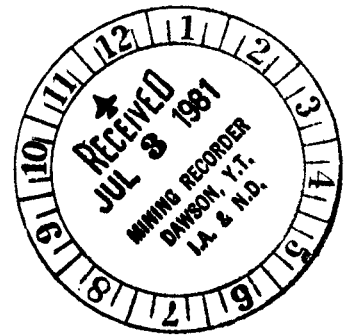


120057  
Part A



BARLOW LAKE GOLD MINES LIMITED

Placer Lease 5257  
Assessment Report - 1981

Prepared by : Geosearch Enterprises

July 3, 1981

### 1. LOCATION AND ACCESS

Placer Lease 5257 is located 110 km. southeast of Dawson City (N.T.S. 115P/ 12, 13) on the south side of the east tributary of Clear Creek. (Figure 1). The Dawson City - Whitehorse road passes within 5 km. of the lease. Access to the lease is via a good dirt road at kilometre 112.7 to within 3 km. of the lease and then by foot across Clear Creek. Figure 2 outlines the exact location of lease 5257 on the claim map.

### 2. PROPERTY STATUS

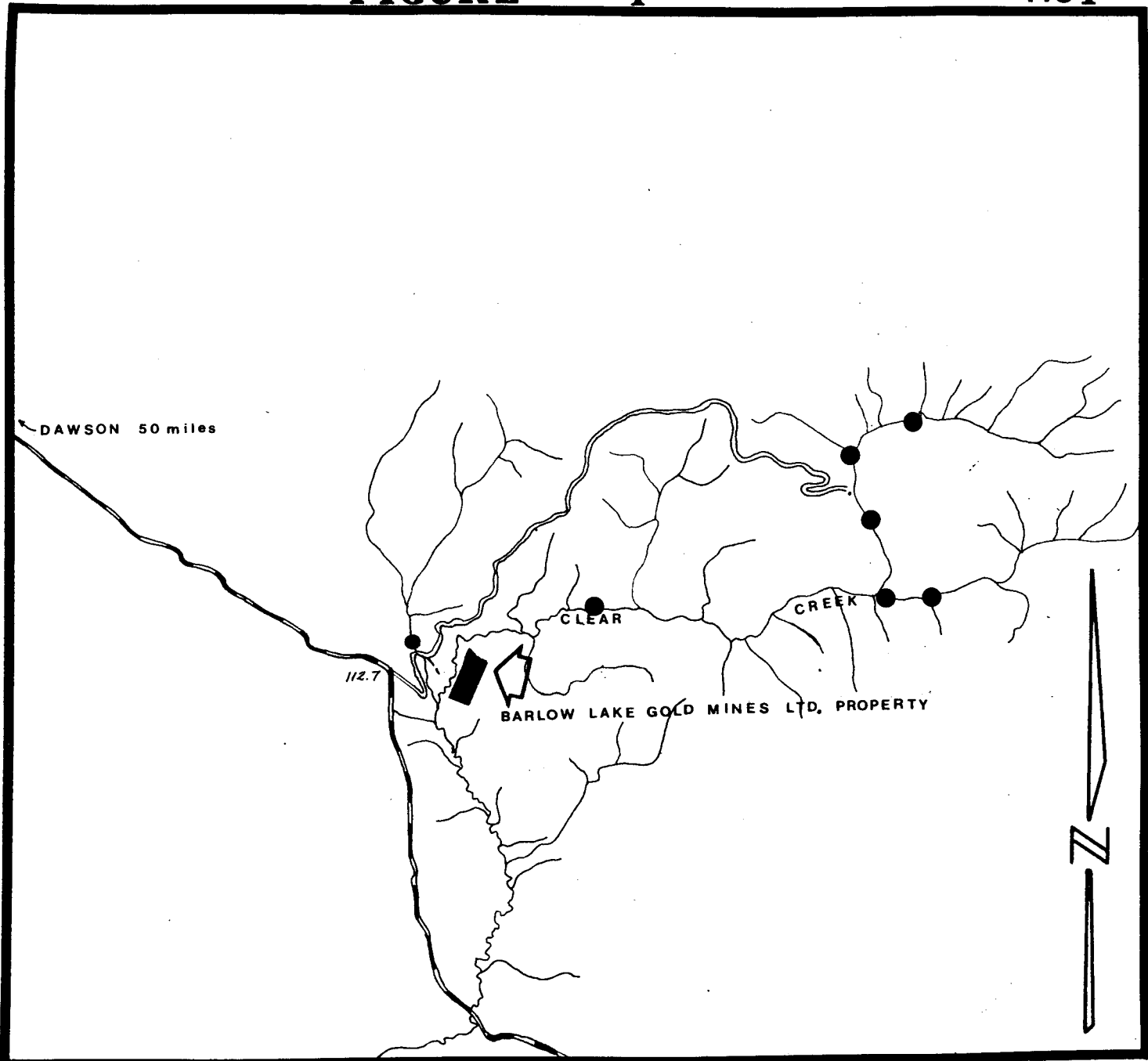
Lease 5257 was acquired by Blake Brady on July 17, 1980 and the lease was subsequently assigned to Barlow Lake Gold Mines Limited. Geosearch Enterprises was authorized by Barlow Lake Gold Mines Limited to complete and file the required \$2000 worth of assessment work to renew the lease a further year.

### 3. GEOLOGY

No bedrock was observed on the lease during the property examination. However, 1 - 2 metre angular boulders of sericitized quartz - mica schist was observed to the north (Barlow Lake #2). An outcrop of medium-grained foliated gneissic granodiorite was observed about 200 metres north of the lease (Barlow Lake #1). This granodiorite intrusion, believed to be Jurassic-Cretaceous in age, probably occurs at depth underneath the southern part of the lease. The quartz-mica schist represents the Ordovician Yukon Group which probably underlies the northern half of the lease. Figure 3 indicates the geological picture.

# FIGURE 1

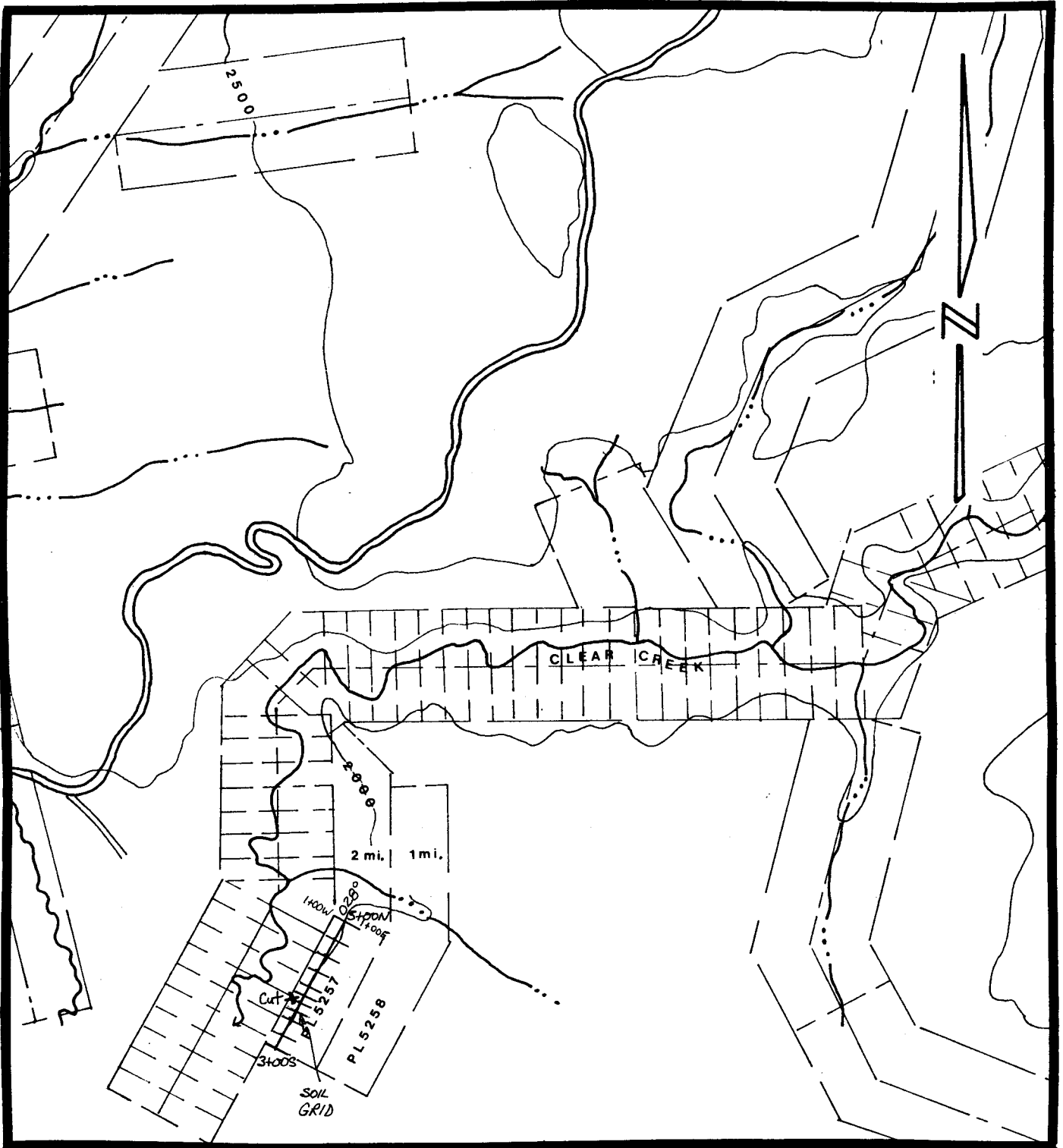
115 P



1 : 250,000

● dredges

# FIGURE 2

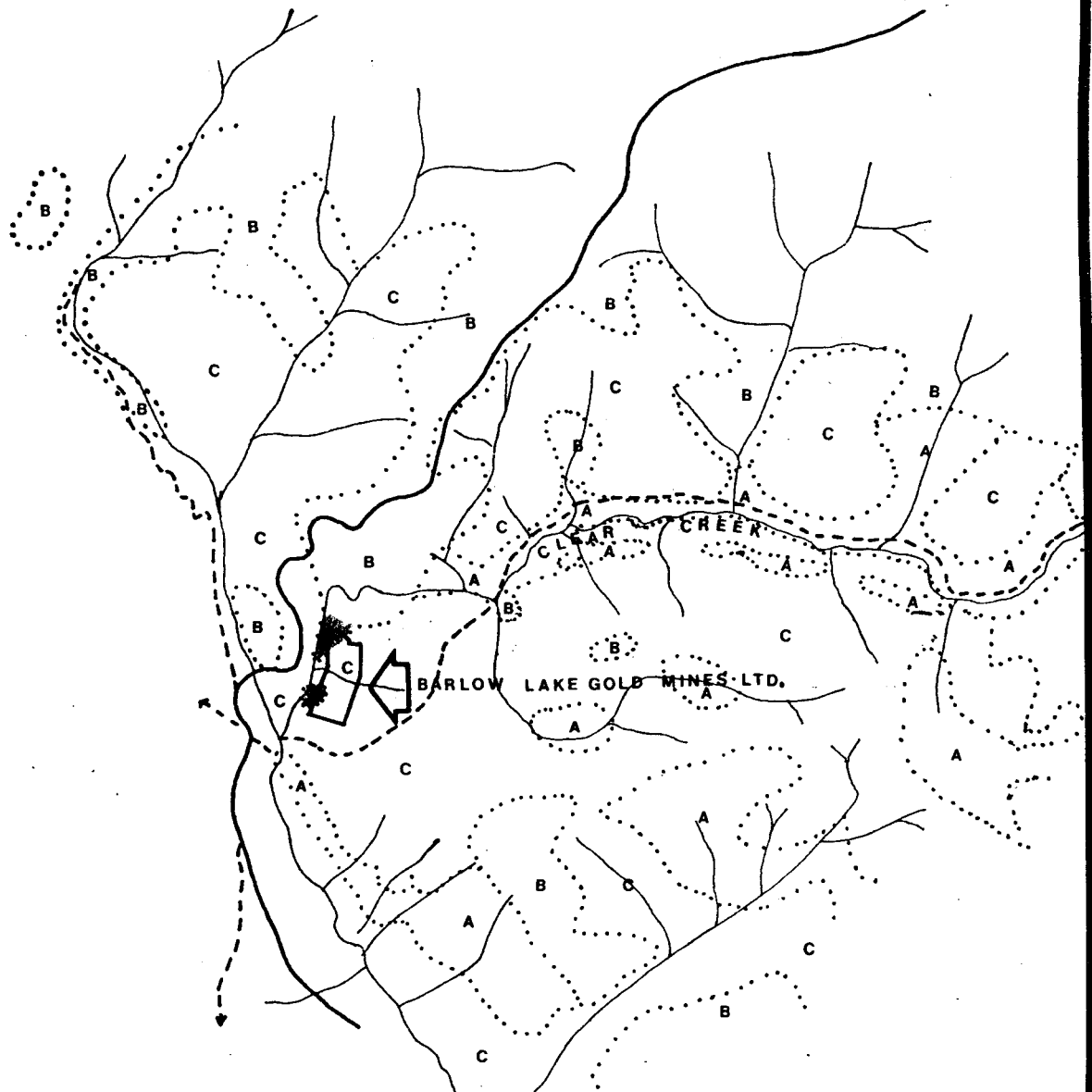


1 INCH : 1/2 MILE

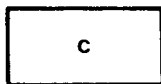
# FIGURE 3

1 in. : 2 mi.

AFTER P. MAP 48-25 A



## GEOLOGY MAP



DRIFT; TILL AND GLACIAL OUTWASH; STREAM DEPOSITS



QUARTZITE, SCHIST, SLATE, LIMESTONE, GNEISS



GRANODIORITE, GRANITE, GNEISSIC GRANITE

The main unit of interest on the lease is a remnant of White Channel gravel of Pliocene age which overlies the granodiorite and schists. These gravels are well exposed in an old hydraulic mining cut on the southern part of the lease, near the western boundary. This mining cut is believed to have been worked in the late 1940's by diverting water along a 200 metre ditch from a creek to the south. No known records exist as to how much gold was removed.

The White Channel gravels consist of well-rounded, white vein quartz pebbles and cobbles from 4 cm. to 15 cm. diameter. Three foot channel samples Barlow Lake #3 and #4 were taken from the upper part of the cut. The gravels are identical in appearance with the White Channel gravels in the Klondike District. They were formed during a long period of gradual uplift and slow cutting down of its base level of origin (Bostock, 1948). Any gold concentration, as in Bonanza and Hunker Creeks, would occur at the base of the White Channel gravel near its contact to underlying granodiorite or schist. This contact is not exposed for sampling. To evaluate the gold potential of this contact, two humic samples were taken over the White Channel gravels and will be assayed for minute concentrations of gold.

#### 4. GEOCHEMICAL SURVEY

##### (i) Theory:

The average gold content of soils is 5 ppb. but the ash of plants may contain up to 1000 ppb. Gold Schmidt (1937) was the first to demonstrate the enrichment of gold in the humus

layer (Ao). Since that time soil surveys of the Ao horizon have been successful in outlining lode type gold deposits in Kirkland Lake, Noranda, and Val D'Or. (Gleeson, Boyle, 1979). Humus anomalies have outlined gold zones beneath up to 40 metres overburden, with anomalous concentrations occurring directly over the subcrop of auriferous zones. Dispersion patterns are little affected by slope or glacial transport. Significant anomalies were in the order of 50-100 ppb. in a background of about 10 ppb. Au.

Recently, humic samples over an alluvial occurrence in Tasmania, Australia successfully showed areas of gold concentrations (Baker, 1980). No such surveys are known over placer gold occurrences in Canada.

The uptake of gold by plants and its subsequent concentration in humus has been attributed principally to cyanides. These cyanides, produced by the plants, allow gold to enter into solution, forming gold cyanides which are absorbed by the plants. Since the plants do not use the solution as a nutrient, the decomposition of plant debris results in gold accumulations in the humus horizon of the soil. (Lakin, 1974)

(ii) Grid Description

A total of 218 Ao humic samples were taken on lease 5257. A chained and flagged baseline, trending  $028^{\circ}$  was established with 100 metre crosslines from 3 + 00 M.S. to 5 + 00 M.N. The chained and flagged crosslines were extended 100 metres east and 100 metres west. Lines were chained using a rented "topo-fill" machine. Humic samples were taken at 10 metre intervals.

Line 0 + 00 transected the cut of White Channel gravels and to examine this area in more detail lines 0 + 50 N. and 0 + 50 S. were also sampled. Figure 4 outlines the extent of the grid.

Samples were selected from the upper 3 cm. of the soil profile. Vegetation consisted principally of secondary growth of silver birch, poplar, and spruce. A forest fire appears to have decimated older growth sometime in the 1950's. Samples consisted mainly of decaying silver birch and poplar twigs and leaves, coniferous needles, and moss. Wherever possible, moss was avoided since gold concentrations are generally negligible in such shallow rooted plants. In addition care was taken not to sample too deep to avoid any silt or pebbles from the A<sub>1</sub> - A<sub>2</sub> horizon.

(iii) Assay Technique

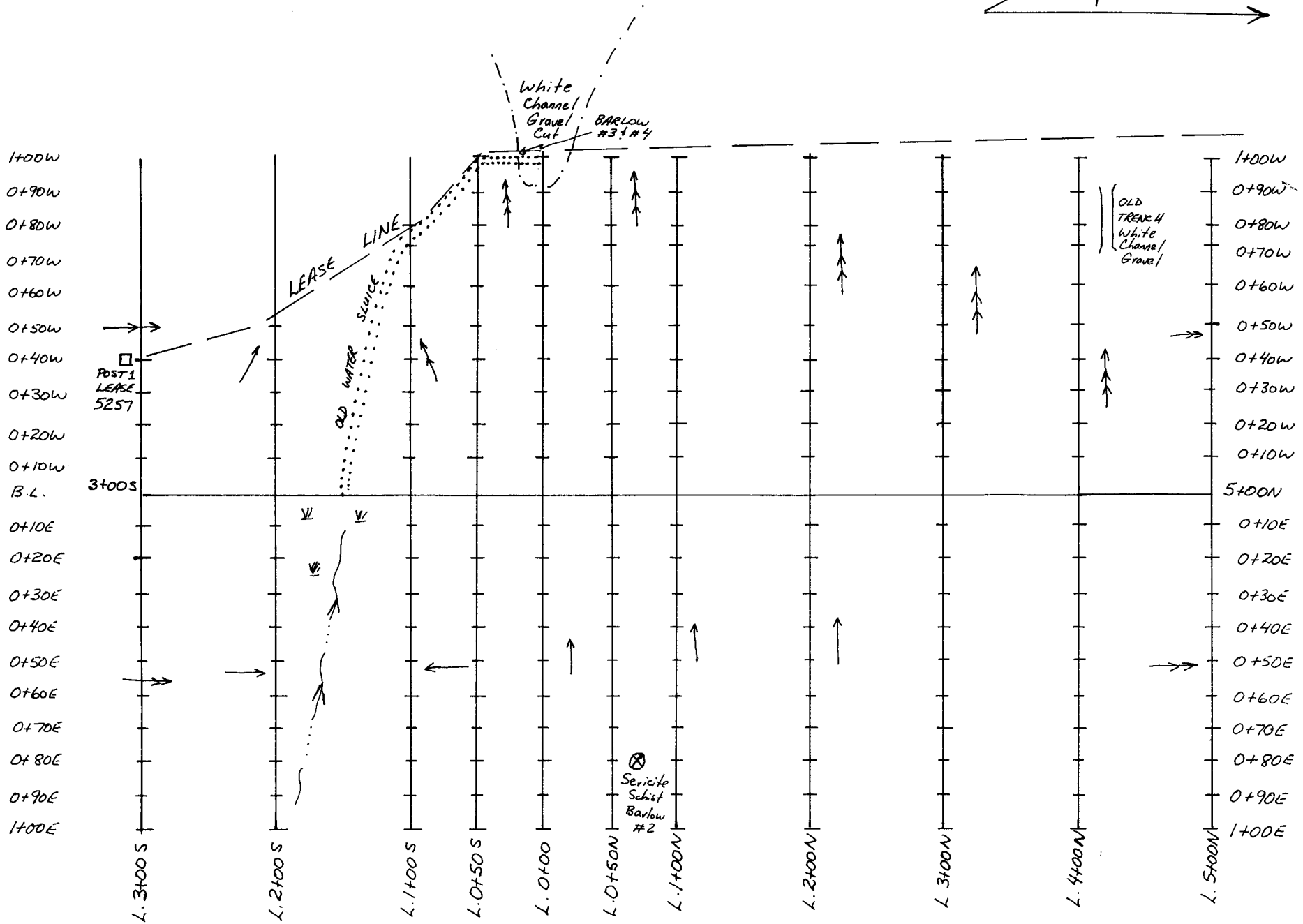
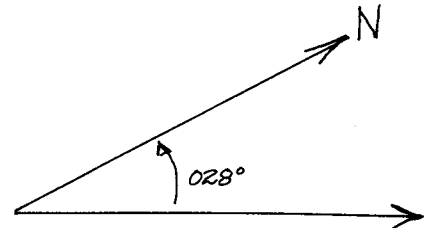
Samples were taken in cloth 15 cm. by 10 cm. bags purchased from X-ray Assay Laboratories in Toronto. Cloth bags should be used to avoid rotting of sample bags prior to analysis. All assays must be done by the neutron activation process since techniques such as atomic absorption may volatilize any gold present. The only neutron activation assay facilities at present in Canada are in Ontario.

In the preparation stage, samples are dried and then macerated to a fine pulp. This pulp is then subject to 50,000 psi pressure, resulting in a pellet which is later bombarded by neutrons in a nuclear reactor. X-ray Assay Laboratories uses the 5 megawatt reactor at McMaster University in Hamilton, Ontario. The detection limit is 1 ppb. Au. Rock samples are assayed in a similar process but preparation involves more expensive pulverization.



FIGURE 4  
 BARLOW LAKE GOLD MINES LTD  
 A<sub>0</sub> SOIL GRID

Barlow #1  
 Foliated  
 Granodiorite  
 outcrop

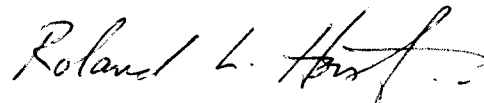


5. ASSESSMENT COSTS

Figure 5 outlines the total assessment expenditures of \$2205.30 on lease 5257. The major portion is for the 218 humic Au assays at \$6.50 each, including preparation. These assay results will be available in three to four weeks time and will be submitted when received.

6. PROPOSED WORK PROGRAM - 1982

The 1982 work program will be contingent on the results of this assessment work. If the humic sampling program is successful, more detailed follow-up by further humic sampling or overburden drilling of anomalies is proposed. If the present sampling is not successful, a shallow hammer seismic survey to outline the thickness of the White Channel gravels is suggested. This hammer seismic survey could outline possible overburden drilling sites.



Roland Horst, BSc., MSc.

Geosearch Enterprises

## REFERENCES

- Baker, W.E. 1980 A Biogeochemical approach to gold prospecting in N.E. Tasmania, Australia. (Vancouver Geochemical Symposium - 1981)
- Bostock, H.S. 1948 McQueston, Yukon Territory G.S.C. Paper 48 - 25
- Gleeson, C.F. 1979 "Consider Geochemistry when Seeking Gold"  
Boyle, R.W. Northern Miner, March 8th
- Goldschmidt, V.M. 1937 The principles of distribution of chemical elements in minerals and rocks.  
Jour. Chem. Soc. (London) P. 655-673
- Lakin et. al. 1974 Geochemistry of gold in the Weathering cycle.  
US.GS. Bull. 1330, 80 p.

FIGURE 5

1981 Assessment  
Placer Lease 5257

218	Cloth Sample Bags @ 10¢	\$ 21.80
218	Humic Samples, Preparation Charge @ 50¢	109.00
218	Humic Samples Au Assay by neutron activation @ \$6.00	1308.00
4	Rock Samples, Preparation @ \$2.00	8.00
4	Rock Samples, Au Assay by neutron activation @ \$6.00	24.00
6	Rolls Flagging @ \$ 5.00	30.00
3	Rolls "Topo-fill" Line @ \$4.00	12.00
3 Days	"Topo-fill" Rental @ \$10.00/day	30.00
3 Days	Consulting Fees @ \$175.00/day	525.00
1/2 Day	Report Compilation @ \$175.00/day	87.50
	Drafting, Typing, Xeroxing Report, Binder	<u>50.00</u>
		<u><u>\$2205.30</u></u>

Note: Fee schedule for X-ray Assay Laboratories attached



# X-RAY ASSAY LABORATORIES

LIMITED

1885 LESLIE STREET • DON MILLS, ONTARIO M3B 3J4 • (416) 445-5755

Telex 06-986947

## **Schedule of Fees for Assays and Analyses**

**Effective April 1, 1981**

## Contents

Introduction to XRAL .....	1
Terms and Conditions .....	1
Geochemistry	
Rock Analysis, Majors .....	2
Trace Analysis, Rocks, Soils etc. ....	3
Neutron Activation .....	4
Assaying	
Quantitative Assays and Analyses .....	5-6
Semi Quantitative Analyses .....	6
Data Processing .....	7
Stable Isotope Analysis .....	7
Environmental Coal Analysis .....	7

### Introduction

X-Ray Assay Laboratories is a wholly Canadian owned private company founded in 1954 for the purpose of providing analytical and technical services to the minerals industry. It has had since inception a strong bias towards modern instrumental methods. Beginning with a single X-Ray spectrometer — a radical departure from the then prevalent classical methods — it has followed this path until today the methodology in use includes a wide variety of the most advanced instrumental techniques.

Of particular note is the recent introduction of neutron activation analysis as a routine service for a number of elements including Uranium, Thorium, Gold and Tungsten.

The introduction of computer control of instruments and data processing has improved efficiency and reliability such that a major breakthrough in the field of rock geochemistry has been achieved.

It is now possible to obtain the highest quality whole rock compositional data at a fraction of former costs and, to use rock geochemistry as a practical, cost effective exploration tool. XRAL offers a range of statistical and data plotting programs designed to assess the ore potential of geological units.

The Company and its employees take pride in their ability to provide a reliable service and look forward to continuing the good relations established within the minerals industry over the past 26 years.

November, 1980

### Terms and Conditions

#### Sample Handling Charges

A sample preparation charge, as indicated below, is applied to all samples of normal size and weight received in the as collected condition. Surcharges are applied to unusually large or wet samples, to other materials requiring special treatment and for the sorting and listing of unorganized, undocumented shipments at an hourly rate of \$25.00.

*	Reduction of Rocks, Core, Aggregates .....	\$2.00
	Reduction of Crushed Rock, Coarse Pulps, Till .....	1.50
	Drying and Screening Soils, Silts, etc. ....	0.50
	Drying and Screening Lake Sediments .....	Hourly Rate
*	Drying and Blending Organics as Humus, Leaves .....	0.50
	Drying and Macerating Twigs, Bark .....	1.50
	Drying and Macerating Wood, Small Branches .....	2.00
	Total Digestion .....	2.00
	Ashing .....	Hourly Rate

#### Special Assays

1. Check assays; repeat assays or analyses are charged for at the regular rates.
2. Umpire assays; charged at 4 times the regular rate.
3. Abnormal samples such as concentrates and mill products which may introduce problems will be charged the hourly rate of \$25.00.
4. Rush projects requiring overtime will carry a 50% surcharge.

# I GEOCHEMISTRY

## Neutron Activation

### Rare Earths, Uranium & Thorium

La	to	1	ppm	Lu	to	0.2	ppm
Ce	to	10	ppm	Dy	to	1	ppm
Sm	to	0.1	ppm	Nd	to	5	ppm
Eu	to	1	ppm	U	to	0.1	ppm
Tb	to	1	ppm	Th	to	0.5	ppm
Yb	to	1	ppm				

..... Lot \$85.00  
 Minimum Charge \$200.00

If Dy is not required deduct 10.00 from Lot price.

This method is suitable for **Trace Analysis**. Detection limits will vary somewhat with matrix and are particularly affected by Uranium (+ 500 ppm) and Thorium (+ 1000 ppm).

### Gold, Rhenium and the Platinum Group Elements

1. Gold ..... to 1 ppb

~~In rocks, sediments, soils ..... \$6.00~~

~~In organics, as humus and plant matter by direct irradiation, no preconcentration ..... \$6.00~~

(Additional elements determined in organics ... Th, W, As, Sb, Co, Fe, Cr, Br.) - free 221 address

2. Platinum Group, Rhenium & Gold<sup>1</sup> in rocks, sediments & soils.

Rh	..... to 1	ppb	Os	..... to 5	ppb
Pd	..... to 5	ppb	Ru	..... to 5	ppb
Pt	..... to 5	ppb	Re	..... to 5	ppb
Ir	..... to 0.1	ppb	Au	..... to 1	ppb

..... Lot \$60.00

**Note:** 1. Detection limits for Pt are increased with high Au/Pt Ratios and limits for other elements will be affected by abnormally high Au, As, Sb and Cu Content. Samples with high Zinc content do not yield to this method.

### Neutron Activation — Other Elements

Detection Limit		
Group 1		First Element ..... \$6.00
		Each Additional ..... 1.00
Sc	0.5 ppm	
Cr	10 ppm	
Co	5 ppm	
Th	1 ppm	
Ta	5 ppm	
Hf	1 ppm	
Cs	5 ppm	
Sb	0.2 ppm	

~~120121~~

120057.

GEOSEARCH ENTERPRISES  
26 Denlow Road,  
London, Ontario  
N6G 3L4

September 9, 1981

Mr. Dave Jennings,  
Mining Recorder  
Dept. of Indian Affairs and Northern Development  
Dawson City, Yukon Territory

Dear Dave:

Please find enclosed the gold neutron activation results from humus samples taken on placer lease 5257 held by Barlow Lake Gold Mines Limited. These samples were taken to fulfill the work requirements on the lease and a report was filed by Geosearch Enterprises on behalf of Barlow Lake Gold Mines Limited on July 3, 1981 at your office.

A receipt from X-Ray Assay Laboratories Limited and a sketch map indicating the plotted values are also enclosed.

I apologize for the lateness of these results which were held up for some time by X-Ray Assay Laboratories through a misunderstanding on their part.

Interpretation of the results is included which may be added to the previous report if you so desire. I trust you will find this satisfactory.

Best Regards,

*Roland L. Horst*  
(Roland L. Horst)

President,

Geosearch Enterprises,

on behalf of Barlow Lake Gold Mine Limited





X-RAY ASSAY LABORATORIES LIMITED

1885 LESLIE STREET, DON MILLS, ONTARIO M3B 3J4

PHONE 416-445-5755

TELEX 06-986947

CERTIFICATE OF ANALYSIS

TO: GEOSSEARCH ENTERPRISES  
ATTN: ROLAND HORST  
26 DENLAW ROAD,  
LONDON, ONTARIO.  
N6G 3L4

CUSTOMER NO. 132

DATE SUBMITTED  
10-JUL-81

REPORT 12104

REF. FILE 7797-A1

222 SAMPLES

PROJECT: BARLOW

WERE ANALYSED AS FOLLOWS:

	UNITS	METHOD	DETECTION LIMIT
AU	PPB	NA	1.000
AU	PPB	FANA	1.000

CORRECTED REPORT



DATE 10-SEP-81

X-RAY ASSAY LABORATORIES LIMITED  
CERTIFIED BY *[Signature]*

\*\*\* UNLESS INSTRUCTED OTHERWISE WE WILL DISCARD REJECTS \*\*\*  
30 DAYS AND PULPS 180 DAYS FROM DATE OF THIS REPORT

SAMPLE	AU PPB	AU PPB	SAMPLE	AU PPB	AU PPB
5+00N-1+00W	2	--	3+00N-0+30E	<1	--
5+00N-0+90W	<1	--	3+00N-0+40E	3	--
5+00N-0+80W	<1	--	3+00N-0+50E	2	--
5+00N-0+70W	<1	--	3+00N-0+60E	1	--
5+00N-0+60W	2	--	3+00N-0+70E	<1	--
5+00N-0+50W	<1	--	3+00N-0+80E	<1	--
5+00N-0+40W	1	--	3+00N-0+90E	<1	--
5+00N-0+30W	2	--	3+00N-1+00E	3	--
5+00N-0+20W	1	--	2+00N-1+00W	<1	--
5+00N-0+10W	1	--	2+00N-0+90W	1	--
5+00N-BL	1	--	2+00N-0+80W	<1	--
5+00N-0+10E	1	--	2+00N-0+70W	4	--
5+00N-0+20E	<1	--	2+00N-0+60W	1	--
5+00N-0+30E	3	--	2+00N-0+50W	3	--
5+00N-0+40E	1	--	2+00N-0+40W	2	--
5+00N-0+50E	<1	--	2+00N-0+30W	2	--
5+00N-0+60E	1	--	2+00N-0+20W	<1	--
5+00N-0+70E	<1	--	2+00N-0+10W	1	--
5+00N-0+80E	<1	--	2+00N-BL	1	--
5+00N-0+90E	<1	--	2+00N-0+10E	1	--
5+00N-100E	1	--	2+00N-0+20E	<1	--
4+00N-1+00W	1	--	2+00N-0+30E	3	--
4+00N-1+90W	1	--	2+00N-0+40E	1	--
4+00N-1+80W	<1	--	2+00N-0+50E	1	--
4+00N-1+70W	1	--	2+00N-0+60E	<1	--
4+00N-1+60W	1	--	2+00N-0+70E	1	--
4+00N-1+50W	<1	--	2+00N-0+80E	1	--
4+00N-1+40W	2	--	2+00N-0+90E	2	--
4+00N-1+30W	1	--	2+00N-1+00E	1	--
4+00N-1+20W	<1	--	1+00N-1+00W	2	--
4+00N-1+10W	1	--	1+00N-0+90W	1	--
4+00N-BL	1	--	1+00N-0+80W	1	--
4+00N-0+10E	1	--	1+00N-0+70W	2	--
4+00N-0+20E	<1	--	1+00N-0+60W	1	--
4+00N-0+30E	<1	--	1+00N-0+50W	<1	--
4+00N-0+40E	2	--	1+00N-0+40W	1	--
4+00N-0+50E	2	--	1+00N-0+30W	<1	--
4+00N-0+60E	1	--	1+00N-0+20W	<1	--
4+00N-0+70E	2	--	1+00N-0+10W	2	--
4+00N-0+80E	3	--	1+00N-BL	1	--
4+00N-0+90E	4	--	1+00N-0+10E	1	--
4+00N-1+00E	1	--	1+00N-0+20E	<1	--
3+00N-1+00W	<1	--	1+00N-0+30E	1	--
3+00N-0+90W	1	--	1+00N-0+40E	1	--
3+00N-0+80W	<1	--	1+00N-0+50E	1	--
3+00N-0+70W	<1	--	1+00N-0+60E	<1	--
3+00N-0+60W	1	--	1+00N-0+70E	1	--
3+00N-0+50W	1	--	1+00N-0+80E	1	--
3+00N-0+40W	1	--	1+00N-0+90E	1	--
3+00N-0+30W	6	--	1+00N-1+00E	<1	--
3+00N-0+20W	7	--	0+50N-1+00W	<1	--
3+00N-0+10W	2	--	0+50N-0+90W	2	--
3+00N-BL	1	--	0+50N-0+80W	1	--
3+00N-0+10E	2	--	0+50N-0+70W	1	--
3+00N-0+20E	2	--	0+50N-0+60W	<1	--

SAMPLE	AU >PB	AU PPB	SAMPLE	AU PPB	AU PPB
0+50N-0+50W	1	--	0+50S-0+80E	1	--
0+50N-0+40W	<1	--	0+50S-0+90E	1	--
0+50N-0+30W	1	--	0+50S-1+00E	<1	--
0+50N-0+20W	1	--	1+00S-0+80W	<1	--
0+50N-0+10W	<1	--	1+00S-0+70W	1	--
0+50N-BL	1	--	1+00S-0+60W	2	--
0+50N-0+10E	1	--	1+00S-0+50W	2	--
0+50N-0+20E	1	--	1+00S-0+40W	<1	--
0+50N-0+30E	1	--	1+00S-0+20W	<1	--
0+50N-0+40E	1	--	1+00S-0+10W	<1	--
0+50N-0+50E	1	--	1+00S-BL	2	--
0+50N-0+60E	<1	--	1+00S-0+10E	1	--
0+50N-0+70E	<1	--	1+00S-0+20E	<1	--
0+50N-0+80E	<1	--	1+00S-0+30E	<1	--
0+50N-0+90E	1	--	1+00S-0+40E	1	--
0+50N-1+00E	1	--	1+00S-0+50E	1	--
0+00-1+00W	<1	--	1+00S-0+60E	2	--
0+00-0+90W	1	--	1+00S-0+70E	2	--
0+00-0+80W	<1	--	1+00S-0+80E	<1	--
0+00-0+70W	13	--	1+00S-0+90E	1	--
0+00-0+60W	<1	--	1+00S-1+00E	1	--
0+00-0+50W	<1	--	2+00S-0+50W	<1	--
0+00-0+40W	1	--	2+00S-0+40W	2	--
0+00-0+30W	<1	--	2+00S-0+30W	1	--
0+00-0+20W	1	--	2+00S-0+20W	1	--
0+00-0+10W	1	--	2+00S-0+10W	1	--
0+00-BL	<1	--	2+00S-BL	2	--
0+00-0+10E	2	--	2+00S-0+10E	1	--
0+00-0+20E	1	--	2+00S-0+20E	2	--
0+00-0+30E	1	--	2+00S-0+30E	2	--
0+00-0+40E	1	--	2+00S-0+40E	1	--
0+00-0+50E	1	--	2+00S-0+50E	<1	--
0+00-0+60E	2	--	2+00S-0+60E	1	--
0+00-0+70E	<1	--	2+00S-0+70E	2	--
0+00-0+80E	1	--	2+00S-0+80E	1	--
0+00-0+90E	<1	--	2+00S-0+90E	3	--
0+00-1+00E	1	--	2+00S-1+00E	1	--
0+50S-1+00W	1	--	3+00S-0+40WA	2	--
0+50S-0+90W	1	--	3+00S-0+40WB	1	--
0+50S-0+80W	<1	--	3+00S-0+30W	<1	--
0+50S-0+70W	<1	--	3+00S-0+20W	3	--
0+50S-0+60W	1	--	3+00S-0+10W	2	--
0+50S-0+50W	1	--	3+00S-BL	3	--
0+50S-0+40W	<1	--	3+00S-0+10E	2	--
0+50S-0+30W	<1	--	3+00S-0+20E	3	--
0+50S-0+20W	<1	--	3+00S-0+30E	2	--
0+50S-0+10W	<1	--	3+00S-0+40E	4	--
0+50S-BL	1	--	3+00S-0+50E	7	--
0+50S-0+10E	<1	--	3+00S-0+60E	1	--
0+50S-0+20E	1	--	3+00S-0+70E	2	--
0+50S-0+30E	<1	--	3+00S-0+80E	2	--
0+50S-0+40E	<1	--	3+00S-0+90E	1	--
0+50S-0+50E	1	--	3+00S-1+00E	<1	--
0+50S-0+60E	1	--	BARLOW-1	--	<1
0+50S-0+70E	<1	--	BARLOW-1-GRAVEL	--	1

SAMPLE	AU PPB	AU PPB	SAMPLE	AU PPB	AU PPB
BARLOW-2	--	<1	BARLOW-2-GRAVEL	--	14

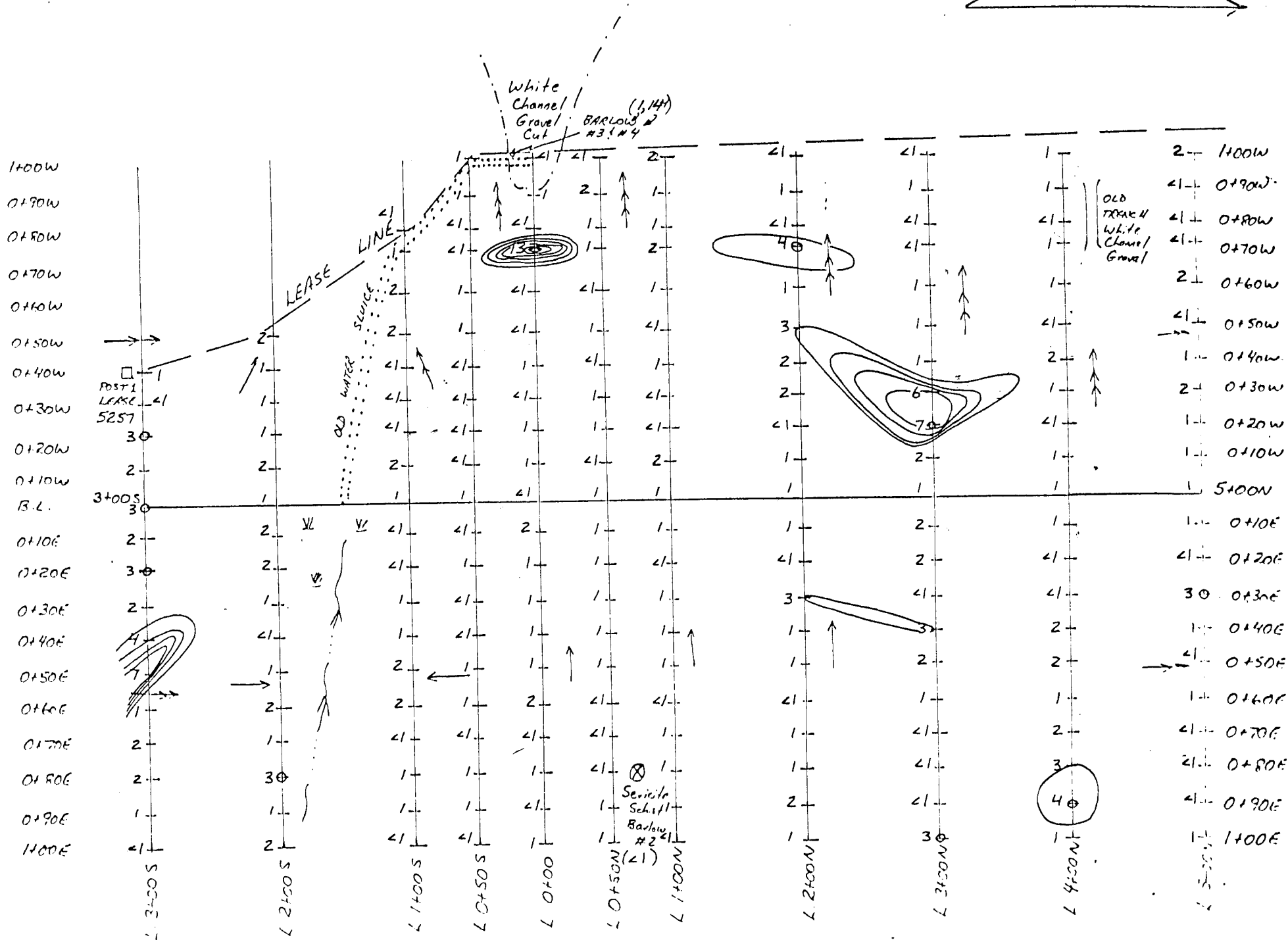
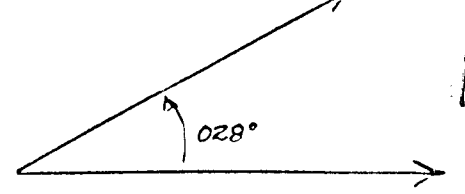


BARLOW LAKE GOLD MINES LTD

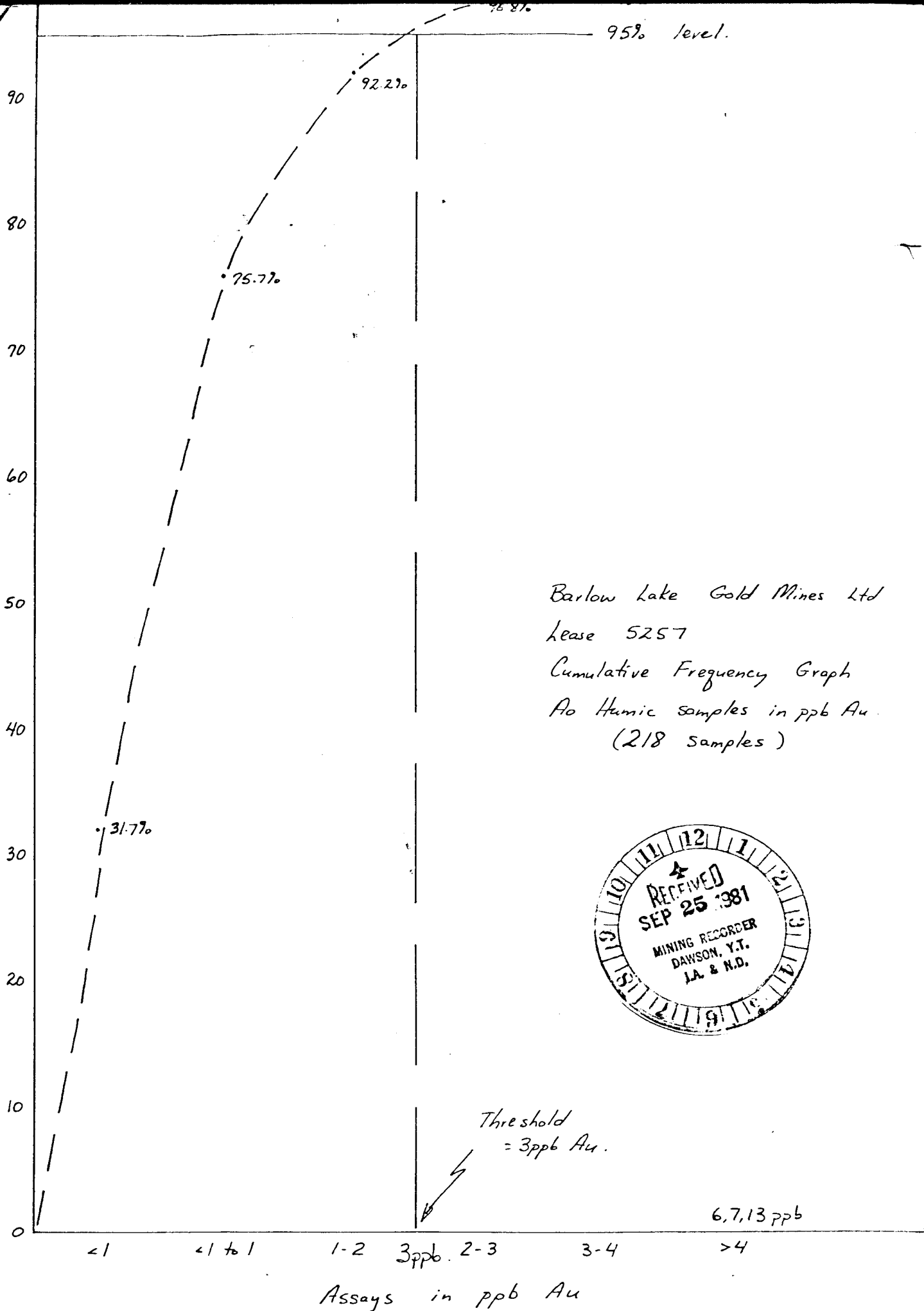
As SOIL GRID

Contour Interval: 1 ppb Au

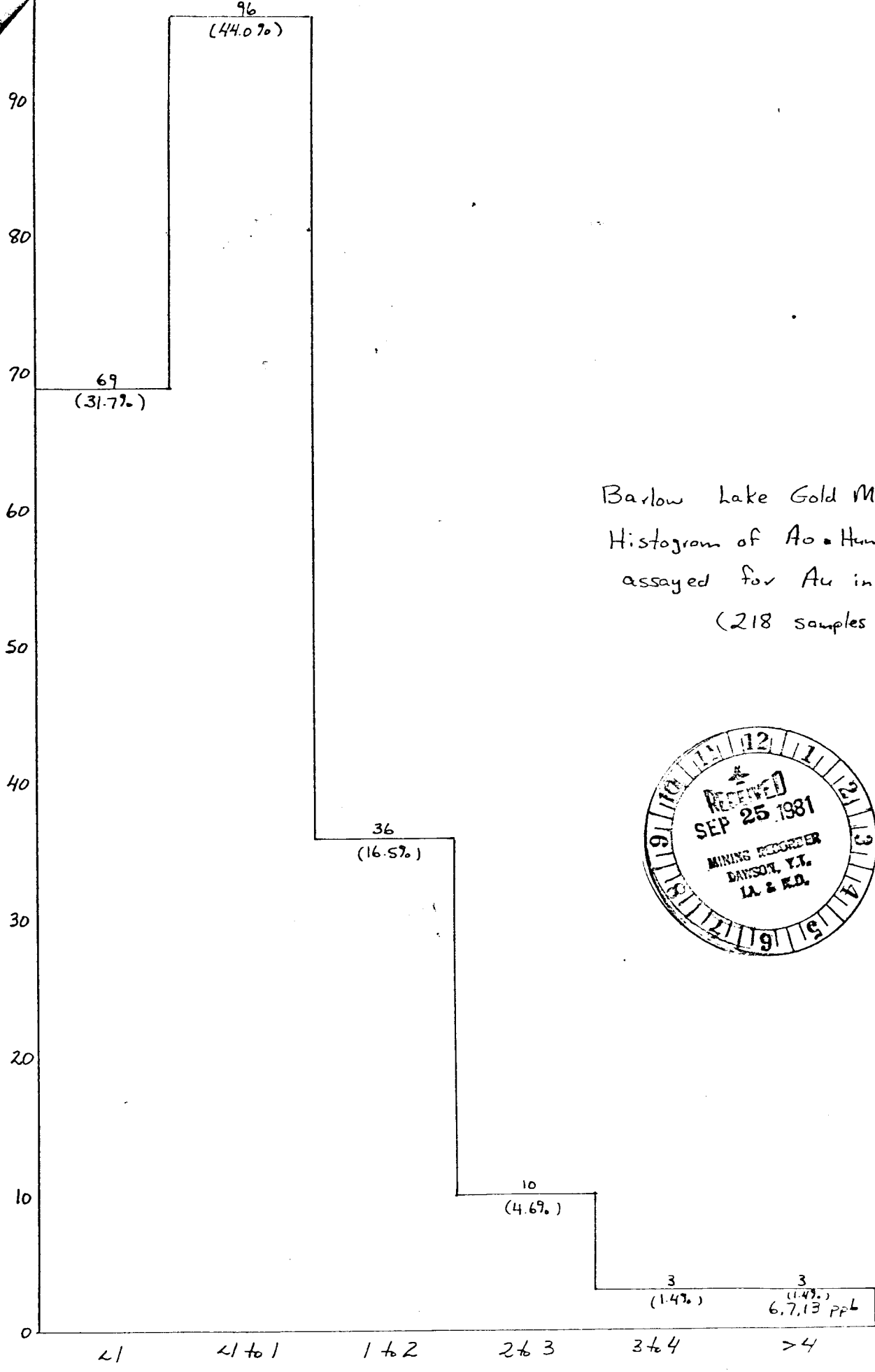
(21) Granodiorite OUTCROP



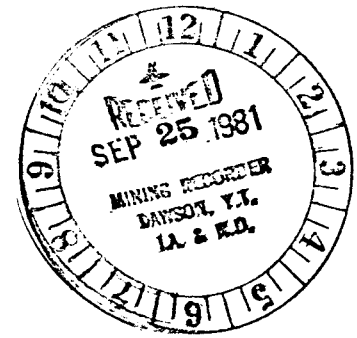
Percentage of Samples



Number of Samples  
(Percentage in brackets)



Barlow Lake Gold Mines Ltd.  
Histogram of Au - Hemic Samples  
assayed for Au in ppb.  
(218 samples)



Assays in ppb Au.

PLACER LEASE 5257

Addendum to Assessment Report of July 3, 1981 prepared by Geosearch Enterprises for Barlow Lake Gold Mines Limited.

Interpretation of Results

The 218 Au humic samples were analyzed for trace gold content by the neutron activation method. Assay results are stated with a detection limit of  $<1$  ppb. although the actual detection limit is .5 ppb.

The background is very low at about 1 ppb. but is characteristic of background values in tundra areas and some areas of the Canadian Shield (Eric Hoffman - X-ray Assay Lab.). The average value is 1.25 ppb. if samples with values of  $<1$  ppb. are assigned a value of .5 ppb. Anomalous values at the 95 confidence level are  $>3$  ppb. These values range from 3 ppb. to 13 ppb. and values exceeding 6 ppb. are considered to warrant follow-up work (Eric Hoffman).

A broad trend is outlined about 1000 m. long from near the White Channel gravel cut (13 ppb.) towards line 3+00 N. This zone contains values of 13, 4, 3, 6, and 7 ppb. Au at the crest of a slope. These values may indicate root penetration to the top of the White Channel gravel which from the gravel sample exhibited a high background of 14 ppb. Au (Sample #4). The overlying polymictic gravel assayed only 1 ppb. (Sample 3). Overburden may be too thick on the slopes for roots to penetrate the barren cap gravel through to the White Channel gravel.

A second anomalous area occurs on line 3+00 S where five values exceed 3 ppb. These also occur at the top of a ridge where overburden may be thinner and could indicate another area of root



penetration to White Channel gravel.

The only rock samples of a foliated granodiorite outcrop and sericite schist boulder yielded less than 1 ppb. Au as expected.

#### CONCLUSIONS

The White Channel gravel has an anomalous background in the area of probably 10-15 ppb. Au but is overlain by a barren polymictic gravel with a background of 1-2 ppb. Au. This barren cover prevents concentration of gold in humic material since the roots cannot penetrate significantly into the White Channel gravel. Anomalous values all occur on the crests of ridges where overburden and the overlying barren gravel appear thinner. The results are positive since they confirm the anomalous gold background of the White Channel gravel. As stated in the main report, the major gold concentration would occur at the base of the White Channel gravel where it rests against granodiorite.

#### Proposed Work Program

The humic sampling program and gravel assaying have confirmed the presence of anomalous White Channel gravel on lease 5257. Minor additional humic sampling should be completed in the area of 0+20 W to 0+80 W on lines 0+00 to 4+00 N along the anomalous trend, to confirm the results and provide more detailed information. No more than 50 samples are anticipated, involving an expenditure of about \$500. This ridge should be an excellent place to test the thickness of the White Channel gravel and evaluate gold potential near its basal contact. Two to three holes 15 m. deep are anticipated with an overburden sampling drill.

Expenditure is estimated at \$1500 for this shallow overburden drilling.

*R. L. Horsfall*

