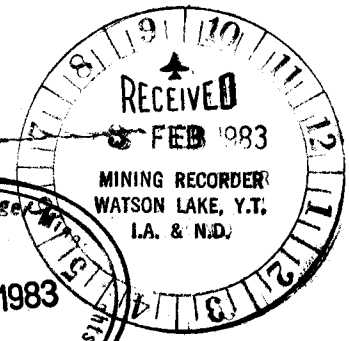
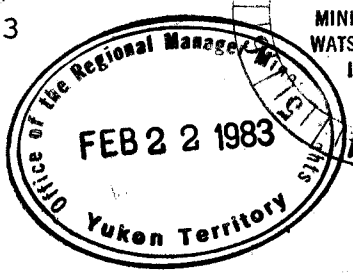
TITLE: GEOCHEMICAL, GEOPHYSICAL AND PROSPECTING REPORT ON THE THRALL 1-92 MINERAL CLAIMS

AUTHOR: N. Hulstein

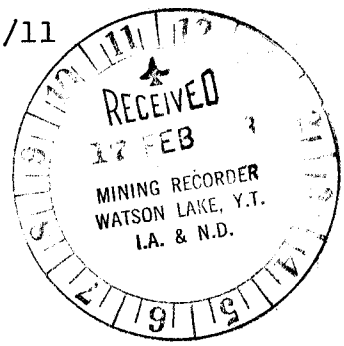
DATE: January, 1983

COMMODITIES: Molybdenum





LOCATION:
- Name of Claim Group - Thrall Claims
- Mining District - Watson Lake, Y.T.
- Co-ordinates - Latitude 60°33'N
- Longitude 131°20'W
- Claim Sheet Numbers - 105B/11



DATE WORK WAS DONE: July - August, 1982

Getty Canadian Metals, Limited
Vancouver office

091408

This [illegible] d by
the [illegible]
[illegible] Quartz
[illegible]
[illegible] amount
of $ 22,500-

P Watson

for [illegible]
Geological Services for Commissioner
of Yukon Territory.

INDIAN and NORTHERN AFFAIRS

TRANSMITTAL FORM

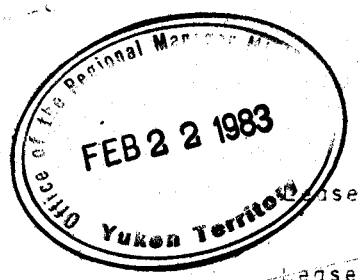
M.R. File No. _____

S.M.R. File No. _____

Date Fwd 18 Feb 83

FROM: Mining Recorder at Watson Lake

TO Supervising Mining Recorder at Whitehorse, Y.T.



FOR ACTION ARE:

☐ NEW APPL'N for PLACER LEASE to PROSPECT: Name:

☐ RENEWAL APPL'N PLACER LEASE to PROSPECT: Name: Lease No.

☐ AFFIDAVIT of EXPENDITURE on PLACER LEASE. Name Lease No.

☐ ASSIGNMENT of PLACER LEASE No.
From: To:

☐ GROUPING APPL'N UNDER SEC. 52(2) PLACER MINING ACT.
Owner:

☐ DIAMOND DRILL LOGS
Claims: Claim sheet no.

☑ QUARTZ ASSESSMENT REPORT
Claims: THRALL 1-92F Claim sheet no. 105-B-11

Type of report: PROSPECTING, GEOCHEMICAL, GEOPHYSICAL

Submitted by: GETTY CANADIAN METALS, LTD

Cls. work performed on: THRALL 1-8, 10-16, 29, 31, 33-35, 37, 39, 41, 43, 45, 47, 49-50, 53-56, 58, 60, 62, 64-80, 85, 89F to 92F

$ Req. for ren. application $22,500.00

Signature

REPLY ACTION Date Ret.

091408

Signature

Department of Indian Affairs and Northern Development

YUKON QUARTZ MINING ACT

FORM "C" - APPLICATION FOR A CERTIFICATE OF WORK

(This form required in duplicate with sketch showing location of work.)

RECEIVED
1982
MINING RECORDER
WATSON LAKE, Y.T.
I.A. & N.D.

I (Name) Nicole Hulstein	Occupation Geologist
(Postal Address) #509-700 West Pender St, Vancouver BC V6C 1G8	OFFICE DATE STAMP

MAKE OATH AND SAY, THAT :-

1. I am the owner, or agent of the owner, of the mineral claim(s) to which reference is made herein.

2. I have done, or caused to be done, work on the following mineral claim(s):
(Here list claims on which work was actually done by number and name)

THRALL 74, 76
THRALL 78, 80
THRALL 85
YA 67460, YA 67462
YA 67464, YA 67466
YA 67471

SHOW DATES WORK COMMENCED AND ENDED ON CLAIMS HAVING DIFFERENT ANNIVESARY DATES

situated at Upper Meister River Claim Sheet No. 105B/11

in the Watson Lake Mining District, to the value of at least $6,000.00

dollars, since the 9th day of July 19 82,

to represent the following mineral claims under the authority of Grouping Certificate No. 3354.
(Here list claims to be renewed by number and name in numerical order)

Group 6 (see Enclosed sketch)

Grant No.	Claim Name	Renewal Period	New Expiry Date
30Oct 82 YA 67460, YA 67462	THRALL 74, 76	5 years	October 30, 1987
✓ YA 67464, YA 67466	THRALL 78, 80	5 years	October 30, 1987
✓ YA 67467 - YA 67474	THRALL 81 - 88	5 years	October 30, 1987

TOTAL 60 Claim years applied for.

3. The following is a detailed statement of such work: (Set out full particulars of the work done in the twelve months in which such work is required to be done, as shown by Section 53.)

Geological, geophysical & geochemical surveys, commenced July 9th, 1982, and were completed by August 4, 1982.

Geological, geophysical & geochemical report will be submitted prior to December 30, 1982.

Work totalled $6,000.00

Sworn before me at Vancouver, B.C.
this 1st day of November 1982

A Commissioner for Oaths for ~~Yukon Territory~~ B.C.

Nicole Hulstein
Applicant.

091408

Department of Indian Affairs and Northern Development

YUKON QUARTZ MINING ACT

FORM "C" - APPLICATION FOR A CERTIFICATE OF WORK

(This form required in duplicate with sketch showing location of work.)

RECEIVED
NOV 1982
MINING RECORDER
WATSON LAKE, Y.T.
I.A. & N.D.

OFFICE DATE STAMP

I (Name) Nicole Hulstein Occupation Geologist

(Postal Address) #509-700 West Pender St, Vancouver BC V6C 1G8

MAKE OATH AND SAY, THAT :-

1. I am the owner, or agent of the owner, of the mineral claim(s) to which reference is made herein.

2. I have done, or caused to be done, work on the following mineral claim(s): Getty Canadian Metals, Limited
(Here list claims on which work was actually done by number and name)

THRALL 65-73 YA 67451-YA67458
THRALL 75, 77, 79 YA 67461, YA 67463, YA 67465
THRALL 89F - 92F YA 67475 - YA 67478

SHOW DATES WORK COMMENCED AND ENDED ON CLAIMS HAVING DIFFERENT ANNIVESARY DATES

situated at Upper Meister River Claim Sheet No. 105B/11

in the Watson Lake Mining District, to the value of at least $8,000.00

dollars, since the 9th day of July 19 82,

to represent the following mineral claims under the authority of Grouping Certificate No. 3353,
(Here list claims to be renewed by number and name in numerical order)

Group 5 (see Enclosed sketch)

Grant No.	Claim Name	Renewal Period	New Expiry Date
30 car 82 5 YA 67451-YA67459	THRALL 65-73	5 years	October 30, 1987
YA 67461, YA 67463 & YA 67465	THRALL 75,77,79	5 years	October 30, 1987
5 YA 67475-YA67478	THRALL 89F-92F	5 years	October 30, 1987

TOTAL 80 Claim years applied for.

3. The following is a detailed statement of such work: (Set out full particulars of the work done in the twelve months in which such work is required to be done, as shown by Section 53.)

Geological, geophysical & geochemical surveys, commenced July 9th, 1982, and were completed by August 4, 1982.

Geological, geophysical & geochemical report will be submitted prior to December 30, 1982.

Work totalled $8,000.00

Sworn before me at Vancouver, B.C.
this 1st day of November 1982

A Commissioner for Oaths for ~~Yukon Territory~~ B.C.

Nicole Hulstein
Applicant.

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT

YUKON QUARTZ MINING ACT

FORM "C" - APPLICATION FOR A CERTIFICATE OF WORK

RECEIVED
[illegible]82
MINING RECORDER
WATSON LAKE, Y.T.
I.A. & N.D.

(This form required in duplicate with sketch showing location of work.)

I (Name) Nicole Hulstein	Occupation Geologist
(Postal Address) #509-700 West Pender St., Vancouver, B.C., V6C 1G8	OFFICE DATE STAMP

MAKE OATH AND SAY, THAT:

1. I am the owner, or agent of the owner, of the mineral claim(s) to which reference is made herein.

2. I have done, or caused to be done, work on the following mineral claim(s):

(Here list claims on which work was actually done by number and name)

THRALL 2 23 to 28	YA 65948
THRALL 39, 40, 41, 42, 44	YA 65985, YA 65987
THRALL 53-56	YA 65999-YA66002

situated at Upper Meister River Claim Sheet No. 105B/11

in the Watson Lake Mining District, to the value of at least $1,600.00

dollars, since the 9th day of July 19 82.

to represent the following mineral claims under the authority of Grouping Certificate No. 3244 (Phil)

(Here list claims to be renewed in numerical order, by grant number and claim name, showing renewal period requested).

Group 4 (see enclosed sketch)

	Grant No.	Claim Name	Renewal Period	New Expiry Date
2 Jul 87	YA 65948	THRALL 2	1 year	July 2, 1988
"	YA 65969-YA 65974	THRALL 23-28	1 year	July 2, 1988
87	YA 65985-YA 65988	THRALL 39-42	1 year	July 2, 1988
"	YA 65990	THRALL 44	1 year	July 2, 1988
"	YA 65999-YA 66002	THRALL 53-56	1 year	July 2, 1988

TOTAL: 16 claim years applied for.

3. The following is a detailed statement of such work: (Set out full particulars of the work done indicating dates work commenced and ended in the twelve months in which such work is required to be done as shown by Section 53.)

Geological, geophysical & geochemical surveys, commenced July 9th, 1982, and were completed by August 4, 1982.

Geological, geophysical & geochemical report will be submitted prior to December 30, 1982.

Work totalled $1,600.00

Sworn before me at Vancouver, B.C.

this 4 day of November 19 82

Notary Public

Nicole Hulstein
Applicant

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT

YUKON QUARTZ MINING ACT

FORM "C" - APPLICATION FOR A CERTIFICATE OF WORK

OFFICE DATE STAMP

(This form required in duplicate with sketch showing location of work.)

I (Name) Nicole Hulstein Occupation Geologist

(Postal Address) #509-700 West Pender St., Vancouver, B.C., ~~V6C 1G8~~

MAKE OATH AND SAY, THAT:

1. I am the owner, or agent of the owner, of the mineral claim(s) to which reference is made herein.

2. I have done, or caused to be done, work on the following mineral claim(s):

(Here list claims on which work was actually done by number and name)

THRALL 33 (TH) 22, 35, 36, 37 38	YA 65979, YA 65981, YA 65983
THRALL 49-50	YA 65995-YA 65996
THRALL 58 57	YA 66004

situated at Upper Meister River Claim Sheet No. 105B/11

in the Watson Lake Mining District, to the value of at least $2,700.00

dollars, since the 9th day of July 19 82,

to represent the following mineral claims under the authority of Grouping Certificate No. 3243 (Thru)

(Here list claims to be renewed in numerical order, by grant number and claim name, showing renewal period requested).

Group 3 (see enclosed sketch)

	Grant No.	Claim Name	Renewal Period	New Expiry Date
2 Jul 86	YA 65963- YA 65968	THRALL 17-22	2 years	July 2, 1988
"	YA 65979	THRALL 33	2 years	July 2, 1988
87	YA 65980-YA 65984	THRALL 34-38	1 year	July 2, 1988
86	YA 65995-YA 65996	THRALL 49-50	2 years	July 2, 1988
"	YA 66003-YA 66004	THRALL 57-58	2 years	July 2, 1988

TOTAL: 27 claim years applied for

3. The following is a detailed statement of such work: (Set out full particulars of the work done indicating dates work commenced and ended in the twelve months in which such work is required to be done as shown by Section 53.)

Geological, geophysical & geochemical surveys, commenced July 9th, 1982, and were completed by August 4, 1982.

Geological, geophysical & geochemical report will be submitted prior to December 30, 1982.

Work totalled $2,700.00

Sworn before me at Vancouver, B.C.

this 4 day of November 19 82

Notary Public

Nicole Hulstein
Applicant

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT

YUKON QUARTZ MINING ACT

FORM "C" - APPLICATION FOR A CERTIFICATE OF WORK

OFFICE DATE STAMP

(This form required in duplicate with sketch showing location of work.)

I (Name) Nicole Hulstein Occupation Geologist

(Postal Address) #509-700 West Pender St., Vancouver, B.C., V6C 1G8

MAKE OATH AND SAY, THAT:

1. I am the owner, or agent of the owner, of the mineral claim(s) to which reference is made herein.
2. I have done, or caused to be done, work on the following mineral claim(s):

(Here list claims on which work was actually done by number and name)

THRALL 9, 10-16
THRALL 60, 62, 64
51, 52, 59
YA 65956-62
YA 66006, YA 66008, YA 66010

situated at Upper Meister River Claim Sheet No. 105B/11

in the Watson Lake Mining District, to the value of at least $2,700.00

dollars, since the 9th day of July 19 82,

to represent the following mineral claims under the authority of Grouping Certificate No. 3242 (Prw)

(Here list claims to be renewed in numerical order, by grant number and claim name, showing renewal period requested).

Group 2 (see enclosed sketch)

	Grant No.	Claim Name	Renewal Period	New Expiry Date
2 July 86	YA 65955, YA 65957	THRALL 9, 11	2 years	July 2, 1988
87	YA 65956, YA 65958	THRALL 10, 12	1 year	July 2, 1988
86	YA 65959, YA 65961	THRALL 13, 15	2 years	July 2, 1988
87	YA 65960, YA 65962	THRALL 14, 16	1 year	July 2, 1988
86	YA 65997, YA 65998	THRALL 51, 52	2 years	July 2, 1988
86	YA 66005-YA 66009	THRALL 59-63	2 years	July 2, 1988
87	YA 66010	THRALL 64	1 year	July 2, 1988

TOTAL: 27 claim years applied for

3. The following is a detailed statement of such work: (Set out full particulars of the work done indicating dates work commenced and ended in the twelve months in which such work is required to be done as shown by Section 53.)

Geological, geophysical & geochemical surveys, commenced July 9th, 1982, and were completed by August 4, 1982.

Geological, geophysical & geochemical report will be submitted prior to December 30, 1982.

Work totalled $2,700.00

Sworn before me at Vancouver, B.C.

this 4 day of November 19 82.

Notary Public

Nicole Hulstein
Applicant

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT

YUKON QUARTZ MINING ACT

FORM "C" - APPLICATION FOR A CERTIFICATE OF WORK

(This form required in duplicate with sketch showing location of work.)

I (Name) Nicole Hulstein	Occupation Geologist
(Postal Address) #509-700 West Pender St., Vancouver, B.C., V6C 1G8	OFFICE DATE STAMP

MAKE OATH AND SAY, THAT:

1. I am the owner, or agent of the owner, of the mineral claim(s) to which reference is made herein.
2. I have done, or caused to be done, work on the following mineral claim(s):

(Here list claims on which work was actually done by number and name)

Geddy Creek-Metals Limited

THRALL 1 YA 65947
3-8 YA 65949-54
29 to ~~31~~ 32 YA 65976, YA 65978
43, 45 to ~~47~~ 48 YA 65989, YA 65991, YA 65993

situated at Upper Meister River Claim Sheet No. 105B/11

in the Watson Lake Mining District, to the value of at least $1,600.00

dollars, since the 9th day of July 19 82,

to represent the following mineral claims under the authority of Grouping Certificate No. 3241 (Rev)

(Here list claims to be renewed in numerical order, by grant number and claim name, showing renewal period requested).

Group 1 (see enclosed sketch)

Grant No.	Claim Name	Renewal Period	New Expiry Date
~~July 87~~ YA 65947	THRALL ~~1~~	1 year	July 2, 1988
YA 65949-YA65954	THRALL 3-8	1 year	July 2, 1988
YA 65975-YA65978	THRALL ~~29-32~~	1 year	July 2, 1988
YA 65989	THRALL ~~43~~	1 year	July 2, 1988
YA 65991-YA 65994	THRALL ~~45-48~~	1 year	July 2, 1988

TOTAL: 16 claim years applied for

3. The following is a detailed statement of such work: (Set out full particulars of the work done indicating dates work commenced and ended in the twelve months in which such work is required to be done as shown by Section 53.)

Geological, geophysical & geochemical surveys, commenced July 9th, 1982, and were completed by August 4, 1982.

Geological, geophysical & geochemical report will be submitted prior to December 30, 1982.

Work totalled $1,600.00.

Sworn before me at Vancouver, B.C.

this 4 day of November 19 82.

Notary Public

Nicole Hulstein
Applicant

TABLE OF CONTENTS

LIST OF FIGURES

APPENDICES

SUMMARY AND CONCLUSIONS

This report describes the results of prospecting, soil sampling, and geophysical surveys carried out in July to August, 1982, on the THRALL claims.

The THRALL 1-64 quartz mineral claims were staked in June, 1981, to cover a small granodiorite stock containing stockwork quartz molybdenite mineralization. Surface exposure is limited and mineralization is restricted to talus and float occurrences. Molybdenite mineralization has not previously been reported in this area and the showing appears to be a new and significant find.

The stockwork appears to be related to a quartz-feldspar porphyry phase of the intrusion and was noted over a distance of at least 200 metres. Quartz veining and occasional disseminated molybdenite occur throughout the granodiorite stock. At the main showing the mineralized talus is scattered and diluted by barren granodiorite debris. Molybdenite occurs in minor to abundant amounts mainly along the vein walls. A grab sample of rusty mineralization ran 0.036% Mo and 0.23 oz/ton Ag. Potassium feldspar alteration envelopes are common and strongly developed adjacent to some veins and weak pervasive clay, chlorite and sericite alteration is common.

A grid soil geochemistry program outlined broad coincidental or

near coincidental anomalies for Mo, Cu, W, Pb, Ag and F associated with the trace of the stock. Local peak values occurred over areas of observed mineralization and in several areas of overburden cover. The strongest and best defined anomaly was that for Mo which runs the length of the grid area (3,600 metres) and was open at both ends. Values of 230 ppm Mo were obtained. Many of the other metal anomalies were also open to the northwest and additional claims were staked in October, 1981, to cover extensions of these anomalies.

During the 1982 field season prospecting northwest of the main molybdenite showing indicates that this mineralization can be traced out a further 1,200 metres, with molybdenite occurring in quartz veining in both granodiorite, diorite and metasediments, as well as in small quartz feldspar porphyry dykes (1 to 3 metres in width).

While prospecting the eastern ridge, five small quartz feldspar dykes were found scattered along the ridge top, one of which contained up to 1% pyrite.

A total of 220 soil samples were collected from extensions of last years grid lines, and new grid lines covering the open soil anomalies to the north and west. These samples were analyzed for Mo, Cu, W, Pb, Ag and Zn.

The results from this survey showed that the open molybdenum anomaly from 1981 can be closed to the northwest, indicating the total length of the anomaly to be approximately 4,500 metres (it is still open to the south, however, it is only approximately 200 metres wide). The highest value of molybdenum obtained during this survey was 67 ppm. This molybdenum anomaly closely approximates the contacts of the Cretaceous granodiorite intrusion. Along with the molybdenum anomaly there are co-incident Cu, W, Pb and silver anomalies, although for the most part these are not as extensive as the molybdenum anomaly (the one exception to this is copper).

A proton magnetometer survey was conducted over the entire grid, the results of which indicated a magnetic low approximating the boundary of the granodiorite intrusion. This would indicate that the intrusion is approximately 1,600 metres in length.

RECOMMENDATIONS

Further exploration is warranted on the THRALL claims. It is recommended that:

1. A suite of rocks from the main showing area, i.e. quartz-feldspar porphyry, granodiorite and diorite, be taken and analyzed in order to see which phase contains the more abundant molybdenum and to see what the ratio is between molybdenum found in quartz veining and that found disseminated throughout the rock.

2. An I.P. survey be conducted in order to trace out the most sulphide-rich lithology.

3. Trenching be done over the main showing, the purpose of which would be to determine the extent of mineralization under talus.

INTRODUCTION

Location and Access - see Figure 1

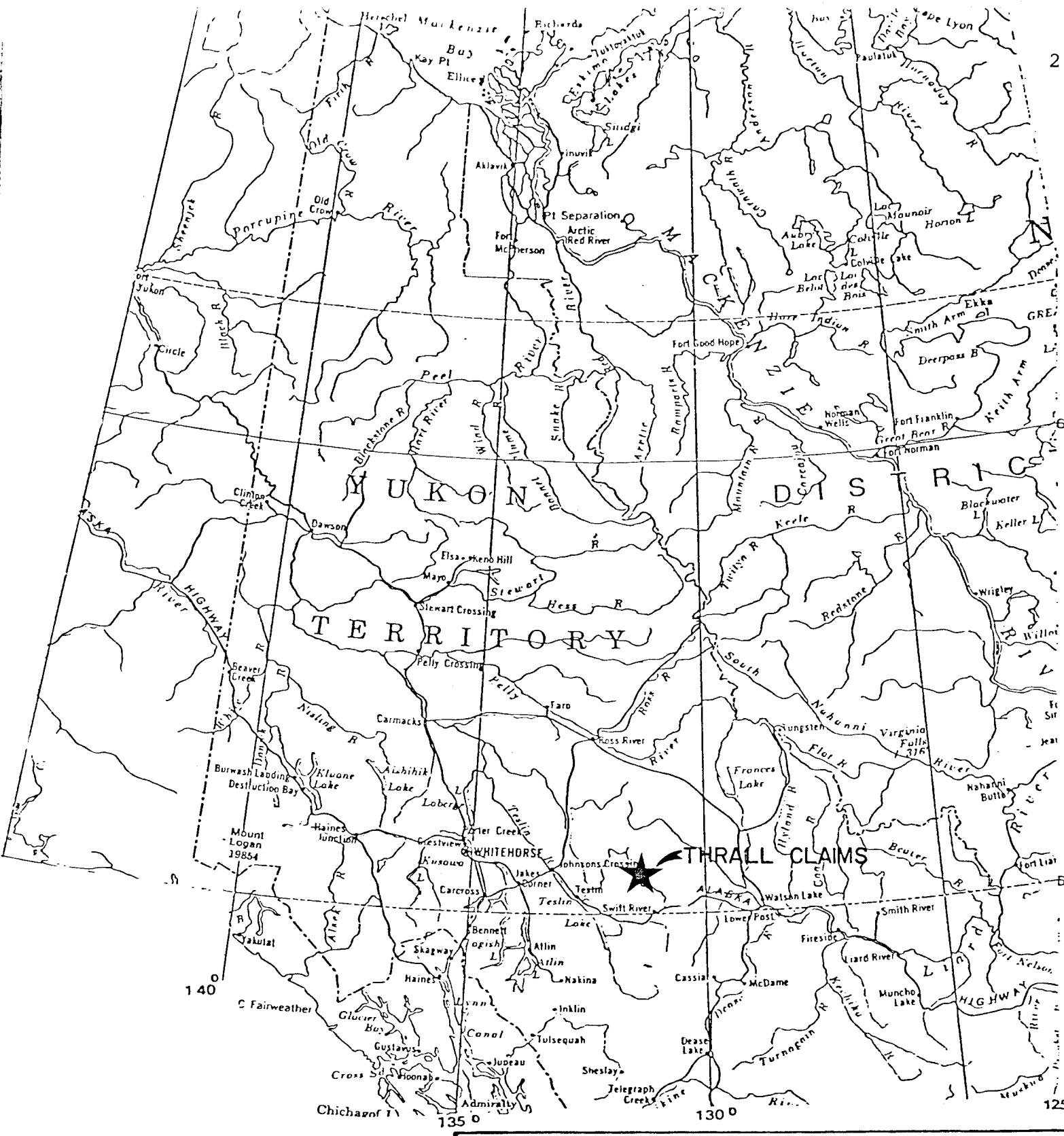
The THRALL 1-92 mineral claims are located in the Wolf Lake area (105B/11) of the Yukon Territory at latitude 60°33'N and longitude 131°20'W. The city of Whitehorse, Yukon Territory, lies 200 air kilometres to the west and the Alaska Highway, 60 kilometres to the south. Access to the area is by helicopter from Whitehorse or Watson Lake, approximately a one hour flight each way. Equipment and supplies can be transported by float plane from either Whitehorse or Watson Lake to Wolf Lake and ferried by helicopter 14 kilometres to the property.

Claims - see Figure 2

Land holdings consist of 88 full-sized and 4 fractinal claims, which together cover an area of about 2,200 hectares, or about 5,400 acres. The claims are 100% owned by Getty Canadian Metals, Ltd. A claims list showing record and expiry dates is given in Appendix VI.

Physiography and Climate

The claim block is situated at the headwaters of the informally named Thrall Creek. Thrall Creek is a northwest flowing tributary of Irvine Creek which flows west into Wolf Lake and the Yukon River System. The area lies within the Cassiar Mountains with moderate to steep glaciated ridges reaching 1,500 to 1,800 metres elevation. The intervening valleys are generally broad and U-shaped with thick marshy glacial overburden cover. Most of the claims area



SCALE 1:6,336,000

100 50 0 100 Statute Miles

100 0 100 200 Kilometres

CASSIAR PROJECT 1982

LOCATION MAP

DRAWN BY: L. C	DATE: JAN., 1982
CHECK'D BY: B. HOLLAND	DRAW'G No: FIGURE 1
N.T.S.: 105-B	SCALE: 1:6336000

Getty Mines, Limited

is above tree line. The main vegetation types in the valleys are alder and willow bush, known as "buck brush". Scattered clusters of stunted spruce are common throughout the area.

Outcrop exposure is generally restricted to the ridges, with some exposure in creek cuts and in the narrow valley bottoms. Talus is abundant along ridge flanks. Small frost boils and seeps are common near the base of the ridges.

History and Development

In 1978 the Geological Survey of Canada initiated a regional stream sediment survey over the Wolf Lake map sheet as part of its Uranium Reconnaissance Program (U.R.P.). As a result of this program co-incidental anomalous values were obtained for Mo (11 ppm), W (22 ppm), Cu (58 ppm) Pb (22 ppm) and Zn (110 ppm), on a north draining tributary of Irvine Creek. Normal background values in the area are 1 ppm Mo, 2 ppm W, 20 ppm Cu, 4 ppm Pb, and 60 ppm Zn. This anomaly prompted the area to be staked in 1979, however, there is no record or sign of any work being done and the claims lapsed.

In 1981, Getty Canadian Metals, Ltd. conducted a regional reconnaissance molybdenum program in the north and central Yukon. Research and data compilation revealed that the above mentioned anomaly was not staked and a prospecting crew was dispatched in June, 1981, to investigate. Molybdenite mineralization was located in association with quartz veining in talus of quartz-feldspar porphyry granodiorite.

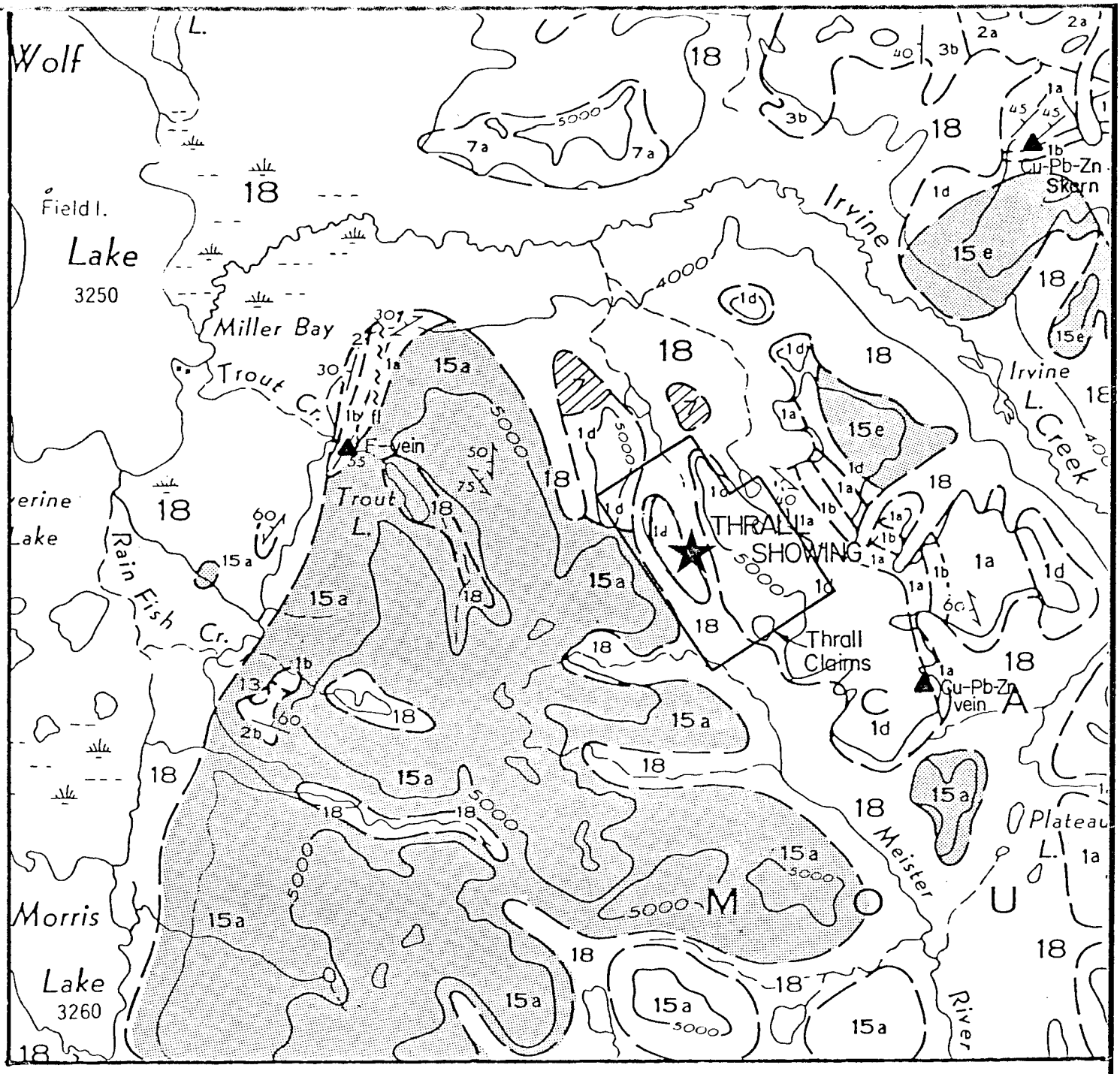
Minor disseminated molybdenite was also located in float and rare outcrop of granodiorite over a wide area of poor rock exposure. The THRALL 1-64 claims were staked and later a program of grid soil geochemistry and mapping was undertaken. The THRALL 65-92 claims were added in October, 1981, to cover extensions of soil geochemistry anomalies.

During July and August, 1982, prospecting, soil sampling and a ground magnetometer survey were carried out on the THRALL claims. This program was conducted in order to follow up the open Mo, Cu, W, Pb and Ag soil anomalies located in 1981. The claims upon which work was actually done include the THRALL 1-88 and 89F-92F claims.

The work described herein was conducted by and under the direct supervision of N. Hulstein, contract geologist, Fox Geological Consultants, Vancouver. B. Bowen, Getty staff geologist, laid out the program, while the writer evaluated the results based on the data presented herein.

REGIONAL GEOLOGY - see Figure 3

The Wolf Lake region is sominated by the Cretaceous Cassiar Intrusions which cut a sequence of largely calcareous lower Paleozoic sediments and their metamorphic equivalents. This intrusive complex can be separated into several components including, among others, the Seagull and Cassiar Batholiths. The Seagull Batholith lies to the south of the Wolf Lake area and is noted for its anomalous fluorine, tin and tungsten content and associated mineral occurrences such as



LEGEND

LITHOLOGY

PLEISTOCENE AND RECENT

18 Overburden

JURASSIC AND/OR CRETACEOUS

15 15a, CASSIAR BATHOLITH: mainly biotite quartz monzonite and granodiorite; 15e, mainly biotite-muscovite granodiorite

DEVONIAN AND MISSISSIPPIAN

Greenstone, metasediments

CAMBRIAN AND (?) EARLIER

1d Biotite schist and gneiss

1a,b Metasediments

SYMBOLS

Mineral occurrence

Bedding

Schistosity

SCALE

0 5 10

KILOMETRES

N

CASSIAR PROJECT 1982 (THRALL CLAIMS)

GEOLOGY OF IRVINE CREEK AREA

DRAWN BY: L. CONNOR	DATE: MARCH, 1982
CHECK'D BY: B.H., B.K.B.	DRAW'G No: FIGURE 3
N.T.S.: 105-B-11	SCALE: 1:155,000

Getty Mines, Limited

the Logjam Creek tungsten-molybdenum and the Swift River tin deposits. Northeast of the Seagull Batholith lies the large, northwest trending Cassiar Batholith which is composed of mainly biotite quartz monzonites and granodiorites. A smaller unnamed batholith lies further to the northeast, along Irvine Creek. The "Irvine Creek Batholith" consists of largely biotite-muscovite granodiorite.

The THRALL claims are located between these latter two batholiths in an area underlain by a small unmapped granodiorite stock. This stock intrudes rocks mapped by the Geological Survey of Canada as Cambrian or earlier, biotite schists and gneisses; with Devono-Mississippian greenstones and related metasediments occurring to the north along Irvine Creek (Units 1d and 7 respectively, Figure 3).

Within the Wolf Lake-Irvine Creek region only 3 mineral occurrences, other than the Thrall showings, have been reported. These are: 1) a quartz-fluorite vein on Trout Creek, 2) a copper-lead-zinc vein north of the Meister River, and 3) a copper-lead-silver skarn northeast of Irvine Creek (see Figure 3). The last of these showings is held as the COM 21-26 claims, owned by Dayton Silver Mines, Ltd. and the SOURCE 1-24 claims (staked September, 1981) owned by Serem Ltd. The remaining mineral occurrences are open and no other valid mineral claims are located within a thirty kilometre radius of the THRALL claims. Other known porphyry molybdenum occurrences in the region include the Red Mountain

deposit (Amoco Canada Petroleum) 140 kilometres to the northwest, and Logjam Creek deposit (Amax Exploration) 60 kilometres to the south.

RESULTS OF THE 1982 PROGRAM

Geology - see Figure 4.

During 1981 geological mapping was carried out by using one (1) inch equals one half (1/2) mile government airphotos for control. The results of this survey showed that the country rocks underlying much of the claims area consist of an intercalated package of greenstones, dioritized greenstones, and metasediments intruded locally by medium to coarse grained diorites and quartz diorites. Intruding all the above rocks is a small dyke-like stock of granodiorite trending northwest-southeast through the central portion of the claim block. Associated with this granodiorite are small quartz-feldspar porphyry granodiorite intrusions. For a more complete description of lithologies see the Geological and Geochemical Report on the THRALL 1-92 Mineral Claims, 1981, by R.T. Holland.

During 1982 prospecting and a limited geological mapping survey were conducted. Survey control was through the use of existing government airphotos and a 1:10,000 scale pencil manuscript prepared by Pacific Survey Corporation of Vancouver.

The 1982 work located two quartz-feldspar porphyry granodiorite dykes 700 metres north of the main showing. Both dykes are beige weather-

ing and the largest is 2.5 metres wide and can be followed uphill for 5 metres. The dykes consist of extremely fine grained plagioclase, potassium feldspar and quartz, with grey quartz eyes up to 3 mm in diameter. The porphyry dykes contain small scattered quartz veins most of which are less than 1 cm wide.

On the ridge east of lines 9+00N to 15+00N five more quartz-feldspar porphyry dykes were found. The largest of these is 5 metres wide and can be traced for 50 metres. These dykes are the same composition as those previously noted, however, they contain no quartz veining.

Mineralization and Alteration

Five occurrences of molybdenite were noted up to 1,200 metres northwest of the main molybdenite showing found in 1981. The new occurrences are found in quartz veins which are, for the most part, 1 to 3 cm thick. The molybdenite is either finely disseminated throughout the quartz vein (flakes are less than 1 mm in diameter), or is found in larger flakes (up to 5 mm in diameter) along the selvages of the vein. The quartz veins are found in both diorite and granodiorite talus and in the two quartz-feldspar porphyry dykes which outcrop 700 metres northwest of the main showing.

Minor occurrences of malachite, azurite and chalcopyrite have also been located in quartz veining along with molybdenite.

Alteration envelopes are well developed around many of the mineral-

ized veinlets. Strong secondary K-feldspar replaces plagioclase, often completely, over widths of 1 to 2 cm with weaker replacement over greater widths.

Other alteration assemblages are not readily distinguished in the field and poor exposure prevents recognition of alteration halos. In addition, altered rocks often occur near fresh looking specimens. Most of the granodiorite rocks have some clay alteration of plagioclase and chloritization of biotite. Sericite alteration of plagioclase and biotite is also common with biotites often totally replaced. Strong gossanous alteration occurs locally over narrow widths with the rock generally crumbly and well fractured suggesting a zone of shearing or crackling. Minor pyrite is common in most of the granodiorites, however, no pyrite enriched halo was outlined. Calcite alteration and veining is common in the metasediments and diorite to the west (500 metres) and northwest (1,200 metres) of the main showing as well as on the ridge top east of Thrall Creek.

Geochemistry

Soil sampling in 1981 partially delineated a large northwest trending Mo anomaly, at least 3,500 metres long by 400 to 800 metres wide, which was open to the northwest and southeast. Mo values range from 6 to 323 ppm, but more commonly fell in the 20 to 60 ppm range. In the northwest portion of the 1981 grid, co-incident and/or peripheral anomalies for Cu, Pb, Ag and W also occurred. The Mo

anomaly is co-incident with the granodiorite and observed mineralization.

A total of 220 soil and 3 stream sediment samples were taken in 1982. The objective of the soil sampling was to close off anomalies located in 1981. The soil samples were taken on extensions of last year's grid, and on additional grid lines to the northwest, using an extension of the 1981 base line for control. The grid lines were spaced 300 metres apart, with soil samples taken at 50 metre intervals. The soil samples were analyzed for Mo, Cu, W, Pb, Ag and Zn by Acme Analytical Laboratories, Limited, of Vancouver. Analytical procedures are given in Appendix I.

A prospector's grub hoe or mattock was used to collect each soil sample from a depth of approximately 15 to 25 cm. An effort was made to sample the B horizon where possible. Samples were collected in brown kraft paper bags and dried prior to shipment to Vancouver.

Statistical analysis of the soil data was done by plotting histograms of frequency versus concentration for both the 1981 (693 samples) and 1982 (220 samples) data for each element. Apparent anomalous values determined from the histogram plot were compared with anomalous values of Mo, Cu, W, Pb, Ag and Zn from properties of similar geology (Yukon Exploration and Geology, 1981, Interim Copy) in order to obtain the anomalous values for each element on the THRALL claims. The values for each element were then plotted and contoured according to background and anomalous population

divisions as shown in Figures 5 through 10.

Molybdenum - see Figure 5.

Soil results in 1981 outlined a strong northwest trending molybdenum anomaly which extended the full length of the 1981 grid area. The 1982 soil sampling closed off the anomaly approximately 900 metres northwest of previous sampling. The threshold between the weakly anomalous and background values is defined at 9 ppm Mo. Values greater than or equal to 30 ppm Mo are considered definitely anomalous. Within the overall anomalous trend are numerous highly anomalous peaks with values to 67 ppm Mo. These peaks are strongest and most abundant in northwestern areas of the grid where they are centered on known talus and outcrop exposures of granodiorite and quartz-feldspar porphyry.

Copper - see Figure 6.

The area of weakly anomalous (less than 50 ppm) copper is more extensive than that of molybdenum, extending practically throughout the northern section of the grid. The anomalous population is 110 ppm and the highest value obtained is 400 ppm. The most prevalent highly anomalous area (greater than 200 ppm) is still in the vicinity of the main showing.

Tungsten - see Figure 7.

The area of weakly anomalous (less than 5 ppm) tungsten geochemistry are generally co-incidental but far less extensive than those for molybdenum and define the same linear belt. The less extensive nature of tungsten may be due in part to the fact that the threshold of 5 ppm is close to the detection limit of analysis. Anomalous values (less than 12 ppm) can be grouped into three main clusters which increase in size and intensity to the northwest and correspond to the more intense portions of the molybdenum anomaly. The strongest tungsten response, as for copper and molybdenum, occurs in the western corner of the survey area, where values reach 74 ppm.

Lead - see Figure 8

The lead soil geochemistry shows an anomalous trend within the northwestern half of the grid. This anomalous area is in part co-incidental and in part flanking the anomalous molybdenum belt and corresponding granodiorite contact. The anomalous threshold of 1981 and 1982 data is defined at 60 ppm and values to 190 ppm lead were obtained in 1982. The highest values for lead are found in two clusters, one in the central grid region and the other in the westernmost corner.

Silver - see Figure 9.

Silver anomalies are generally small and dispursed with the main concentrations occurring near the baseline in the central

portion of the grid, co-incidental with the widest part of the granodiorite stock. Values to 1.0 ppm silver are found in the 1982 results. The anomalous threshold 0.8 ppm Ag, a moderate response which is an extension of this main anomalous zone, is also found downhill from the main showing. This overall trend, although co-incidental with the general anomalous trends for molybdenum and copper, does not correspond to any strongly anomaloys zones for these elements. Scattered anomalies further north of the base line in the central and northwestern grid regions, outline a poorly defined U-shaped trend.

Zinc - see Figure 10.

Samples were analyzed for zinc in 1982 only. The anomalous value was 90 ppm. Only a few spot anomalies exist in the northern portion of the grid.

Geophysics - see Figure 11

A proton magnetometer survey was completed using a Geometrics G816 Proton Magnetometer (instrument specifications are given in Appendix II). Readings were obtained in 50 metre station intervals along existing 1981 grid lines and 1982 extensions at a line spacing of 300 metres. Corrections for the data were done automatically by a base station recorder at the camp site.

The magnetic relief of the grid area ranges from 58,165 to 59,293 gammas. A negative magnetic expression with a relief of 645 gammas below the regional magnetic field trend of 58,800 gammas was found

in the south and central portion of the grid. This low is approximately 2,000 metres long by 500 metres wide and trends in a northwesterly direction, roughly co-incident with the granodiorite intrusive.

Nicole Hulstein

GETTY CANADIAN METALS, LTD.

REFERENCES

Holland, R.T.(1982), Geological and Geochemical Report on the Thrall 1-92 Mineral Claims. Prepared for Getty Mines, Limited by Bema Industries Limited.

Geology Section, D.I.A.N.D.(1982), Interim Copy - Yukon Exploration and Geology 1981.

APPENDIX I

ANALYTICAL PROCEDURES

Acme Analytical Laboratories, Ltd.

STREAM SEDIMENT and SOIL SAMPLES

Mo, Cu, W, Pb, Ag, Zn.

Sample Preparation

Samples are dried at 75°C and sieved to -80 mesh.

Digestion

A .500 gram sample is digested with 3 ml of 3:1:3 HCl to HNO_3 to H_2O at 90°C for 1 hour. The sample is then diluted with 10 ml of demineralized water.

Determination

All the above elements are determined by Inductively Coupled Argon Plasma (ICP) from this solution.

Detection Limits: Ag - 0.1 ppm

Mo, Cu, W, Pb, Zn - 3 ppm

APPENDIX II

GEOMETRICS

MODEL G-816/826

PORTABLE PROTON MAGNETOMETER

SPECIFICATIONS

Sensitivity:	± 1 gamma throughout range.
Range:	20,000 to 90,000 gammas (worldwide).
Tuning:	Multiposition switch with signal amplitude indicator light on display.
Gradient Tolerance:	Exceeds 800 gammas/feet.
Sampling Rate:	Manual push button, one reading each six seconds.
Output:	Five digit numeric display with readout directly in gammas.
Power Requirements:	Twelve 1.5 volt "D" cell universally available flashlight-type batteries. Charge state or replacement signified by flashing indicator light on display.
Temperature Range:	Console and sensor: -40° to $+85^{\circ}$ C. Battery pack: 0° to $+50^{\circ}$ C (limited use to -15° C; lower temperature battery belt operation-optional).
Accurary (Total Field):	± 1 gamma through 0° to $+50^{\circ}$ C temperature range.
Sensor:	High signal, noise cancelling, mounted on staff or attached to backpack.
Size:	Console: 3.5 x 7 x 11 inches (9 x 18 x 28 cm) Sensor: 3.5 x 5 inches (9 x 13 cm) Staff: 1 inch diameter x 8 ft. length (3 cm x 2.5 m)

Weight:

	Lbs.	Kgs.
Console (w/batteries):	5.5	2.5
Sensor and signal cable:	4	1.8
Aluminum staff:	2	.9
TOTAL	11.5	5.2

APPENDIX III

PERSONNEL

N. Hulstein	Getty Mines, Limited Suite 509 - 700 West Pender St. Vancouver, B.C., V6C 1G8
Toni Borschneck	"
Brian Bowen	"
Tom Kraft	"
Brad Van Den Bussche	"

APPENDIX IV

STATEMENT OF EXPENDITURES

THRALL CLAIMS

July - August, 1982

Salaries

Getty (prospecting, soil sampling and geophysical survey)...	10,800.00
Geochemical Analysis - Acme Analytical Laboratories, Ltd....	1,256.21
Board - 4 people/30 days @ $20.00 /day.....	2,400.00
Pencil Manuscript - Pacific Survey Corporation	2,940.00

Aircraft Charter

Fixed Wing - Mob and Demob

Air North Charter and Training, Ltd.....	1,452.90

Helicopter - Supply flights, Mob and Demob

Keystone Helicopters Ltd.

5.8 hours @ $450.00/hr, fuel.....	2,805.65
4 hours @ $475.00/hr, fuel.....	2,157.60
8.4 hours @ $600.00 /hr, fuel.....	5,384.00
TOTAL:	29,196.36

I certify the above to be a true and correct statement of costs and expenditures.

Nicole Hulstein

N. Hulstein

Geologist

APPENDIX V

I, N. HULSTEIN, hereby certify that:

1. I am a geologist residing at #206 - 357 E. 2nd Street, North Vancouver, B.C.;

2. I received a Bachelor of Science Degree in Geological Sciences from Saint Mary's University of Halifax, Nova Scotia, in 1980 and have been practicing my profession since May, 1981;

3. I am the author of this report and directed the overall conduct of the programme described herein;

4. I am employed as a geologist by Fox Geological Consultants, Limited for Getty Mines, Limited.

Nicole Hulstein

N. Hulstein
Geologist

THRALL CLAIMS

Claims Status

APPENDIX VI

Grant No.	Claim	Date Recorded	Due Date
YA 65947	Thrall 1	July 2, 1981	July 2, 1988
YA 65948	Thrall 2	July 2, 1981	July 2, 1988
YA 65949	Thrall 3	July 2, 1981	July 2, 1988
YA 65950	Thrall 4	July 2, 1981	July 2, 1988
YA 65951	Thrall 5	July 2, 1981	July 2, 1988
YA 65952	Thrall 6	July 2, 1981	July 2, 1988
YA 65953	Thrall 7	July 2, 1981	July 2, 1988
YA 65954	Thrall 8	July 2, 1981	July 2, 1988
YA 65955	Thrall 9	July 2, 1981	July 2, 1988
YA 65956	Thrall 10	July 2, 1981	July 2, 1988
YA 65957	Thrall 11	July 2, 1981	July 2, 1988
YA 65958	Thrall 12	July 2, 1981	July 2, 1988
YA 65959	Thrall 13	July 2, 1981	July 2, 1988
YA 65960	Thrall 14	July 2, 1981	July 2, 1988
YA 65961	Thrall 15	July 2, 1981	July 2, 1988
YA 65962	Thrall 16	July 2, 1981	July 2, 1988
YA 65963	Thrall 17	July 2, 1981	July 2, 1988
YA 65964	Thrall 18	July 2, 1981	July 2, 1988
YA 65965	Thrall 19	July 2, 1981	July 2, 1988
YA 65966	Thrall 20	July 2, 1981	July 2, 1988
YA 65967	Thrall 21	July 2, 1981	July 2, 1988
YA 65968	Thrall 22	July 2, 1981	July 2, 1988
YA 65969	Thrall 23	July 2, 1981	July 2, 1988
YA 65970	Thrall 24	July 2, 1981	July 2, 1988
YA 65971	Thrall 25	July 2, 1981	July 2, 1988
YA 65972	Thrall 26	July 2, 1981	July 2, 1988
YA 65973	Thrall 27	July 2, 1981	July 2, 1988
YA 65974	Thrall 28	July 2, 1981	July 2, 1988
YA 65975	Thrall 29	July 2, 1981	July 2, 1988
YA 65976	Thrall 30	July 2, 1981	July 2, 1988
YA 65977	Thrall 31	July 2, 1981	July 2, 1988
YA 65978	Thrall 32	July 2, 1981	July 2, 1988
YA 65979	Thrall 33	July 2, 1981	July 2, 1988
YA 65980	Thrall 34	July 2, 1981	July 2, 1988
YA 65981	Thrall 35	July 2, 1981	July 2, 1988
YA 65982	Thrall 36	July 2, 1981	July 2, 1988
YA 65983	Thrall 37	July 2, 1981	July 2, 1988
YA 65984	Thrall 38	July 2, 1981	July 2, 1988
YA 65985	Thrall 39	July 2, 1981	July 2, 1988
YA 65986	Thrall 40	July 2, 1981	July 2, 1988
YA 65987	Thrall 41	July 2, 1981	July 2, 1988
YA 65988	Thrall 42	July 2, 1981	July 2, 1988
YA 65989	Thrall 43	July 2, 1981	July 2, 1988
YA 65990	Thrall 44	July 2, 1981	July 2, 1988
YA 65991	Thrall 45	July 2, 1981	July 2, 1988

Grant No.	Claim	Date Recorded	Due Date
YA 65992	Thrall 46	July 2, 1981	July 2, 1988
YA 65993	Thrall 47	July 2, 1981	July 2, 1988
YA 65994	Thrall 48	July 2, 1981	July 2, 1988
YA 65995	Thrall 49	July 2, 1981	July 2, 1988
YA 65996	Thrall 50	July 2, 1981	July 2, 1988
YA 65997	Thrall 51	July 2, 1981	July 2, 1988
YA 65998	Thrall 52	July 2, 1981	July 2, 1988
YA 65999	Thrall 53	July 2, 1981	July 2, 1988
YA 66000	Thrall 54	July 2, 1981	July 2, 1988
YA 66001	Thrall 55	July 2, 1981	July 2, 1988
YA 66002	Thrall 56	July 2, 1981	July 2, 1988
YA 66003	Thrall 57	July 2, 1981	July 2, 1988
YA 66004	Thrall 58	July 2, 1981	July 2, 1988
YA 66005	Thrall 59	July 2, 1981	July 2, 1988
YA 66006	Thrall 60	July 2, 1981	July 2, 1988
YA 66007	Thrall 61	July 2, 1981	July 2, 1988
YA 66008	Thrall 62	July 2, 1981	July 2, 1988
YA 66009	Thrall 63	July 2, 1981	July 2, 1988
YA 66010	Thrall 64	July 2, 1981	July 2, 1988
YA 67451	Thrall 65	Oct 30, 1981	Oct 30, 1987
YA 67452	Thrall 66	Oct 30, 1981	Oct 30, 1987
YA 67453	Thrall 67	Oct 30, 1981	Oct 30, 1987
YA 67454	Thrall 68	Oct 30, 1981	Oct 30, 1987
YA 67455	Thrall 69	Oct 30, 1981	Oct 30, 1987
YA 67456	Thrall 70	Oct 30, 1981	Oct 30, 1987
YA 67457	Thrall 71	Oct 30, 1981	Oct 30, 1987
YA 67458	Thrall 72	Oct 30, 1981	Oct 30, 1987
YA 67459	Thrall 73	Oct 30, 1981	Oct 30, 1987
YA 67460	Thrall 74	Oct 30, 1981	Oct 30, 1987
YA 67461	Thrall 75	Oct 30, 1981	Oct 30, 1987
YA 67462	Thrall 76	Oct 30, 1981	Oct 30, 1987
YA 67463	Thrall 77	Oct 30, 1981	Oct 30, 1987
YA 67464	Thrall 78	Oct 30, 1981	Oct 30, 1987
YA 67465	Thrall 79	Oct 30, 1981	Oct 30, 1987
YA 67466	Thrall 80	Oct 30, 1981	Oct 30, 1987
YA 67467	Thrall 81	Oct 30, 1981	Oct 30, 1987
YA 67468	Thrall 82	Oct 30, 1981	Oct 30, 1987
YA 67469	Thrall 83	Oct 30, 1981	Oct 30, 1987
YA 67470	Thrall 84	Oct 30, 1981	Oct 30, 1987
YA 67471	Thrall 85	Oct 30, 1981	Oct 30, 1987
YA 67472	Thrall 86	Oct 30, 1981	Oct 30, 1987
YA 67473	Thrall 87	Oct 30, 1981	Oct 30, 1987
YA 67474	Thrall 88	Oct 30, 1981	Oct 30, 1987
YA 67475	Thrall 89F	Oct 30, 1981	Oct 30, 1987
YA 67476	Thrall 90F	Oct 30, 1981	Oct 30, 1987
YA 67477	Thrall 91F	Oct 30, 1981	Oct 30, 1987
YA 67478	Thrall 92F	Oct 30, 1981	Oct 30, 1987

GROUP 5

GROUP 6

GROUP 1

GROUP 4

GROUP 3

GROUP 2

LEGEND

- Claim boundary and post (located)
- 76 — Thrall claim number
- YA67462 — Grant number
- Claim group boundary
- Flagged grid line
- +1798 — Spot elevation in metres
- WL 1456 — Lake with water level elevation in metres
- Swamp
- Creek

TO ACCOMPANY THE CASSIAR PROJECT SUMMARY REPORT 1982 BY N. HULSTIEN

METRES
200 100 0 100 200 300 400 500

Contour interval 10 metres

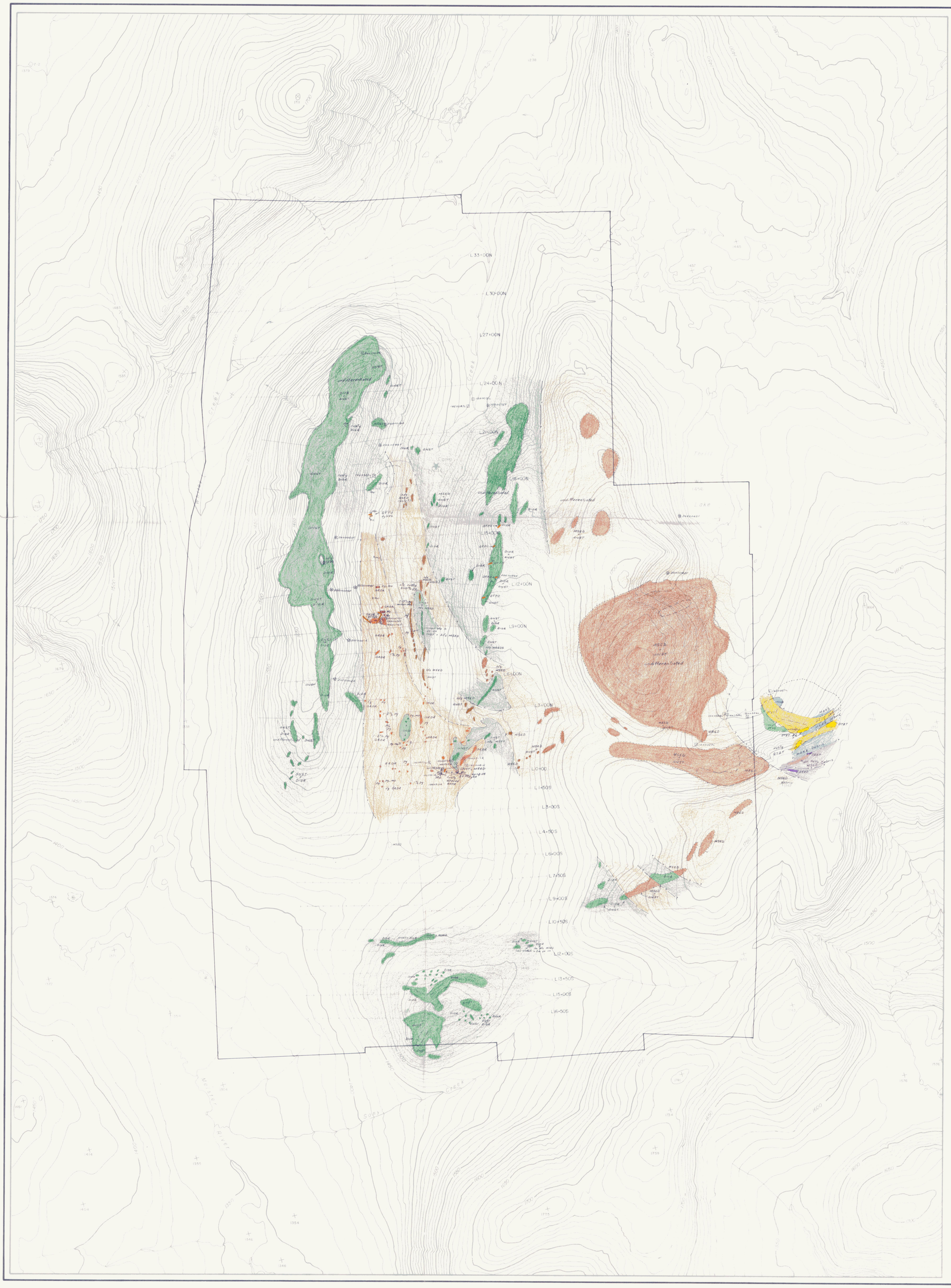
CASSIAR PROJECT

THRALL CLAIMS

CLAIMS LOCATION
091108

DRAWN BY: N. HULSTIEN	DATE: JANUARY, 1983
CHECK'D BY: B.K.B.	DRAWING NO.: 2
N.T.S. 105B/11	SCALE 1:10,000

Getty Canadian Metals, Ltd.



LEGEND

LITHOLOGY

JURASSIC AND/OR CRETACEOUS

- QFPO — Quartz-feldspar porphyry granodiorite
- GRDR — Granodiorite

DEVONIAN AND MISSISSIPPIAN

- HDIOR — Hornblende quartz diorite, hornblende diorite
- GNST — Greenstone, dioritized greenstone, andesite
- MSED — Metasediments, volcanic metasediments

CAMBRIAN AND EARLIER (?)

- VOLC SEDS — Volcanic sediments
- QTZT — Quartzite
- MARB — Marble
- PHYL — Phyllite
- SERP — Serpentinite, serpentine basalt

SYMBOLS

- hfs — Hornfelsed
- py — Pyrite (<1% unless indicated)
- mo — Molybdenite
- fg — Fine grained
- gr — Graphite
- Area of felsenmeer
- Area of outcrop
- x — Molybdenite occurrence
- Rock chip sample site and number
- Stream sediment sample site and number
- Claim block boundary
- Geological contact approximate/doubtful
- L4+50N — Flagged grid line
- Creek
- +1798 — Spot elevation in metres
- WL 1456 — Lake with water elevation in metres
- Swamp

NB: Colour coding of outcrop or felsenmeer represents the most important lithological member, other lithologies are present as indicated.

Contour interval 10 metres

100 0 100 200 300 400 500
METRES

TO ACCOMPANY THE CASSIAR PROJECT SUMMARY REPORT 1982, BY N. HULSTEIN

CASSIAR PROJECT

THRALL CLAIMS
GEOLOGY
091 I 08

DRAWN BY: N. HULSTEIN	DATE: JANUARY, 1983
CHECKED BY: B.K.B.	DRAWG No: 4
N.T.S. 105B/11	SCALE: 1:10,000

Getty Canadian Metals, Ltd.

L33+00N
L30+00N
L27+00N
L24+00N
L21+00N
L19+50N
L18+00N
L16+50N
L15+00N
L15+50N
L12+00N
L10+50N
L10+00N
L9+00N
L7+50N
L6+00N
L4+50N
L3+00N
L1+50N
L0+00
L1+50S
L3+00S
L4+50S
L6+00S
L7+50S
L9+00S
L10+50S
L12+00S
L14+50S
L15+00S
L16+50S

Whitley Creek

Creek

Thrall

Camp

1300 1350 1400 1450 1500 1550 1600 1650

1654 1696 1706 1668 1446 1625

NS.

LEGEND

- Soil sample site 1982, with corresponding results in ppm
- Soil sample site 1981, with corresponding results in ppm
- Stream sediment sample site 1982, with corresponding results in ppm
- Stream sediment sample site 1981, with corresponding results in ppm
- Main molybdenite occurrence
- Minor molybdenite occurrences
- +1625 Spot elevation in metres

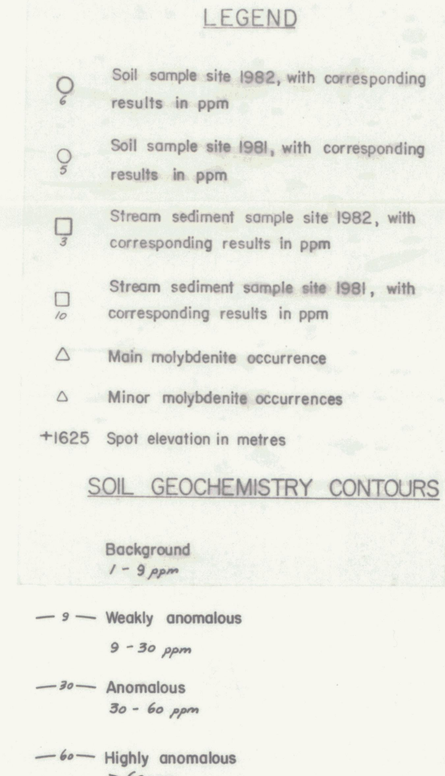
SOIL GEOCHEMISTRY CONTOURS

Background
1 - 9 ppm

— 9 — Weakly anomalous
9 - 30 ppm

— 30 — Anomalous
30 - 60 ppm

— 60 — Highly anomalous
> 60 ppm



MOLYBDENUM

SCALE

100 0 100 200 300m.

Scale in metres

Contour interval 10 metres

To accompany the Cassiar Project Summary Report 1982 by: N. Hulstein

CASSIAR PROJECT

THRALL CLAIMS

SOIL & STREAM SEDIMENT GEOCHEMISTRY
MOLYBDENUM 091109

DRAWN BY: N. Hulstein	DATE: January 1983
CHECK'D BY: B. K. Bowen	DRAW'G No: 5
N.T.S.: 105B-11	SCALE: 1:5,000

Getty Canadian Metals, Ltd.

CASSIAR PROJECT

THRALL CLAIMS

SOIL & STREAM SEDIMENT GEOCHEMISTRY

COPPER 091408

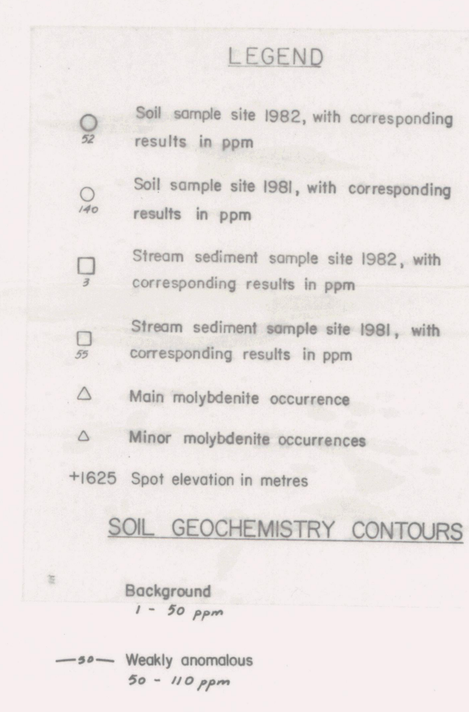
N

LEGEND

- Soil sample site 1982, with corresponding results in ppm (e.g. 52)
- Soil sample site 1981, with corresponding results in ppm (e.g. 140)
- Stream sediment sample site 1982, with corresponding results in ppm (e.g. 3)
- Stream sediment sample site 1981, with corresponding results in ppm (e.g. 55)
- △ Main molybdenite occurrence
- △ Minor molybdenite occurrences
- +1625 Spot elevation in metres

SOIL GEOCHEMISTRY CONTOURS

- Background 1 - 50 ppm
- —50— Weakly anomalous 50 - 110 ppm
- —110— Anomalous 110 - 200 ppm
- —200— Highly anomalous > 200 ppm



COPPER

SCALE

100 0 100 200 300m.

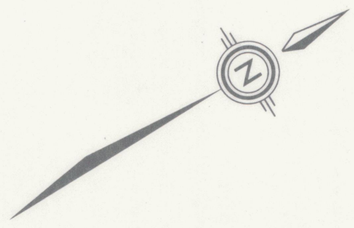
Scale in metres

Contour interval 10 metres

DRAWN BY: N. Hulstein	DATE: January 1983
CHECK'D BY: B.K. Bowen	DRAW'G No: 6
N.T.S.: 105B-11	SCALE: 1:5,000

Getty Canadian Metals, Ltd.

To accompany the Cassiar Project Summary Report 1982 by: N. Hulstein



LEGEND

- 22 — Soil sample site 1982, with corresponding results in ppm
- >2 — Soil sample site 1981, with corresponding results in ppm
- 4 — Stream sediment sample site 1982, with corresponding results in ppm
- 2o — Stream sediment sample site 1981, with corresponding results in ppm
- △ — Main molybdenite occurrence
- △ — Minor molybdenite occurrences
- +1625 — Spot elevation in metres

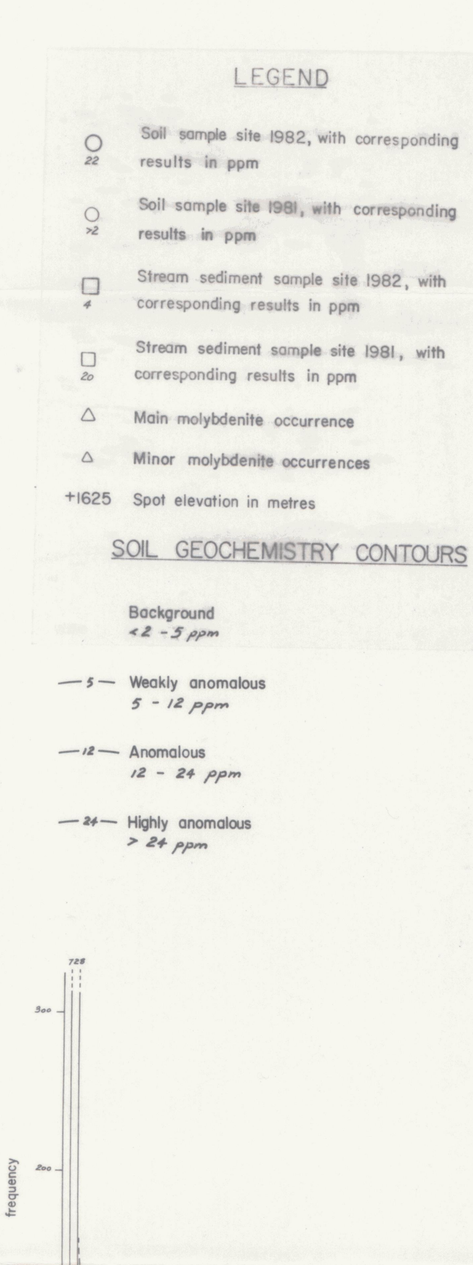
SOIL GEOCHEMISTRY CONTOURS

Background
<2 - 5 ppm

—5— Weakly anomalous
5 - 12 ppm

—12— Anomalous
12 - 24 ppm

—24— Highly anomalous
> 24 ppm



TUNGSTEN

SCALE

100 0 100 200 300m.

Scale in metres

Contour interval 10 metres

CASSIAR PROJECT

THRALL CLAIMS

SOIL & STREAM SEDIMENT GEOCHEMISTRY

TUNGSTEN 091408

DRAWN BY: N. Hulstein	DATE: January 1983
CHECK'D BY: B.K. Bowen	DRAW'G No: 7
N.T.S.: 105B-11	SCALE: 1:5,000

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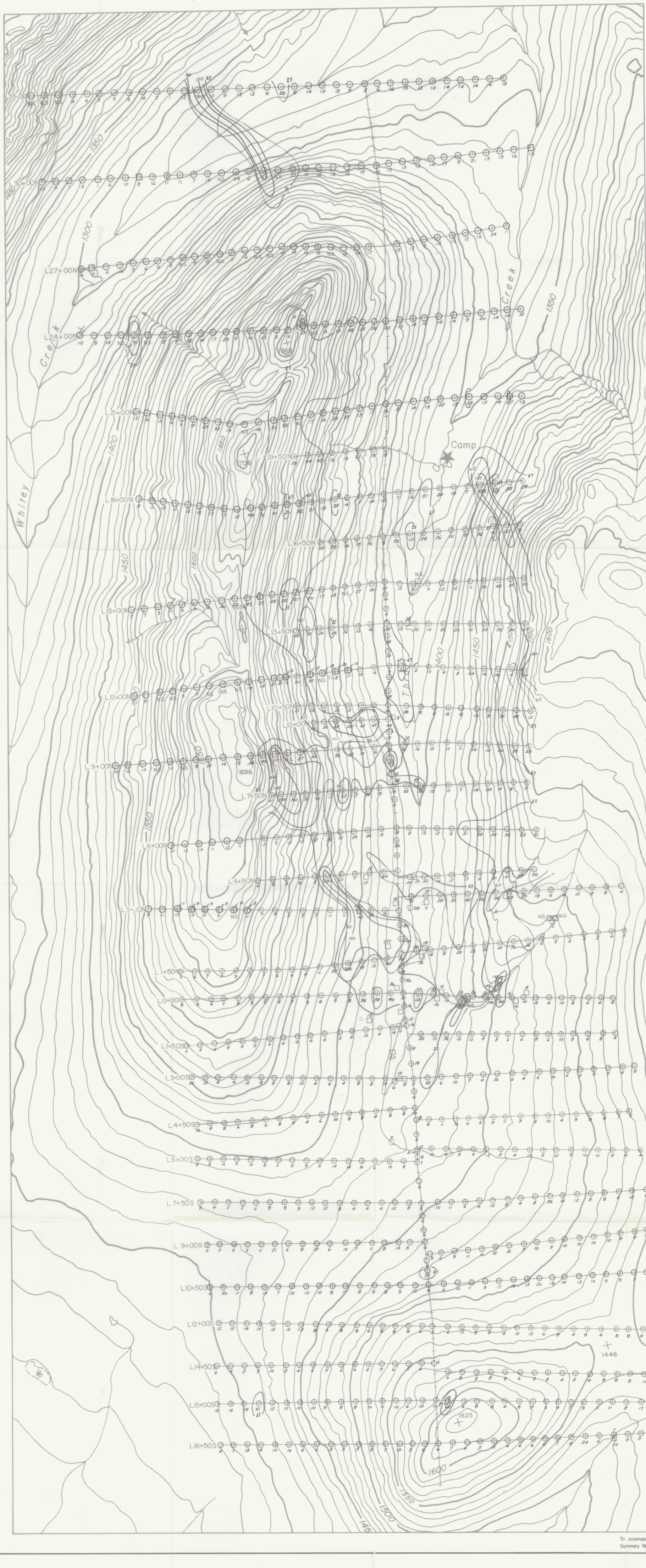
To accompany the Cassiar Project Summary Report 1982 by: N. Hulstein



LEGEND

- Soil sample site 1982, with corresponding results in ppm
- Soil sample site 1981, with corresponding results in ppm
- Stream sediment sample site 1982, with corresponding results in ppm
- Stream sediment sample site 1981, with corresponding results in ppm
- Main molybdenite occurrence
- Minor molybdenite occurrences
- +1625 Spot elevation in metres

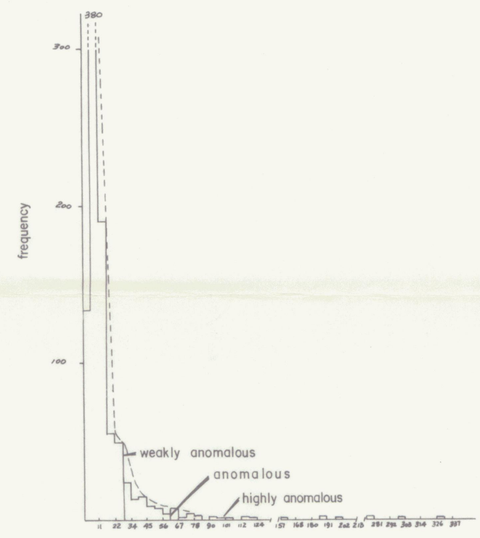
SOIL GEOCHEMISTRY CONTOURS

Background
1 - 27 ppm

—27— Weakly anomalous
27 - 60 ppm

—60— Anomalous
60 - 100 ppm

—100— Highly anomalous
> 100 ppm



LEAD

SCALE

100 0 100 200 300m.

Scale in metres

Contour interval 10 metres

CASSIAR PROJECT

THRALL CLAIMS

SOIL & STREAM SEDIMENT GEOCHEMISTRY

LEAD

091408

DRAWN BY: N. Hulstein	DATE: January 1983
CHECK'D BY: B. K. Bowen	DRAW'G No: 8
N.T.S. 105B-11	SCALE: 1:5,000

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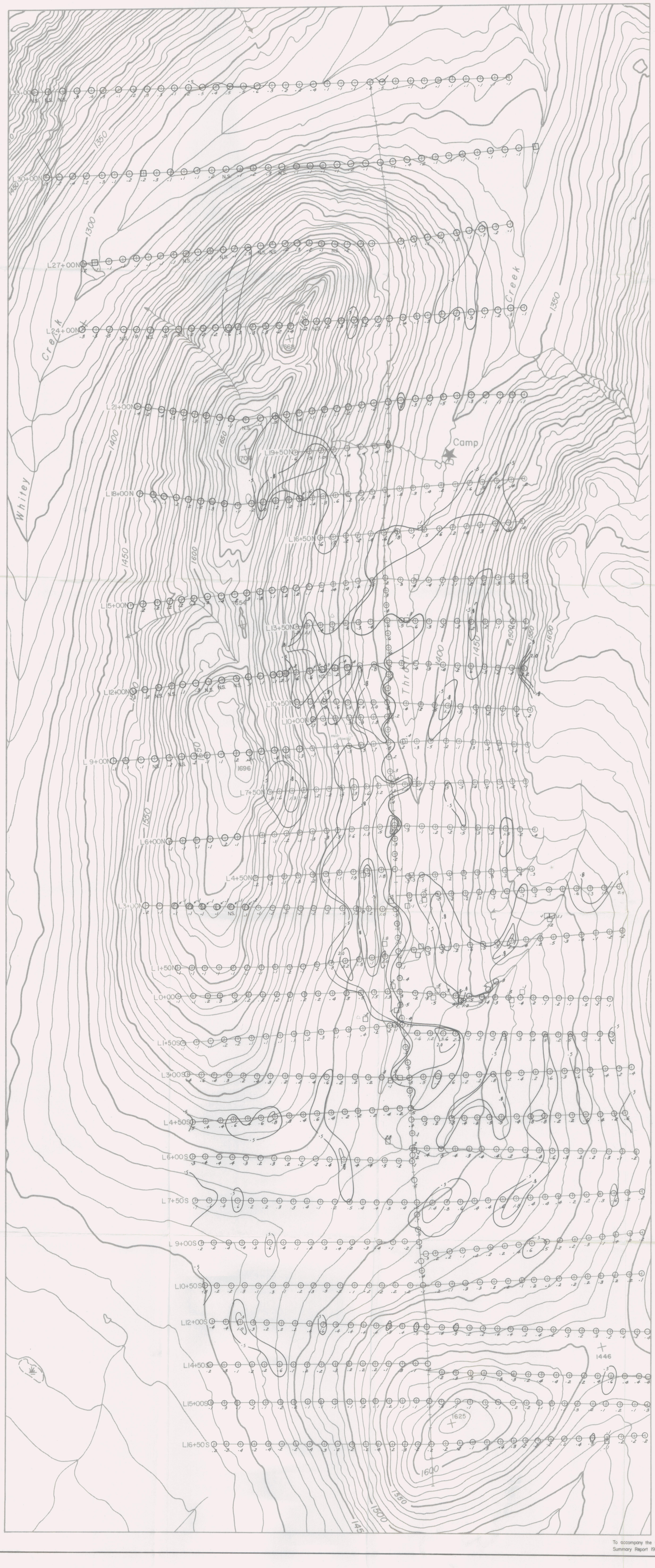
To accompany the Cassiar Project Summary Report 1982 by: N. Hulstein



LEGEND

- Soil sample site 1982, with corresponding results in ppm
- Soil sample site 1981, with corresponding results in ppm
- Stream sediment sample site 1982, with corresponding results in ppm
- Stream sediment sample site 1981, with corresponding results in ppm
- Main molybdenite occurrence
- Minor molybdenite occurrences
- +1625 Spot elevation in metres

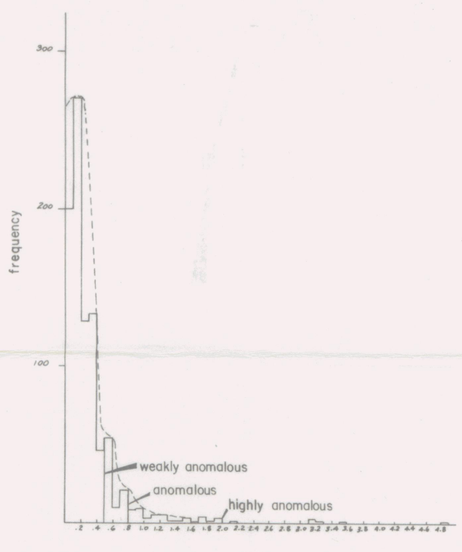
SOIL GEOCHEMISTRY CONTOURS

Background
.1 - .5 ppm

—.5— Weakly anomalous
.5 - .8 ppm

—.8— Anomalous
.8 - 2.0 ppm

—2.0— Highly anomalous
> 2.0 ppm



SCALE

100 0 100 200 300m.

Scale in metres

Contour interval 10 metres

CASSIAR PROJECT

THRALL CLAIMS

SOIL & STREAM SEDIMENT GEOCHEMISTRY
SILVER 091408

DRAWN BY: N. Hulstein	DATE: January 1983
CHECK'D BY: B.K.B.	DRAW'G No: 9
N.T.S. 105B-11	SCALE: 1:5,000

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Summary Report 1982 by: N. Hulstein

L33+00N

L30+00N

L27+00N

L24+00N

L21+00N

L19+50N

L18+00N

L16+50N

L15+00N

L13+50N

L12+00N

L10+50N

L10+00N

L 9+00N

L7+50N

L6+00N

L4+50N

L3+00N

L1+50N

L0+00

L1+50S

L3+00S

L4+50S

L6+00S

L 7+50S

L 9+00S

L10+50S

L12+00S

L14+50S

L15+00S

L16+50S

Creek

Whitey Creek

Throll

Camp

main showing

1696

1706

1625

1446

1600

1550

1500

1450

1400

1350

1300

1650

LEGEND

- Soil sample site 1982, with corresponding results in ppm
- Soil sample site 1981, with corresponding results in ppm
- Stream sediment sample site 1982, with corresponding results in ppm
- Stream sediment sample site 1981, with corresponding results in ppm
- Main molybdenite occurrence
- Minor molybdenite occurrences
- +1625 Spot elevation in metres

SOIL GEOCHEMISTRY CONTOURS

Background
11 - 69 ppm

— 69 — Weakly anomalous
69 - 90 ppm

— 90 — Anomalous
90 - 129 ppm

— 129 — Highly anomalous
> 129 ppm

ZINC

SCALE

100 0 100 200 300m.

Scale in metres

Contour interval 10metres

CASSIAR PROJECT

THRALL CLAIMS

SOIL & STREAM SEDIMENT GEOCHEMISTRY

ZINC 091408

DRAWN BY: N. Hulstein	DATE: January, 1983
CHECK'D BY: B.W.Bowen	DRAW'G No: 10
N.T.S.: 105B-11	SCALE: 1:5,000

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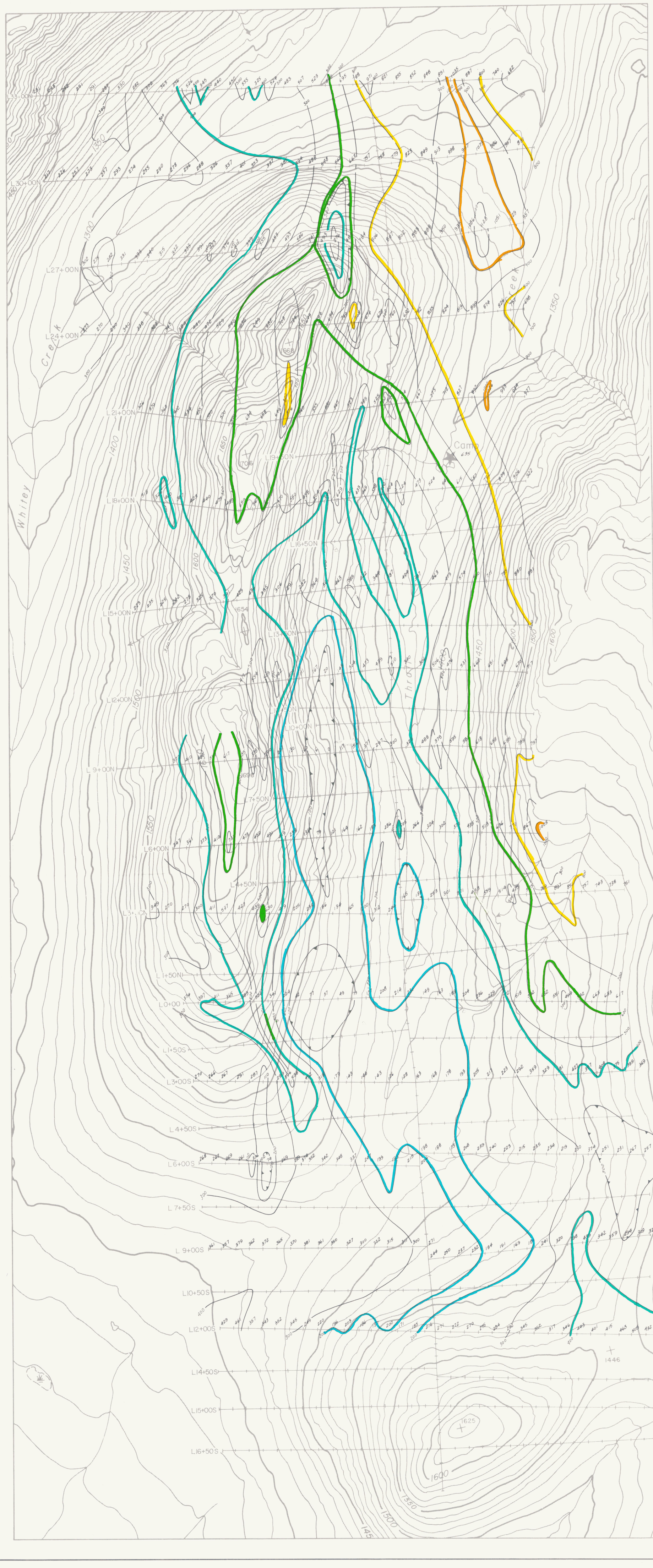
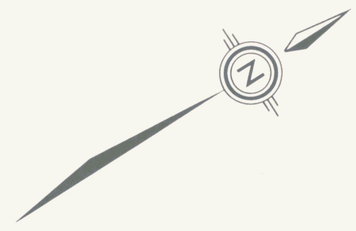
To accompany the Cassiar Project Summary Report 1982 by: N. Hulstein





LEGEND

- >1100 gammas
- 1100 - 1000 gammas
- 1000 - 900 gammas
- 900 - 800 gammas
- 800 - 700 gammas
- 700 - 600 gammas
- 600 - 500 gammas
- 500 - 400 gammas
- 400 - 300 gammas
- 300 - 200 gammas
- 200 - 100 gammas
- <100 gammas

*Base of relief 0 gammas is equal to 58,165 gammas. This value was subtracted from all subsequent data.

Measurement of Total Magnetic Field

Instruments used:

Geometrics Proton Procession Magnetometer
Field- G8-16, Base station - G8-26
CMG (Canadian Mining Geophysics.) MR-10
Base Station Recorder

Magnetic contour interval - 100 gammas

SYMBOLS

- Magnetic low
- Flagged grid line
- Stream
- Lake
- Swamp
- +1625 Spot elevation in metres

Topographic contour interval 10 metres

TO ACCOMPANY THE CASSIAR PROJECT SUMMARY REPORT 1982 BY N. HULSTIEN

SCALE

100 0 100 200 300m.

Scale in metres

CASSIAR PROJECT

091408

THRALL CLAIMS

PROTON MAGNETOMETER SURVEY

091408

DRAWN BY: N. HULSTIEN	DATE: JANUARY, 1983
CHECKED BY: B.K.B.	DRAWING No: 11
N.T.S. 105B-11	SCALE 1:5,000

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