3539

GEOLOGICAL EXAMINATION

Johnny 1-24 Mineral Claims

Blue Sheep Lake, Liard M. D., B. C.

(58°, 128° NE)

by

A. C. Ogilvy, P.Eng.

with a section on

Geophysics

by

S. Presunka

Holder of Claims: Charles J. Shandalla

Work done for: Caltor Syndicate, optionee

Field work done: Sept. 6-11, 1971

TABLE OF CONTENTS

		Page
1.	Summary	1
2.	Introduction	1
3.	Property	2
4.	Location and Accessibility	2
5.	Regional Geology	3
6.	Present Work Program	4
7.	Local Geology	5
8.	Geophysics	8
9.	Conclusions	13
10.	Appendix: Assay Certificates	

ILLUSTRATIONS

Fig. 1	Location Map	ff. 2
Fig. 2	Claim Map	ff. 2
Fig. 3	Regional Geology	ff. 3
Fig. 4	Local Geology	ff. 5
Plan 1	E.M.-16 survey ST. 18.6	in pocket
Plan 2	E.M.-16 survey St. 17.8	" "
Plan 3	Magnetometer survey	" "

Geological Examination
Johnny 1-24 Mineral Claims
Blue Sheep Lake, Liard M. D., B. C.
(58°, 128° NE)

1. Summary

Ag - Pb - Zn - Cu mineralization occurs in float at a porphyry-limestone contact. An EM-16 survey has indicated several strong conductors, and the geophysics operator has recommended more geophysics. Although recognizing that mineralization and conductors do exist and further work could conceivably improve the prospect, the writer is not prepared to recommend it at this time.

2. Introduction

The writer spent several hours under adverse weather conditions on the prospect on Sept. 11 at the close of a 4-man 6-day geophysics and prospecting program carried out by Mr. T. Antoniuk, P.Eng. (Ont.), manager of Caltor Syndicate, Mr. S. Presunka, geophysical operator and Messrs. P. Brask and J. Byrne, prospectors in the employ of Caltor Syndicate. Mr. Presunka is highly regarded as a geophysics operator and the writer is personally satisfied he is competent in his field. His report

and maps are included as Section 8 and Plans 1, 2 and 3 of this report. Acknowledgement is made of the advice and assistance rendered by Mr. Antoniuk.

3. Property

The property consists of 24 mineral claims located in the Liard M. D. of British Columbia and shown on Mineral Map 104 I 16 W, a portion of which is included as fig. 2 herein.

Johnny 1-12 (Tags 143506M--17M, Record Nos. 55067M--078M) were staked 23 July '71 and recorded at Cassiar, B.C. 30 July '71.

Johnny 13-24 (Tags 143518M--29M, Record Nos. 55402M--413M) were staked 27 Aug. '71 and recorded at Vancouver 8 Sept. '71.

The 24 claims were staked by Charles J. Shandalla of Whitehorse, Yukon, who subsequently optioned them to Caltor Syndicate.

4. Location and Accessibility

Coordinates are 58°46'N, 128°18'E, elevation approx. 5000 ft. It thus lies in the northeast corner of the Cry Lake Map Area (104-I-16).

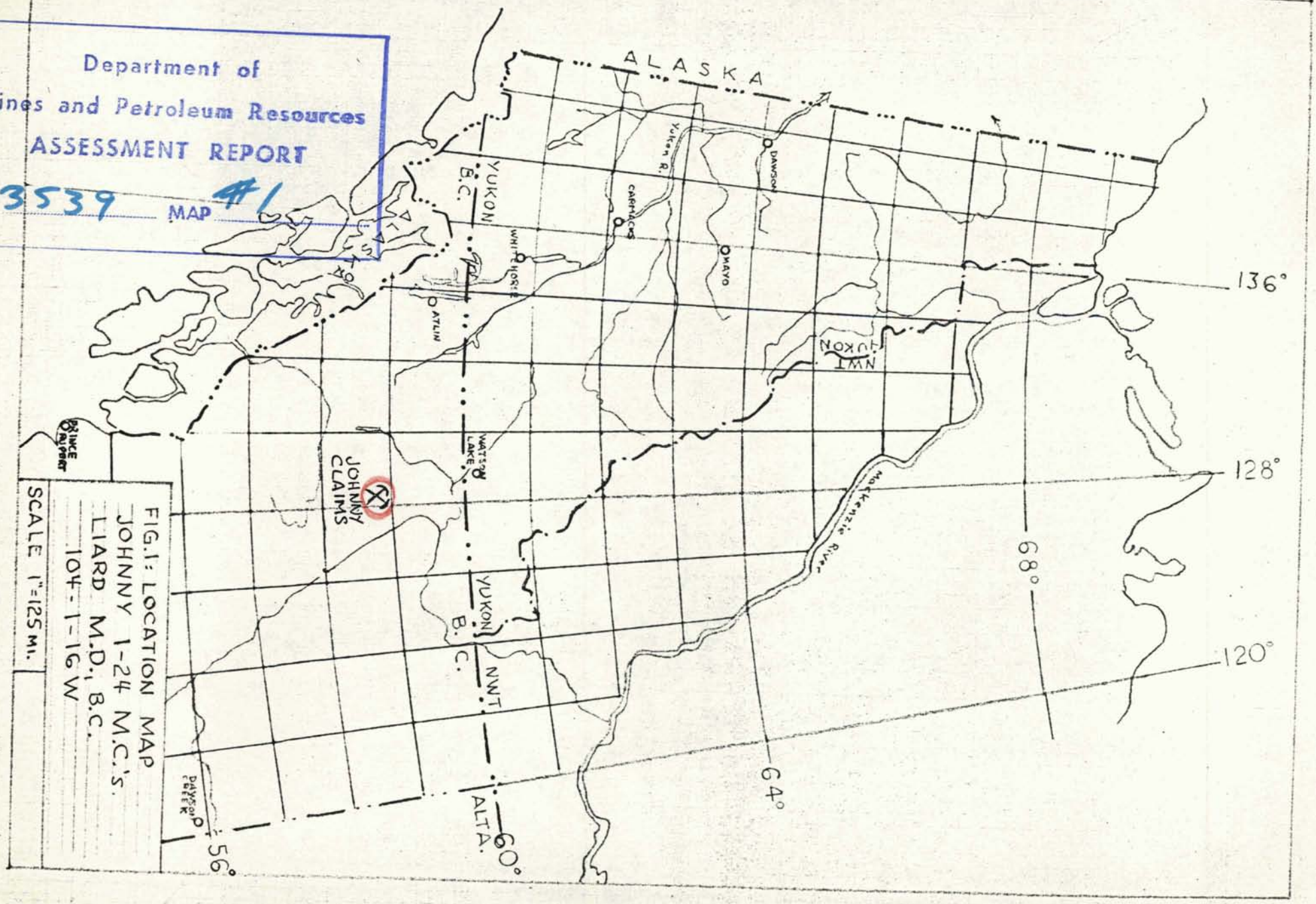


FIG. 1: LOCATION MAP
JOHNNY 1-24 M.C.'s.
LIARD M.D., B.C.
104-I-16 W
SCALE 1"=125 MI.

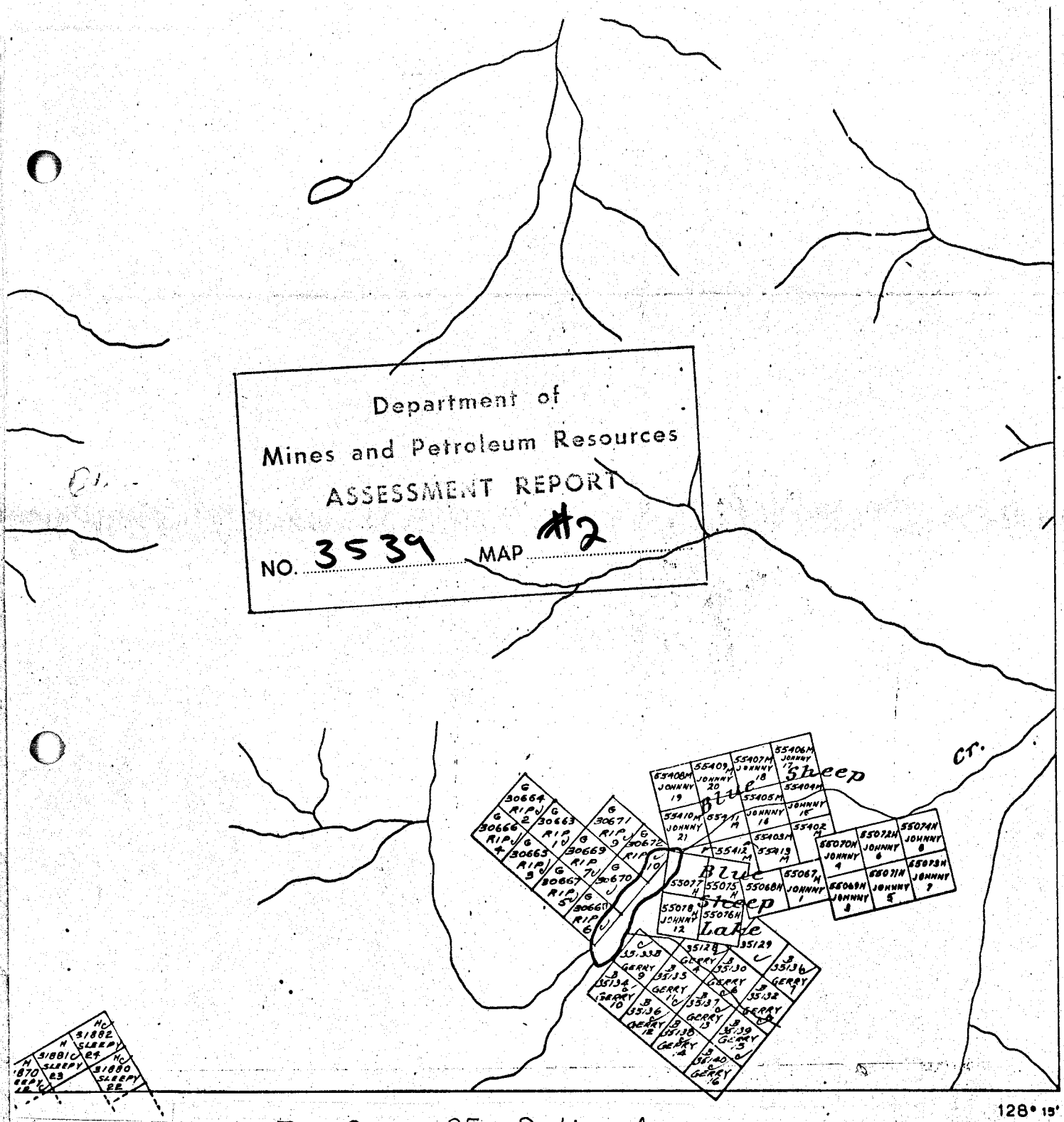


Fig. 2 : SE Portion of

DEPARTMENT OF MINES AND PETROLEUM RESOURCES
VICTORIA, B.C.

MINERAL CLAIM MAP 104 I/16W(M)

0 1 MILES 2 3

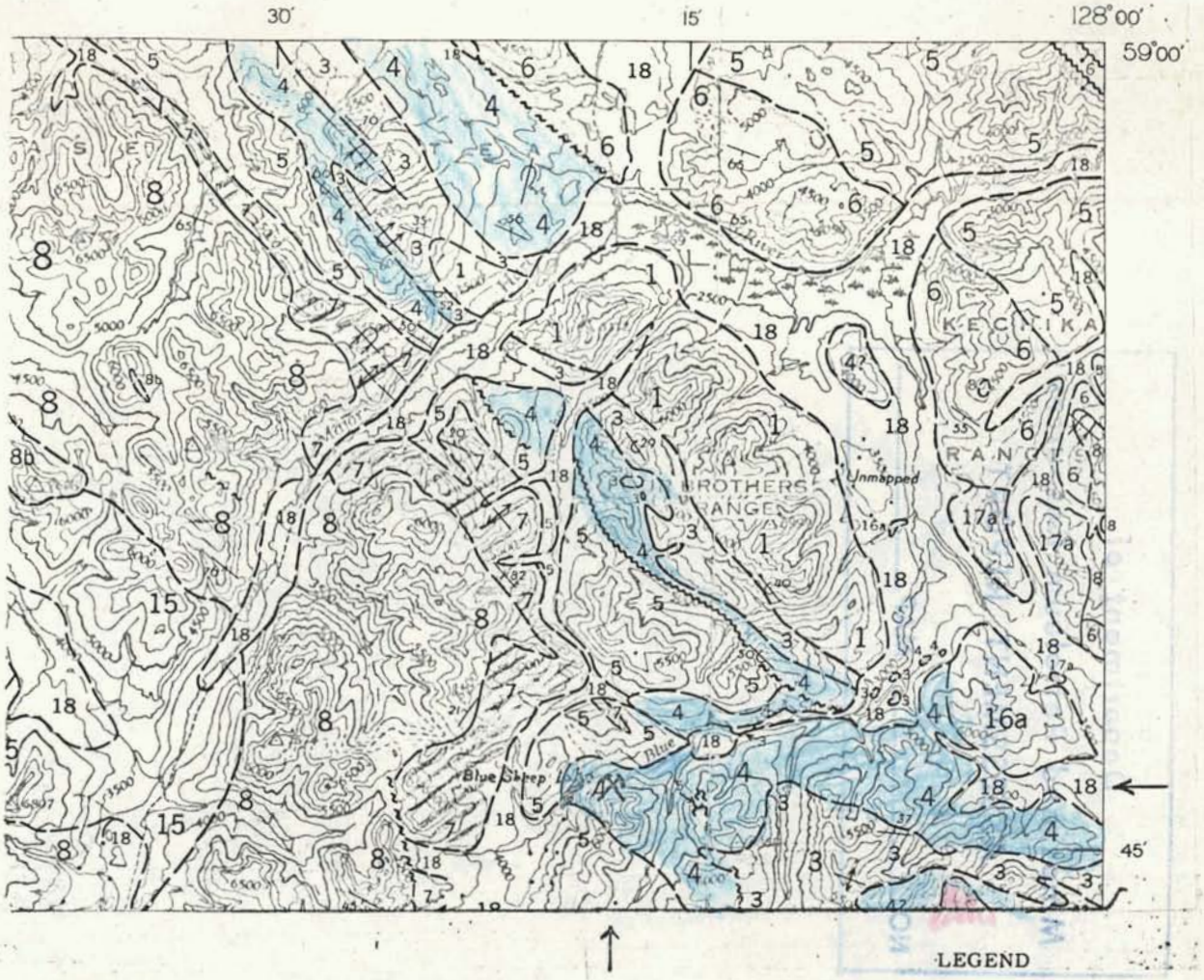
0 1000 5000 FEET 10000 15000

The prospect lies near the east edge of the Stikine Ranges of the Cassiar Mountains (Central Plateau and Mountain Area, Interior System, Cordilleran Region). Specifically, the showings are located on the west end of the north-facing slope of the 7000 ft (plus) peak immediately east of Blue Sheep Lake (elev. 3700 ft) at the headwaters of the main south tributary of Major Hart Creek, a tributary of the Turnagain--Kechika--Liard River system. Pleistocene ice moved north across the area.

The prospect is accessible by float-equipped fixed wing aircraft available at Watson Lake from which it is located 97 mi at 170° True, and during summer months, Dease Lake (67 mi at 075° True).

5. Regional Geology

The regional geology, as mapped by Gabrielse et al of the G.S.C. is shown on Map 29--1962: Cry Lake, the northeast portion of which is reproduced as fig. 3 herein. A more-or-less conformable series of lower-and middle-Paleozoic calcarious and clastic sediments form a folded belt suggestive of a northwest-plunging anticlinoreum parallel to the northeast contact of the Cassiar



LEGEND

PALAEOZOIC

DEVONIAN AND MISSISSIPPIAN

UPPER DEVONIAN AND LOWER MISSISSIPPIAN

8 — Chert, argillite, argillaceous quartzite, greenstone, diorite, meta-diorite, conglomerate, limestone; 8a, may be in part or entirely younger; 8b, serpentinized peridotite, locally includes meta-andesite and meta-diorite; 8c, biotite-muscovite-quartz schist and gneiss, feldspar-quartz gneiss, quartz-biotite schist amphibolite; 8d, greenstone, age uncertain

SILURIAN AND DEVONIAN

SILURIAN, LOWER(?) AND MIDDLE DEVONIAN

7 — Graptolitic siltstone, Silurian; well bedded, laminated dolomite sandy dolomite, dolomitic sandstone; well bedded limestone, fetid dolomite, Middle Devonian

SILURIAN

6 — Dolomite, cherty dolomite, sandy dolomite, dolomitic sandstone

CAMBRIAN AND ORDOVICIAN

MIDDLE AND UPPER CAMBRIAN, LOWER AND MIDDLE ORDOVICIAN

5 — Thin-bedded shale, limestone, calcareous shale, argillaceous limestone, graptolitic shale; includes minor bodies of greenstone

CAMBRIAN

LOWER CAMBRIAN

4 — Limestone, dolomite, oolitic limestone; minor shale

3 — Quartzite, shale, siltstone, pebble conglomerate

LOWER PALAEOZOIC AND EARLIER (?)

2 — Quartz-mica gneiss, quartzite, crystalline limestone, hornfels, skarn, feldspar-quartz gneiss

PROTEROZOIC

UPPER PROTEROZOIC

1 — Crystalline limestone, sandy limestone and dolomite, phyllite, sheared quartzite, chlorite schist

QUATERNARY

PLEISTOCENE AND RECENT

18 — Fluviatile gravel, sand, and silt; glacial outwash; till and alpine moraine

TERTIARY AND QUATERNARY

LATE TERTIARY AND PLEISTOCENE

17 — Basalt, olivine basalt; 17a, rhyolite, pisolitic siliceous tuff, chalcedonic rhyolite breccia

CRETACEOUS AND TERTIARY

UPPER CRETACEOUS AND PALEOCENE

16 — Conglomerate, sandstone, shale; 16a, conglomerate, may be younger

JURASSIC AND/OR CRETACEOUS

15 — Undifferentiated granitic rocks, mainly quartz monzonite; 15a, CASSIAR BATHOLITH: mainly biotite quartz monzonite and granodiorite, commonly gneissic and mafic-rich near contacts with 8 and 8a; 15b, mainly hornblende quartz monzonite and granodiorite

Figure 3
REGIONAL GEOLOGY
(NE portion GSC Map 29-1962)

Scale: 1 in to 4 mi

batholith.

The area of the prospect is represented as a 1-mile-wide belt of rocks of Unit 4: (limestone, dolomite, oolitic limestone and minor shale of lower Cambrian age). This formation outcrops as the crest of an anticline and is bounded to the north, west and southwest by various argillaceous and calcarious rocks of middle Cambrian to middle Ordovician age.

6. Present Work Program

Several preliminary visits were made by T. Antoniuk, P.Eng., manager of Caltor Syndicate and by S. Presunka, geophysical operator, during which preliminary prospecting, sampling and geophysical work were undertaken.

From Sept. 6 to 11 inclusive, Messrs. Antoniuk and Presunka, assisted by J. Byrne and P. Brask (prospectors) worked on the property. Work included chaining and flagging 3900 ft of baseline and pacing and flagging 24,500 ft of cross lines. Magnetic and EM16 surveys were carried out over all lines and the area was prospected. On Sept. 11, A.C. Ogilvy, P.Eng. made a short visit to the property to make geological observations.

7. Local Geology

Geological mapping (see fig. 4) was confined to the vicinity of the mineralized float and the nearby "A" and "B" EM-16 anomalies. Horizontal control was furnished by the geophysics grid, and vertical control by interpolating between two helicopter altimeter readings, and sketching form-lines.

The surface within the mapped area rises 800 ft, (from elevation 4800 to 5600 ft.) in a distance of 2000 ft. (1800 N to 200 S), giving an average slope of 40% within the area mapped. A gully a few hundred feet wide and a few tens of feet deep lies to the east of the baseline. Although vegetation, other than moss, is absent, outcrop is generally obscured by boulders and scree, apparently locally derived. However good exposures are locally present in 10-ft-high cliffs above and to the west of the gully.

There are 4 mappable rock units: limestone and skarn (1), shale (2), porphyry (3) and magnetite (4).

Unit 1, the limestone, corresponds to G.S.C. Map unit 4 (fig. 3) and is of Lower Cambrian age. It is

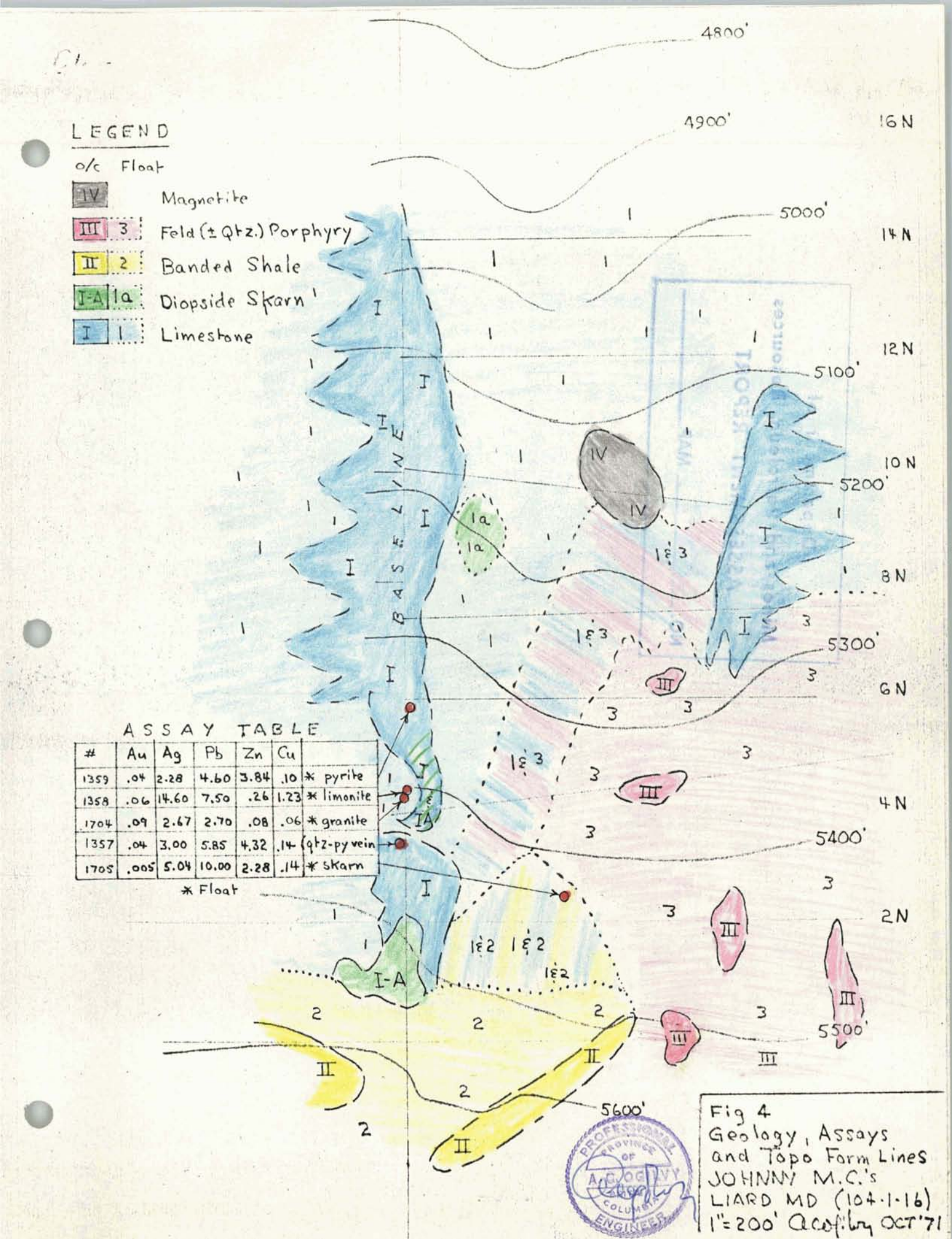


Fig 4
Geology, Assays and Topo Form Lines
JOHNNY M.C.'s
LIARD MD (104-1-16)
1"=200' Acof by OCT'71

fine grained, and no primary structures beyond local parallel jointing suggestive of bedding-plane fractures were noted. The attitude of these fractures (120°/15NE) suggest the limestone underlying the baseline and outcropping on the west side of the gully forms a dip-slope.

Evidence of contact metamorphism includes both silicification (and bleaching) and irregular bodies of diopside and (red) garnet-diopside skarn. (unit 1a)

Unit 2 is a cliff-forming member consisting of well banded apple-green, buff and grey shale probably in part tuffaceous. Its dip is flat to 5° SE (i.e. into the hillside). Although its contact with the limestone is obscured by a 2-300 ft-wide zone of unit 2 talus, it is thought to overlie the limestone conformably, and comprise part of G.S.C. map unit 4.

Unit 3 is an assemblage of leucocratic, locally biotitic, feldspar and quartz-feldspar porphyry, exhibiting ½-inch to 1-inch fresh (unaltered) pink K-feldspar phenocrysts and locally 1/8-inch diameter round quartz grains. An aerial reconnaissance suggested that the porphyry forms a sill extending eastward from the area mapped, but no contact-relationships were noted in the area mapped.

Unit 4, massive magnetite, was observed in situ at one place near the interface of porphyry and limestone float, but probably in the limestone horizon.

Economic mineralization was observed in one bedrock occurence in limestone and otherwise was restricted to float overlying the limestone. It consists of coarse galena, sphalerite and pyrite and fine-grained pyrrhotite and (traces of) chalcopyrite. Of the 4 occurrences of float sampled, one consisted of granitic rock, one of diopside skarn, one of limonite (hematite and jarosite) and one of massive pyrite. Assays and locations are shown on Fig. 4. In addition, coarse pyrite and secondary calcite was noted in place in a minor fault in bleached pink-buff limestone at 17 N on the baseline. The magnetite outcrop at 10N/4E appears to be barren of economic sulfides.

8. Geophysics

(Note: This section was written by S. Presunka).

The geophysical work done on Johnny claim group in the Blue Sheep Lake area consisted of Ronka E.M.-16:, (Stations 18.6 and 17.8) and the M.F. 1 Fluxgate magnetometer.

The North-south base line was established from 7-S to 32N, (3900 feet). East west lines were run every 200 feet. The lines were flagged every 100 feet. The conductors (cross overs) were marked by a cross of flagging on the ground. Rock specimen were taken on the cross-overs wherever possible. Soil samples were taken on the overburden area where the cross-overs occurred.

E.M.-16: Station 18.6 (Plan #1)

The rece ption of this V.L.F. station was very good, thus the results are very reliable. The tilt direction of this station was 060°, which made profiling possible along the east west lines. One of these profiled prints was contoured. The contoured plan shows more clearly the conductive trends, particularly where the conductors are folded or faulted. The A, B and C conductors are much better illustrated by contouring

than by profiling.

The "A" conductor (Plan #1) which starts on L-10 north some 500 feet east of the base line strikes in a northwest direction crossing L-16 North, at 100 feet east of the base line where it appears to be terminated. This conductor is approximately 900 feet long and is indicated to be a good sulphide conductor close to surface. This conductor correlates well with the magnetic anomaly. Sulphides in place as well as mineralized float were picked up along this conductor.

The "B" conductor, (Plan #2) has a north-south strike which happens to follow a gully. This conductor starts on L-0, some 125 feet east of the base line and continues in a northerly direction to L-8N, some 75 feet east of the base line. This is a deep set conductor. Some galena float has been picked up along the strike of this conductor. The south end of this conductor is faulted off to the east where it crosses L-25 and 4-S some 500 feet east of the base line. There is a magnetic correlation with this E.M.-16 anomaly.

The "C" anomaly which starts on L-16 North some 150 feet east of the base line, continues north to L-28N at 200 feet east of base line and continues north of the

grid. There is no magnetic correlation to this conductor and very likely it is due to a fault.

The "D" conductor, some 700 feet west of the base line on line 28N has a south-southwest strike, crossing L-24 N at 800 feet east and continues off the grid in both directions. There is only a weak magnetic support to this conductor. A tail of well mineralized float has been observed along this conductor.

"E" conductor west of the base line is in limestone. This conductor starts on L-0 at 450 feet west of the base line and crosses L-2N at 650 West of the base line. From here the conductor strikes in northeast direction, crossing the base line at 1500N and continues on to join up with conductors "A" and "C". Galena float was picked up on L-2N at 600 feet west in the vicinity of the cross-over.

E.M.-16: ST. 17.8 (Plan #2) (Tilt direction 350°)

The "A" conductor on this sheet correlates very closely with the "A" conductor of sheet #1. The magnetic correlation with Plan 2 is very close.

The high dip angle along L-16 N east of the base line is very likely due to a flat lying conductor to the south. A similar condition is likely to exist between lines 10N and 6N from 900 feet to 1500 feet east of the base line.

The "B" anomaly, located west of the baseline on lines 28N and 26N, only roughly correlates with the E.M.-16 conductor of sheet #1. The strike differs considerably for some reason. This is in the vicinity of mineralized float.

The "C" conductor, located at Sta. 6 & 50 south on the base line, happens to be in the saddle (between two mountain peaks). This is in the medium magnetic anomaly area.

Another flat lying conductor occurs south of L-0, west of the base line.

Magnetometer Survey--Plan #3 (Instrument M.F. 1 Fluxgate)

The "A" anomaly, which is coincidental with the E.M.-16 conductors of both station, stands out most prominently. This anomaly starts on L-10N some 300 feet east of the base line and continues in a north-northwest

direction to cross the base line at 1700 feet north.

The individually scattered high magnetic anomalies are very likely due to pockets of high grade magnetite.

Only a small portion of the area was covered geophysically. A much larger area should be geophysically covered in the hopes of finding more conductors to choose from. The area is very steep, with a lot of talus. This would make it most difficult if one should want to check the E.M.-16 conductors with the horizontal loop.

Steve Presunka

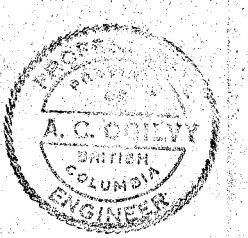
(sgd) S. Presunka

9. Conclusions

Geological mapping confirms the presence of a contact between acid igneous rock and limestone-skarn favorable to mineralization. Float indicates the existance of Ag - Pb - Zn - Cu mineralization associated with both skarn and intrusive rocks. Assays indicate Ag - Pb - Zn values approaching economic grades and a Ag/Pb ratio ranging from 0.5 to 1.95 and averaging 0.9. Geophysical surveys indicate strong conductive bodies in the vicinity of the mineraliation and the contact.

On the other hand, the continuity of mineralization in float and outcrop is not impressive. None of the float appears to have travelled more than 2 or 300 ft downhill. Thus there is little liklihood of the mineralized float observed emanating from above the shale-limestone contact. The configuration of the conductive bodies was not resolved by the mapping.

Although more intensive and extensive prospecting and geological mapping could conceivably find a more interesting prospect, no recommendation for further work can be made at this time.



Whitehorse, Oct. 20, 1971

A. C. Ogilvy, P.Eng.

DATE August 13,1971.

ASSAY CERTIFICATE

FILE NO. 6890-3

WHITEHORSE ASSAY OFFICE

P.O. BOX 346. WHITEHORSE. YUKON

RECEIVED FROM Caltor Syndicate

SAMPLE NO.	GOLD Oz. Per Ton	SILVER Oz Per Ton	Lead	Zinc	Copper		Ag/Pb	
1357	.04	3.00	5.85	4.32	.14		0.51	
1358	.06	14.60	7.50	.26	1.23		1.95	
1359	.04	2.28	4.60	3.84	.10		0.50	

ASSAYER Geo. Spalding

DATE September 16,1971.

ASSAY CERTIFICATE

FILE NO. 6994-2

WHITEHORSE ASSAY OFFICE

P.O. BOX 346. WHITEHORSE. YUKON

RECEIVED FROM Caltor Syndicate

SAMPLE NO.	GOLD Oz. Per Ton	SILVER Oz Per Ton	Lead	Zinc	Copper		Ag/Pb	
1704	.09	2.67	2.70	.08	.06		1.00	
1705	.005	5.04	10.0	2.28	.14		0.50	

ASSAYER Geo. Spalding

77 Teslin Road
Whitehorse, Yukon

A. Cameron Ogilvy, P.Eng.

In Account With: Caltor Syndicate

October 24, 1971

RE: Examination and report
Johnny Claims, Liard M.D., B.C.

(a) Professional Services

Sept. 9, 10; 1971: Travel to Watson Lake, aviation-weather delay @ Watson L. 1.5 days @ $100	$ 150.00
Sept. 11: Examination; return to Whse. 1 day @ $150.	150.00
Oct. 18 to Oct. 23; preparing report 3 days @ $150.	450.00
Sub Total	$ 750.00

(b)

Sept. 8	phone	$ 3.25
Sept. 9, 1971		
	CP Air: Whse to Watson L.	22.00
	Taxis	3.00
	Meals	4.00
	Motel	10.00
Sept. 10, 1971 (delayed due wx)		
	Taxis	2.00
	Meals	12.00
	Motel	10.00
Sept. 11, 1971		
	Bkfst.	2.00
	Taxis	3.00
	Frontier Helicipters (04678 enc.)	512.50
Oct. 18	phone	2.80
Oct. 23	printing	15.00
	Sub Total	$ 601.55
	TOTAL	$1351.55

ck 462

REGISTERED PROFESSIONAL ENGINEER OF A. C. OGILVY BRITISH COLUMBIA ENGINEER

14 Blue Sheep

Paid

ORIGINAL

B.C.-YUKON AIR SERVICE LTD.

CHARTER FLYING

WATSON LAKE, YUKON

STATEMENT OF FLYING SERVICES RENDERED

Sept. I3, I97I

STATION Watson Lake AIRCRAFT Otter REGISTRATION CF-XUK PILOT D.Ball

IN ACCOUNT WITH Caltor Syndicate

ADDRESS Box I23I

Whitehorse Y.T.

DATE 19	FROM	TO	FLYING TIME HOURS: MINUTES	CHARGE $ PER HOUR	AMOUNT
Sept.6/7I	Ticket #4I87				249.60
Sept.II/7I	Ticket #4I93				249.60
		Blue Sheep TA			Cheque #1432
				TOTAL ▶	$499.20

O THE WHITEHORSE STAR

I4I

B.C.-YUKON AIR SERVICE LTD.

CHARTER AND CONTRACT TICKET

Date SEPT 11 1971 A/C Type OTTER CF XUX

Pilot DENNIS BALL Base WATSON

Charge to CALTOR SYNDICATE

Address BOX 1231 WHITEHORSE

For Passage From: WATSON To: BLUESHEEP

To: WATSON To:

To: To:

To: To:

Fare: 192	Miles @ $ 1.30	$ 249 60
	Hours @ $	$
	Contract Rate MOVE CAMP	$
INTO WATSON		$
		$
		$
		$
	Total Charge	$ 249 60

This ticket is expressly subject to the conditions printed on the reverse side of ticket and which are hereby accepted.

Authorized by J Byrne

№ 4193

B.C.-YUKON AIR SERVICE LTD.

CHARTER AND CONTRACT TICKET

Date SEPT 6 1971 A/C Type OTTER CF XUX

Pilot DENNIS BALL Base WATSON

Charge to CALTOR SYNDICATE

Address BOX 1231 WHITEHORSE Y.T.

For Passage From: WATSON To: BLUESHEEP

To: WATSON To:

To: To:

To: To:

Fare: 192	Miles @ $ 1.30	$ 249 60
	Hours @ $	$
	Contract Rate 4 MEN & GEAR	$
INTO BLUESHEEP		$
PACK 12		$
PICK UP ON THE 10TH		$
		$
	Total Charge	$ 249 60

This ticket is expressly subject to the conditions printed on the reverse side of ticket and which are hereby accepted.

Authorized by J Byrne

№ 4187

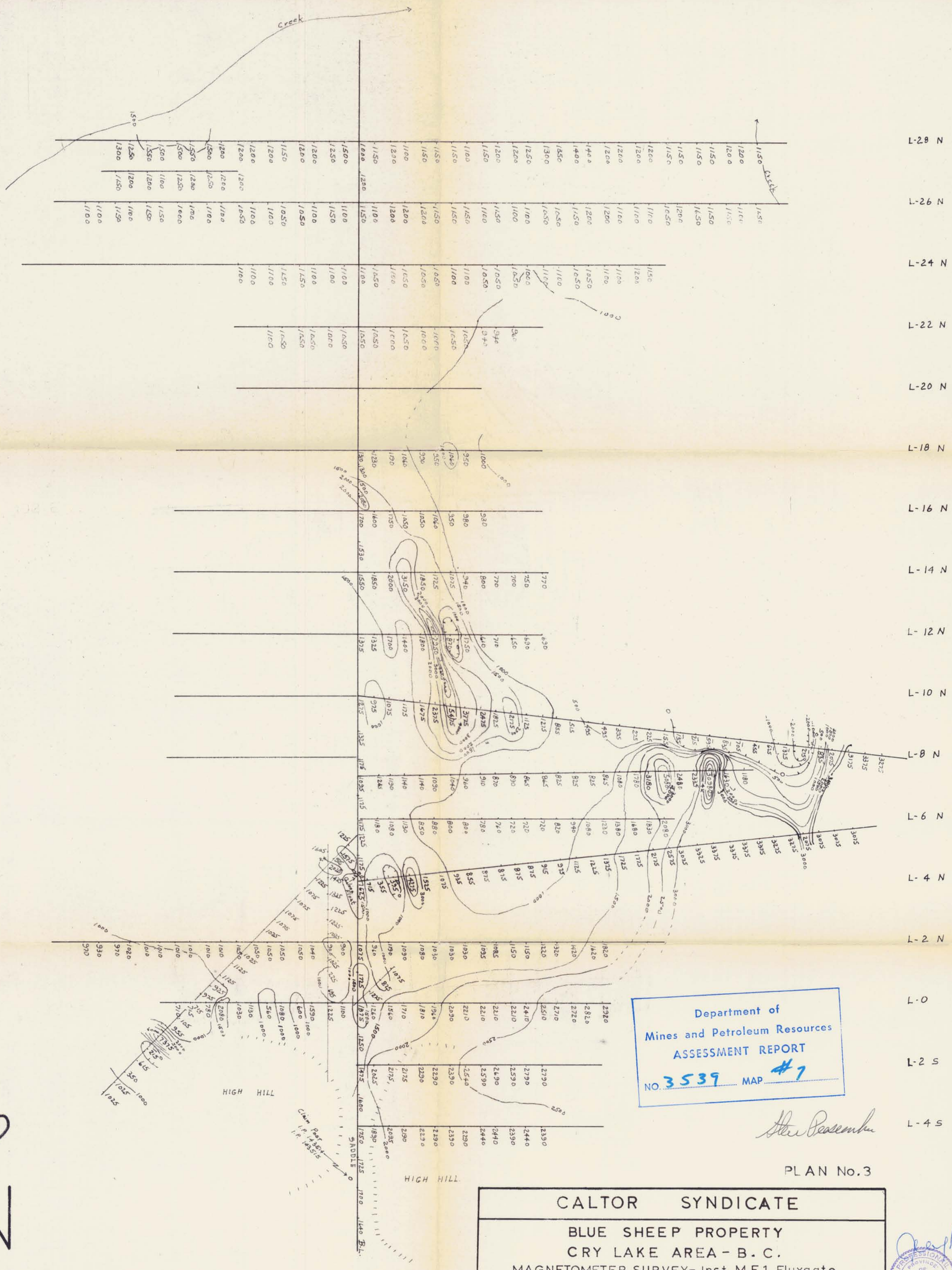
STATEMENT

Steve Presunka
208 - 9th Ave. S.W.
Dauphin Manitoba DATE Sept-17 19 71

CALTOR SYNDICATE
608 Drury ST.
Whitehorse Yukon

DATE	DETAILS	DEBIT	CREDIT	BALANCE
	12 days -			
	@ $100.00 per day		$1200.00	
	Geophysical Survey			
	E.M-16 and Magnetometer			
	Thank you			
	Steve Presunka			
	Blue Sheep			
Please	Deposit to Bank of Commerce			
	999 West Pender ST.			
	Vancouver 1 B.C.			
	Acct No 2802			

Rediform 8M101

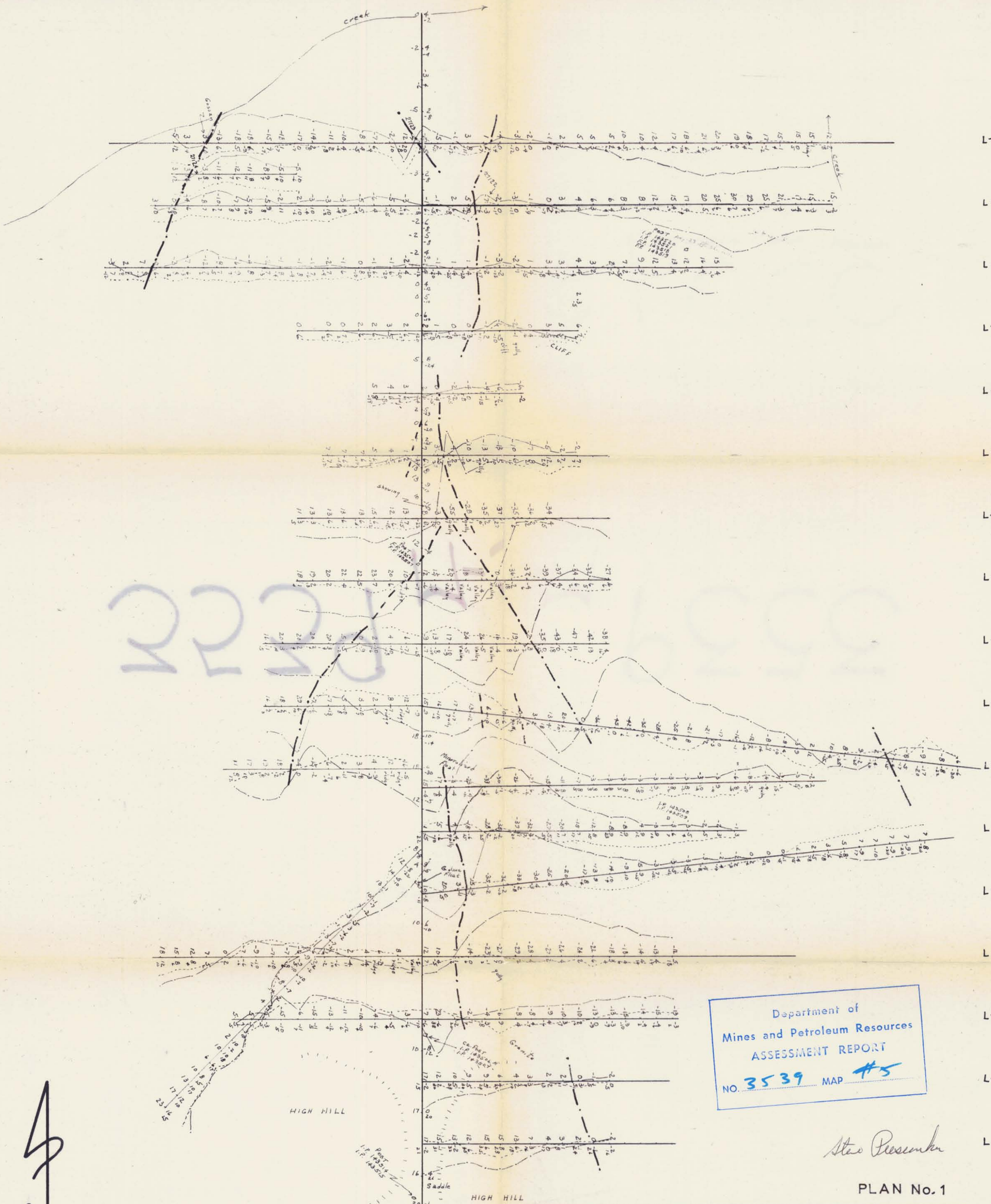


PLAN No.3

CALTOR SYNDICATE

BLUE SHEEP PROPERTY
CRY LAKE AREA - B. C.
MAGNETOMETER SURVEY- Inst. M.F.1 Fluxgate

Scale : 1"= 200' Drawn by S. Presunka Sept. 1971



Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 3539 MAP #5

Stan Presunka

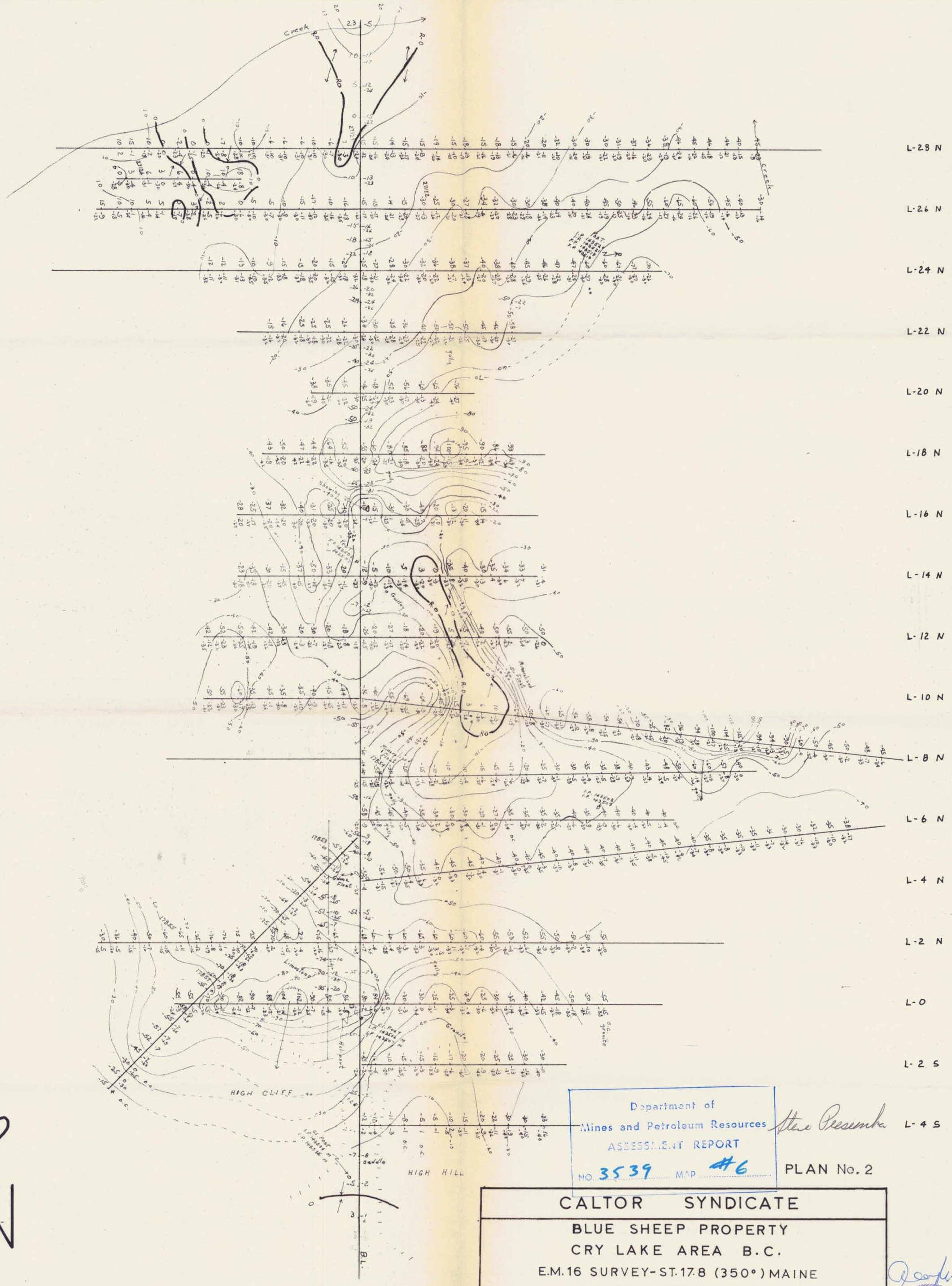
PLAN No. 1

CALTOR SYNDICATE
BLUE SHEEP PROPERTY CRY LAKE AREA B.C. E.M.16 SURVEY ST.18.6 (060°) SEATTLE Inphase —·—·— Quadrature - - - - - - } 1"=40 %
Scale: 1"=200' Drawn by S. Presunka. Sept.1971

PROFESSIONAL ENGINEER
PROVINCE OF
A. C. OGILVY
BRITISH COLUMBIA

N
18.6 (060°)

3539
M-5



PLAN No. 2

CALTOR SYNDICATE

BLUE SHEEP PROPERTY
CRY LAKE AREA B.C.
E.M.16 SURVEY - ST. 17.8 (350°) MAINE
INPHASE CONTOURS ONLY

SCALE: 1"=200'. Drawn by S. Presunka. Sept. 1971

Steve Presunka

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
A. C. OGILVY