

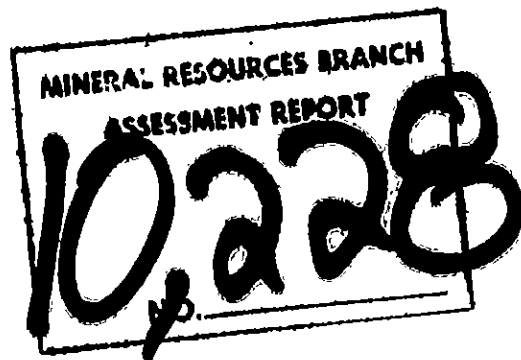
82-71-10228

SOIL GEOCHEMISTRY  
NORTHERN BELLE GROUP  
MOUNT PAYNE  
SLOCAN MINING DISTRICT  
SANDON, B. C.  
LAT. 50°00'N, LONG. 117°12.3'W  
82 K 3E

ARCTEX ENGINEERING SERVICES

LOCKE B. GOLDSMITH, P.ENG.  
CONSULTING GEOLOGIST

FEBRUARY, 1982



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SOIL GEOCHEMISTRY  
NORTHERN BELLE GROUP  
MOUNT PAYNE  
SLOCAN MINING DISTRICT  
SANDON, B. C.  
82 K 3E

SUMMARY

Soil samples taken along a new road cut contain anomalous concentrations of silver and lead. Grid sampling of soil on 50-metre centres should be completed. Bulldozer trenching should be considered when results of the soil geochemistry are compiled. A budget of \$37,250.00 should be available.

## INTRODUCTION

The group consists of two reverted crown grants and one located claim.

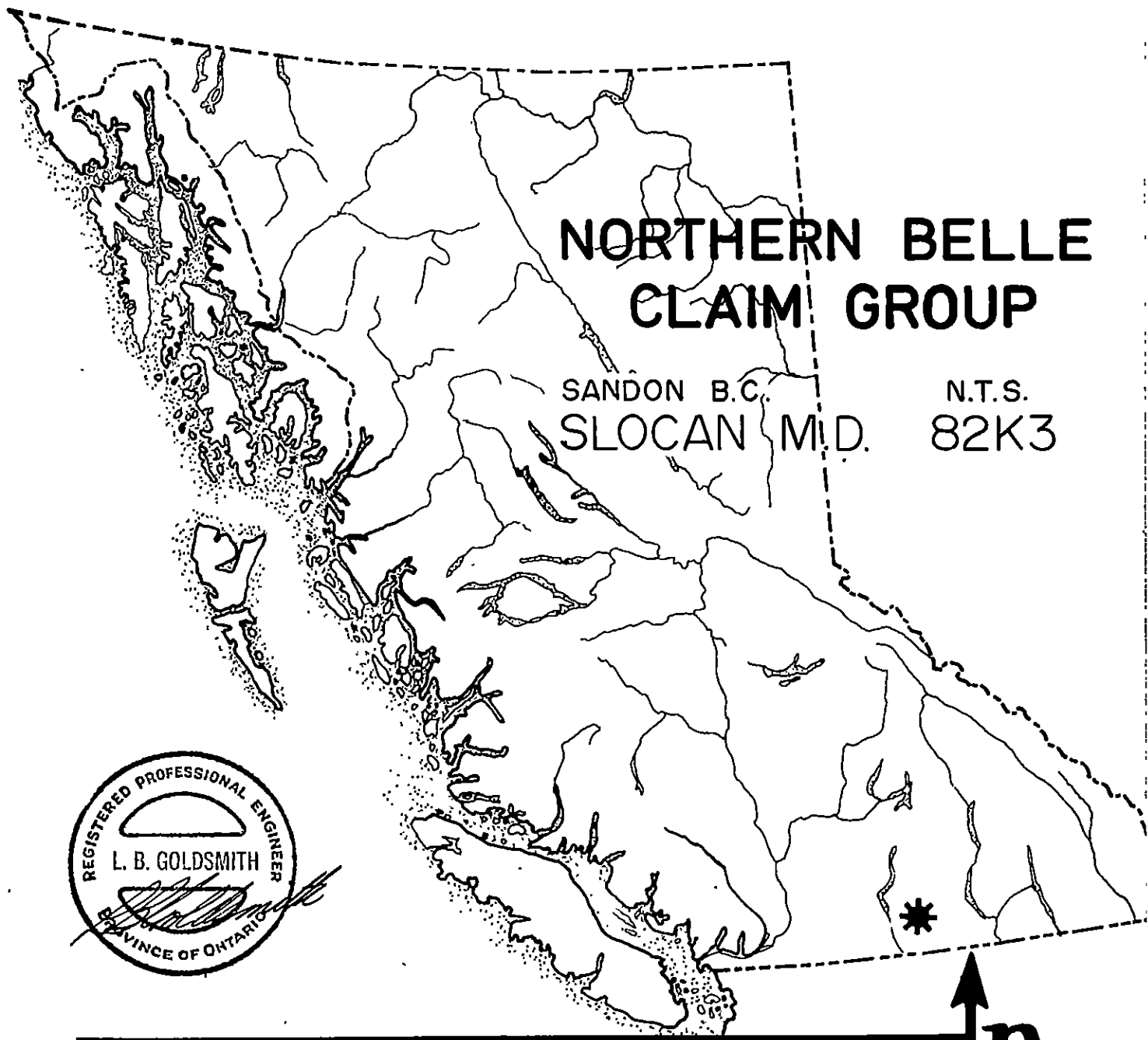
<u>Name</u>	<u>Lot Number</u>	<u>Record Number</u>
Northern Belle	L3173	1143(3)
Galena Fraction	L4895	
Judith Ann		2688(9)

Two kilometres (1.25 miles) west of Zincton, a dirt road departs from Highway 31A and trends southeasterly up the valleys of McGuigan and Rambler Creeks, eventually turning southwesterly and thence southerly to the Old Tom Moore and Antoine Mines. During 1981 a road was extended westerly and southerly from a switchback on a talus slope midway between the former mines. Approximate location of the new road where it crosses the Northern Belle group is shown on the soil geochemistry map. Total distance from Highway 31A to the property is about 10 km (6 miles). Elevations range from 2135 m (7000') to 2410 m (7900') within the claim boundaries.

Two adits which have soil slumped over the portals were observed on the Northern Belle claim. Dumps are small; the workings are probably not extensive. Immediately to the east of the group, production from the Antoine (L516), the Red Fox (L2413) and the Ruby Silver (L515) claims is recorded in MINDEP files of the University of British Columbia as:

<u>Property</u>	<u>Tons</u>	<u>oz Ag/ton</u>	<u>% Pb</u>	<u>% Zn</u>	<u>oz Au/ton</u>
Antoine	8821	40.2	9.82	2.73	0.0006
Red Fox	569	198	45.5	1.41	
Ruby Silver	40	211	51.4		

Twenty-one soil samples were collected along the cutbank of the new road, and analyzed for lead and silver.



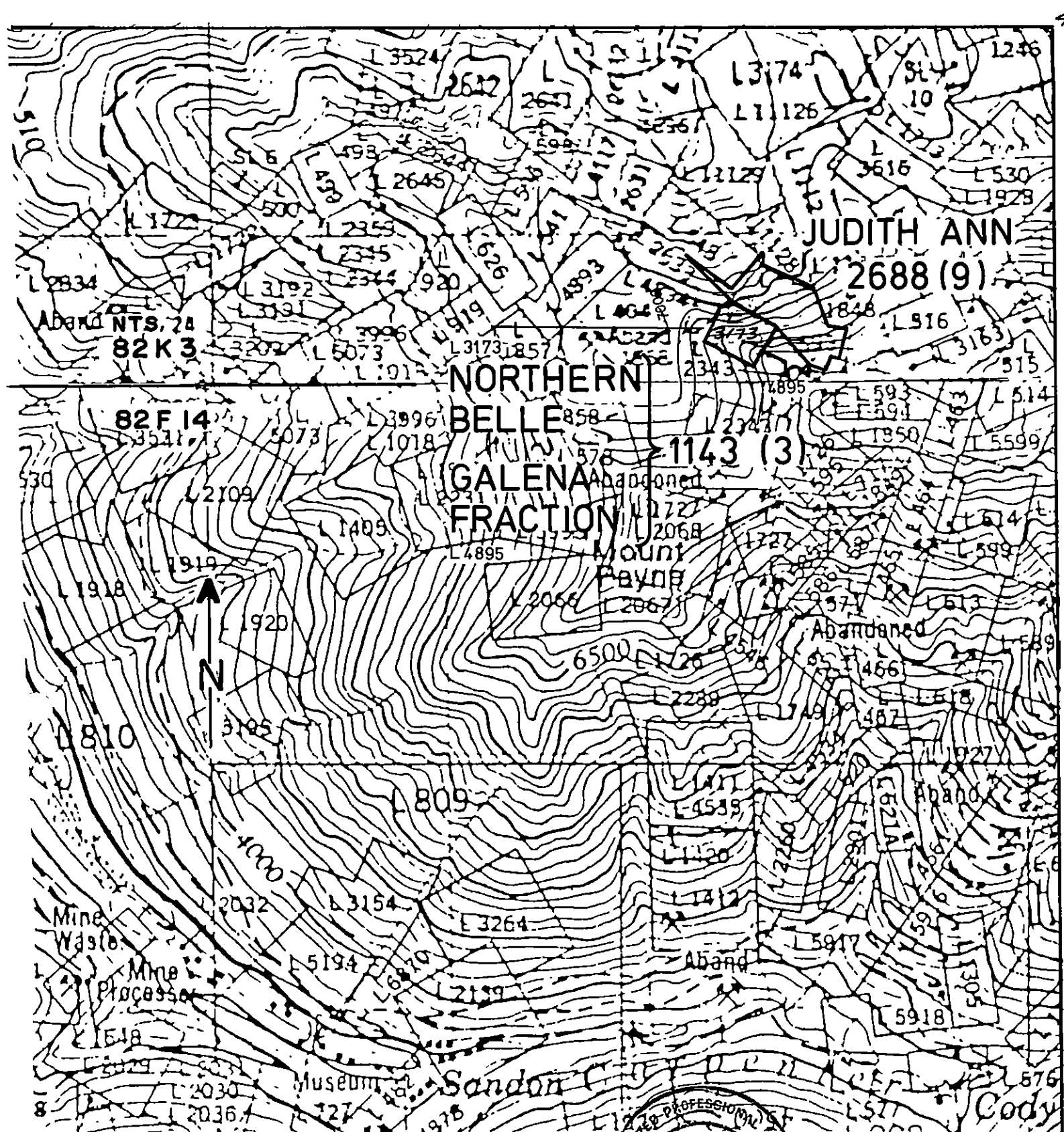
**NORTHERN BELLE  
CLAIM GROUP**

SANDON B.C. N.T.S.  
SLOCAN M.D. 82K3



**Location  
map**

ARCTEX ENGINEERING SERVICES  
FEBRUARY 1982



0 200 m. 1000 m.

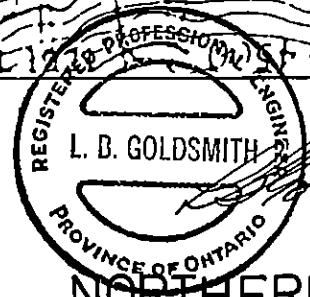


1: 20 000

February  
1982

# CLAIM MAP

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NORTHERN BELLE  
CLAIM GROUP

SANDON B.C. SLOCAN M.D. 82K3

## GEOLOGY

The area is underlain by the Slocan sediments, a thick sequence of argillite with subordinate amounts of quartzite, limestone, and tuff. Argillite in outcrop was noted in the road 25 metres north of the south boundary of the Northern Belle claim, and in rusty, oxidized dump material at the adits.

## SOIL GEOCHEMISTRY

Samples were collected at 50-metre spacing from the cutbank of the road. Material was obtained between 0.6-1.2 metres (2'-4') below organic debris. Soil is dark brown to black, clay-rich, with argillite fragments.

Too few samples were taken to determine statistical background, threshold, and anomalous values. However, extensive sampling in argillite terrain in the vicinity has established levels of lead and silver values as:

	<u>Background</u>	<u>Threshold</u>	<u>Anomalous</u>
ppm Pb	-38	38 to 150	+150
ppm Ag	±2.3	2.3 to 4.9	+4.9

Lead is anomalous in eight samples and silver is anomalous in three. Soil transport and dispersion of values is northerly, westerly, and southerly off the spur ridge which trends northwesterly across the Northern Belle claim.

## CONCLUSIONS

Anomalous lead and silver values appear to be derived from a source on the spur ridge, perhaps near old underground workings.

## RECOMMENDATIONS

1. Soil sampling should be completed on a 50-metre-square grid over the claim group, with subsequent fill-in on 25-metre centres as required. Geological mapping should be undertaken at the time of sampling.

2. Trenching with a bulldozer or backhoe should be done within geo-chemically and geologically favourable areas.

### COST ESTIMATE

1. Soil sampling, grid preparation	\$ 3,000	
Analyses	3,000	
Geological mapping	2,000	
Vehicle, travel, room, board, supplies	1,500	
Reporting	<u>2,000</u>	
	\$11,500	
Contingencies @ 10%	<u>1,150</u>	
	\$12,650	\$12,650
2. Bulldozer trenching	\$15,000	
Supervision	3,000	
Vehicle, travel, room, board, supplies	1,000	
Assays	500	
Reporting	<u>1,000</u>	
	\$20,500	
Contingencies @ 20%	<u>4,100</u>	
	\$24,600	<u>\$24,600</u>
	TOTAL	\$37,250



Respectfully submitted,

*Locke B. Goldsmith*  
 Locke B. Goldsmith, P.Eng.  
 Consulting Geologist

Vancouver, B. C.  
 February 13, 1982



## ENGINEER'S CERTIFICATE

LOCKE B. GOLDSMITH

1. I, Locke B. Goldsmith, am a Registered Professional Engineer in the Province of Ontario and a Registered Professional Geologist in the State of Oregon. My address is 301, 1855 Balsam Street, Vancouver, B. C.
2. I have a B.Sc. (Honours) degree from Michigan Technological University and have done postgraduate study in Geology at Michigan Tech, University of Nevada and the University of British Columbia. I am a graduate of the Haileybury School of Mines and am a Certified Mining Technician. I am a member of the Society of Economic Geologists, the AIME, and the Australasian Institute of Mining and Metallurgy, and a Fellow of the Geological Association of Canada.
3. I have been engaged in mining exploration for the past 23 years.
4. I have authored the report entitled, "Soil Geochemistry, Northern Belle Group, Mount Payne, Slocan Mining District, Sandon, B. C." dated February 13, 1982. The report is based upon fieldwork and research supervised by the author.
5. I own, with associates, 100% interest in the property.
6. I consent to the use of this report in a prospectus or in a statement of material facts related to the raising of funds.



Respectfully submitted,

L. B. GOLDSMITH

*Locke B. Goldsmith*  
 Locke B. Goldsmith, P.Eng.  
 Consulting Geologist

Vancouver, B. C.

February 13, 1982

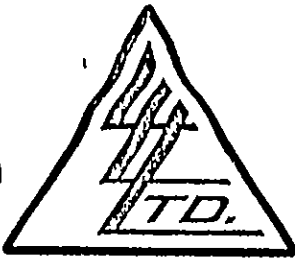
## REFERENCES

1. Cairnes, C. E., 1934, Slocan Mining Camp, British Columbia, GSC Memoir 173.
2. \_\_\_\_\_, 1935, Description of Properties, Slocan Mining Camp, British Columbia, GSC Memoir 184.
3. MINDEP Computer Files, University of British Columbia.

## COST STATEMENT, 1981 PROGRAMME

1. L. B. Goldsmith, October 4, $\frac{1}{2}$ February 10, $\frac{1}{2}$ February 11, $\frac{1}{2}$ February 13, $\frac{1}{4}$ February 14, $\frac{1}{4}$ February 15 - total 3 days @ \$360/day		\$1,080.00
G. Bennett, October 4, 1 day @ \$180/day		180.00
P. Harker, October 4, 1 day @ \$180/day		180.00
2. Meals, accommodation - 37.00 $\div$ 3 worker days = \$12.33/person/day		37.00
3. Transportation, \$48.00/day		
October 4, 40 miles @ \$0.30/mile	\$12.00	
Truck rental	30.00	
Gas	<u>6.00</u>	
	\$48.00	48.00
4. Geochemical analyses - \$85.05 $\div$ 21 samples = \$4.05/sample		85.05
5. Report - Drafting, prints, report materials, typing		<u>348.60</u>
		\$1,958.65

APPENDIX



# LORING LABORATORIES LTD.

Phone 274-2777

629 Beaverdam Rd. N.E.  
Calgary 67, Alberta

## Geochemical Analysis of Soils, Sediments and Silts.

FOR: Copper, Lead, Zinc, Nickel and Silver, and Cobalt

### Sample Preparation:

- Samples were placed in dryer overnight at 105°C.
- All samples are sieved through an 80 mesh nylon screen.
- The minus 80 is placed in pre-marked sample bag for analysis. The plus 80 portion is discarded.

### Sample Dissolution:

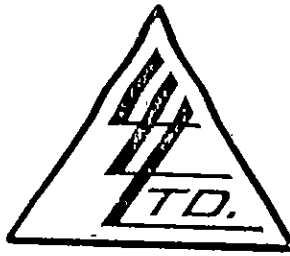
- 1/2 gram samples are weighed and transferred to test tubes.
- One ml water added, then three mls hydrochloric (concentrated), one ml nitric acid (concentrated) are added.
- Test tubes are then placed into hot water bath 100°C and digested for three hours with occasional shaking to ensure complete digestion.
- Test tubes are removed from water bath and allowed to cool.
- Test tubes are bulked to exactly 10 mls, corked and shook.
- All samples are then allowed to settle until clear.
- The clear solutions are then aspirated through the atomic absorption spectrophotometer with appropriate standards to obtain the metal content.

### Detection Limits and Precision:

<u>Element</u>	<u>Detection Limit</u>	<u>Precision at 100 ppm level</u>
Copper	1 ppm	+ - 2 ppm
Lead	2 ppm	+ - 4 ppm
Zinc	1 ppm	+ - 2 ppm
Nickel	1 ppm	+ - 2 ppm
Silver	0.2 ppm	+ - 1 ppm
Cobalt	1 ppm	+ - 4 ppm

To: Mr. Locke B. Goldsmith,  
 301, 1855 Balsam Street,  
 Vancouver, B.C. V6K 3M3

cc: G. Bennett, New Denver, B.C.



File No. 22975  
 Date January 21, 1982  
 Samples Soil

Certificate of  
**ASSAY OF**  
**LORING LABORATORIES LTD.**

Page # 1

SAMPLE No.	PPM Pb	PPM Ag
NB-BL-00+00 RD	69	1.8
NB-0+50S RD	144	1.6
1+00S RD	95	1.0
1+50S RD	128	2.1
2+00S RD	300	7.4
2+50S RD	90	1.2
3+00S RD	53	1.2
0+50E RD	50	1.0
1+00E RD	305	6.6
1+50E RD	68	1.9
2+00E RD	270	2.5
2+50E RD	105	2.3
3+00E RD	430	3.8

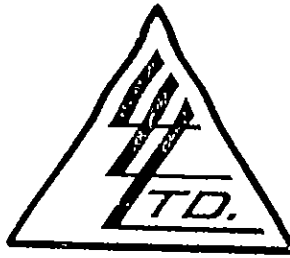
**I Hereby Certify** THAT THE ABOVE RESULTS ARE THOSE  
 ASSAYS MADE BY ME UPON THE HEREIN DESCRIBED SAMPLES . . . .

Rejects Retained one month.  
 Pulps Retained one month  
 unless specific arrangements  
 made in advance.

*S. J. Juan*  
 Assayer

To: Mr. Locke B. Goldsmith,  
 301, 1855 Balsam Street,  
 Vancouver, B.C. V6K 3M3

cc: G. Bennett - New Denver, B.C.



File No. 22975  
 Date January 21, 1982  
 Samples Soil

Certificate of  
**ASSAY** of  
**LORING LABORATORIES LTD.**

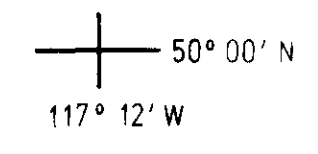
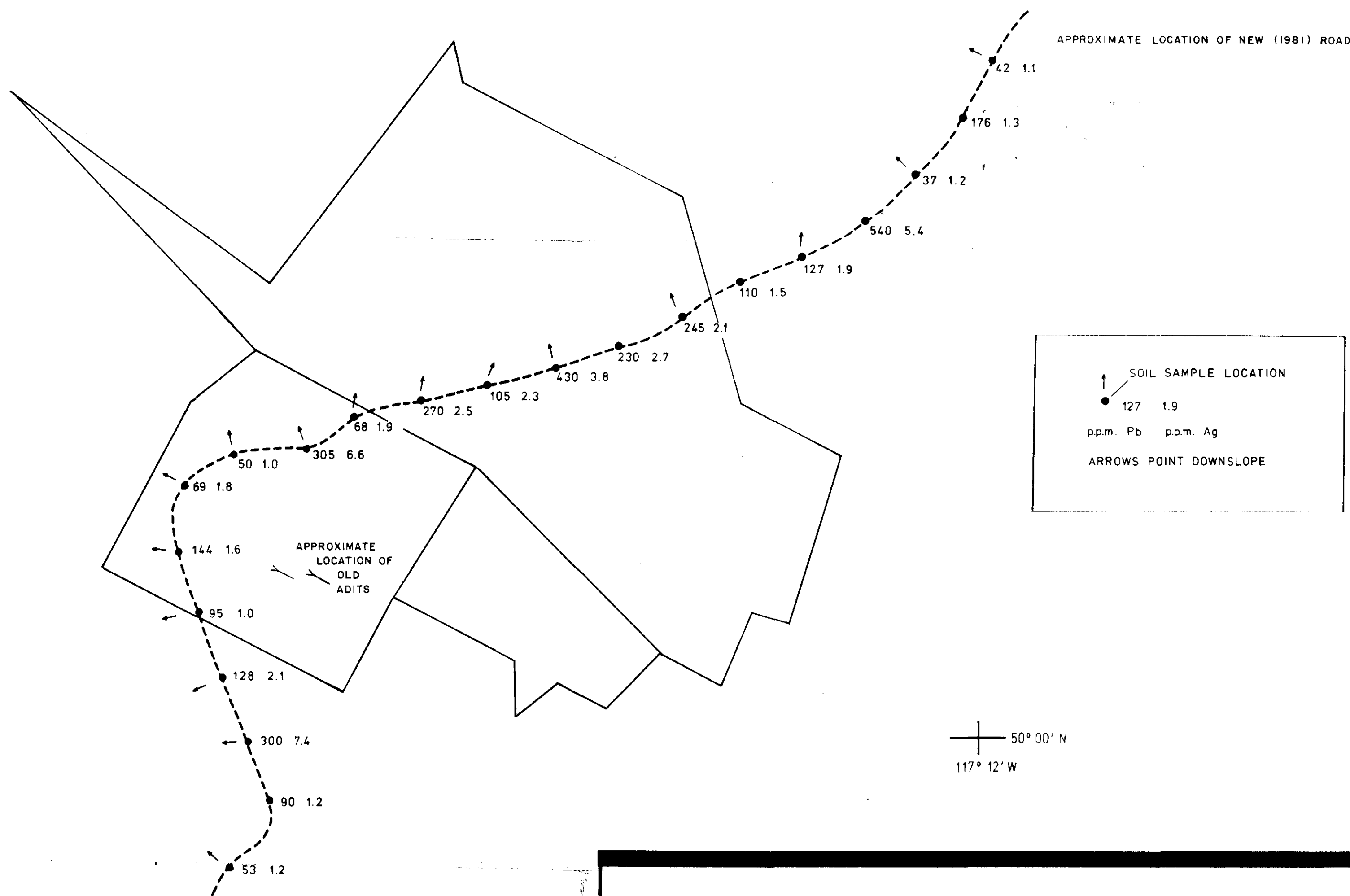
Page # 2

SAMPLE No.	PPM Pb	PPM Ag
NB-3+50E RD	230	2.7
4+00E RD	245	2.1
4+50E RD	110	1.5
5+00E RD	127	1.9
5+50E RD	540	5.4
6+00E RD	37	1.2
6+50E RD	176	1.3
7+00E RD	42	1.1

**I Hereby Certify** THAT THE ABOVE RESULTS ARE THOSE  
 ASSAYS MADE BY ME UPON THE HEREIN DESCRIBED SAMPLES . . . .

Rejects Retained one month,  
 Pulps Retained one month  
 unless specific arrangements  
 made in advance.

*[Signature]*  
 Assayer



# NORTHERN BELLE CLAIM GROUP

SANDON AREA, B.C. N.T.S. 82K3 SLOCAN M.D.



## SOIL GEOCHEMISTRY 1:2500

TO ACCOMPANY REPORT BY  
L. B. GOLDSMITH, P. Eng.

ARCTEX ENGINEERING SERVICES February 1982

