drilling Report on the Pinelode Property, Atlin Mining Division, B.C.
- Diment, R., 1990, Induced Polarization Survey Report on the Pinelode Property, Atlin Mining Division, B.C.
- Diment, R., 1990, Magnetometer Survey Report on the Pinelode Property, Atlin Mining Division, B.C.
- Monger, J.W.H., 1975, Upper Paleozoic Rocks of the Atlin Terrane, Northwestern B.C. and South-Central Yukon, Geological Survey of Canada, Paper 74-47, 63p.
- Walcott, P.E., 1992, Induced Polarization Survey on the Pinelode Property, Atlin Area, B.C. NTS 104N/11 & 12.

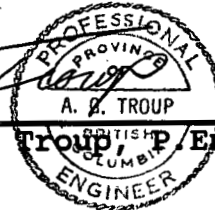
**6.0 STATEMENT OF QUALIFICATIONS:**

I, Arthur G. Troup, do hereby certify that:

- 1) I am a consulting geologist with Archean Engineering Ltd. of 3605 Creery Avenue, West Vancouver, B.C.
- 2) I am a graduate of McMaster University in Hamilton, Ontario with an M.Sc. in Geology.
- 3) I am a registered member of the Association of Professional Engineers of the Province of British Columbia.
- 4) I have practiced my profession in Canada and abroad since 1964.
- 5) I have worked intermittently on gold exploration projects in the Atlin area since 1981. Data obtained from the Geological Survey of Canada, B.C. Dept. of Mines, and assessment reports and other support documents provided by D.G.S. Purvis were also used as background and reference data.

Dated at Vancouver, British Columbia,  
this 31<sup>st</sup> day of January 1995.

  
\_\_\_\_\_  
Arthur G. Troup, P. Eng.





**7.0 COST STATEMENT**

<b>SURVEYING OF DRILL SITES:</b> J.W.R. Smith, Atlin, B.C.	425.00
<b>SITE PREPARATION AND RECLAMATION:</b> Connolly Enterprises Ltd.	4,746.45
<b>CONTRACT DRILLING:</b> Midnight Sun Drilling Ltd.	29,671.32
<b>ASSAYING AND GEOCHEMICAL ANALYSIS:</b> Chemex Labs Ltd.	2,729.04
<b>PROJECT PLANNING &amp; SUPERVISION:</b> Archean Engineering Ltd.	2,140.00
<b>REPORT PREPARATION:</b> Archean Engineering Ltd.	1,719.00
<b>GEOLOGICAL SUPERVISION &amp; LOGGING:</b> Mackay Falkiner & Associates	5,321.99
<b>SAMPLE SHIPPING CHARGES:</b> Points North Transportation Inc.	623.93
<b>SUPPLIES &amp; SUNDRY CHARGES:</b>	5,250.00
<b>TOTAL</b>	<u>52,626.73</u>

**APPENDIX 1**

**DRILL LOGS**

**SURPRIZE LAKE EXPLORATION  
LIMITED PARTNERSHIP**

**PINELODE GOLD PROSPECT  
Dec. 6, 1994**

**SLRC94-01                      Location: 9965N 9935E                      Angle: 60°                      Azimuth: 0°**

<b>Depth</b>	<b>Sample #</b>	<b>Geology</b>	<b>Comments</b>
0-5	1101-1105	<b>Overburden 0 to 5 meters.</b> Mixed gravels and coarse sand. Rare mafic volcanic boulders.	Dry
5-11	1106-1111	<b>Overburden 5 to 11 meters.</b> Mixed gravels and coarse sand. Till and or glacial fluvial?	Wet
11-12	1112	<b>Subcrop 11 to 12 meters.</b> Mafic volcanic mixed with overburden.	Wet
12-52	1113-1152	<b>Mafic Volcanic. 12 to 52 meters.</b> Dark green fine grained. Minor quartz veining rare localized qtz stockwork with associated pervasive silica alteration and minor sulfides. Trace disseminated sulfides in unaltered volcanic.	Dry
52-57	1153-1157	<b>Mafic to Intermediate dike? 52 to 57 meters.</b> Dark grey brown volcanic or fine grained intrusive. 53-54 meters minor qtz veining and associated silicification. 55-56 meters Qtz carbonate veining and silicification associated with slickensides.	Dry
57-68	1158-1168	<b>Mafic Volcanic. 57-68 meters.</b> Dark green fine grained volcanic. 66-67 meters qtz veining with some associated silicification.	Dry
68-89	1169-1189	<b>Argillite. 68-89 meters.</b> Dark grey silicious argillite. 1% disseminated sulfides. 73 meters minor interbed of brownish greywacke.	Dry

Depth Sample #	Geology	Comments
89-91 1190-1191	<b>Mafic Volcanic. 89-91 meters.</b> Dark green fine grained volcanic.	Dry
91-93 1192-1193	<b>Argillite. 91-93 meters.</b> Dark grey silicious argillite.	Dry
93-100 1194-1200 meters	<b>Mafic Volcanic. 93-100 meters.</b> Dark green fine grained volcanic.	Dry to 96 Wet from 96 to 100

**SURPRIZE LAKE EXPLORATION  
LIMITED PARTNERSHIP**

**PINELODE GOLD PROSPECT  
Dec. 9, 1994**

**SLRC94-02**

**Location: 10007N 9955E**

**Angle: 60<sup>0</sup>**

**Azimuth: 0<sup>0</sup>**

<b>Depth</b>	<b>Sample #</b>	<b>Geology</b>	<b>Comments</b>
0-2	2201-2202	<b>Overburden 0 to 2 meters.</b> Locally derived subcrop. Dark green mafic volcanic.	Dry
2-29	2203-2229	<b>Mafic Volcanic. 2 to 29 meters.</b> Dark green fine grained. Minor qtz and qtz-carbonate veining. Notably 8 to 9 meters and 14 to 18 meters.	Dry
29-51	2230-2251	<b>Argillite. 29 to 51 meters.</b> Black silicious, local chert interbeds. Minor quartz veining, and trace to 1% fracture filling and disseminated pyrite. Graftitic from 40m to 42m, and 45m to 48m.	<b>Notes on wet intervals are misplaced.</b>
51-58	2252-2258	<b>Mafic Volcanic. 51 to 58 meters.</b> Dark green fine grained. 3% to 5% qtz veining and associated silicification from 55m to 57m.	

**SURPRIZE LAKE EXPLORATION  
LIMITED PARTNERSHIP**

**PINELODE GOLD PROSPECT  
Dec. 11, 1994**

**SLRC94-03**      **Location: 10045N 9990E**      **Angle: 60°**      **Azimuth: 0°**

<b>Depth</b>	<b>Sample #</b>	<b>Geology</b>	<b>Comments</b>
0-2	3301-3302	<b>Overburden 0 to 2 meters.</b> Locally derived subcrop. Dark green mafic volcanic.	Dry
2-34	3303-3334	<b>Mafic Volcanic or Tuff? 2 to 34 meters.</b> Dark green, very fine grained. 1-3% disseminated pyrite. Locally pyrite occurs along fracture surfaces (14m-15m). Minor qtz veining and associated silicification throughout.	Wet from 6 meters.
34-43	3335-3343	<b>Argillite 34 to 43 meters.</b> Dark grey to black, silica rich. ~1-3% pyrite, disseminated and fracture filling.	Wet
43-50	3344-3350	<b>Mafic Volcanic 43 to 50 meters.</b> Dark green, fine grained, mottled under magnification. 2-5% disseminated and fracture filling pyrite. Fracture filling pyrite is locally associated with minor qtz veining.	Wet

**SURPRISE LAKE EXPLORATION  
LIMITED PARTNERSHIP**

**PINELODE GOLD PROSPECT  
Dec. 13, 1994**

**SLRC94-04      Location: 9800N 9700E      Angle:60° Azimuth:0°**

<b>Depth</b>	<b>Sample #</b>	<b>Geology</b>	<b>Comments</b>
0-11	4401-4411	<b>Overburden 0 -to 11 metres Mixed gravels and coarse sand. Till and glacial fluvial.</b>	Dry
11-13	4412-4413	<b>Overburden 0 -to 11 metres Mixed gravels and coarse sand. Till and glacial fluvial.</b>	Wet
13-14	4414	<b>Subcrop 13-14 metres Serpentenite ultramafic with disseminated sulfides</b>	Wet
14-24	4415-4424	<b>Ultramafic 14-24 metres Serpentenite with disseminated sulfides</b>	Dry
24-32	4425-4432	<b>Ultramafic 24-32 metres Serpentenite with no sulfides</b>	Dry
32-34	4433-4434	<b>Ultramafic 32-34 metres Serpentenite with disseminated sulfides</b>	Dry
34-35	4435	<b>Ultramafic 34-35 metres Serpentenite with calcite</b>	Dry
35-38	4436-4438	<b>Ultramafic 35-38 metres Serpentenite with no sulfides</b>	Dry
38-44	4439-4444	<b>Ultramafic 38-44 metres Serpentenite with disseminated sulfides</b>	Dry
44-50	4446-4450	<b>Ultramafic 44-50 metres Serpentenite with no sulfides</b>	Dry

Depth	Sample #	Geology	Comments
50-52	4451-4452	Ultramafic 50-52 metres Serpentenite with disseminated sulfides	Dry
52-53	4453	Ultramafic 52-53 metres Serpentenite with calcite	Dry
53-67	4454-4467	Ultramafic 53-67 metres Serpentenite with disseminated sulfides	Dry
67-70	4468-4470	Mafic Volcanic 67-70 metres Peridotite with Quartz- carbonate veining	Dry
70-71	4471	Ultramafic 52-53 metres Serpentenite with quartz veining	Dry
71-74	4472-4474	Ultramafic 71-74 metres Serpentenite with disseminated sulfides	Dry
74-75	4475	Ultramafic 74-75 metres Serpentenite with quartz- carbonate veining	Dry
75-76	4476	Mafic Volcanic 75-76 metres Peridotite with Quartz- carbonate veining	Dry
76-77	4477	Ultramafic 76-77 metres Serpentenite with quartz- carbonate veining	Dry
77-79	4478-4479	Mafic Volcanic 78-79 metres Peridotite with Quartz- carbonate veining	Dry
79-96	4480-4496	Mafic Volcanic 79-96 metres Peridotite with Quartz- carbonate veining	Wet



**APPENDIX 2**

**ASSAYS  
AND  
ANALYTICAL RESULTS**



# Chemex Labs Ltd.

Analytical Chemists \* Geochemists \* Registered Assayers  
 212 Brooksbank Ave., North Vancouver  
 British Columbia, Canada V7J 2C1  
 PHONE: 604-984-0221

To: SURPRISE LAKE EXPLORATION LTD.

4446 14TH ST.  
 WEST VANCOUVER, BC  
 V7T 2S3

Project :  
 Comments: ATTN: DAVID PURVIS

Number : 1-A  
 Pages : 3  
 Certificate Date: 10-JAN-95  
 Invoice No. : 19433566  
 P.O. Number :  
 Account : MKO

## CERTIFICATE OF ANALYSIS

### A9433566

SAMPLE	PREP CODE		Au ppb	Au oz/T	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	La	Mg
	FA	AA	calc.	calc.	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	%
1127	208	276	< 5<0.0005	< 0.2	1.64	< 2	< 10	< 0.5	2	1.53	< 0.5	16	107	58	2.91	< 10	< 1	0.08	< 10	1.40	
1137	208	276	< 5<0.0005	< 0.2	1.40	28	150	< 0.5	< 2	1.49	0.5	13	82	63	2.20	< 10	< 1	0.08	< 10	0.82	
1156	208	276	< 5<0.0005	< 0.2	2.16	< 2	30	< 0.5	2	2.05	< 0.5	18	375	37	2.43	< 10	< 1	0.09	< 10	2.68	
1167	208	276	< 5<0.0005	< 0.2	2.46	34	40	< 0.5	< 2	1.92	< 0.5	24	266	36	2.65	< 10	< 1	0.20	< 10	2.40	
1185	208	276	< 5<0.0005	< 0.2	1.92	< 2	310	< 0.5	2	1.20	1.5	19	179	78	3.75	< 10	< 1	1.02	< 10	1.48	
2209	208	276	< 5<0.0005	< 0.2	1.56	< 2	10	< 0.5	< 2	2.09	< 0.5	12	76	58	2.15	< 10	< 1	0.06	< 10	0.89	
2224	208	276	< 5<0.0005	< 0.2	1.46	< 2	40	< 0.5	4	1.45	0.5	13	88	37	2.70	< 10	1	0.15	< 10	1.08	
2238	208	276	< 5<0.0005	< 0.2	1.55	< 2	300	< 0.5	4	0.98	< 0.5	19	107	71	3.34	< 10	< 1	0.71	< 10	1.26	
2255	208	276	< 5<0.0005	< 0.2	1.75	< 2	20	< 0.5	< 2	1.69	< 0.5	81	85	57	2.97	< 10	< 1	0.10	< 10	1.34	
3312	208	276	< 5<0.0005	< 0.2	1.58	6	10	< 0.5	< 2	1.95	< 0.5	19	98	57	3.30	< 10	1	0.13	< 10	1.28	
3326	208	276	30	0.0010	< 0.2	1.72	< 2	20	< 0.5	2	2.16	< 0.5	18	84	65	3.03	< 10	< 1	0.12	< 10	1.20
3338	208	276	< 5<0.0005	< 0.2	1.65	< 2	40	< 0.5	< 2	0.64	< 0.5	12	145	72	2.85	< 10	< 1	0.83	< 10	1.05	
3346	208	276	< 5<0.0005	< 0.2	1.41	< 2	80	< 0.5	< 2	1.56	< 0.5	26	54	55	3.61	< 10	< 1	0.17	< 10	1.21	
4414	208	276	< 5<0.0005	< 0.2	0.70	2	50	< 0.5	< 2	0.71	0.5	55	84	15	3.43	< 10	< 1	0.03	< 10	13.35	
4415	208	276	< 5<0.0005	< 0.2	0.74	< 2	20	< 0.5	< 2	0.46	0.5	63	1195	62	3.96	< 10	< 1	< 0.01	< 10	>15.00	
4416	208	276	< 5<0.0005	< 0.2	0.57	< 2	< 10	< 0.5	< 2	0.38	< 0.5	60	1320	86	3.82	< 10	< 1	< 0.01	< 10	>15.00	
4417	208	276	< 5<0.0005	< 0.2	0.32	2	< 10	< 0.5	< 2	0.23	< 0.5	69	924	7	3.66	< 10	< 1	< 0.01	< 10	>15.00	
4418	208	276	< 5<0.0005	< 0.2	0.37	< 2	< 10	< 0.5	< 2	0.19	0.5	64	802	20	3.60	< 10	< 1	< 0.01	< 10	>15.00	
4419	208	276	< 5<0.0005	< 0.2	4.41	< 2	< 10	< 0.5	< 2	1.10	0.5	37	176	22	5.52	< 10	4	< 0.01	< 10	9.13	
4420	208	276	< 5<0.0005	< 0.2	3.26	< 2	< 10	< 0.5	< 2	2.08	0.5	24	109	43	4.56	< 10	1	0.02	< 10	4.90	
4421	208	276	< 5<0.0005	< 0.2	0.93	< 2	< 10	< 0.5	< 2	0.42	0.5	59	968	8	3.66	< 10	< 1	< 0.01	< 10	>15.00	
4422	208	276	< 5<0.0005	< 0.2	0.55	< 2	< 10	< 0.5	< 2	0.22	0.5	67	1025	5	3.72	< 10	< 1	< 0.01	< 10	>15.00	
4423	208	276	< 5<0.0005	< 0.2	0.60	< 2	< 10	< 0.5	< 2	0.28	0.5	67	922	12	3.77	< 10	< 1	< 0.01	< 10	>15.00	
4424	208	276	< 5<0.0005	< 0.2	0.79	< 2	< 10	< 0.5	< 2	0.86	< 0.5	62	1125	11	3.58	< 10	< 1	< 0.01	< 10	>15.00	
4425	208	276	< 5<0.0005	< 0.2	0.58	< 2	< 10	< 0.5	4	0.72	0.5	60	1020	12	3.46	< 10	< 1	< 0.01	< 10	>15.00	
4426	208	276	< 5<0.0005	< 0.2	0.60	< 2	< 10	< 0.5	2	0.60	0.5	63	772	14	3.55	< 10	< 1	< 0.01	< 10	>15.00	
4427	208	276	< 5<0.0005	< 0.2	1.88	2	< 10	< 0.5	< 2	1.05	0.5	61	786	89	4.38	< 10	< 1	< 0.01	< 10	>15.00	
4428	208	276	< 5<0.0005	< 0.2	0.27	< 2	< 10	< 0.5	< 2	0.12	0.5	73	799	9	3.71	< 10	< 1	< 0.01	< 10	>15.00	
4429	208	276	< 5<0.0005	< 0.2	0.26	< 2	< 10	< 0.5	< 2	0.32	0.5	71	765	12	3.87	< 10	< 1	< 0.01	< 10	>15.00	
4430	208	276	< 5<0.0005	< 0.2	0.29	< 2	< 10	< 0.5	2	0.15	< 0.5	73	915	9	3.76	< 10	< 1	< 0.01	< 10	>15.00	
4431	208	276	< 5<0.0005	< 0.2	0.34	< 2	< 10	< 0.5	< 2	0.24	< 0.5	71	991	8	3.63	< 10	< 1	< 0.01	< 10	>15.00	
4432	208	276	< 5<0.0005	< 0.2	0.38	< 2	< 10	< 0.5	2	0.14	0.5	73	1130	7	3.81	< 10	< 1	< 0.01	< 10	>15.00	
4433	208	276	< 5<0.0005	< 0.2	0.40	4	< 10	< 0.5	< 2	0.20	< 0.5	69	1100	10	3.77	< 10	< 1	< 0.01	< 10	>15.00	
4434	208	276	< 5<0.0005	< 0.2	0.93	< 2	< 10	< 0.5	< 2	3.19	0.5	58	1140	10	3.55	< 10	< 1	< 0.01	< 10	14.95	
4435	208	276	< 5<0.0005	< 0.2	3.21	< 2	< 10	< 0.5	< 2	5.37	0.5	27	211	12	4.19	< 10	< 1	0.03	< 10	5.74	
4436	208	276	< 5<0.0005	< 0.2	3.97	< 2	< 10	< 0.5	8	5.39	0.5	27	163	9	5.06	< 10	< 1	0.04	< 10	5.62	
4437	208	276	< 5<0.0005	< 0.2	2.22	< 2	< 10	< 0.5	< 2	1.21	0.5	55	1065	42	4.20	< 10	< 1	< 0.01	< 10	11.80	
4438	208	276	< 5<0.0005	< 0.2	1.14	< 2	< 10	< 0.5	< 2	0.71	< 0.5	64	1240	18	3.82	< 10	< 1	< 0.01	< 10	>15.00	
4439	208	276	< 5<0.0005	< 0.2	0.44	< 2	< 10	< 0.5	< 2	0.50	0.5	68	968	36	3.77	< 10	< 1	< 0.01	< 10	>15.00	
4440	208	276	< 5<0.0005	< 0.2	0.36	< 2	< 10	< 0.5	< 2	0.13	0.5	71	1015	12	3.73	< 10	< 1	< 0.01	< 10	>15.00	

CERTIFICATION:

*David Purvis*



# Chemex Labs Ltd.

Analytical Chemists \* Geochemists \* Registered Assayers  
 212 Brooksbank Ave., North Vancouver  
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 PHONE: 604-984-0221

To: SURPRISE LAKE EXPLORATION LTD.

4446 14TH ST.  
 WEST VANCOUVER, BC  
 V7T 2S3

Project :  
 Comments: ATTN: DAVID PURVIS

Project Number : 1-B  
 Total Pages : 3  
 Certificate Date: 10-JAN-95  
 Invoice No. : I9433566  
 P.O. Number :  
 Account : MKO

## CERTIFICATE OF ANALYSIS

### A9433566

SAMPLE	PREP CODE	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
1127	208 276	350	1	0.16	35	470	< 2	< 2	11	10	0.18	< 10	< 10	102	< 10	34
1137	208 276	280	1	0.18	29	330	< 2	6	8	13	0.18	< 10	< 10	83	< 10	42
1156	208 276	350	2	0.13	81	580	< 2	< 2	10	22	0.19	< 10	< 10	84	< 10	34
1167	208 276	390	1	0.19	88	430	< 2	< 2	9	30	0.17	< 10	< 10	70	10	30
1185	208 276	510	9	0.09	48	540	< 2	< 2	11	16	0.27	< 10	< 10	170	10	98
2209	208 276	345	< 1	0.19	25	270	< 2	2	9	16	0.33	< 10	< 10	91	10	24
2224	208 276	305	1	0.16	24	480	< 2	< 2	8	8	0.18	< 10	< 10	108	< 10	32
2238	208 276	340	2	0.09	43	490	2	< 2	6	15	0.18	< 10	< 10	94	< 10	44
2255	208 276	325	< 1	0.23	36	460	< 2	2	11	16	0.18	< 10	< 10	119	540	32
3312	208 276	410	1	0.31	31	330	< 2	< 2	14	12	0.15	< 10	< 10	136	10	34
3326	208 276	415	1	0.29	31	320	< 2	2	13	13	0.23	< 10	< 10	125	10	32
3338	208 276	455	7	0.06	30	640	< 2	< 2	8	7	0.14	< 10	< 10	93	< 10	84
3346	208 276	340	< 1	0.19	28	580	< 2	2	10	9	0.21	< 10	< 10	128	30	40
4414	208 276	505	< 1	0.02	1030	160	4	< 2	7	27	0.03	< 10	< 10	42	20	26
4415	208 276	590	< 1	0.01	1280	70	< 2	< 2	9	16	0.02	< 10	< 10	46	20	24
4416	208 276	505	< 1	< 0.01	1240	20	< 2	< 2	9	14	0.01	< 10	< 10	40	20	20
4417	208 276	455	< 1	< 0.01	1370	20	< 2	< 2	6	5	< 0.01	< 10	< 10	26	20	16
4418	208 276	465	< 1	< 0.01	1305	10	< 2	< 2	6	8	< 0.01	< 10	< 10	27	20	22
4419	208 276	530	< 1	0.09	203	520	< 2	< 2	23	10	0.16	< 10	< 10	209	20	32
4420	208 276	620	< 1	0.22	81	570	< 2	2	18	12	0.30	< 10	< 10	182	10	38
4421	208 276	600	< 1	< 0.01	1180	30	< 2	< 2	6	8	0.01	< 10	< 10	48	20	28
4422	208 276	525	< 1	< 0.01	1295	20	2	< 2	8	5	0.01	< 10	< 10	39	20	26
4423	208 276	515	< 1	< 0.01	1335	30	< 2	< 2	8	3	0.01	< 10	< 10	41	20	24
4424	208 276	550	< 1	< 0.01	1310	10	< 2	< 2	8	4	< 0.01	< 10	< 10	49	20	26
4425	208 276	455	< 1	< 0.01	1190	20	< 2	< 2	8	8	0.01	< 10	< 10	40	20	22
4426	208 276	390	< 1	< 0.01	1375	40	< 2	< 2	6	12	0.01	< 10	< 10	39	20	18
4427	208 276	505	< 1	< 0.01	1205	130	6	< 2	12	8	0.03	< 10	< 10	96	20	22
4428	208 276	455	< 1	< 0.01	1425	20	< 2	< 2	6	3	< 0.01	< 10	< 10	26	20	18
4429	208 276	610	< 1	< 0.01	1465	30	< 2	< 2	6	20	< 0.01	< 10	< 10	23	20	20
4430	208 276	630	< 1	< 0.01	1470	10	< 2	< 2	6	9	< 0.01	< 10	< 10	25	20	18
4431	208 276	525	< 1	< 0.01	1415	20	< 2	< 2	7	15	< 0.01	< 10	< 10	27	20	18
4432	208 276	560	< 1	< 0.01	1415	10	< 2	< 2	7	2	< 0.01	< 10	< 10	29	20	18
4433	208 276	400	< 1	< 0.01	1370	20	< 2	< 2	7	3	< 0.01	< 10	< 10	30	20	18
4434	208 276	545	< 1	< 0.01	1120	40	< 2	< 2	8	14	0.01	< 10	< 10	49	20	28
4435	208 276	740	< 1	0.31	137	390	< 2	< 2	21	20	0.36	< 10	< 10	174	20	42
4436	208 276	890	< 1	0.33	88	470	< 2	< 2	24	20	0.41	< 10	< 10	213	20	50
4437	208 276	480	< 1	0.02	1015	120	< 2	< 2	10	4	0.08	< 10	< 10	98	20	32
4438	208 276	575	< 1	< 0.01	1335	30	< 2	< 2	8	7	0.01	< 10	< 10	59	20	32
4439	208 276	380	< 1	< 0.01	1345	30	< 2	< 2	6	10	< 0.01	< 10	< 10	31	20	20
4440	208 276	370	< 1	< 0.01	1400	30	< 2	< 2	6	2	< 0.01	< 10	< 10	27	20	18

CERTIFICATION: *Hart Buchler*



# Chemex Labs Ltd.

Analytical Chemists \* Geochemists \* Registered Assayers  
 212 Brooksbank Ave., North Vancouver  
 British Columbia, Canada V7J 2C1  
 PHONE: 604-984-0221

To: SURPRISE LAKE EXPLORATION LTD.

4446 14TH ST.  
 WEST VANCOUVER, BC  
 V7T 2S3

Number :2-A  
 Pages :3  
 Certificate Date: 10-JAN-95  
 Invoice No. :I9433566  
 P.O. Number :  
 Account :MKO

Project :  
 Comments: ATTN: DAVID PURVIS

## CERTIFICATE OF ANALYSIS A9433566

SAMPLE	PREP CODE	Au ppbAu oz/T FA+AA calc.	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %
4441	208 276	< 5<0.0005	< 0.2	0.50	< 2	< 10	< 0.5	< 2	0.25	0.5	69	1225	10	3.81	< 10	< 1	< 0.01	< 10	>15.00
4442	208 276	< 5<0.0005	< 0.2	0.66	< 2	< 10	< 0.5	< 2	0.20	0.5	70	1550	28	3.96	< 10	< 1	< 0.01	< 10	>15.00
4443	208 276	< 5<0.0005	< 0.2	1.48	< 2	< 10	< 0.5	6	0.31	0.5	70	1305	9	4.62	< 10	< 1	< 0.01	< 10	>15.00
4444	208 276	< 5<0.0005	< 0.2	0.30	< 2	< 10	< 0.5	< 2	0.20	0.5	67	835	30	3.63	< 10	< 1	< 0.01	< 10	>15.00
4445	208 276	< 5<0.0005	< 0.2	0.30	< 2	< 10	< 0.5	2	0.15	< 0.5	73	883	6	3.81	< 10	< 1	< 0.01	< 10	>15.00
4446	208 276	20 0.0005	< 0.2	0.29	< 2	< 10	< 0.5	< 2	0.09	0.5	74	1065	11	3.93	< 10	< 1	< 0.01	< 10	>15.00
4447	208 276	< 5<0.0005	< 0.2	0.35	2	< 10	< 0.5	< 2	0.09	< 0.5	68	1330	18	3.53	< 10	< 1	< 0.01	< 10	>15.00
4448	208 276	< 5<0.0005	< 0.2	0.33	< 2	< 10	< 0.5	< 2	0.24	0.5	72	1135	5	3.51	< 10	< 1	< 0.01	< 10	>15.00
4449	208 276	< 5<0.0005	< 0.2	0.41	< 2	< 10	< 0.5	< 2	0.10	0.5	71	1330	3	3.58	< 10	< 1	< 0.01	< 10	>15.00
4450	208 276	< 5<0.0005	< 0.2	0.38	< 2	< 10	< 0.5	< 2	0.12	0.5	72	1165	4	3.54	< 10	< 1	< 0.01	< 10	>15.00
4451	208 276	< 5<0.0005	< 0.2	0.33	< 2	< 10	< 0.5	< 2	0.35	0.5	69	1215	23	3.68	< 10	< 1	< 0.01	< 10	>15.00
4452	208 276	< 5<0.0005	< 0.2	0.44	< 2	< 10	< 0.5	< 2	1.18	< 0.5	65	1010	8	3.39	< 10	< 1	< 0.01	< 10	>15.00
4453	208 276	< 5<0.0005	< 0.2	0.60	< 2	< 10	< 0.5	< 2	0.47	0.5	72	1060	4	3.70	< 10	< 1	< 0.01	< 10	>15.00
4454	208 276	< 5<0.0005	< 0.2	0.58	< 2	< 10	< 0.5	< 2	0.39	0.5	60	1215	7	3.21	< 10	< 1	< 0.01	< 10	>15.00
4455	208 276	< 5<0.0005	< 0.2	0.39	< 2	< 10	< 0.5	< 2	0.35	0.5	70	1190	33	3.74	< 10	1	< 0.01	< 10	>15.00
4456	208 276	< 5<0.0005	< 0.2	0.52	4	< 10	< 0.5	< 2	0.37	< 0.5	65	1255	14	3.68	< 10	< 1	< 0.01	< 10	>15.00
4457	208 276	< 5<0.0005	< 0.2	0.67	< 2	< 10	< 0.5	< 2	0.37	0.5	68	1340	12	3.74	< 10	< 1	< 0.01	< 10	>15.00
4458	208 276	< 5<0.0005	< 0.2	1.28	< 2	< 10	0.5	< 2	0.39	0.5	64	1160	9	4.10	< 10	< 1	< 0.01	< 10	>15.00
4459	208 276	< 5<0.0005	< 0.2	1.95	< 2	< 10	< 0.5	< 2	0.43	0.5	63	1225	9	4.81	< 10	< 1	< 0.01	< 10	>15.00
4460	208 276	< 5<0.0005	< 0.2	0.87	< 2	< 10	< 0.5	< 2	0.17	< 0.5	70	1495	8	4.00	< 10	< 1	< 0.01	< 10	>15.00
4461	208 276	< 5<0.0005	< 0.2	0.63	< 2	< 10	< 0.5	< 2	0.12	0.5	70	1505	11	3.84	< 10	< 1	< 0.01	< 10	>15.00
4462	208 276	< 5<0.0005	< 0.2	0.65	< 2	< 10	< 0.5	< 2	0.14	< 0.5	72	1585	13	3.98	< 10	< 1	< 0.01	< 10	>15.00
4463	208 276	< 5<0.0005	< 0.2	0.65	< 2	< 10	< 0.5	4	0.12	0.5	72	1645	12	3.96	< 10	< 1	< 0.01	< 10	>15.00
4464	208 276	< 5<0.0005	< 0.2	0.66	< 2	< 10	< 0.5	< 2	0.13	0.5	71	1600	15	3.84	< 10	< 1	< 0.01	< 10	>15.00
4465	208 276	< 5<0.0005	< 0.2	0.71	< 2	< 10	< 0.5	< 2	0.29	0.5	69	1645	12	3.90	< 10	< 1	< 0.01	< 10	>15.00
4466	208 276	< 5<0.0005	< 0.2	0.87	< 2	< 10	0.5	2	0.41	< 0.5	66	1530	14	3.89	< 10	< 1	< 0.01	< 10	>15.00
4467	208 276	< 5<0.0005	< 0.2	1.76	< 2	< 10	< 0.5	< 2	0.31	< 0.5	60	1090	13	4.06	< 10	< 1	< 0.01	< 10	>15.00
4468	208 276	< 5<0.0005	< 0.2	0.71	< 2	< 10	0.5	< 2	0.18	< 0.5	69	1325	8	3.64	< 10	< 1	< 0.01	< 10	>15.00
4469	208 276	< 5<0.0005	< 0.2	2.74	< 2	< 10	0.5	4	1.97	< 0.5	30	476	19	3.83	< 10	< 1	0.02	< 10	7.62
4470	208 276	< 5<0.0005	< 0.2	2.89	< 2	< 10	0.5	4	0.70	0.5	50	959	26	4.36	< 10	< 1	< 0.01	< 10	12.30
4471	208 276	< 5<0.0005	< 0.2	0.66	< 2	< 10	< 0.5	< 2	0.19	< 0.5	68	1360	15	3.80	< 10	< 1	< 0.01	< 10	>15.00
4472	208 276	< 5<0.0005	< 0.2	0.93	< 2	< 10	< 0.5	< 2	0.34	0.5	66	1430	14	3.80	< 10	< 1	< 0.01	< 10	>15.00
4473	208 276	< 5<0.0005	< 0.2	0.53	< 2	< 10	< 0.5	< 2	0.14	0.5	66	1305	40	3.58	< 10	1	< 0.01	< 10	>15.00
4474	208 276	< 5<0.0005	< 0.2	0.58	6	< 10	< 0.5	2	0.11	< 0.5	68	1340	15	3.66	< 10	< 1	< 0.01	< 10	>15.00
4475	208 276	< 5<0.0005	< 0.2	0.62	< 2	< 10	< 0.5	< 2	0.72	0.5	66	1415	6	3.68	< 10	< 1	< 0.01	< 10	>15.00
4476	208 276	< 5<0.0005	< 0.2	1.86	6	< 10	0.5	< 2	1.10	< 0.5	55	1050	12	4.01	< 10	< 1	< 0.01	< 10	13.95
4477	208 276	< 5<0.0005	< 0.2	2.32	< 2	< 10	< 0.5	4	4.11	< 0.5	18	119	12	2.80	< 10	3	0.04	< 10	2.72
4478	208 276	< 5<0.0005	< 0.2	2.14	< 2	< 10	< 0.5	< 2	0.37	0.5	49	962	45	3.46	< 10	< 1	< 0.01	< 10	10.70
4479	208 276	< 5<0.0005	< 0.2	2.15	< 2	< 10	0.5	4	2.35	< 0.5	14	119	68	2.85	< 10	< 1	0.04	< 10	2.28
4480	208 276	< 5<0.0005	< 0.2	1.95	< 2	< 10	0.5	2	2.17	< 0.5	19	198	45	3.04	< 10	< 1	0.06	< 10	3.17

CERTIFICATION: *David Purvis*



# Chemex Labs Ltd.

Analytical Chemists \* Geochemists \* Registered Assayers  
 212 Brooksbank Ave., North Vancouver  
 British Columbia, Canada V7J 2C1  
 PHONE: 604-984-0221

To: SURPRISE LAKE EXPLORATION LTD.

4446 14TH ST.  
 WEST VANCOUVER, BC  
 V7T 2S3

Page Number : 2-B  
 Pages : 3  
 Certificate Date: 10-JAN-95  
 Invoice No. : I9433566  
 P.O. Number :  
 Account : MKO

Project :  
 Comments: ATTN: DAVID PURVIS

## CERTIFICATE OF ANALYSIS

### A9433566

SAMPLE	PREP CODE	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
4441	208 276	420	< 1	< 0.01	1375	20	< 2	< 2	7	3	< 0.01	< 10	< 10	33	20	20
4442	208 276	550	< 1	< 0.01	1370	20	< 2	< 2	8	3	< 0.01	< 10	< 10	42	20	28
4443	208 276	565	< 1	< 0.01	1230	70	< 2	< 2	13	3	0.03	< 10	< 10	74	20	26
4444	208 276	380	< 1	< 0.01	1340	20	< 2	< 2	6	3	< 0.01	< 10	< 10	27	20	18
4445	208 276	560	< 1	< 0.01	1485	20	< 2	< 2	6	4	< 0.01	< 10	< 10	25	20	16
4446	208 276	565	< 1	< 0.01	1495	10	< 2	< 2	7	7	< 0.01	< 10	< 10	25	20	16
4447	208 276	570	< 1	< 0.01	1440	10	< 2	< 2	6	10	< 0.01	< 10	< 10	26	20	18
4448	208 276	535	< 1	< 0.01	1445	10	2	< 2	6	11	< 0.01	< 10	< 10	25	20	16
4449	208 276	510	< 1	< 0.01	1520	20	< 2	< 2	7	15	< 0.01	< 10	< 10	28	20	16
4450	208 276	565	< 1	< 0.01	1455	20	< 2	< 2	7	11	< 0.01	< 10	< 10	27	20	16
4451	208 276	460	< 1	< 0.01	1395	20	< 2	< 2	6	9	< 0.01	< 10	< 10	27	20	18
4452	208 276	415	< 1	< 0.01	1320	20	< 2	< 2	6	7	< 0.01	< 10	< 10	29	20	18
4453	208 276	570	< 1	< 0.01	1440	10	2	< 2	7	5	< 0.01	< 10	< 10	31	20	24
4454	208 276	470	< 1	< 0.01	1290	20	< 2	< 2	7	6	< 0.01	< 10	< 10	31	20	20
4455	208 276	495	< 1	< 0.01	1390	10	< 2	< 2	6	3	< 0.01	< 10	< 10	30	20	24
4456	208 276	450	< 1	< 0.01	1315	10	< 2	< 2	7	4	< 0.01	< 10	< 10	34	20	22
4457	208 276	485	< 1	< 0.01	1370	10	< 2	< 2	8	6	< 0.01	< 10	< 10	41	20	24
4458	208 276	495	< 1	< 0.01	1175	40	< 2	< 2	12	7	0.02	< 10	< 10	57	20	22
4459	208 276	545	< 1	< 0.01	1060	70	< 2	< 2	17	3	0.04	< 10	< 10	79	20	22
4460	208 276	475	< 1	< 0.01	1395	40	< 2	< 2	9	2	< 0.01	< 10	< 10	46	20	24
4461	208 276	475	< 1	< 0.01	1380	20	< 2	< 2	8	1	< 0.01	< 10	< 10	39	20	24
4462	208 276	500	< 1	< 0.01	1410	20	< 2	< 2	9	1	< 0.01	< 10	< 10	42	20	26
4463	208 276	505	< 1	< 0.01	1385	20	< 2	< 2	9	1	< 0.01	< 10	< 10	41	20	26
4464	208 276	575	< 1	< 0.01	1350	10	< 2	< 2	9	< 1	< 0.01	< 10	< 10	41	20	28
4465	208 276	685	< 1	< 0.01	1315	30	< 2	< 2	9	4	< 0.01	< 10	< 10	41	20	34
4466	208 276	675	< 1	< 0.01	1245	30	< 2	< 2	10	7	0.01	< 10	< 10	43	20	32
4467	208 276	590	< 1	< 0.01	1065	20	< 2	< 2	15	3	0.02	< 10	< 10	57	20	28
4468	208 276	575	< 1	< 0.01	1325	20	< 2	< 2	9	2	< 0.01	< 10	< 10	38	20	26
4469	208 276	520	< 1	0.17	384	330	< 2	< 2	11	19	0.23	< 10	< 10	124	10	38
4470	208 276	415	< 1	0.01	823	200	< 2	< 2	11	4	0.04	< 10	< 10	108	20	30
4471	208 276	595	< 1	< 0.01	1335	30	< 2	< 2	9	1	< 0.01	< 10	< 10	40	20	28
4472	208 276	560	< 1	< 0.01	1280	20	< 2	< 2	10	2	0.01	< 10	< 10	50	20	28
4473	208 276	490	< 1	< 0.01	1325	20	< 2	< 2	8	1	< 0.01	< 10	< 10	36	20	28
4474	208 276	570	< 1	< 0.01	1315	20	< 2	< 2	8	4	< 0.01	< 10	< 10	35	20	28
4475	208 276	600	< 1	< 0.01	1295	30	< 2	< 2	8	8	< 0.01	< 10	< 10	36	20	34
4476	208 276	630	< 1	0.04	957	140	< 2	< 2	11	6	0.10	< 10	< 10	76	20	38
4477	208 276	485	< 1	0.32	65	280	< 2	< 2	12	31	0.30	< 10	< 10	105	10	30
4478	208 276	395	< 1	0.01	873	110	< 2	< 2	8	1	0.07	< 10	< 10	77	10	28
4479	208 276	405	< 1	0.27	68	330	< 2	2	9	19	0.28	< 10	< 10	115	10	28
4480	208 276	420	< 1	0.34	166	340	< 2	< 2	10	31	0.21	< 10	< 10	121	10	28

CERTIFICATION:

*Hart Buchler*



# Chemex Labs Ltd.

Analytical Chemists \* Geochemists \* Registered Assayers  
 212 Brooksbank Ave., North Vancouver  
 British Columbia, Canada V7J 2C1  
 PHONE: 604-984-0221

To: SURPRISE LAKE EXPLORATION LTD.

4446 14TH ST.  
 WEST VANCOUVER, BC  
 V7T 2S3

Project:  
 Comments: ATTN: DAVID PURVIS

Number :3-A  
 Pages :3  
 Certificate Date: 10-JAN-95  
 Invoice No. : I9433566  
 P.O. Number :  
 Account : MKO

## CERTIFICATE OF ANALYSIS A9433566

SAMPLE	PREP CODE	Au		Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	La	Mg
		ppb	oz/T	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm
4481	208 276	< 5	< 0.0005	< 0.2	1.49	< 2	10	< 0.5	< 2	1.51	< 0.5	27	398	36	2.96	< 10	< 1	0.03	< 10	6.36
4482	208 276	< 5	< 0.0005	< 0.2	1.68	4	20	0.5	2	1.74	< 0.5	16	138	46	2.54	< 10	< 1	0.05	< 10	2.49
4483	208 276	< 5	< 0.0005	< 0.2	1.55	< 2	< 10	0.5	< 2	1.89	0.5	13	52	63	2.26	< 10	< 1	0.04	< 10	1.15
4484	208 276	< 5	< 0.0005	< 0.2	1.58	< 2	< 10	0.5	< 2	1.75	< 0.5	13	80	62	2.46	< 10	< 1	0.04	< 10	1.63
4485	208 276	< 5	< 0.0005	< 0.2	1.65	< 2	< 10	0.5	2	1.82	< 0.5	10	39	85	2.40	< 10	< 1	0.04	< 10	1.05
4486	208 276	< 5	< 0.0005	< 0.2	1.28	< 2	< 10	0.5	< 2	1.50	< 0.5	12	67	51	1.98	< 10	< 1	0.03	< 10	1.33
4487	208 276	< 5	< 0.0005	< 0.2	1.64	< 2	10	0.5	6	1.70	0.5	11	37	102	2.67	< 10	< 1	0.04	< 10	1.08
4488	208 276	< 5	< 0.0005	< 0.2	1.66	< 2	< 10	< 0.5	2	1.77	< 0.5	11	32	76	2.50	< 10	1	0.06	< 10	0.92
4489	208 276	< 5	< 0.0005	< 0.2	1.62	< 2	< 10	0.5	8	1.85	< 0.5	10	49	83	2.37	< 10	< 1	0.06	< 10	1.10
4490	208 276	< 5	< 0.0005	< 0.2	1.93	< 2	< 10	0.5	2	2.25	< 0.5	12	67	76	2.55	< 10	< 1	0.06	< 10	1.23
4491	208 276	< 5	< 0.0005	< 0.2	1.79	< 2	< 10	< 0.5	2	2.15	< 0.5	11	41	37	2.46	< 10	< 1	0.05	< 10	0.95
4492	208 276	< 5	< 0.0005	< 0.2	1.80	< 2	< 10	0.5	< 2	2.04	< 0.5	16	125	37	2.75	< 10	1	0.05	< 10	2.24
4493	208 276	< 5	< 0.0005	< 0.2	1.74	6	10	0.5	2	1.96	< 0.5	13	118	39	2.60	< 10	2	0.06	< 10	1.88
4494	208 276	< 5	< 0.0005	< 0.2	1.76	2	< 10	0.5	< 2	2.05	< 0.5	14	51	27	2.46	< 10	< 1	0.05	< 10	1.15
4495	208 276	< 5	< 0.0005	< 0.2	1.66	< 2	< 10	< 0.5	2	2.18	0.5	12	78	8	2.03	< 10	< 1	0.03	< 10	1.49
4496	208 276	< 5	< 0.0005	< 0.2	1.65	< 2	< 10	0.5	4	2.44	< 0.5	12	117	15	2.14	< 10	< 1	0.01	< 10	2.63

CERTIFICATION:

*David Purvis*



# Chemex Labs Ltd.

Analytical Chemists \* Geochemists \* Registered Assayers  
 212 Brooksbank Ave., North Vancouver  
 British Columbia, Canada V7J 2C1  
 PHONE: 604-984-0221

To: SURPRISE LAKE EXPLORATION LTD.

4446 14TH ST.  
 WEST VANCOUVER, BC  
 V7T 2S3

Project :  
 Comments: ATTN: DAVID PURVIS

Form Number :3-B  
 Total Pages :3  
 Certificate Date: 10-JAN-95  
 Invoice No. :I9433566  
 P.O. Number :  
 Account :MKO

## CERTIFICATE OF ANALYSIS

A9433566

SAMPLE	PREP CODE	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
4481	208 276	440	< 1	0.25	418	280	< 2	2	9	26	0.16	< 10	< 10	92	10	26
4482	208 276	545	< 1	0.29	160	310	< 2	2	8	35	0.18	< 10	< 10	108	10	24
4483	208 276	340	< 1	0.26	40	230	< 2	< 2	7	26	0.23	< 10	< 10	103	< 10	22
4484	208 276	335	< 1	0.29	72	300	< 2	2	8	29	0.19	< 10	< 10	106	< 10	24
4485	208 276	315	< 1	0.26	29	300	< 2	< 2	7	28	0.20	< 10	< 10	111	< 10	24
4486	208 276	270	< 1	0.21	63	290	< 2	< 2	6	23	0.17	< 10	< 10	90	< 10	18
4487	208 276	400	< 1	0.27	33	390	< 2	2	8	23	0.20	< 10	< 10	123	< 10	28
4488	208 276	320	< 1	0.29	19	350	< 2	2	8	26	0.19	< 10	< 10	128	< 10	24
4489	208 276	315	< 1	0.30	39	260	< 2	< 2	7	31	0.22	< 10	< 10	120	< 10	22
4490	208 276	350	< 1	0.33	39	280	< 2	2	8	30	0.27	< 10	< 10	121	< 10	24
4491	208 276	345	< 1	0.30	19	240	< 2	2	8	24	0.28	< 10	< 10	116	< 10	24
4492	208 276	410	< 1	0.31	105	370	< 2	< 2	10	32	0.24	< 10	< 10	117	< 10	28
4493	208 276	375	< 1	0.33	85	330	< 2	< 2	9	36	0.23	< 10	< 10	116	< 10	28
4494	208 276	350	< 1	0.32	34	270	< 2	< 2	8	20	0.27	< 10	< 10	115	< 10	24
4495	208 276	320	< 1	0.19	70	250	< 2	< 2	6	26	0.22	< 10	< 10	85	< 10	20
4496	208 276	325	< 1	0.11	94	320	< 2	< 2	7	22	0.20	< 10	< 10	77	< 10	20

CERTIFICATION: *Hart Bickler*



# Chemex Labs Ltd.

Analytical Chemists \* Geochemists \* Registered Assayers  
212 Brooksbank Ave., North Vancouver  
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PHONE: 604-984-0221 FAX: 604-984-0218

To: SURPRISE LAKE EXPLORATION LTD.

1446 14TH ST.  
WEST VANCOUVER, BC  
V7T 2S3

Project :  
Comments: ATTN: DAVID PURVIS

Page Number : 1  
Total Pages : 1  
Certificate Date: 10-FEB-95  
Invoice No. : 19511464  
P.O. Number :  
Account : MKO

## CERTIFICATE OF ANALYSIS

A9511464

SAMPLE	PREP CODE	Au ppb AFS	Pt ppb AFS	Pd ppb AFS								
4416	244 --	< 2	5	6								
4424	244 --	< 2	5	4								
4434	244 --	< 2	5	4								
4438	244 --	< 2	5	4								
4442	244 --	< 2	5	6								
4449	244 --	< 2	5	2								
4460	244 --	< 2	5	6								
4465	244 --	< 2	5	6								
4472	244 --	< 2	5	6								
4475	244 --	< 2	5	4								

CERTIFICATION:

*David Purvis*