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Ref.

GEOLOGICAL, GEOPHYSICAL AND GEOCHEMICAL REPORT

ON THE

AXL2 CLAIM

ADAMS PLATEAU AREA

KAMLOOPS MINING DIVISION

51° 02'N 119° 37'N

NTS 82M/4E

Claim Name	Record No.	Units	Expiry Date
AXL 2	648	20	November 26. 1977

on behalf of

TRI-STAR RESOURCES LTD. (N.P.L.)

by

G. Gutrath, P. Eng.
Atled Exploration Management Ltd.

November 22, 1977

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INTRODUCTION

This report is a compilation of the exploration data filed as assessment work by Norman Newsom as agent for Tri-Star Resources Ltd. under an Affidavit on Application to Record work dated November 17, 1977.

PERSONNEL

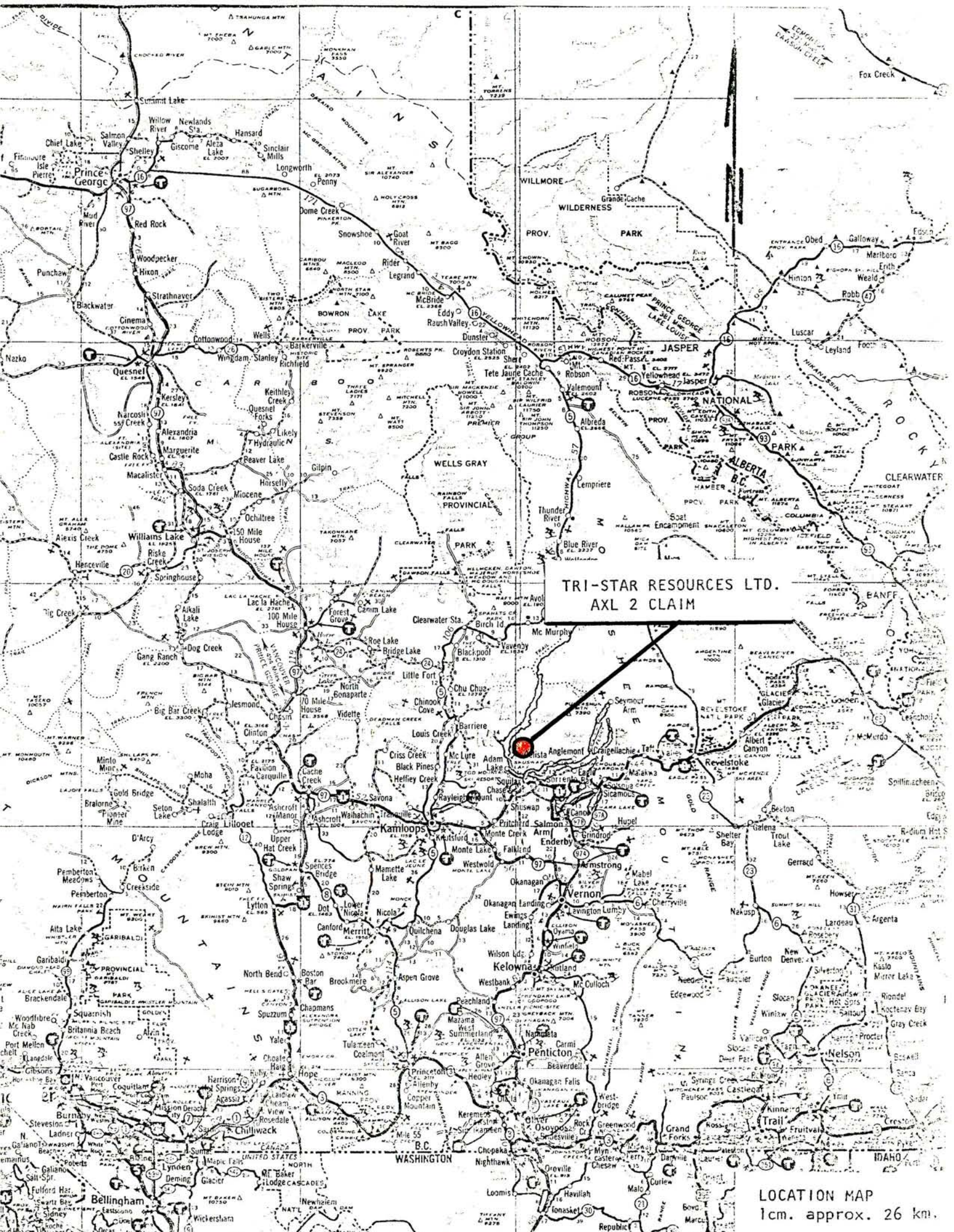
1. G. Gutrath, P. Eng. geologist
   Overall supervision and report

2. David Mark, B. Sc. geophysicist
   Geophysical supervision

3. T. Rolston, geophysical technician
   Geophysical field supervision

4. Norman Newsom, technician
   Field supervision :
   grid survey, silt sampling and
   magnetometer survey

5. Reginald Davis, technical assistant
   line cutting and field assistant


TRI-STAR RESOURCES LTD.
AXL 2 CLAIM
LOCATION MAP
1cm. approx. 26 km.

GEOGRAPHY

Location

The AXL property is located in the central portion of the Adams Plateau approximately 48 km. north-northwest of the community of Salmon Arm in southcentral British Columbia.

The approximate coordinates of the property are 51°02'N and 119°37'W.

Access

There is a paved secondary road that leaves the Trans Canada Highway at Squilax, crosses Little River and the Adams River and follows the north shore of Shuswap Lake. At Corning Creek, approximately 5.6 km. east of the Adams River bridge, there is a good gravel logging road, suitable for 2-wheel drive vehicles, that goes north 40 km. and passes through the central portion of the AXL 2 claim.

The Holding Lumber Company has extended a good logging road within three miles of the south boundary of the AXL 2 claim. It is 26 kilometers from the bridge at the south end of Adams Lake to the end of this road.

Topography

The claim covers a gently rolling plateau area between the elevations of 1,860 m. and 1,950 m.

The Nikwikwaia Valley lies to the southeast and Adams Lake Valley lies to the northeast.

Less than 10% of the area will be rock exposures although overburden cover is generally thin except where gullys have been filled with glacial till. There are numerous streams in shallow channels draining the area to the southeast.

Vegetation

The claim is covered by a good stand of spruce and balsam interspersed with the occasional, open swampy area.

Climate

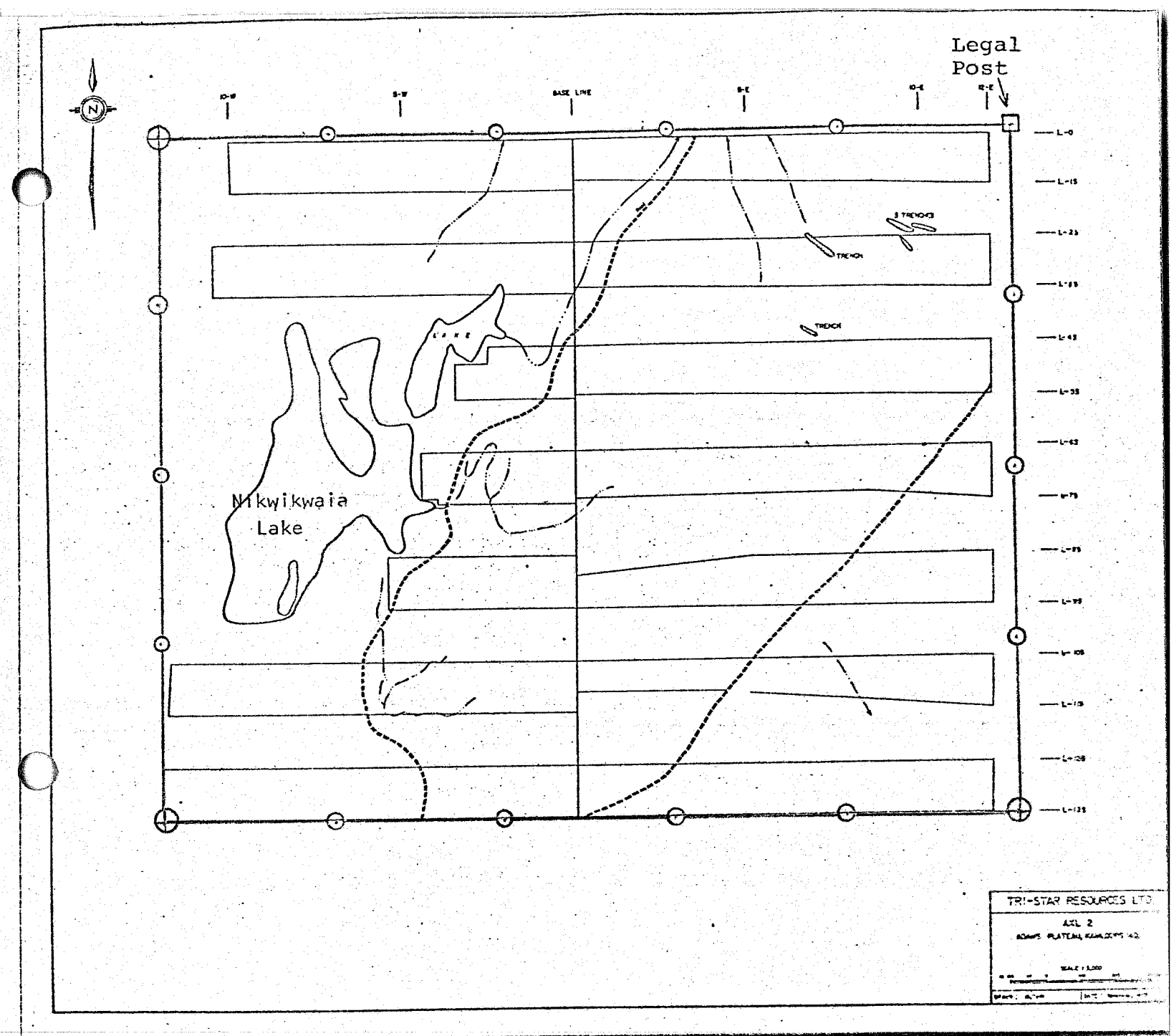
The Adams Plateau is in a transition area between the interior dry belt and the Columbia River rain belt. Average precipitation would be in the order of 100 centimeters & compacted winter snowfall would vary from 1.2 m. to 2 m. The area is free of snow from June through October.

Water

There is ample water in the area for drilling or future mill requirements.

Power

B.C. Hydro has just completed a major transmission line that passes within 16 km. of the property.



TRI-STAR RESOURCES LTD.

CLAIM MAP

AXL 2 CLAIM

ADAMS PLATEAU AREA

CLAIMS

The following information is from the Record of Mineral Claim, Form G.

Name	Units	Record Number	Expiry Date
AXL 2	20	648	November 26, 1977

HISTORY

Massive sulphide mineralization was first discovered on the Adams Plateau in 1927 and in 1928, Granby Mining, Smelting and Power Company optioned the Lucky Coon property that is located on the west side of the plateau. Granby, carried out an extensive programme of trenching combined with limited diamond drilling before terminating their agreement on the property. In 1948, Consolidated Mining and Smelting Company optioned the Mosquitoe King property that is located approximately 2.4 km. to the southeast of the present day Spar Group.

The Spar Group, then known as the EX Claim, was owned by P. Bischoff who shipped 59 tons of hand picked high grade to the Cominco smelter in 1952.

During the 1950's, the Mosquitoe King property and the EX claims (Spar property) were acquired by Giant Metallics Ltd., who carried out an extensive surface exploration programme that included and induced polarization survey and diamond drilling. Giant Metallics shipped approximately 250 tons of high grade mineralization from the adit zone to the Kam Kotia mill at Sandon. Giant Metallics allowed the EX claims to lapse in 1973 and they were acquired by George Kachuck on behalf of Pamex Mining Ltd.

During 1976, Pamex constructed a new road to the adit zone and opened up the tunnel so that the face could be seen for the first time since the 1950's. Pamex has made shipments to the custom mill at Lumley and the concentrates have been shipped to the Cominco smelter.

In October, 1976, the Spar Group was optioned by Hesca Resources who carried out a diamond drilling programme until freeze-up in November.

Craigmont Mines Ltd. have optioned the Mosquitoe King property that adjoins the Spar property to the east and have located additional claim blocks in the area in 1976. During 1977 Craigmont carried out surface exploration and diamond drilling on its properties in the area.

Cominco staked 9 claims totalling 59 units on the east side of Adams Lake, 3 kilometers to the west of the AXL 2 claim.

The Lucky Coon property located 500 meters to the north of the AXL 2 claim, was optioned from its owners and during August and September a number of shipments of high grade lead-zinc-silver mineralization were made from the property.

There is very little known about the history of the area covered by the AXL 2 claim but it has undoubtedly been prospected in detail because of its close proximity

to the Lucky Coon property. Bulldozer trenches were located in the northeast corner of claim and a portion of the easterly section of the claim is covered by an old grid.

GEOLOGY

General

The Adams Plateau is underlain by a thick series of sedimentary and interbedded volcanic rocks of Permian or earlier age.

The sediments are composed of argillites and limey argillites with minor thin beds of limestone and quartzite. These units are moderately to strongly foliated and form phyllites and schists.

The volcanics have also been metamorphosed to form green chlorite schists.

This sedimentary-volcanic series has a general east-west strike and dips gently northward. The foliation in most instances sub-parallels the bedding. There are a number of northerly trending faults that cross the plateau.

Property

The majority of the AXL 2 claim is underlain by Permian or earlier greenstones and chlorite schists, interbedded with related phyllites and limestones. This greenstone series is in contact with metasediments along the north side of the claim. The altered sediment are largely composed of limey argillaceous phyllites, with minor limestone, quartzite and greenstone members. The contact has been mapped by the G.S.C. as trending across the claim group in a north-westerly to westerly direction.

Outcrop Geology

Survey Completed

The writer mapped a portion of the outcrop geology in the northern one-third of the claim. Mr. Newsom located the balance of the outcrops shown on the enclosed outcrop geology map. The geological mapping was not completed because of a light fall of snow.

Results

In the northwestern portion of the claim the outcrop exposures increase in number and size towards the eastern side of the claim. In the Nikwikwaia Lake area and starting to the west of the road there are only a few small scattered outcrops but to the north of Nikwikwaia Lake there are numerous outcrops with cliff faces between 5 and 12 meters high bordering northeasterly trending gullies. The northwestern portion of the grid is terminated on a sharp escarpement with cliff faces up to 60 meters high that marks the edge of the Adams Plateau.

There are scattered outcrops to the east and southeast of Nikwikwaia Lake but to the east of the road there are no outcrops except in the southeastern portion of the claim on lines 12S and 13S east.

To the north of Nikwikwaia Lake the area is divided into a series of northeasterly trending gullies that are believed to be fault zones. These zones are sub-paralling a major regional lineament located in the low depression on the east side of Nikwikwaia Lake.

Bordering the gullies the outcrops are highly sheared to a quartz chlorite to chlorite schist. The overall schistosity trends in the northeasterly direction with a variable dip to the west. However, the schists are highly contorted and drag folded resulting in many local variations to the regional trend.

Along the northwestern edge of the grid in the area of line 1S, 2S, 3S and 4S west are massive outcrops of weak to moderately sheared chlorite schists believed to be the metamorphic derivatives of volcanic rocks.

There has not been enough mapping done to determine the location of the east-west trending contact between the greenstone schists in the Nikwikwaia Lake area and the limey phyllites and related metamorphosed sediments mapped by the G.S.C. along the north side of the claim.

Disseminated pyrite occurs in the chlorite schists but no other mineralization was noted. The trenches in the north-east portion of claims were sloughed and the snow cover made it impossible to properly examine this area.

GEOPHYSICAL SURVEY

Magnometer Survey

Instrumentation and Theory

The magnetic survey was carried out using a portable vertical component, Model G-110 fluxgate magnetomer manufactured by Sabre Electronic Instruments Ltd. of Burnaby, B.C. It is a visual-null type instrument using digital dial readout with a range of 100,000 gammas and a reading accuracy of 10 gammas. The G-110 has a temperature coefficient of 2 gammas per degree centigrade.

Only 2 commonly occurring minerals are strongly magnetic; magnetite and pyrrhotite. Hence, magnetic surveys are used to detect the presence of these minerals in varying concentrations. Magnetic data are also useful as a reconnaissance tool for mapping geologic lithology and structure since different rock types have different background amounts of magnetite and/or pyrrhotite.

Survey Procedure

The grid was put in by chain and compass immediately before the magnetic survey was started. The baseline was set up in a northsouth direction with the schistosity trend and marked every 50 m. Normal to the baseline at 200 m intervals are the east-west crosslines. The baseline was blazed except in treeless areas where pickets were placed at 50 m intervals.

Magnetometer readings were taken at the 50 m stations on the crosslines. The diurnal change was checked by first establishing magnetic values at 150 m. intervals on the baseline and then closing the loops onto these values as the survey progressed.

Survey Completed

All the crosslines from line 0 to line 13S were magnetically surveyed for a total of 23,800 line meters.

Survey Results

A series of magnetic lows extending from line 10S - 400 m W north to line 1S - 150 m W are believed to be directly related to the regional northeasterly trending lineament.

On line 0-750W and on line 2S - 950W there are low amplitude anomalies of plus 800 gammas that are related to the more extensive greenstone schist outcrops.

There is a sharp localized high of plus 2000 gammas on line 9S - 900 m. E. The causative source of this anomaly has not been determined.

GEOCHEMICAL SURVEY

Sample Procedure

The soil samples were taken from the "B" soil horizon which has a brownish colouration at depths varying from 6 inches to 1 foot. The samples were taken with a grub-hoe and stainless steel trowel and were collected in kraft paper bags.

The samples were analysed by General Testing Laboratories Ltd. 1001 East Pender Street, Vancouver, B.C. using the following procedure:

- Samples sifted to - 80 mesh
- Mesh weigh used 0 -50g.
- Final volume 10 ml.

- Method of analysis: Instrumental - Atomic absorption
- Extraction: Hot HC_1O_4 - HNO_3 digestion
- Detection: Techtron AA_4 and AA_5
- Supervising chemist: L. Wong.

The silt samples were collected from both active streams and from springs of local origin. The samples were taken with a stainless steel trowel and placed in Kraft paper bags. The samples were partially dried in the field before shipment. The silt samples were analysed by the same procedures as outlined above.

The soil and silt samples were analysed for silver, lead and zinc.

Survey Complete

A total of 68 samples were collected and of these, 25 were soil samples and 43 were silt samples. The soil samples were taken along road cuts as a general orientation survey.

Silts samples were collected from streams and springs but because of the freezing temperatures not all the streams could be sampled. During the summer there would be many more springs and small streams that could be sampled.

Survey Results

A minimum amount of sampling has been done to determine background values.

1. Silt Sampling

Lead

a) background values 20-60 ppm
b) threshold anomalous 60-80 ppm
c) anomalous + 80 ppm

There are 2 anomalous lead values of 96 ppm on line 6S-135m. east and 125 ppm on OS-7E.

Zinc

a) background value 40-140 ppm
b) threshold anomalous 140-180 ppm
c) anomalous + 180 ppm

There are 6 anomalous zinc values ranging from 188 ppm to a high of 262 ppm. Five of these anomalous values are in the northeastern portion of the grid area on lines OS and 1S. There was one sample taken on line 5S-700E and it is anomalous.

The causative source of the anomalous area in the north-east portion of the grid area has not been determined but it may be related to the limey phyllites that are a very favourable host for lead-zinc mineralization. Highly oxidized limey phyllites are exposed in a trench on the adjoining claim group approximately 200 m to the east of line OS-10E.

Silver

Silver values ranged from 0.8 ppm to high of 1.8 ppm. Siver in this environment does not appear to be a useful element for defining anomalous areas.

2. Soil Sampling

A total of 16 soil samples were collected from a number of locations over the entire claim area. This is an inadequate number of samples to determine background values for the area. However, from this initial data it appears that the soil sample results have a similar frequency distribution to the silt samples.

Lead

a) background 20-60 ppm
b) threshold anomalous 60-80 ppm.

There is only 1 anomalous lead value of 97 ppm at station MAG 1 located where the road crosses line OS.

Zinc

a) background 40 to 140 ppm
b) threshold anomalous +140

There are two anomalous samples. The first sample of 299 ppm was taken where the road crosses the base line between line 3S and 4S. The second sample of 618 ppm is strongly anomalous and it was taken on line 6S where it crosses the road.

Silver

Silver values are very silimar to those found in the silts. The values cover a narrow range from 0.8 to 1.7 ppm.

3. Comment

Soil sampling in this area of the Shuswap terrain has not been particularly successful in localizing mineral occurrences. The heavy rainfall removes the metal ion from the surface soil. In addition there is very little vertical mobilization of metal ions because of numerous clay seams in the overlying glacial till. However, lateral ion mobilization is possible and as a result silt samples from springs and even minor seepages warrent sampling as they may indicate a mineral occurrence in the area. By determining the approximate direction of flow of the ground water drainage it may be possible to outline the general area where the mineral occurrence is located. Once the general area is determined the mineral occurrence can be further defined by geophysical surveys or by soil sampling if the overburden is not too deep.

The only soil horizon that will be particularly useful to samples is the "C" horizon directly above bedrock. This sampling can be done by using a soil auger,

drive-pipe or an overburden drill if depths are greater than 2 m. This type of sampling is expensive but it is warrented if the initial survey indicates a broad anomalous area where additional information is required to define a suitable drill target.

CONCLUSIONS AND RECOMMENDATIONS

The magnetic survey has been useful in defining geological features and in particular the regional north to north easterly trending fault zone on the east side of Nikwikwaia Lake. The generally higher magnetic responses in the southeast corner of the grid is believed to result from a change in the underlying geology. However, within this area the 2000 gamma anomaly on line 9S- 9 east is related to a localized feature, possibly a fault or dike.

The geochemical survey has located anomalous zinc and lead values but there has not been adequate sampling done to localize anomalous areas or to evaluate the entire claim.

It is recommended that the geological mapping and geochemical silt sampling programme be completed. In addition, test lines should be magnetically and electromagnetically surveyed over the mineralized zones on the Spar claim and Lucky Coon group. These results will be of assistance in interpreting the results of the surveys on the AXL 2 claim.

Lines 0, 1S, 2S, 3S, 8S, 9S and 10S should be electro-magnetically surveyed.

ESTIMATED COSTS

Phase I (completion)

a) Geological mapping Geologist 3 to 4 days	600.00
b) Geophysical surveys Technician and overall supervision.	800.00
c) Geochemical survey	800.00
d) Data compilation and report	400.00
	2,600.00
Contingencies and overhead 10%	260.00
	2,860.00

Phase II Contingent on results of Phase I

Respectfully Submitted,

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA

Gordon C. Gutrath P. Eng.
Atled Exploration Management Ltd.

ENGINEER'S CERTIFICATE

I, GORDON C. GUTRATH, of 3636 Lakedale Avenue in the Municipality of Burnaby, in the Province of British Columbia, DO HEREBY CERTIFY:-

1. That I am a consulting geologist with a business address of 1024-355 Burrard Street, Vancouver, B.C. V6C 2G8.

2. That I am a graduate of the University of British Columbia where I obtained my B.Sc., in geological science in 1960.

3. That I am a Registered Professional Engineer in the Geological Section of the Association of Professional Engineers in the Province of British Columbia.

4. That I have practised my profession as a geologist for the past sixteen years, and

5. That I have no interest in the property with which this report is concerned, nor do I expect to receive any such interest, nor do I have any interest in TRI-STAR RESOURCES LTD. (N.P.L.)

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA

Gordon C. Gutrath, B.Sc., P. Eng.

DATED at the City of Vancouver, Province of British Columbia, this 22nd day of November, , 1977 .

PARK STATIONERS & PRINTERS LTD.
Law and Commercial Stationers
Vancouver, B.C.
Form 204

CANADA
PROVINCE OF
BRITISH COLUMBIA

TO WIT:

In the Matter of costs incurred in carrying out the exploration program on the AXL2 mineral claim.

I, NORMAN NEWSOM

Of the City of Vancouver, in the Province of British Columbia

do solemnly declare that the following is a true and accurate summary of the costs incurred:

D. Mark	-	$ 300.00	- Geophysical report
G. Gutrath	-	450.00	- ($150.per day - $300. report)
R. Davis	-	550.00	- Wages
T. Rolston	-	1,453.50	- Wages, equipment rental, air fare, etc.
R. Davis	-	37.50	- air fare
Assays	-	204.00	- (general testing)
Mapping	-	153.00	- (Altair)
Filing of work	-	600.00	
Truck (10 days @ $20)		200.00	
Mileage (2/3 of 700 miles @ 20¢)	-	93.00	
N. Newsom	-	1,300.00	
Expenses, food, lodging	-	1,594.00	
Equipment, etc.	-		
		6,935.00	

AND I make this solemn declaration, conscientiously believing it to be true and knowing that it is of the same force and effect as if made under oath, and by virtue of the CANADA EVIDENCE ACT.

DECLARED before me at Vancouver in the Province of British Columbia, this 22nd day of November A. D., 1977.

NORMAN NEWSOM

KENNETH A. GRACEY
A Notary Public, Judge for the Province of British Columbia.
A Commissioner for taking Affidavits for British Columbia.
404-850 WEST HASTINGS ST.
VANCOUVER, B.C. V6C 1E1

Dated November 22, 1977

IN THE MATTER OF

costs incurred in carrying out the exploration program on the AXL 2 mineral claim.

Statutory Declaration

Park Stationers & Printers Ltd., Vancouver, B.C.

10-W | 5-W | BASE LINE | 5-E | 10-E | 12-E

L-0
L-1S
L-2S
L-3S
L-4S
L-5S
L-6S
L-7S
L-8S
L-9S
L-10S
L-11S
L-12S
L-13S

Road

3 TRENCHES

TRENCH

TRENCH

L A K E

N I K W I K W A I A
L A K E

40°

Regional Lineament

LEGEND

a. Chorite schist, quartz chlorite schist greenstone

Shearing attitude

Outline of outcrops

TRI-STAR RESOURCES LTD.

AXL 2

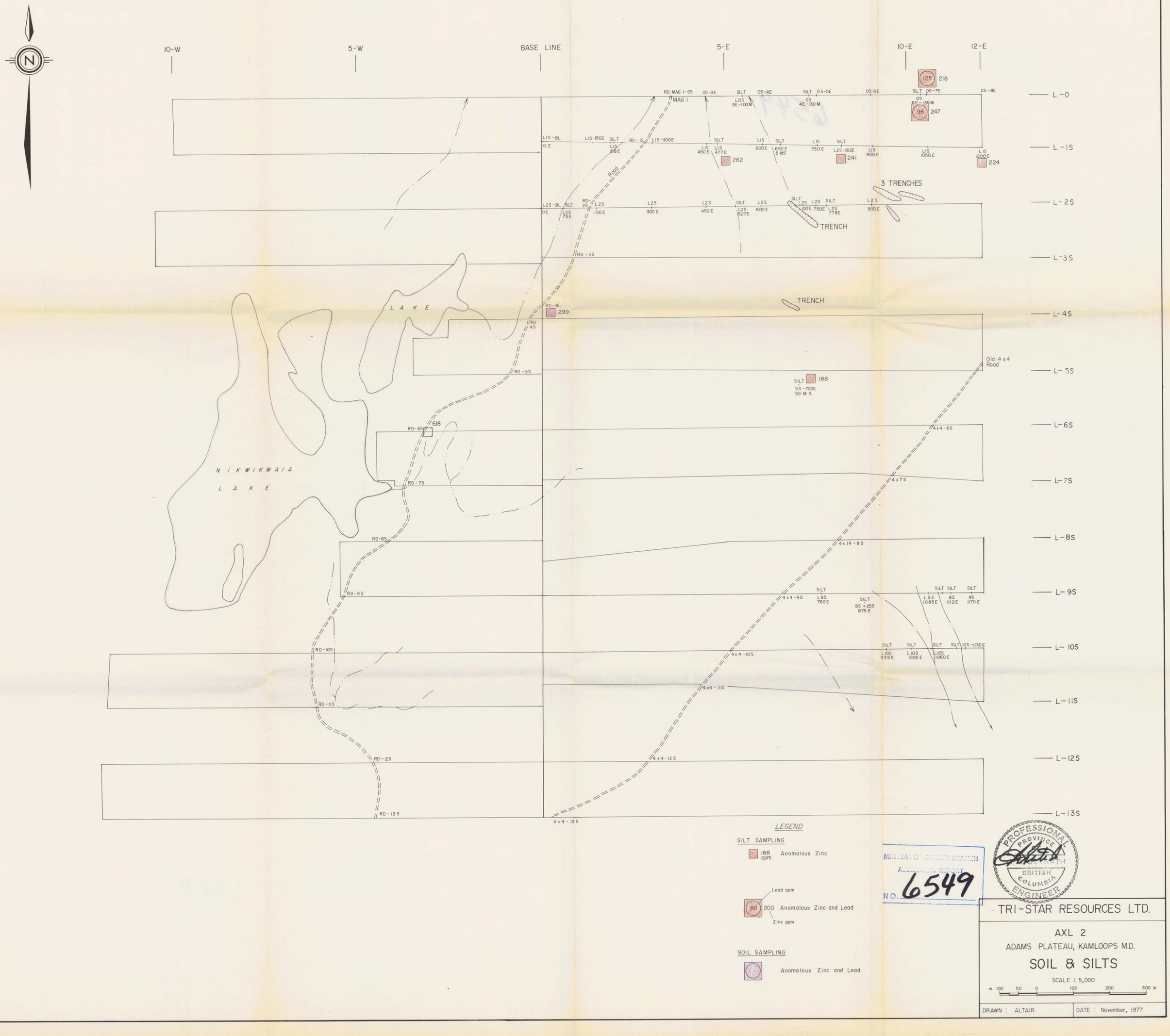
ADAMS PLATEAU, KAMLOOPS M.D.

OUTCROP GEOLOGY

SCALE 1:5,000

m. 100 50 0 100 200 300 m.

DRAWN : ALTAIR | DATE : November, 1977



LEGEND

SILT SAMPLING

188 ppm — Anomalous Zinc

Lead ppm / 80 200 / Zinc ppm — Anomalous Zinc and Lead

SOIL SAMPLING

Anomalous Zinc and Lead

PROFESSIONAL ENGINEER — PROVINCE OF BRITISH COLUMBIA

TRI-STAR RESOURCES LTD.

AXL 2

ADAMS PLATEAU, KAMLOOPS M.D.

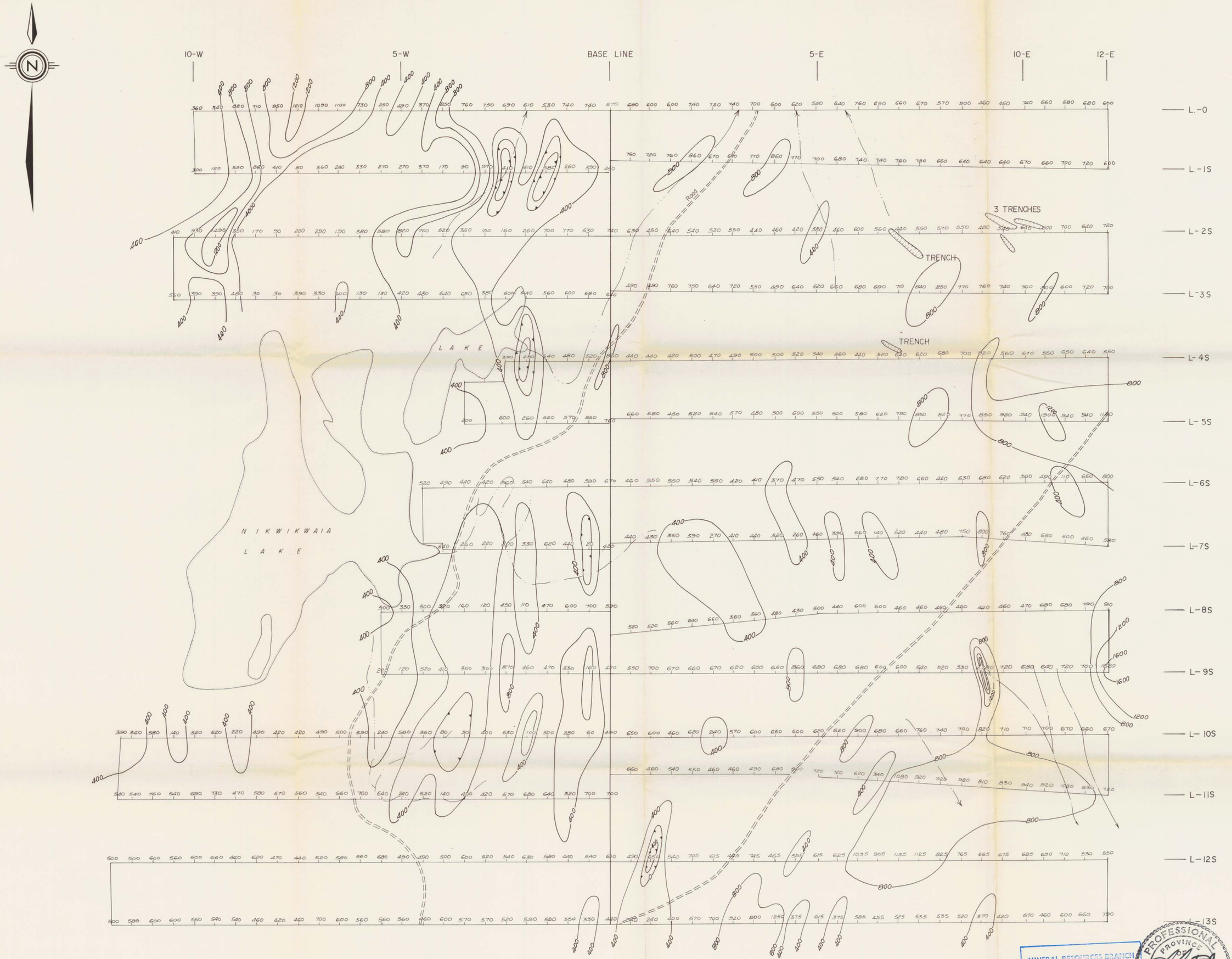
SOIL & SILTS

SCALE 1:5,000

m. 100 50 0 100 200 300 m.

DRAWN : ALTAIR

DATE : November, 1977



PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA

TRI-STAR RESOURCES LTD.

AXL 2

ADAMS PLATEAU, KAMLOOPS M.D.

MAGNETOMETER SURVEY

SCALE 1:5,000

m. 100 50 0 100 200 300 m.

DRAWN : ALTAIR | DATE : November, 1977