

part 2
of 2

Phase I
Geology and Geochemistry
of the
Anderson Lake Project
Lat. $50^{\circ}35'$ Long. $122^{\circ}30'$
NTS 92-J-9&10
Lillooet Mining Division, B. C.

for

X-Calibre Resources Ltd.,
Gold Bridge, B. C.

by

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**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

11,749

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1.0 Summary and Conclusions

The Anderson Lake Project Area has excellent exploration potential for the following types of gold deposits:

- 1) Bralorne-Pioneer Model - Quartz-carbonate veins in tensional structures related to the Cadwallader Structural Complex. Target grades of 0.5 oz/ton gold can be expected.
- 2) Pyritic - Carbonaceous Shear Zones - Remobilization of primary gold into shears within the Fergusson Group at the volcanic-sedimentary interface.
- 3) Disseminated Gold Model - Disseminated gold deposits with grades of 0.1 - 0.2 oz/ton in siliceous carbonaceous sediments of the calcareous Hurley Formation. These deposits are related to major structures, generally thrust faults.

Geological mapping has verified the continuation of the Cadwallader Structural Complex, host to the Bralorne-Pioneer Mines, into the Anderson Lake Project Area.

Conclusive evidence is substantiated by,

- 1) The occurrence of major NW-SE structures which develop a complex structural pattern due to related tensional structures.
- 2) The occurrence of a large body of Bralorne Diorite characterized by heterogenous phases from pyroxenite to soda (?) granite. These rocks contain anomalous gold in rock geochemical samples.
- 3) The occurrence of ultramafic dike-like bodies, representing the Serpentine Belt, which parallel the Cadwallader Structure.

1.0 Summary and Conclusions (Cont.)

Regional lithogeochemical trends of gold and arsenic outline the Cadwallader Structural Complex with anomalous values in country rock, quartz veins and fault structures.

Numerous quartz-carbonate veins with differing orientations occur on the property with anomalous Au, Ag, As, Sb, Cu and Zn content. North trending quartz veins at the Anderson Lake Mine have contained rich pockets of gold up to 0.78 oz/ton over 8.6 feet. Offsetting shear structures at the mine report up to 4.88 oz/ton gold.

Pyritic shear zones in Fergusson Group volcanics and sediments are anomalous in gold, silver, antimony and zinc.

These occurrences of major interest and other anomalous zones on the property require further evaluation. A heavy mineral stream sample programme is recommended for completion this fall. This data coupled with the present geological/lithogeochemical knowledge of the area should warrant a major exploration programme for the 1984 field season.

2.0 Introduction

A programme of geological mapping, rock geochemical sampling and prospecting of the Anderson Lake Project area was completed July 18-24 and August 4, 1983 for X-Calibre Resources Ltd., Gold Bridge, B. C. This report completes Phase I of a three-phase exploration programme recommended in the "Preliminary Report on the Gold Exploration Potential of the Anderson Lake Block" by this author dated July 18, 1983.

Reported mineral showings were located and sampled, the geology was mapped at a scale of 1:25,000 over an 80 sq. km area by traverses on ridge-tops and road and an air photo interpretation was completed. A total of 118 samples were collected and sent to Kamloops Research and Assay Lab, Kamloops, B. C. for rock geochemical analysis of the Au, As, Sb, W, Ag, Cu, and Zn content.

3.0 Location and Access

The Anderson Lake Project Area is located immediately west-northwest of Anderson Lake at Latitude $50^{\circ}35'$ and Longitude $122^{\circ}30'$ on NTS Map Areas 92-J-9 and 10. (Figure 1). The town of D'Arcy, B. C. is located 5 miles to the south of the centre of the claim group. McGillivray Creek drains south then east through the claim area.

The property is accessible by the power line road on the west shore of Anderson Lake which runs from Seton Portage to D'Arcy. Four wheel drive vehicles are recommended for travel on this road. A logging road goes 3.5km west from the mouth of McGillivray Creek to a point in the vicinity of the Anderson Lake Minesite. From there, a hiking trail exists along McGillivray Creek through and beyond the property to McGillivray Pass.

4.0 Current Claim Status

A total of 19 claims, forming the Anderson Lake Group, are held in good standing by X-Calibre Resources Ltd., Gold Bridge, B. C.



X-CALIBRE RESOURCES LTD.

ANDERSON LAKE
PROJECT
LOCATION

SCALE
1:250,000

NTS
92-J-15

FIGURE No.
1

4.0 Current Claim Status (Cont.)

In addition, the Mac 1 and Mac 2 mineral claims are under option from Mr. Bill McConechy, forming part of the Anderson Lake Group as well. (Table I Map I).

Table I Claim Status

<u>Claim</u>	<u>No of Units</u>	<u>Record No.</u>	<u>Anniversary Date</u>
X-Cal #1	20	2329	March 28, 1984
X-Cal #2	20	2330	March 28, 1984
X-Cal #3B	20	2331	March 28, 1984
X-Cal #4	10	2332	March 28, 1984
X-Cal #5	20	2333	March 18, 1984
X-Cal #6	20	2334	March 28, 1984
X-Cal #7	20	2335	March 28, 1984
X-Cal #8	20	2336	March 28, 1984
X-Cal #9	20	2337	March 28, 1984
X-Cal #10	12	2338	March 28, 1984
X-Cal #11	20	2339	March 28, 1984
X-Cal #12	20	2340	March 28, 1984
X-Cal #13	20	2341	April 5, 1984
X-Cal #14	20	2342	March 28, 1984
X-Cal #15	20	2343	March 28, 1984
X-Cal #16	20	2344	April 5, 1984
X-Cal #17	20	2345	April 5, 1984
X-Cal #18	20	2346	April 5, 1984
X-Cal #19	20	2347	April 5, 1984
Mac 1	10	1827	Aug. 13, 1983
Mac 2	10	1828	Aug. 13, 1983

5.0 Exploration History

The most significant gold occurrence in the area is the Anderson Lake Mine, located on the east side of Gold Creek approximately one half kilometre north of McGillivray Creek. A north trending quartz vein attaining widths of up to 4 metres was staked on the Yukon and Skeena claims by the Brett Brothers of Lillooet, B. C. in 1897. The Rosemont and White Rose crown grants were staked to the north of these claims at a later date. Mining of the veins was undertaken by the following companies until 1962,

1900-1910 - Anderson Lake Mining and Milling Co.
1929-1932 - McGillivray Creek Gold Mines Ltd.
1932- ? - National Gold Mines Ltd.
1947-1953 - Golden Contact Mines Ltd.
1960-1962 - Cassiar Copperfields Ltd.

Six adit levels from the 2,918 ft. to 3,650 ft. elevation were driven during this production history, all on the lapsed Skeena claim. A total of 688 ounces of gold was produced from 10,110 tons mined, the bulk of which was recovered in operations from 1900-1903 from the No. 1, 2 and 3 drifts.

The northern half of the Skeena claim and the Yukon claim are presently held by X-Calibre Resources Ltd. on the X-Cal #16 mineral claim. The No. 1, 2, 3 and Mac adit levels are on this ground. The southern half of the Skeena claim is held by Mr. Reg Brummell on the Reynaud Mineral Claim. The Rosemont (L 664) and White Rose (L 669A) crown grants within X-Cal #16 are held by a Mr. Terry Shorn.

During the gold rush of the early '30's, prospectors worked their way from Bralorne - Pioneer down the McGillivray Trail. Two occurrences, the Diorite and Gold Hill prospects, were developed underground during this time period.

5.0 Exploration History (Cont.)

The Diorite adit, located one half kilometre north of McGillivray Creek approximately 1.10km east of the forks of McGillivray Creek, is driven into a roof pendant of phyllite within Bralorne diorite. No gold assays have been reported.

The Gold Hill prospect, located one half kilometre south of the west fork of McGillivray Creek, approximately 1.2km southwest of the forks has adits driven into two prospects approximately 300 metres apart. A 9m wide pyritic quartz vein trending at 170° Az intrudes phyllitic argillite at the west showing and a 1.3m quartz vein intruding granite at the east showing have reported assays up to 0.12 oz/ton.

6.0 Physiography

The property is characterized by steep, rugged mountains from 1,000 ft. ASL to 8,000 ft. ASL (Map II). The tree line is approximately at the 6,000 ft. elevation, ranging from bare rock at the peaks and dense thickets on the lower sidehills and valleys.

McGillivray Creek, draining to the east into Anderson Lake, divides the property into two main mountainous masses. Rock exposures are common along ridges and sporadic on sidehills and along the creeks. Pleistocene glacial till is draped along valley walls and recent alluvial deposits occur in the valley floors.

7.0 General Geology of the Bridge River Area

The geology and mineral deposit descriptions of the Bridge River Area are reported by McCann (1922), Cairnes (1937, 1943), Roddick and Hutchison (1973), Woodsworth (1977) and various government and assessment publications. (Figure 2).

The northeastern margin of the Coast Crystalline Belt trends northwesterly through the area. The northeastern flank of this belt of plutonic



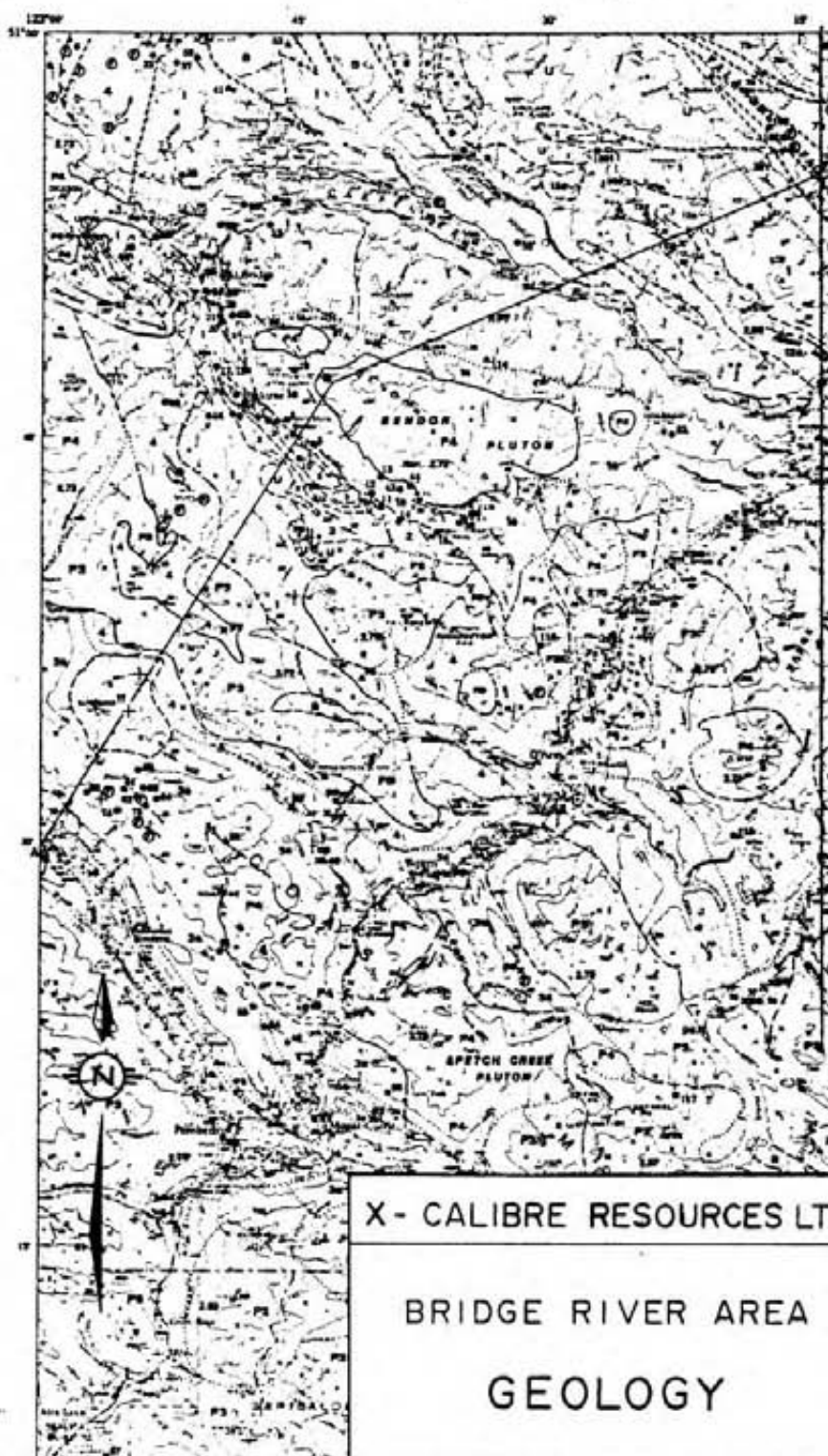
GEOLOGICAL SURVEY OF CANADA
DEPARTMENT OF ENERGY, MINES AND TECHNICAL SURVEYS



Diagrammatic cross-section along A-B-C

LEGEND

- QUATERNARY**
PLEISTOCENE AND RECENT
- 14 Unconsolidated alluvial and glacial deposits
- TERTIARY**
MIOCENE (?)
- 13 Sand and siltstone beds
 - 12 Shale and sandstone lenses, till and loess
 - 11a. Basement Porphyry Structures (approx. of 137)
 - 11b. Metavolcanic granodiorite and gneiss
- LOWER TERTIARY**
- 11a. Sandstone, shale and limestone lenses and minor shales
 - 10 Shale, siltstone, sandstone, calcareous shale and conglomerate
- CRETACEOUS**
UPPER CRETACEOUS
- 9a. **NOVELL PLUTON (S-A, W, N, J, V):** granodiorite
 - 9b. **KNOWALS GROUP**
Arkose, gneiss, shale and other conglomerates
- LOWER CRETACEOUS**
TAYLOR CREEK GROUP
- 8 Quartzite conglomerates, block brecciated clay shales, green till, rhyolite breccias, sandstone and basalt
- JACKSON MOUNTAIN GROUP**
- 7 Unconformably on 8, interbedded micaceous argillite and greywacke, calcareous conglomerates and sand, fine greywacke, calcareous argillite and gray sandstone, fine argillite conglomerates and greywacke, fine greenish greywacke, argillite, gray sandstone and calcareous conglomerate
- JURASSIC AND CRETACEOUS**
UPPER JURASSIC AND LOWER CRETACEOUS
RELAY MOUNTAIN GROUP
- 6 Argillite, greywacke and calcareous conglomerate
- JURASSIC**
LOWER JURASSIC
- 5 Argillite and shales, calcareous sandstone, limestone and calcareous conglomerate
- TRIASSIC**
UPPER TRIASSIC
- 4 **STURLEY FORMATION:** Thin-bedded clay argillite, siltstone, limestone, till, conglomerate, conglomerate, sandstone, and calcareous shale
 - 3 **POWERS FORMATION:** Greenstone derived from calcareous shales and argillite breccias, fine calcareous breccias, till and loess, greenstone, calcareous argillite breccias and shales, shales, argillite, limestone and conglomerate
 - 2 **HOEL FORMATION:** Thin-bedded argillite, shale, conglomerate and greenstone
- MIDDLE TRIASSIC AND (?) OLDER**
SADGE RIVER GROUP (PENTONICH GROUP)
- 1 Chert, argillite, phyllite and greenstone, calcareous sandstone, calcareous shale, unconformably on 2; sandy basaltic shales
- NEOAMPHIBOLITE AND PLUTONIC ROCKS**
(Mostly of unknown age)
- 8 Metamorphosed rocks, mostly calcareous quartzite, little hornblende schist, and calcareous schists bearing garnet, staurolite and possibly sillimanite
 - A Crystalline gneiss, amphibolite, calcareous shale, calcareous sandstone and basaltic shales
 - P8 Gneiss
 - P7 Quartzite
 - P6 Quartzite
 - P5 Greenstone, calcareous sandstone, calcareous shale and calcareous conglomerate
 - P4 Quartzite
 - P3 Quartzite
 - P2 Quartzite, calcareous sandstone, calcareous shale, calcareous shale, calcareous shale and calcareous shale
 - P1 Gneiss
 - U Ultrabasic rocks: amphibolite, peridotite, basalts
- Map-symbols**
- Structure symbols**



X - CALIBRE RESOURCES LTD.
BRIDGE RIVER AREA
GEOLOGY

SCALE 500,000	NTS 92 J	FIGURE No. 2
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7.0 General Geology of the Bridge River Area (Cont.)

rocks is represented by granodiorite to quartz diorite of the Late Cretaceous Bendor Batholith which intrudes the southwestern flank of a paralleling antiform. The antiform has a maximum width of 45km and plunges gently northwest.

With the exception of some exposures of schist and gneiss, this antiformal structure consists of a package of complexly deformed Triassic volcanics and clastics, metamorphosed to a lower greenschist facies.

The most widespread formation which is exposed in the core of the antiform is the Middle Triassic Bridge River or Fergusson Group of chert, argillite and greenstone. Conformably overlying these rocks is the Upper Triassic Cadwallader Group consisting of the basal Noel Formation clastics, the middle Pioneer Formation volcanics and the upper Hurley Formation calcareous sedimentary rocks.

In the Cadwallader Creek Valley, northwest to Eldorado Creek and southeast to Anderson Lake is a belt of plutonic rocks collectively mapped as the Bralorne Intrusions. These intrusives occur along a belt of folded and faulted Cadwallader Group rocks and serpentine of the President Intrusives, forming the Cadwallader Structural Complex. The Bralorne Intrusives are extraordinarily complex and variable in composition from gabbro, augite diorite, hornblende diorite, "greenstone diorite", quartz diorite and soda granite to albitite. The phases of soda granite are of particular economic significance as they are related to the gold deposits of the Bralorne-Pioneer Mining District. Here, gold mineralization averaging 0.52 oz/ton in ribboned quartz veins have produced some four million ounces of gold throughout its production history since 1932.

8.0 Property Geology

8.1 Introduction

A body of Bralorne diorite intrudes and, in part, is structurally emplaced between phyllites, argillites and volcanics of the Fergusson Group to the east and calcareous phyllites of the Hurley Formation to the west. To the north, a northeast trending tongue of granodiorite, forming a faulted contact with Bralorne Diorite at the southeast contact, intrudes a package of Fergusson Group argillites. North and northwest trending ultramafic dike-like intrusions occur within the argillite and along the eastern border of the Bralorne Diorite. Two plugs of Quartz Diorite occur on the west margin of the property.

Geological mapping from Roddick & Hutchison (1973) and Woodsworth (1977) was incorporated into the map where outcrops were not visited by the author.

Five main structural trends in the area serve to complicate the geology, but also enhance the preparation of the country rock for structurally controlled, vein and disseminated gold deposits. (Map III).

8.2 Lithology

8.2.1. Phyllite Fergusson Group (Unit 1)

Well foliated phyllites occur on the eastern portion of the claim group to the north and south of McGillivray Creek in the vicinity of the Anderson Lake Mine. They are grey weathered, silver grey on the fresh surface, fine grained clastic sediments with a well developed north-south foliation. Relict chert pebble structures were observed at the junction of McGillivray and Gold Creeks. These rocks are the most highly metamorphosed sediments on the property.

8.2.2 Argillite - Fergusson Group (Unit 2)

This unit is characterized by its rusty weathered appearance and relatively flat lying bedded nature. A weak foliation is imparted giving a phyllitic structure in places, trending at 160° Az. These sediments are dark grey, aphanitic clastics of the Fergusson Group and may be lesser metamorphosed equivalents of Unit 1.

8.2.3 Volcanics - Fergusson Group (Unit 3)

Light green weathering, massive bedded rocks of volcanic origin occur to the southeast of the property and in one area near the northern end of the Anderson Lake Block.

At this latter location pillow structures were identified whereas to the southeast, possible pyroclastic structures were observed.

These medium grained rocks are weakly foliated and exhibit higher metamorphic grades being pervasively chloritized and clay altered.

Clastic rocks are interbedded, as at location #123, where relict chert pebble structured phyllite occurs within the volcanic package.

8.2.4 Phyllite - Hurley Formation (Unit 4)

Black, grey, light green and maroon calcareous phyllites occur south of the west & east forks of McGillivray Creek to the west of the main body of Bralorne Diorite. Further up section these clastics become coarser grained grading to a tuffaceous sediment with interbedded calcareous bands.

8.2.5 Bralorne Diorite (Unit Bd)

A body of diorite trending north-south through the middle of the property exhibits many features comparable to the Bralorne Diorite in the Cadwallader Creek area. This intrusive is complexly heterogeneous,

8.2.5 Bralorne Diorite (Unit Bd) (Cont.)

where observed, grading from hornblende diorite (most common phase) augite diorite, pyroxenite to more felsic phases of granodiorite to granite.

Quartz-epidote microveins are common and roof pendants of phyllite have been observed at the Diorite showing and on the ridges to the north of it, indicating a high level in the intrusive.

8.2.6 Ultramafic Dikes (Unit Um)

Intrusives of ultramafic rock forming dike-like bodies occur in the argillite package to the north and along the eastern margin of the Bralorne diorite trending at 010°Az. Orange weathered peridotite, often altered to ankerite with resistant olivine crystals forming a pitted texture, contains secondary magnetite (approximately 1%). In places, the rock has been serpentized, mainly at contact margins and where shearing has occurred.

8.2.7 Granodiorite (Unit Gd)

Grey weathering, medium grained granodiorite occurs as a northeast trending tongue faulted in at the northern boundary of the Bralorne Diorite. It is related to the Bendor Intrusive, consisting of 60% white plagioclase, 20% quartz and 20% biotite and hornblende.

8.2.8 Quartz Diorite (Unit Qd)

Two plugs of quartz diorite occur on the western boundary of the Anderson Lake property. The northern body was not visited, but the plug to the southwest exhibits salt & pepper textured diorite with approximately 5% quartz.

8.2.9 Granite (Unit Gr)

Miarolitic granite and quartz monzonite are reported to occur in the X-Cal #1 mineral claim to the southeast of the property (Rod-dick & Hutchison, 1973; Woodsworth, 1977). This rock unit was not investigated in the course of this programme.

8.3 Structure

8.3.1 Introduction

The Anderson Lake Project Area appears to mark a continuation of the Cadwallader Structural Complex from an aerial photo study and ground checking of interpreted structures.

A major flexure, called the X-Cal flexure (Map III), appears to abruptly bend the 120° trending Cadwallader Shear Zone northwest of the property to an orientation approximately north-south, then curving to a 150° orientation at the southern end of the property.

The cymoidal pattern of the Cadwallader Shear Zone and Fergusson Overthrust were interpreted from aerial photographs. These structures form a dilation zone south of the X-Cal flexure which is intruded by Bralorne Diorite and complexly faulted with tensional faults. The existence of tensional fault structure is highly prospective for the exploration of vein-type gold deposits.

A younger northeast trending fault at the southern contact of granodiorite has a left lateral offset of approximately 500 metres as shown by the occurrence of ultramafic dikes as a marker unit. An alternative hypothesis suggests that these ultramafic dikes may be offset by this structure for 3km, although there is some problem in reconstructing the geology over this large of a displacement.

Five main fault structures occur on the property shown as K, M, J, H, and C structures.

8.3.2 'K' Structures

Fault structures paralleling the 150° Az trend of the Cadwallader Structural Complex occur southwest of the Cadwallader Shear Zone in a tightly folded sequence of Hurley sediments and northeast of the Fergusson Overthrust in the Fergusson phyllites. The latter occurrence is seen on the powerline road just north of McGillivray Creek as a 10m wide shear zone containing a swarm of quartz-ankerite veins. This structure dips at 75° to the southwest.

8.3.2 'K' Structures (Cont.)

Quartz veins on the property commonly follow the trend of 150° structures.

8.3.3 'M' Structures

A major structure trending at 105° occurs to the north of the Anderson Lake Mine in Bralorne Diorite and Fergusson Phyllite. No obvious faulting features were observed in a traverse across it in Bralorne Diorite, although it is an obvious air photo lineament. A low angle reverse fault with this orientation is observed in a trench north of the adit levels at the Anderson Lake Mine. No quartz veins with this orientation have been observed.

8.3.4 'J' Structures

A major break trending at 045° Az occurs at the faulted contact of granodiorite and Bralorne Diorite. This fault marks a division of the Anderson Lake property with complex structures and Bralorne Diorite exposures to the southeast and mainly argillites to the northwest.

No quartz veins with this orientation have been observed.

8.3.5 'H' Structures

A north trending structure is interpreted from aerial photographs to mark the western boundary of the Bralorne Diorite.

Gold bearing quartz veins at the Anderson Lake Mine follow this trend at 350° Az to 010° Az.

Ultramafic intrusions follow north-south to 010° Az orientations on the property as well.

Foliation of the clastic rocks of the Fergusson Group and Hurley Formation trend in a north-south direction grading to NW-SE parallel to the trend of the Cadwallader Structural Complex.

8.3.6 'C' Structures

East-west structures are evident from the drainage pattern developed by McGillivray Creek as it swings abruptly to the east at the forks.

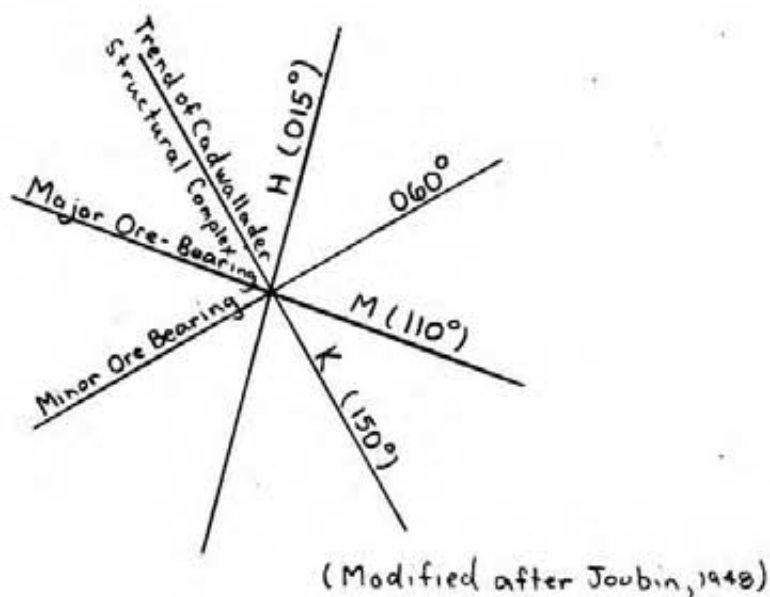
Quartz veins at this orientation are developed in Hurley Clastics and Bralorne Diorite.

8.3.7 Interpretation

This complex structural pattern may best be interpreted utilizing a tectonic model first proposed by Joubin (1948) for the Cadwallader Gold Belt.

Figure 3 shows a tectonic model for the Anderson Lake area based on a modification of Joubin's structural reconstruction of fault structures developed along an orientation of regional compression at 135° Az in the Bralorne Mining Camp. For the Anderson Lake Project Area, the trend of regional compression approximates more closely to 150° Az.

Figure 3 Tectonic Model



8.3.7 Interpretation (Cont.)

In the Bralorne-Pioneer Mining Camp, the ore-bearing structures modified to the Anderson Lake area would be 110° Az 'M' structures observed on the property and 060° Az structures which have not been observed as yet. Gold bearing quartz veins at the Anderson Lake Mine follow 015° 'H' structures which are not an important source of ore in the Bralorne area. This may explain the lack of quality ore from the Anderson Lake Mine, however, the existence of gold in the area is encouraging for the exploration potential of related tensional structures observed on the property.

It has been reported from the underground development of the Anderson Lake Mine that rich pockets of gold grading up to 4.88 oz/ton were observed in a low angle reverse fault which cut off the quartz vein mineralization in the mine. The orientation of this fault at $140^{\circ}/30^{\circ}$ SW approximates the orientation of the Cadwallader Structural Complex ('K' structures).

Clearly more detailed geological mapping is required to understand thoroughly the complex structure of the Anderson Lake Project Area.

8.4 Mineralization

8.4.1 Introduction

Three areas of reported gold mineralization were examined in some detail at the Anderson Lake Mine, the Diorite prospect and the Gold Hill prospect.

Disseminated sphalerite mineralization was observed from a gossan in Fergusson volcanics along the power line road at location No. 121.

8.4.2 Anderson Lake Mine

Six adits were driven into a steeply dipping quartz vein measuring 4 metres maximum width and trending at 350° Az - 020° Az, conforming

8.4.2 Anderson Lake Mine (Cont.)

to the foliation of the phyllitic host rock in most places (Figure 4). The vein is mainly white bull quartz with ankeritic pods and envelopes. Ribbon structure and lit par lit injection into the adjoining wall rocks was observed at the No. 3 adit level.

Assays of up to 0.78 oz/ton over 8.6 feet have been reported.

No visible gold was observed during this investigation.

The tenor of the ore was generally sporadic, developing in high grade pods within the vein and along the sheared vein margins.

A fault trending at $140^{\circ}/30^{\circ}$ SW reported high grade pods up to 4.88 oz/ton in the No. 3 and Pep levels. Diamond drilling failed to delineate ore in this structure. An interpretation that the rake of gold ore in the quartz vein parallels this fault has been made from data on the #2 and #3 levels.

For a more detailed account of the history of the Anderson Lake Mine exploration and development, the reader is referred to "Preliminary Report on the Gold Exploration Potential of the Anderson Lake Block" by this author dated July 18, 1983.

8.4.3 Diorite Prospect

A roof pendant of phyllite within Bralorne Diorite has been intensely silicified and altered to talc, chlorite and mariposite (Figure 5). The surrounding Bralorne Diorite is very heterogeneous containing felsic phases and albitite lenses.

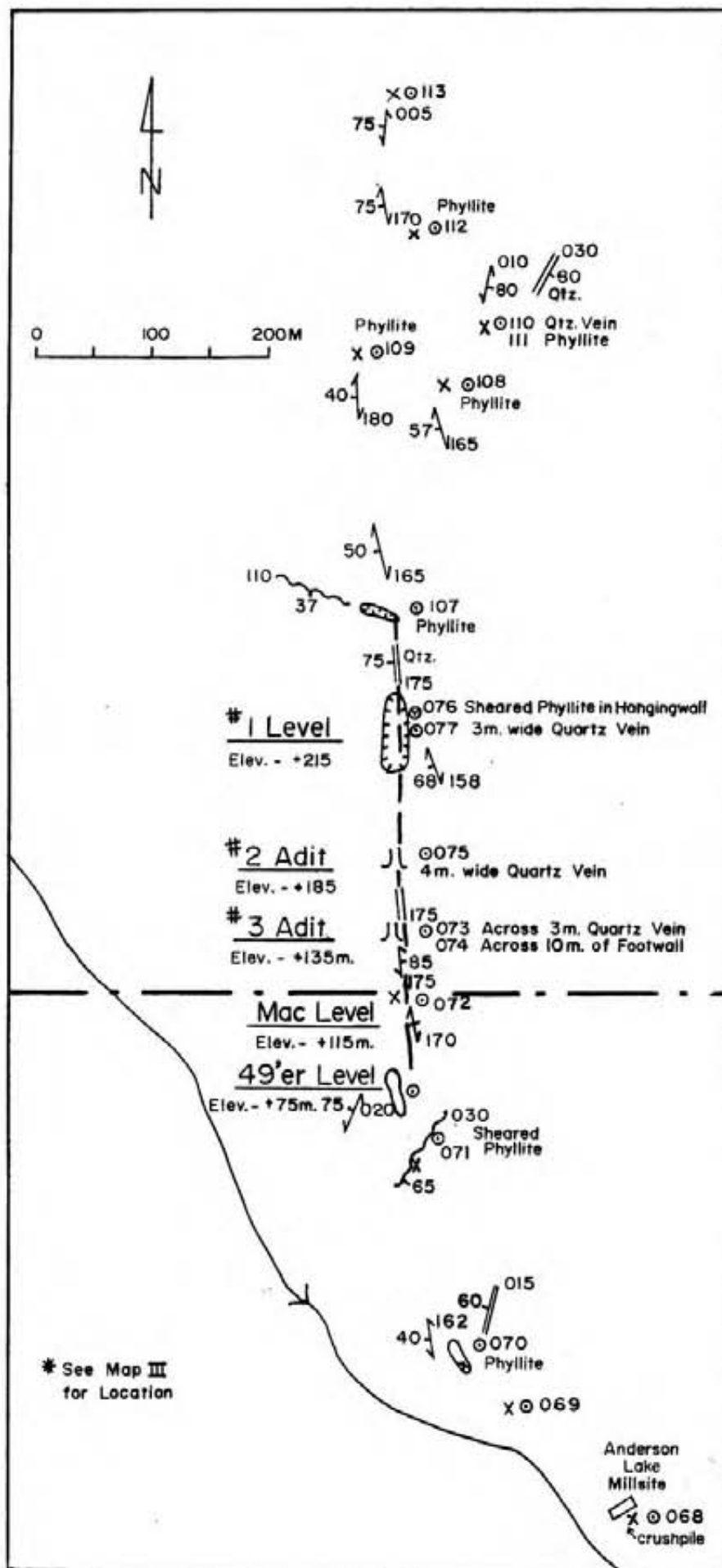
No visible gold was observed.

An adit has been driven into the altered phyllite but could not be entered due to flooding.

8.4.4 Gold Hill Prospect

A quartz vein intruding quartz diorite attains a maximum width of 1.5 m, trending at 140° Az.

sample No.	Au (ppb)	As (ppm)	Sb (ppm)	W (ppm)	Ag (ppm)	Cu (ppm)	Zn (ppm)
068	95	15	.5	1	1.0	34	35
069	380	5	.4	1	1.8	44	225
070	20	<2	.7	1	1.3	52	65
071	<5	6	<.2	1	1.5	49	61
072	<5	5	.3	1	.6	69	47
073	800	4	.4	1	1.1	33	78
074	820	7	.4	1	.6	20	12
075	55	8	.7	1	2.1	28	63
076	35	>15	1.3	1	3.0	29	65
077	90	8	1.4	1	.9	17	35
107	5	<2	.4	1	1.4	24	97
108	<5	<2	<.2	1	1.5	47	107
109	10	<2	<.2	1	1.3	90	90
110	<5	<2	<.2	1	.2	20	26
111	<5	<2	.2	1	1.3	42	71
112	<5	<2	.3	1	.9	31	90
113	<5	2	.2	1	.7	40	50



Legend

- Claim Boundary
- Creek
- Outcrop, Outcrop Area
- Adit
- Trench
- Strike and Dip of Foliation (Inclined, Vertical)
- Strike and Dip of Vein (Inclined, Vertical)
- Strike and Dip of Fault

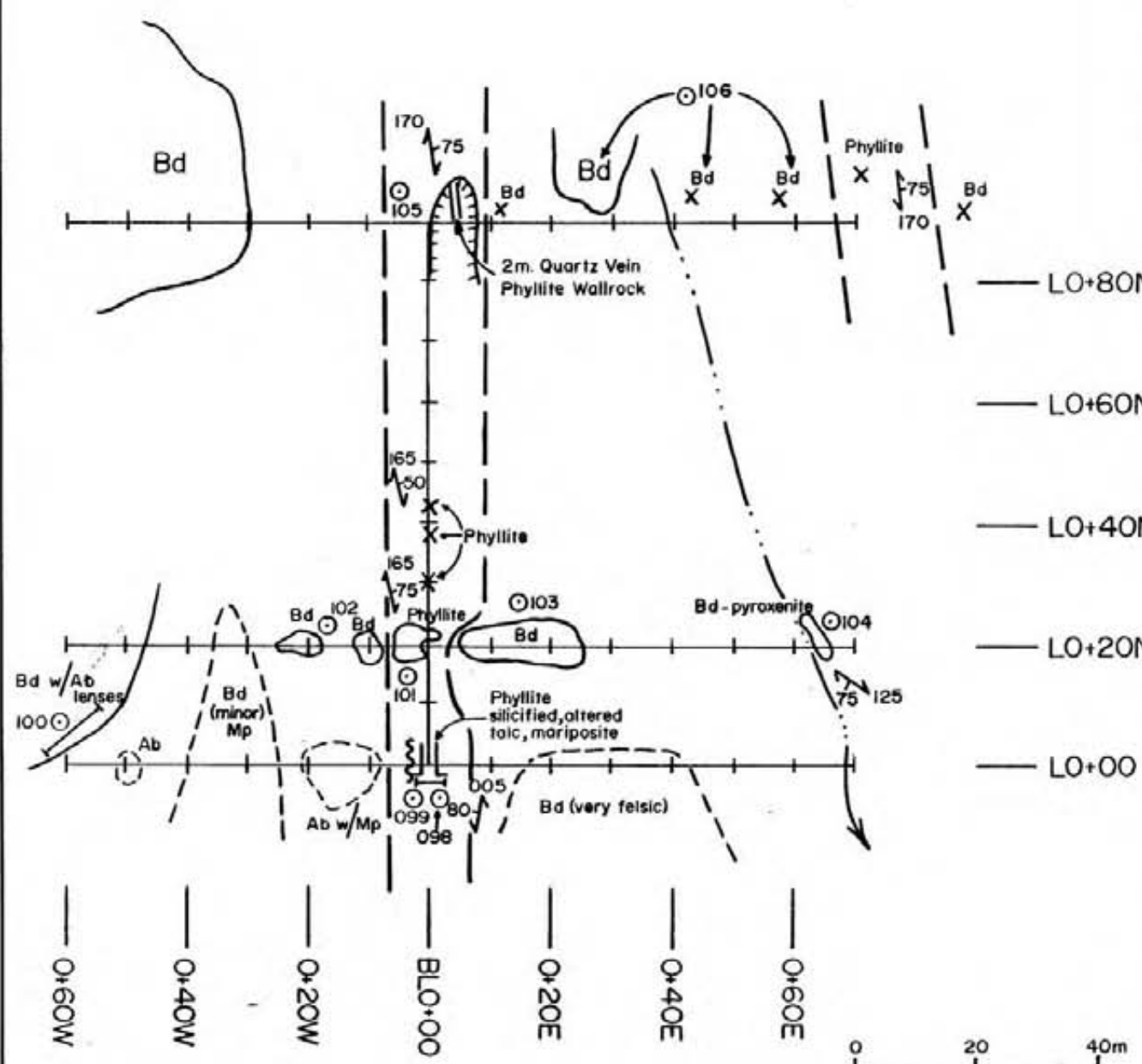
X-CALIBRE RESOURCES LTD.

Anderson Lake Project
Anderson Lake Mine Area

Geology and
Geochemistry

SCALE 1:5,000	GEOLOGY BY R.J. MAZUR	FIGURE No. 4
------------------	--------------------------	-----------------

sample No.	Au (ppb)	As (ppm)	Sb (ppm)	W (ppm)	Ag (ppm)	Cu (ppm)	Zn (ppm)
098	< 5	< 2	< .2	4	1.3	96	10
099	< 5	2	< .2	1	1.0	159	12
100	195	2	< .2	1	.4	52	10
101	35	< 2	.3	1	1.1	50	13
102	10	< 2	< .2	1	.4	58	9
103	< 5	< 2	< .2	1	.2	83	10
104	5	5	< .2	1	.4	240	19
105	5	< 2	< .2	1	1.8	130	10
106	490	< 2	< .2	1	.7	60	22



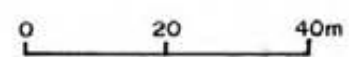
- Legend**
- Chain and Compass Line
 - X, O, ⊙ Outcrop, Outcrop Area, Talus
 - ┆┆ Adit
 - ┆┆ Trench
 - ↖↗ Strike and Dip of Foliation
 - || Vein
 - ~ Shear
 - - - Geological Contact
 - ⊙ Rock Geochemical Sample
 - Bd - Bratarne Diorite
 - Ab - Albite
 - Mp - Mariposite

X - CALIBRE RESOURCES LTD.

Anderson Lake Project
Diorite Prospect

Geology and
Geochemistry

SCALE 1:1,000	GEOLOGY BY R.J.MAZUR	FIGURE No. 5
------------------	-------------------------	-----------------



8.4.4 Gold Hill Prospect (Cont.)

No visible gold was observed.

Two trenches and an adit have been developed on this showing.

Another showing 300 metres to the west is reported where a 9 metre wide pyritic quartz vein has been drifted on. This showing was not visited during the programme.

8.4.5 Location No. 121

A gossan in Fergusson volcanics occurs on the power line road near the northern boundary of the X-Cai #1 mineral claim. (Map III).

Up to 5% disseminated pyrite and sphalerite occur in a massive outcrop of medium grained, light green pyroclastics.

A shear is developed at $125^{\circ} / 30^{\circ} \text{NE}$ which trends to a gossan in microlitic granite to the southeast which was not visited.

9.0 Property Geochemistry

9.1 Introduction

Rock chip samples were collected from outcrops visited during the course of geological mapping and prospecting. Approximately one kilogram of sample material was collected at each outcrop or over an outcrop area at equal intervals over the rock mass, across the stratigraphy where possible. Veins were sampled by representative channels across the vein or at equal intervals across the vein.

A total of 118 samples were collected in the Anderson Lake Project Area.

One bulk sample (approx. 2kg) of stream sediment in Gold Creek was collected for a heavy mineral separation and analysis.

9.2 Methods of Geochemical Analysis

The rock geochemical samples were shipped to Kamloops Research and Assay Lab, Kamloops, B. C. for analysis of Au, Ag, As, Sb, W, Cu and Zn.

Appendix I gives a description of the geochemical methods used in the analysis of these elements.

The bulk stream sediment sample was sent to Chemex Labs, Vancouver, B. C. where it is immersed in a solution of tetrabromethane to separate the fraction greater than 2.96 specific gravity. This fraction is ring ground to -100 mesh and analyzed for the same elements as above.

9.3 Results

Appendix II tabulates the analytical results received from the lab.

Appendix III illustrates histograms of rock geochemical results for Au, Ag, As, Sb, Cu and Zn.

Anomalous values are determined by examination of the distribution of results in the histogram. All elements form log normal distributions. The point where the fitted curve begins to tail out is chosen as the threshold value. All values greater than the threshold value are considered anomalous. (Table II)

Table II Geochemical Anomalies

Element	Background value (Mean)	Threshold Value (% of population)	Threshold Value (Geochemical)
Au	4 ppb	85.6	10 ppb
Ag	0.8 ppm	95.0	2 ppm
As	1.9 ppm	84.8	6 ppm
Sb	0.2 ppm	90.7	0.7 ppm
Cu	40 ppm	95.8	100 ppm
Zn	36 ppm	94.1	90 ppm

9.3 Results (Cont.)

Map IV-IX display the rock geochemical results for Au, Ag, As, Sb, Cu and Zn respectively.

Map X is a compilation map outlining the anomalous areas requiring further work.

9.4 Interpretation

The Anderson Lake Project Area shows a number of prospective trends of anomalous gold, worthy of further investigation. Arsenic, antimony, silver and zinc anomalies occur which may act as pathfinders to gold mineralization.

Eight anomalous zones should be followed up with further mapping, prospecting and sampling as shown below. (Map X)

Area A

Gold anomalies persist for the length of the Fergusson Overthrust (?) structure. There may, in part, be an association with the ultramafic rocks near this zone. Anomalies occur in fault structures (#127), quartz veins (#141, Anderson Lake Mine-Fig. 4), albitite (#144, #184) and Fergusson argillite/phyllite (#109, 153, 155)

Arsenic anomalies are generally mutually exclusive but spatially related to gold in outlining the trend along this major structure.

The outline of anomalous conditions along this major structure is most encouraging for the exploration potential of the Anderson Lake Project Area.

Area B

Bralorne Diorite at the fault contact with granodiorite exhibits anomalous gold values in diorite and roof pendants of argillite (#086, 088, 089, 92). The Bralorne diorite in the vicinity of the Diorite prospect is highly anomalous. (See Fig. 5).

This anomalous trend may be related to the 045 'J' structure as gold

Area B (Cont.)

anomalies occur along it at its intersection with McGillivray Creek in albitite, phyllite and brecciated/silicified argillite (#078-81).

Area C

In the vicinity immediately north of the Anderson Lake Mine, gold and zinc anomalies occur in phyllites and vein material (#109, #114). Samples from the Anderson Lake Mine itself show anomalies in gold, silver, arsenic, antimony and zinc, the highest from the #3 level at 800 and 820 ppb gold.

Further prospecting and sampling in the mine area is recommended to further delineate similar vein structures and test other structures in the area.

Area D

An arsenic anomaly occurs within a northwest trending fault structure parallel to the Cadwallader Shear Zone (?) in folded Hurley phyllites (#135). A copper-zinc anomaly occurs in a nodule within phyllites in the interpreted trace of the Cadwallader Shear Zone as well.

Northwest trending structures in this area should be further prospected and sampled for potential gold mineralization.

Area E

Shear structures trending at 125° Az occur in the Fergusson phyllites (#126) and Fergusson volcanics (#121), sampled along the power line road.

Sample 126 occurs off the property with an accompanying silver-antimony anomaly.

Sample 121 contains a very strong zinc anomaly (770 ppm) with an accompanying weak gold anomaly in a pyritic shear zone forming a gossan.

These anomalies should be prospected and similar trending shear structures sampled within this area.

Anomaly F

A string of zinc and/or antimony anomalies (#170, 172, 173) occur along the 'M' structure in the north of the X-Cal #19 mineral claim. This structure should be prospected and sampled more thoroughly.

Anomaly G

Quartz diorite in the southwestern part of the property forms a distinctive antimony anomaly from sample material consisting of quartz diorite, phyllite and quartz-ankerite material collected during prospecting (#161-4, 169).

Selective sampling and prospecting should be done to ascertain which rock unit carries antimony and whether gold is associated.

Anomaly H

Various isolated silver anomalies (Gold Hill, 084, 125, 128, 180) scattered over the property deserve further prospecting and sampling to examine their significance.

10.0 Recommendations

10.1 Heavy Mineral Stream Sampling Programme

The most cost effective approach to evaluate an area as large as the Anderson Lake Project is by initiating a heavy mineral stream sample programme. This technique is chosen over conventional stream silt sampling because bulk samples are collected which provide a) a more representative sample material for analysis, b) a better chance of obtaining gold in quantities detectable for analysis and c) a larger proportion of fine sediment in the sample which may carry gold.

Map XI illustrates approximately 70 recommended sample sites. Good drainages found during the programme should be sampled as well.

10.1 Heavy Mineral Stream Sampling Programme (Cont.)

The recommended sampling and analytical procedure is as follows

- 1) Choose a good "placer" accumulation of sediment in backeddies or bars.
Collect 5kg of -20 mesh stream sediment at each sample site and send to laboratory.
 - 2) Sieve down to -80 mesh. Save discards.
 - 3) Separation of -80 mesh sediment with greater than 2.96 specific gravity by immersion of sample in a tetrabromomethane solution. Save lighter fraction.
 - 4) Analyze heavy fraction for Au, Ag, As, Sb, W, Hg, Cu, Pb, Zn, Mo, Ba and Cr.
 - 5) Fifteen random samples should first be analyzed in this manner and the gold results obtained should be evaluated.
 - 6) If necessary, the following separations (in order) should be analyzed for gold to determine if better anomaly contrast can be obtained;
 - a) analyze -20 to -80 mesh fraction
 - b) separate out the magnetic fraction. Analyze the non-magnetic fraction (-80 mesh).
 - c) sieve the heavy fraction to -150 mesh. Analyze both the coarse (-80) and fine (-150) fraction.
 - d) grind the coarse fraction (-20 and/or -80) to -150 mesh. Add to the fine fraction and analyze.
 - 7) After selection of separation for gold analysis, the other elements should be analyzed from this fraction. If they compare favourably with the first analysis, all elements can then be analyzed by the selected separation.
Gold content can be determined by fire assay - atomic absorption analysis if the background is within detectable limits and there is enough sample material. Otherwise, fire assay-neutron activation analysis may be advisable.
- It is recommended this programme be carried out this September when the creek levels are low and before next field season.

10.1 Heavy Mineral Stream Sampling Programme (Cont.)

Table III provides an estimated cost for the heavy mineral sample programme.

Table III Estimated Costs - Heavy Mineral Sample Programme

Labour: 2 samplers x \$100/day x 15 days		\$ 3,000
2 helpers x \$70/day x 15 days		2,100
Food: 60 man days x \$15/day		900
Accomodation: 60 man days x \$20/day		1,200
Field Supplies		200
Transportation: 4x4 @ \$60/day x 15 days		900
chopper @ \$450/hr x 15 hrs		6,750
Geochemical Analyses: Orientation 15 samples x \$100/sample		1,500
90 samples x \$70/sample		6,300
Office Expense		1,500
	Sub-total	24,750
	(Plus 10% Contingency)	2,430
	Total	\$ 26,780

Cost/Sample=Approximately \$300

10.2 Phase II Programme

A six month programme from May to October of the 1984 field season should bring the Anderson Lake Project to a stage of diamond drilling.

A base camp should be established near the centre of the property, perhaps at the forks of McGillivray Creek. Helicopter support is essential and fly camps can be established for regional geological and prospecting crews.

The recommended exploration programme consists of:

- 1) Regional geological mapping at a scale of 1:10,000
- 2) Regional prospecting of creeks, ridges and sidehills

10.2 Phase II Programme (Cont.)

- 3) Regional rock geochemical sampling during the course of geological mapping.
- 4) Detailed prospecting in areas of anomalous geology, geochemistry and mineralization.
- 5) Blasting, trenching and sampling of mineral showings.
- 6) Establishment of picket grids over mineral showings providing control at a scale of 1:1000.
- 7) Detailed exploration of mineral showings on established grids
 - a) Rock, soil and/or biogeochemical sampling
 - b) Geophysical surveying (Magnetics, VLF-EM, IP)
 - c) Geological mapping
 - d) Prospecting and trenching

Table IV shows the estimated costs to carry out the Phase II exploration programme of the Anderson Lake Project.

Table IV Estimated Cost - Phase II Exploration

Labour - Project Geologist - 6 mo. x \$5000/mo.	\$ 30,000
- Senior Geologist - 3 mo. x \$3500/mo.	10,500
- Prospector/Trencher - 2 men x 4 mo. x \$3500/mo.	28,000
- Labourers/Linecutters - 2 men x 4 mo. x \$3000/mo.	24,000
- Geophysical Operator - 3 mo. x \$3000/mo.	9,000
- Geochemical Sampler - 3 mo. x \$3000/mo.	9,000
- Cook/Expediter - 5 mo. x \$2000/mo.	10,000
Food - 36 man/mo. x \$500/man mo.	18,000
Accommodation - Complete base camp - 4 tents, heaters, fuel, generator etc.	10,000
Geological Supplies	7,000
Geophysical Equipment rental	6,000
Transportation - 4x4 @ \$1800/mo. x 6 mo.	10,800
- Helicopter (Incl. fuel) @ \$500/hr. x 46 hrs/mo. x 6 mo.	138,000
Freight	2,000
Mobilization - Camp, fuel etc.	10,000
Orthophoto - (1:10,000 scale)	3,000
Geochemical Analyses - 1000 rock x \$25/sample	
- 2000 soil x \$25/sample	
- 500 assays x \$25/sample	87,500
Report Preparation	10,000
Office Expense	<u>10,000</u>
	Sub-total
	433,300
	Plus 10% Contingency
	<u>43,000</u>
	Total
	\$ 476,300

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Appendix I
Methods
of
Geochemical
Analysis

Geochemical Analysis Procedure

Sample Preparation:

A. Sills and Sediments

Dry sample thoroughly and sieve through an 80 mesh stainless steel sieve. The oversize portion is discarded (unless we have been requested to save it) and the analyses are performed on the -80 mesh portion.

B. Vegetation

29.17 grams of material are weighed and placed in 20 gm assay crucibles which are then placed in a relatively cool assay furnace and the temperature is raised gradually. The samples are left in the furnace until the organics are completely burned off. The residue is then assayed.

Fire Assay Re-agents

1. Litharge	:	C.P.
2. Sodium Carbonate	:	C.P.
3. Borax Glass	:	C.P.
4. Potassium Nitrate	:	C.P.
5. Flour	:	
6. Herman Inquarts	:	C.P.
7. SiO ₂	:	C.P.

Atomic Absorption Re-agents

For Ag, Cu, Pb, Zn, Co, Cd, Ni, Mn, Fe, Cr, Mo

Nitric Acid	:	C.P. 70%
Hydrochloric Acid	:	C.P. 37%
Aluminum Chloride	:	C.P.+99%

Fire Assay-A.A. Method for Gold

Weigh 29.17 gms of sample. Fuse with re-agents as above in proportions necessary to obtain a good melt with clean pour and slag easily separated from lead button. (For silicates use flour; for sulphides use potassium nitrate .) Cupel lead bead and place in test tube. Dissolve bead in nitric acid then hydrochloric (3 times the amount of nitric). Bulk to 10 mls and read on atomic absorption spectrophotometer.

Arsenic Geochem

1. Weigh 1.0 gram of sample in test tube.
2. Digest in 0.5 ml. HNO_3 for $\frac{1}{2}$ hour and 1.5 ml. HCl for $1\frac{1}{2}$ hour.
3. Pipette 2 ml. of sample into large test tubes.
4. Add - ¹~~1.5~~ ml. H_2O
2.5 ~~8~~ ml. HCl
1.0 ~~2~~ ml. KI solution
1.5 ~~2~~ ml. SnCl_2 solution
5. Let stand 15 - 20 minutes.
6. Add $\frac{1}{2}$ teaspoon zinc metal and quickly plug with cotton and rubber stopper.
7. Bubble into ^{3 ml} pyridine solution for 30 minutes under fume hood.
8. Read at 540.

REAGENTS

KI - 15 grams in 100 ml. H_2O keep in dark bottle

SnCl_2 - 40 grams in 100 ml. HCl

Pyridine - 1 gram silver diethyldithio carbamate (SDDC) in 200 ml. pyridine.
make 1.0 1.0 1.0

As stock solution (1000 $\mu\text{g}/\text{ml}$) - weigh 1.320 grams As_2O_3

- dissolve in H_2O with 4 grams NaOH

- dilute to 1 litre

Prepare a 1 $\mu\text{g}/\text{ml}$ As standard solution. make fresh daily

Run with samples, standard of 0.5, 1.0, 2.0, 3.0, 5.0, ~~10.0, 15.0 μg~~

~~1.0 μg As = 5 ppm As in sample~~

Weigh CPB - 0.1 - 0.5 g \rightarrow 100 ml

GEOCHEM

KRAL
Tungsten

1. Weigh .25 g sample into a test tube.
2. Add ~1.25 g Potassium Bisulphate, mix and fuse.
3. Leach with 5 ml 10M HCl in bath (high volume).
4. Mix and cool - settle.
5. Pipette 2 ml sol'n and 2 ml SnCl₂ into test tube and mix.
6. Heat @ 80°C for 5 minutes in bath.
7. Add, while hot, 1 ml dithiol solution.
8. Continue heating until color forms - low volume ester phase - do not form a globule that sinks.
9. Remove from bath and cool.
10. Add 1 ml petroleum spirit and shake gently.
11. Compare with standards.

Standards

1. To 12 test tubes containing 2 ml SnCl₂ sol'n add respectively - 2.0, 1.8, 1.6, 1.4, 1.2, 1.0, 1.8, 1.7, 1.6, 1.5, 1.3, 1.0 ml 10M HCl.
2. Add tungsten in the following order - 0, .2, .4, .6, .8, 1.0, ml of 1µg/ml standard sol'n, and .2, .3, .4, .5, .7, 1.0 ml of 10 µg/ml standard sol'n.
3. Continue from step 6 above.

Standards

<u>Reagents</u> - 10M HCl = 835 ml conc → 100 ml	1 = 0 ppm
SnCl ₂ sol'n = 10 g → 100 ml of 10M HCl	2 = .8 ppm
<u>Dithioφ</u> = 1 g Zn_Dithiol → 100 ml flask	3 = 1.6 ppm
and 1 ml conc HCl - dilute	4 = 2.4 ppm
to 100M with iso-amylacetate	5 = 3.2 ppm
<u>Standard W</u> = 1000 ppm, 100 ppm	6 = 4 ppm
10 ppm, 1 ppm	7 = 8 ppm
	8 = 12 ppm
	9 = 16 ppm
	10 = 20 ppm
	11 = 28 ppm
	12 = 40 ppm

Appendix II

Geochemical
Results

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GEOCHEMICAL LAB REPORT

X-Calibre Resources Ltd.
General Delivery,
Goldbridge, B.C.

DATE August 8, 19

ANALYST

FILE NO. G 834

FILE NO.

KRAL NO.	IDENTIFICATION	ppb Au	ppm Sb	ppm As	ppm W	ppm Ag	ppm Cu	ppm zn
1	5054	10	L.2	L2	1	1.5	57	62
2	5055	15	L.2	L2	1	1.4	43	48
3	5056	15	L.2	L2	1	1.3	39	45
4	5057	15	.3	2	1	.9	24	29
5	5058	15	L.2	L2	1	.7	40	67
6	5059	15	L.2	L2	1	1.3	124	31
7	5060	15	L.2	L2	1	.7	26	67
8	5061	10	L.2	2	1	1.0	20	62
9	5062	45	L.2	L2	1	.8	24	74
10	5063	15	3.8	3	1	.8	15	33
11	5064	15	.8	L2	1	.9	48	51
12	5065	5	L.2	L2	1	.9	166	37
13	5066	5	L.2	L2	1	.8	34	23
14	5067	15	L.2	L2	1	1.2	31	62
15	5068	95	.5	15	1	1.0	34	35
16	5069	380	.4	5	1	1.8	44	225
17	5070	20	.7	L2	1	1.3	52	85
18	5071	L5	L.2	6	1	1.5	49	61
19	5072	L5	.3	5	1	.6	69	47
20	5073	800	.4	4	1	1.1	33	78
21	5074	820	.4	7	1	.6	20	12
22	5075	55	.7	8	1	2.1	28	63
23	5076	35	1.3	G15	1	3.0	29	65
24	5077	90	1.4	8	1	.9	17	35
25	5078	15	.2	14	1	.9	9	38
26	5079	15	L.2	L2	1	1.3	38	79
27	5080	50	L.2	3	1	1.1	30	6
28	5081	15	L.2	4	1	1.2	65	67
29	5082	5	L.2	L2	1	.9	56	37
30	5083	L5	.4	14	1	1.2	60	26

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GEOCHEMICAL LAB REPORT

FILE NO. G-834

PAGE 2

KRAL NO.	IDENTIFICATION	ppb Au	ppm Sb	ppm As	ppm W	ppm Ag	ppm Cu	ppm Zn
31	5084	5	1.3	G15	1	1.9	51	30
32	5085	L5	L.2	L2	1	1.0	87	17
33	5086	60	L.2	L2	1	.9	68	18
34	5087	L5	L.2	L2	1	1.0	49	10
35	5088	15	L.2	L2	1	1.1	98	13
36	5089	15	.4	5	1	.7	67	52
37	5090	5	L.2	8	1	.4	21	18
38	5091	L5	L.2	2	1	.2	30	43
39	5092	15	.3	L2	1	.3	94	7
40	5093	5	L.2	L2	1	.1	20	34
41	5094	10	.4	2	1	2.6	29	30
42	5095	10	.3	2	1	.6	18	46
43	5096	L5	L.2	L2	1	1.2	30	33
44	5097	10	.2	4	1	6.6	19	40
45	5098	L5	L.2	L2	4	1.3	96	10
46	5099	L5	L.2	2	1	1.0	159	12
47	5100	195	L.2	2	1	.4	52	10
48	5101	35	.3	L2	1	1.1	50	13
49	5102	10	L.2	L2	1	.4	58	9
50	5103	L5	L.2	L2	1	.2	83	10
51	5104	5	L.2	5	1	.4	240	19
52	5105	5	L.2	L2	1	1.8	130	10
53	5106	490	L.2	L2	1	.7	60	22
54	5107	5	.4	L2	1	1.4	24	97
55	5108	L5	L.2	L2	1	1.5	47	107
56	5109	10	L.2	L2	1	1.3	90	90
57	5110	L5	L.2	L2	1	.2	20	26
58	5111	L5	.2	L2	1	1.3	42	71
59	5112	L5	.3	L2	1	.9	31	90
60	5113	L5	.2	2	1	.7	40	50

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GEOCHEMICAL LAB REPORT

X-Calibre Resources Ltd.
General Delivery
Goldbridge, B.C.

DATE August 22, 1983

ANALYST _____

FILE NO. _____

FILE NO. G-850

KRAL NO.	IDENTIFICATION	ppb Au	ppm Cu	ppm Zn	ppm Ag	ppm As	ppm Sb		
1	5129	L5	45	57	1.1	3	.2		
2	5130	L5	6	15	.3	L2	.2		
3	5131	L5	870	104	.8	6	L.2		
4	5132	L5	69	66	1.3	L2	.2		
5	5133	L5	71	36	1.1	2	.2		
6	5134	L5	17	16	.8	2	L.2		
7	5135	L5	31	25	1.2	9	L.2		
8	5136	L5	28	71	1.0	L2	L.2		
9	5137	L5	19	22	.8	L2	.2		
10	5138	L5	61	69	1.0	L2	L.2		
11	5139	L5	52	28	.8	L2	L.2		
12	5140	L5	66	24	.8	4	L.2		
13	5141	L5	180	24	2.2	G15	2.5		
14	5142	L5	91	31	1.2	L2	L.2		
15	5143	L5	21	16	1.2	L2	L.2		
16	5144	35	4	34	.2	L2	L.2		
17	5145	L5	83	16	.9	G15	.2		
18	5146	L5	41	11	1.3	G15	.7		
19	5147	L5	27	47	.5	L2	.2		
20	5148	L5	11	36	.8	G15	.5		
21	5149	L5	42	82	1.0	L2	L.2		
22	5150	L5	12	22	.3	L2	L.2		
23	5151	5	17	35	1.4	L2	L.2		
24	5152	L5	17	19	.6	L2	L.2		
25	5153	30	32	29	1.0	6	L.2		
26	5154	L5	31	24	1.2	15	L.2		
27	5155	10	27	47	1.4	6	.2		
28	5156	L5	14	10	.7	5	L.2		
29	5157	L5	53	23	.9	L2	L.2		
30	5158	5	49	13	1.0	L2	L.2		

**KAMLOOPS
RESEARCH & ASSAY
LABORATORY LTD.**

GEOCHEMICAL LAB REPORT

FILE NO. G-850

PAGE 2

KRAL NO.	IDENTIFICATION	ppb Au	ppm Cu	ppm Zn	ppm Ag	ppm As	ppm Sb	
31	5159	L5	33	27	.4	L2	L.2	
32	5160	L5	42	36	.5	4	G10.0	
33	5161	L5	20	38	.7	L2	10.0	
54	5162	L5	41	59	.8	L2	2.2	
55	5163	L5	58	17	.5	L2	2.3	
56	5164	L5	20	47	.6	L2	1.0	
57	5165	L5	5	54	.5	L2	.4	
58	5166	L5	4	52	.5	L2	.5	
59	5167	L5	4	53	.6	L2	.3	
60	5168	L5	15	19	.2	L2	.2	
61	5169	L5	17	40	.8	L2	.9	
62	5170	L5	29	93	1.0	L2	.7	
63	5171	L5	22	43	.6	L2	.2	
64	5172	L5	9	46	.6	L2	.6	
65	5173	L5	26	64	.6	L2	.2	
66	5174	L5	11	13	.5	L2	.3	
67	5175	L5	19	29	1.3	3	L.2	
68	5176	L5	62	30	.9	L2	L.2	
69	5177	L5	82	20	.7	L2	.2	
70	5178	L5	46	31	.6	L2	L.2	
71	5179	L5	27	31	.8	L2	L.2	
72	5180	L5	29	49	5.0	2	L.2	
73	5181	L5	28	34	.6	10	.6	
74	5182	L5	59	43	.8	2	L.2	
75	5183	L5	12	16	.7	7	L.2	
76	5184	54	9	21	1.2	G15	.2	
	L means "Less than"							
	Rock Geochem: Crush entire sample, sub-sample if necessary, pulverize in ring grinder to approximately -100 mesh							



CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: (604) 984-0221
TELEX: 043-52597

• ANALYTICAL CHEMISTS

• GEOCHEMISTS

• REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO : X-CALIBRE RESOURCES LIMITED
TYAUGHTON LAKE ROAD
GENERAL DELIVERY
GOLD BRIDGE, B.C.
VOK 1P0

CERT. # : A8213163-001-B
INVOICE # : 12313163
DATE : 12-AUG-83
P.C. # : NCNE

Sample description	Prep code	Au ppb FA+AA						
AL-1	213	65	--	--	--	--	--	--



MEMBER
CANADIAN TESTING
ASSOCIATION

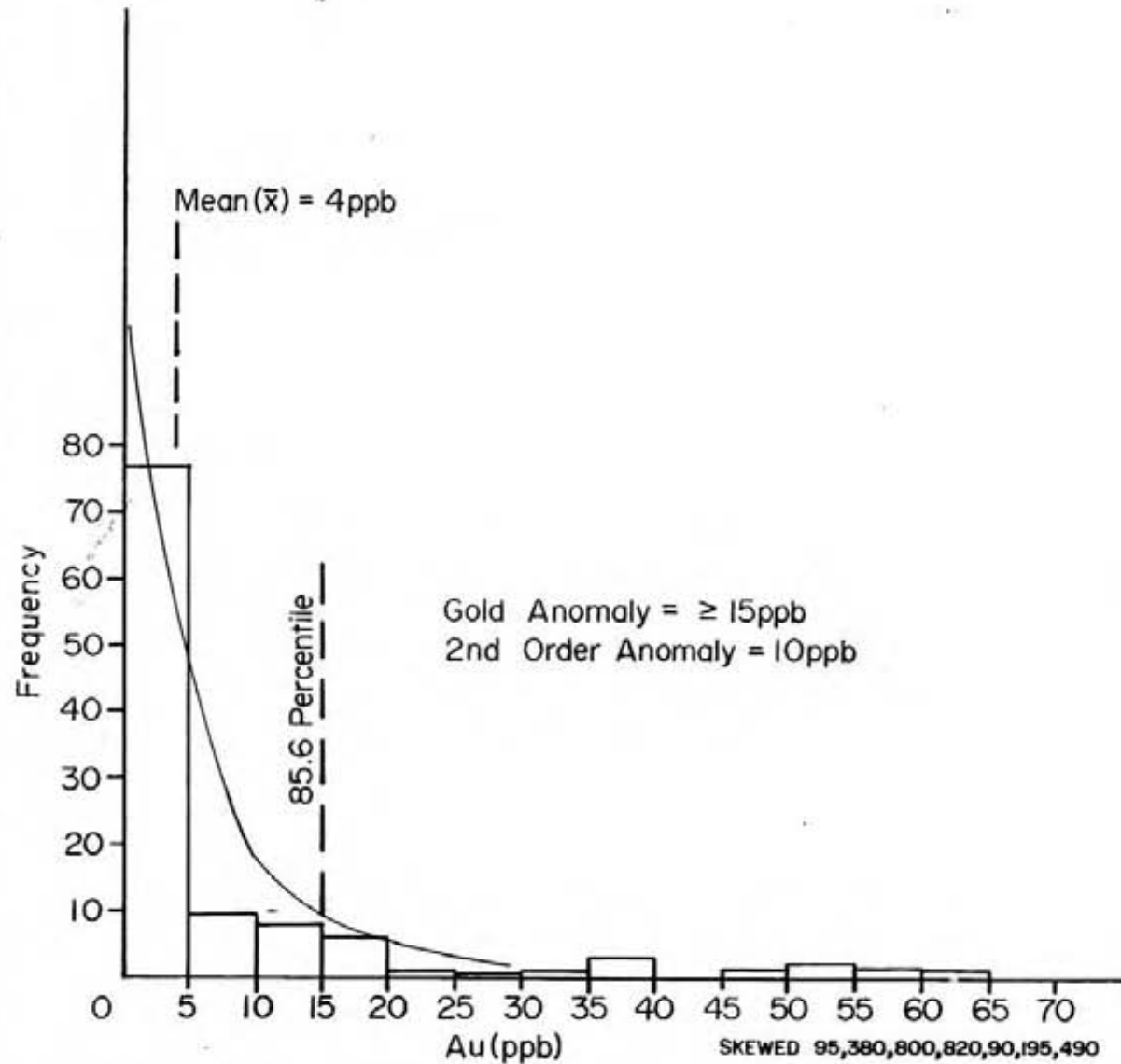
Certified by *Hart Bickler*.....

Appendix III

Histograms

Au, Ag, As, Sb, Cu, Zn

* For Calculating Mean
 <5ppb = 2ppb
 100samples <20ppb used in population



Interval Frequency

Interval	Frequency	ppb
0 - 4	77	<5
5 - 9	10	5
10 - 14	8	10
15 - 19	6	15
20 - 24	1	
25 - 29	1	
30 - 34	1	
35 - 39	3	
40 - 44	0	
45 - 49	1	
50 - 54	2	
55 - 59	1	
60 - 64	1	
65 - 69	0	

X - CALIBRE RESOURCES LTD.

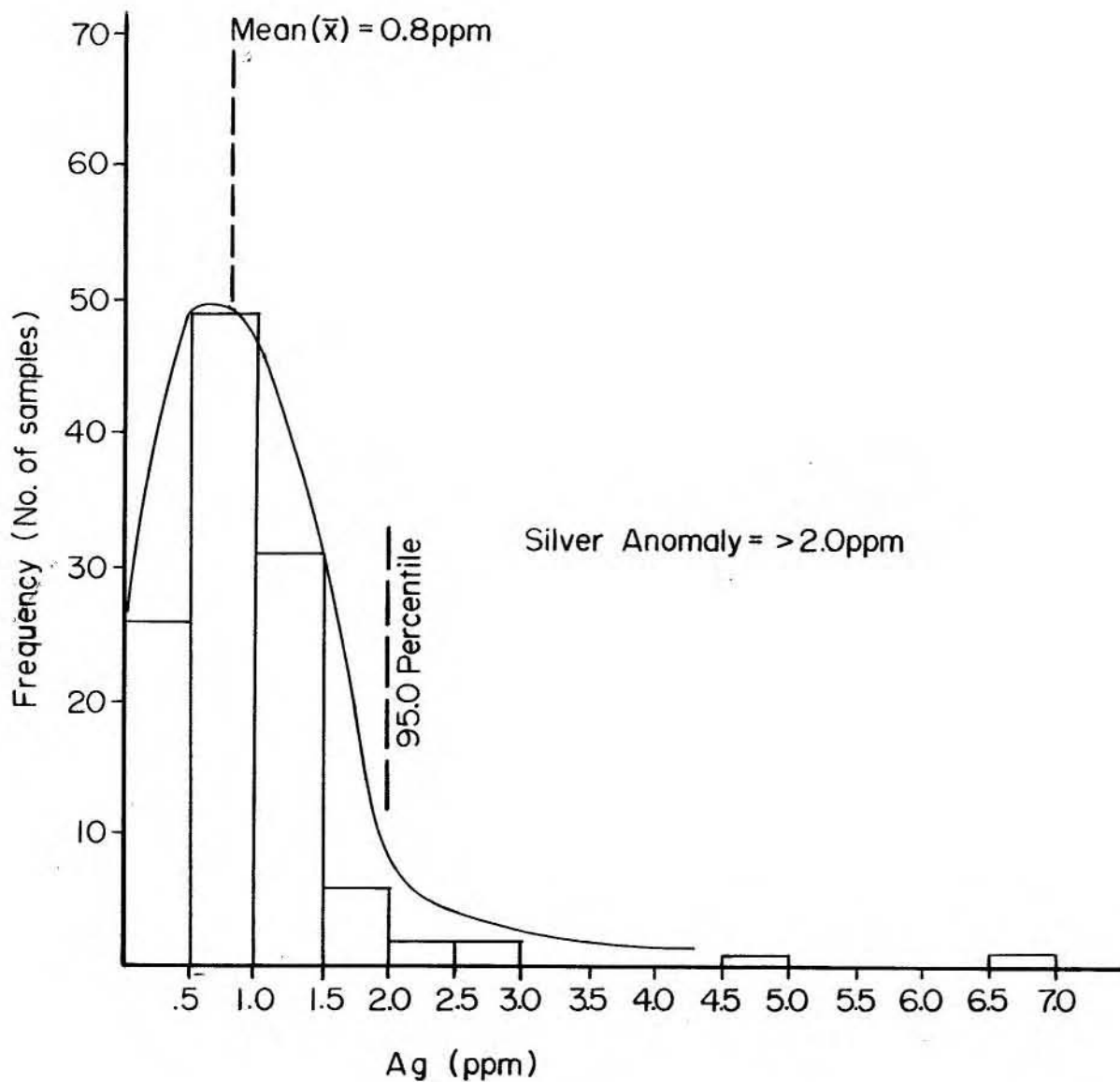
Anderson Lake Project

Histogram-Gold

Rock Geochemical Results

Appendix III

* For Calculating Mean
112 samples ≤ 2.0 ppm
used in population



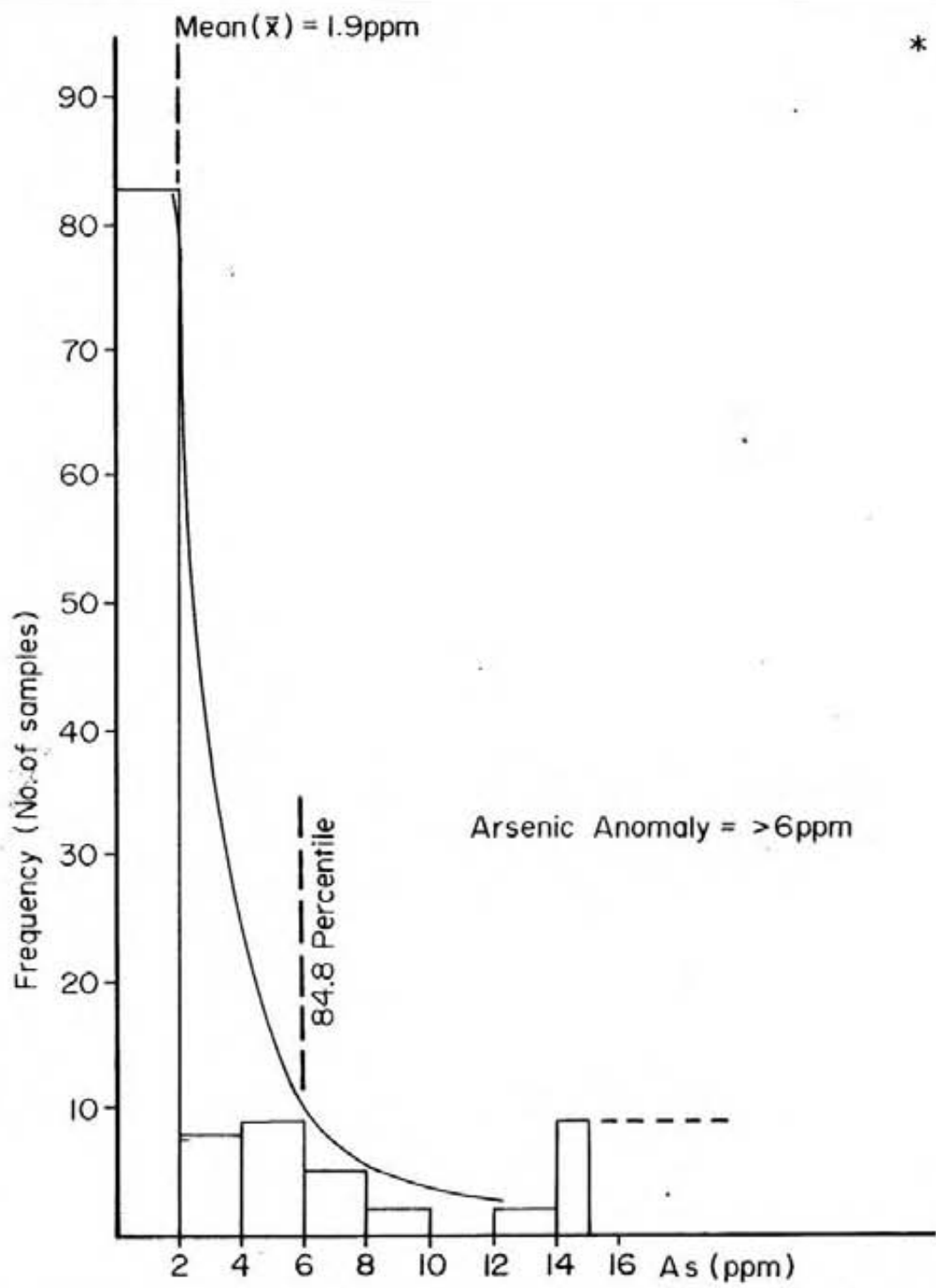
X - CALIBRE RESOURCES LTD.

Anderson Lake Project

Histogram - Silver

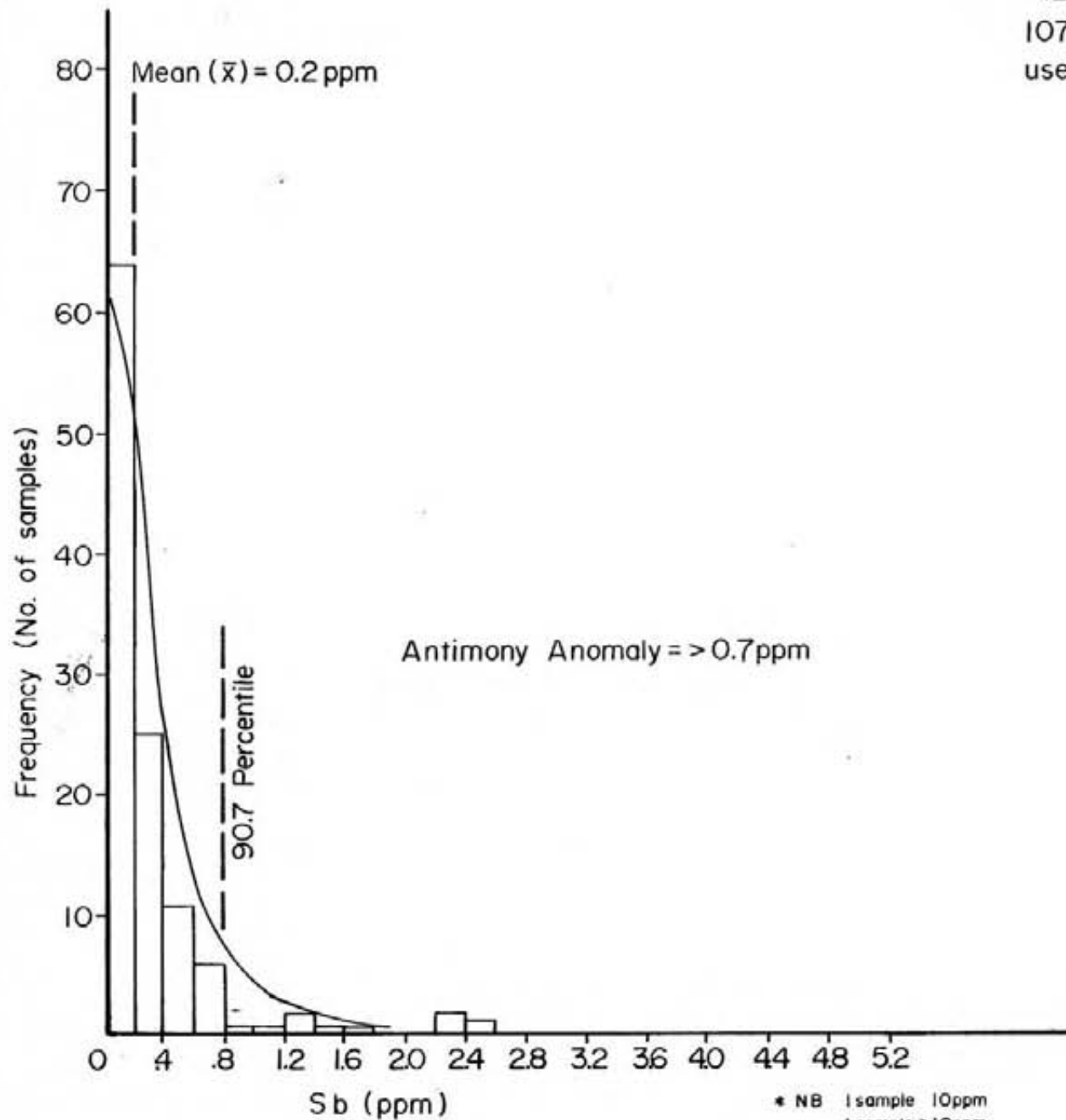
Rock Geochemical Results

Appendix III



* For Calculating Mean
 <2ppm = 1ppm
 100 samples <7ppm used
 in population

X - CALIBRE RESOURCES LTD.
 Anderson Lake Project
 Histogram - Arsenic
 Rock Geochemical Results
 Appendix III

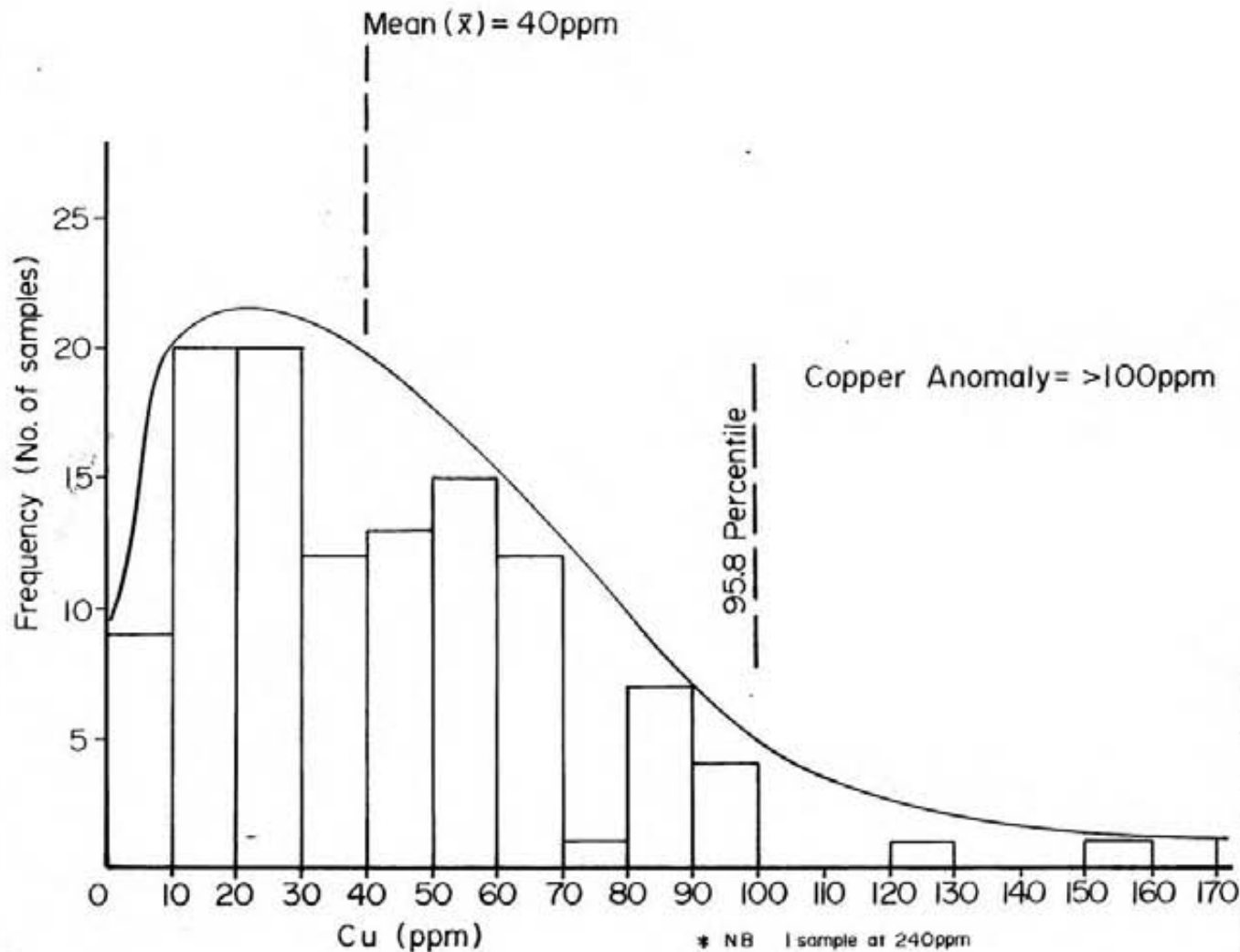


* For Calculating Mean
 <.2 ppm = .1 ppm
 107 samples \leq 0.7 ppm
 used in population

* NB 1 sample 10 ppm
 1 sample >10 ppm

X - CALIBRE RESOURCES LTD.
 Anderson Lake Project
 Histogram - Antimony
 Rock Geochemical Results
 Appendix III

* For Calculating Mean
113 samples ≤ 100 ppm
used in population



* NB 1 sample at 240ppm
1 sample at 870ppm

X - CALIBRE RESOURCES LTD.

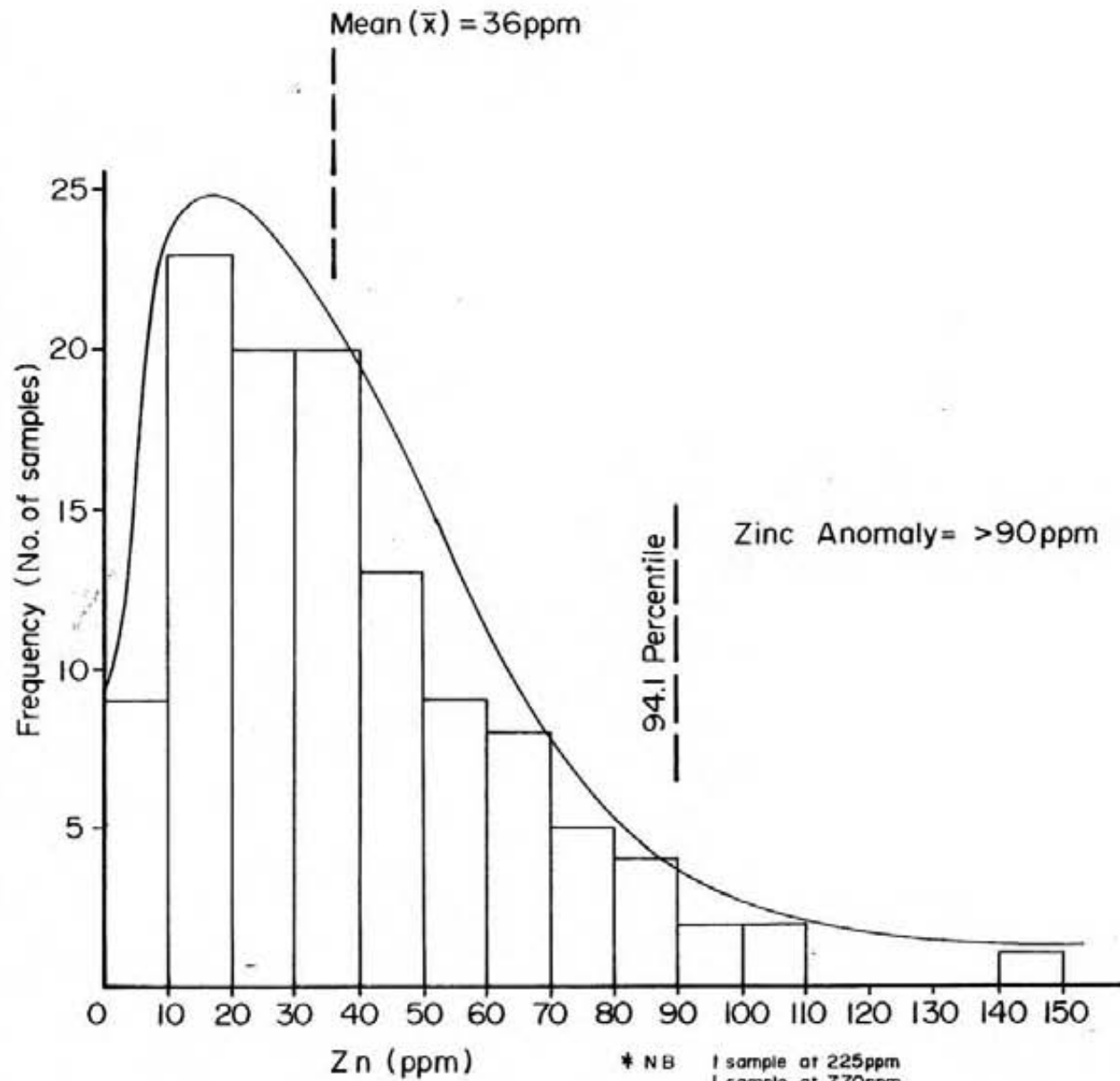
Anderson Lake Project

Histogram-Copper

Rock Geochemical Results

Appendix III

* For Calculating Mean
III samples ≤ 90 ppm
used in population



X-CALIBRE RESOURCES LTD.

Anderson Lake Project

Histogram-Zinc

Rock Geochemical Results

Appendix III

Appendix IV

Itemized
Cost
Statement

Itemized Cost Statement

Geologist 34 days Field and Reports	\$ 6,450.00
Project Manager 37 days @ \$150/day	5,550.00
Labour 22 man days @ \$100/day	2,200.00
Transportation: Truck 37 days @ \$40/day	1,480.00
Trail Bike 12 days @ \$20/day	240.00
Helicopter 4.5 hrs @ \$500/hr	2,250.00
Chainsaw 7 days @ \$10/day	70.00
Accommodation 60 man days @ \$35/day	2,100.00
Food 99 man day @ \$10/day	990.00
Field Supplies	300.00
Camp Supplies	140.00
Drafting	2,700.00
Reproduction	300.00
Geochemical Analysis 118 samples @ \$20/sample	2,360.00
Typing, Secretarial, Office Overhead	900.00
Fuel, Travel, Freight, Misc.	<u>1,150.00</u>
	<u>\$ 30,180.00</u>

NOTE: Not included in this statement is the cost of report entitled "Preliminary Report on the Gold Exploration Potential of the Anderson Lake Block"

Appendix V
Certificate
of
Qualification

Appendix V

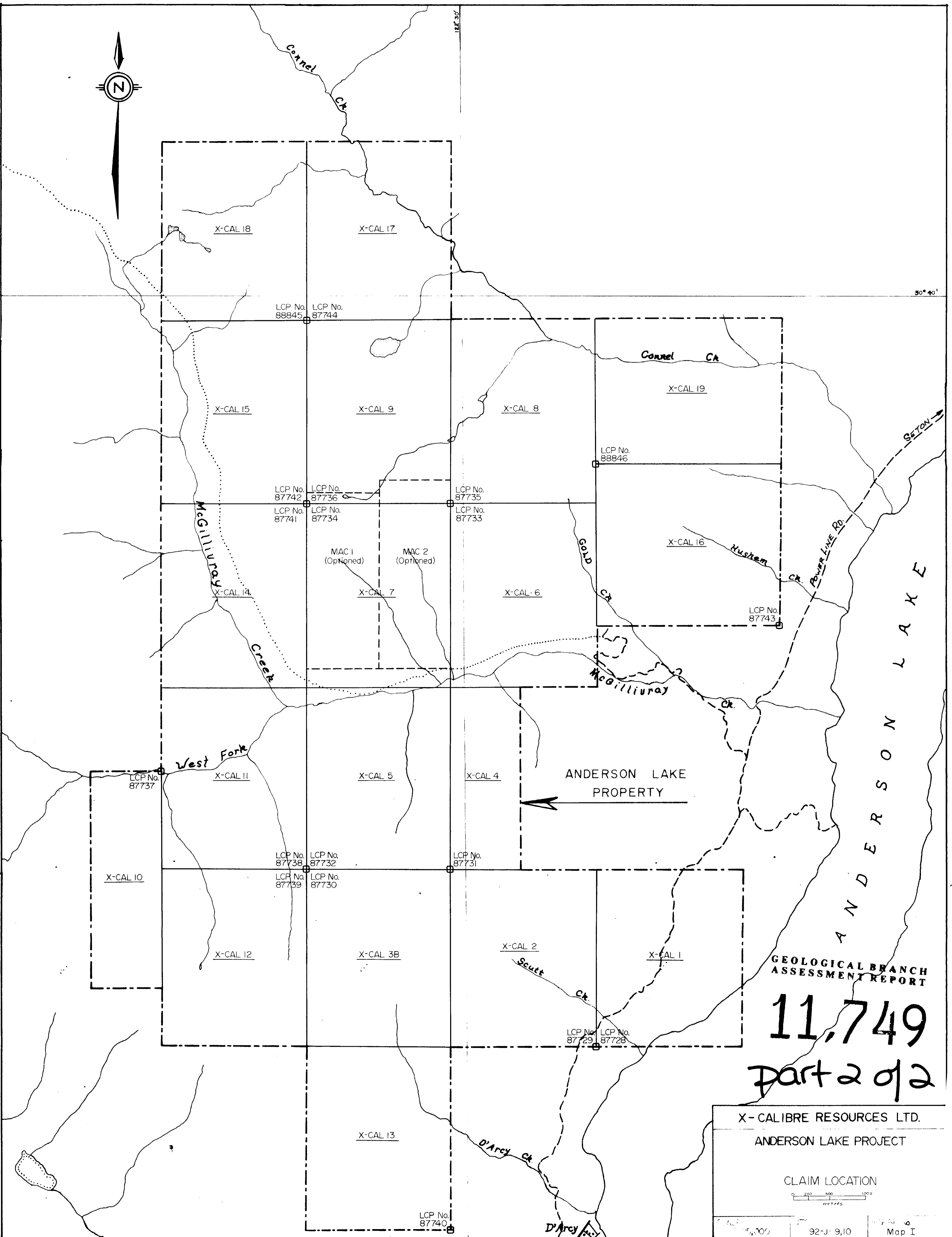
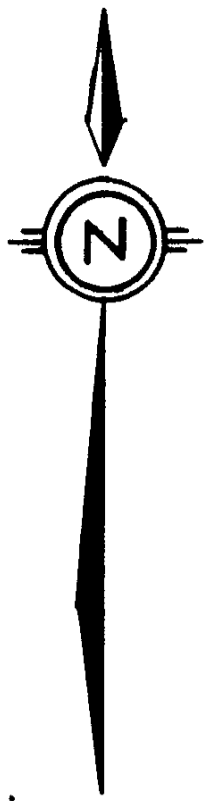
Certificate of Qualification

I, Richard J. Mazur, hereby certify that;

1. I am a registered professional geologist residing at 451 22 Ave. NE, Calgary, Alberta.
2. I am a graduate of the University of Toronto, having been granted a honours Bachelor of Science degree in geology in 1975.
3. I have primarily been employed in the mineral exploration industry since 1975.
4. I have been a member of the Association of Professional Engineers, Geologists and Geophysicists of Alberta continuously since 1980 to the present as a Professional Geologist.
5. I have no interest in the Anderson Lake Block or X-Calibre Resources Ltd., nor have I been promised any interest. The only remuneration I expect to receive is the amount of my professional fee for performing such work.
6. I agree to keep all information documented in this report confidential.
7. I hereby grant X-Calibre Resources Ltd. permission to use this report for its corporate purposes.

Dated this *26th* day of August, 1983
Gold Bridge, B. C.

Rick Mazur
Richard J. Mazur



50° 40'

SETON

ANDERSON LAKE

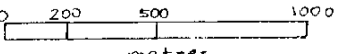
ANDERSON LAKE PROPERTY

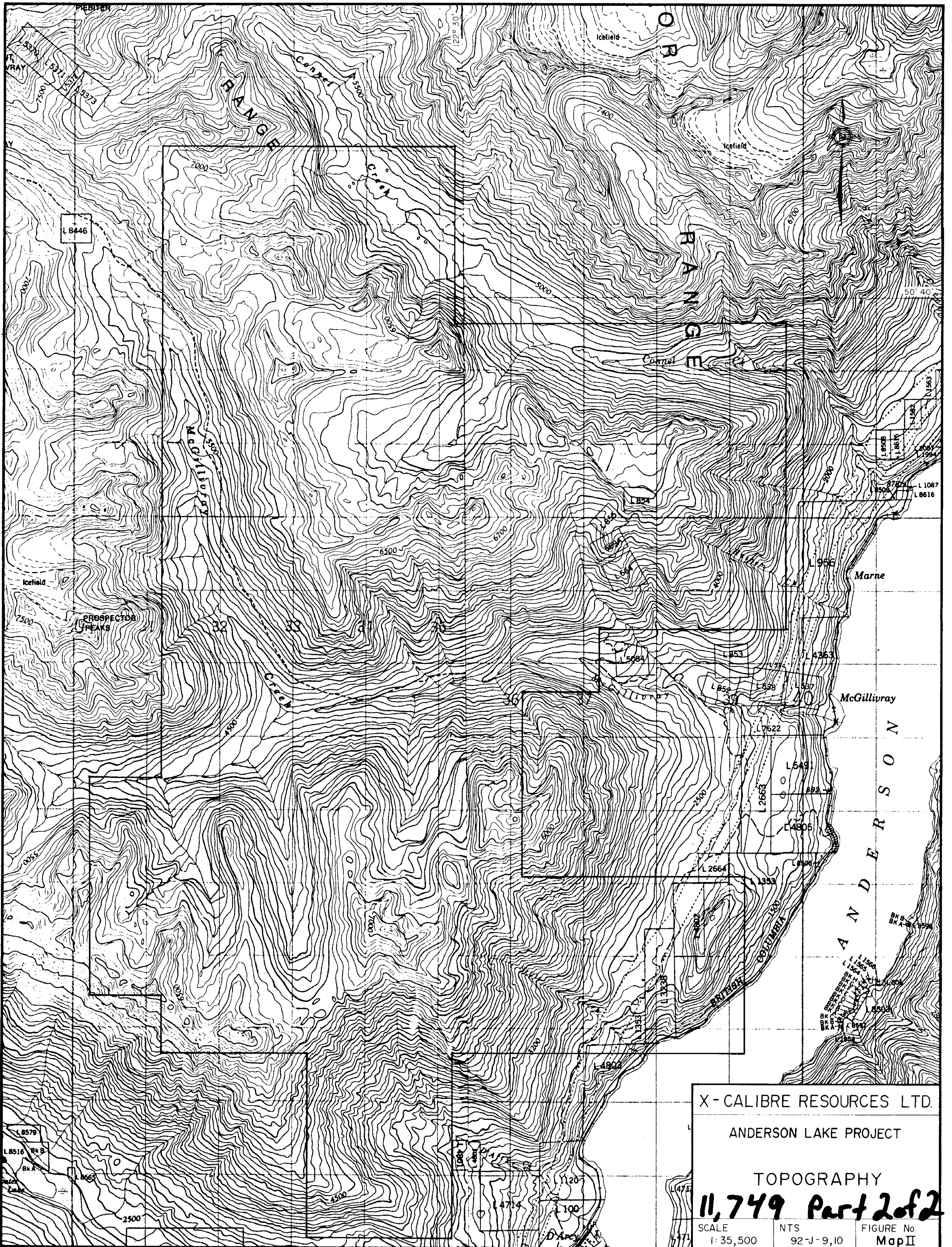
GEOLOGICAL BRANCH ASSESSMENT REPORT

11,749
part 2 of 2

X-CALIBRE RESOURCES LTD.
ANDERSON LAKE PROJECT

CLAIM LOCATION





X-CALIBRE RESOURCES LTD.

ANDERSON LAKE PROJECT

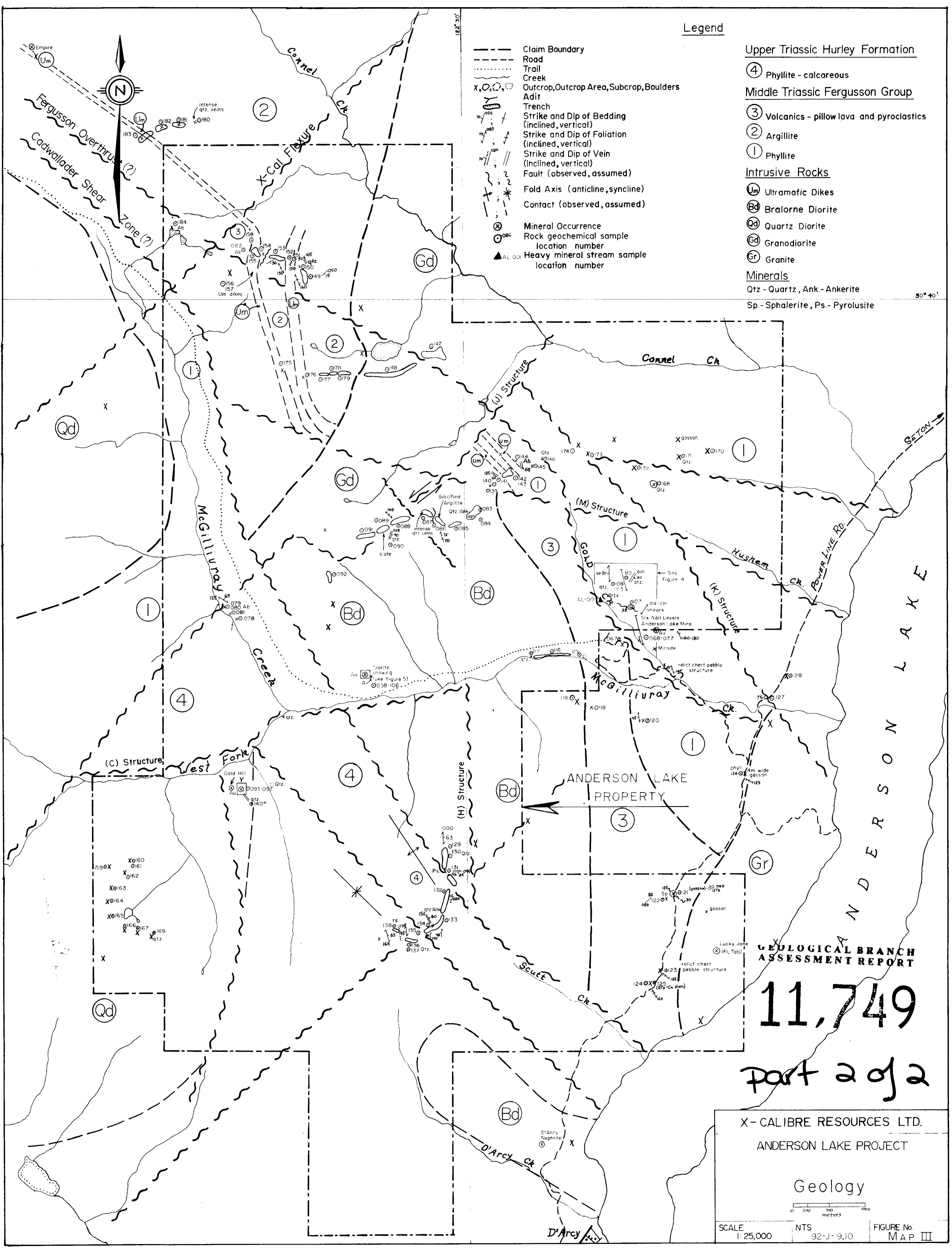
TOPOGRAPHY

11,749 Part 2 of 2

SCALE
1:35,500

NTS
92-J-9,10

FIGURE No
Map II



Legend

- Claim Boundary
- Road
- Trail
- Creek
- X, O, ⊙, ⊖ Outcrop, Outcrop Area, Subcrop, Boulders
- ⊖ Adit
- ⊖ Trench
- ⊖ Strike and Dip of Bedding (inclined, vertical)
- ⊖ Strike and Dip of Foliation (inclined, vertical)
- ⊖ Strike and Dip of Vein (inclined, vertical)
- ⊖ Fault (observed, assumed)
- ⊖ Fold Axis (anticline, syncline)
- ⊖ Contact (observed, assumed)
- ⊖ Mineral Occurrence
- ⊖ Rock geochemical sample location number
- ⊖ Heavy mineral stream sample location number

- Upper Triassic Hurley Formation**
- ④ Phyllite - calcareous
- Middle Triassic Fergusson Group**
- ③ Volcanics - pillow lava and pyroclastics
- ② Argillite
- ① Phyllite
- Intrusive Rocks**
- ⊖ Ultramafic Dikes
- ⊖ Bralorne Diorite
- ⊖ Quartz Diorite
- ⊖ Granodiorite
- ⊖ Granite
- Minerals**
- Qtz - Quartz, Ank - Ankerite
- Sp - Sphalerite, Ps - Pyrolysite

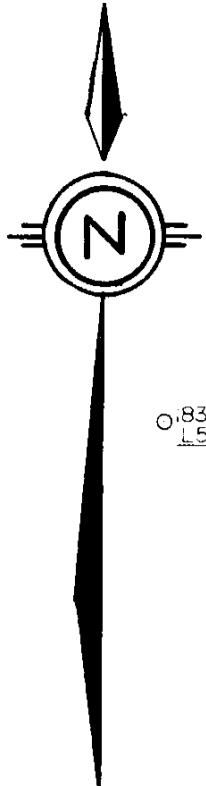
50° 40'

GEOLOGICAL BRANCH ASSESSMENT REPORT

11,749

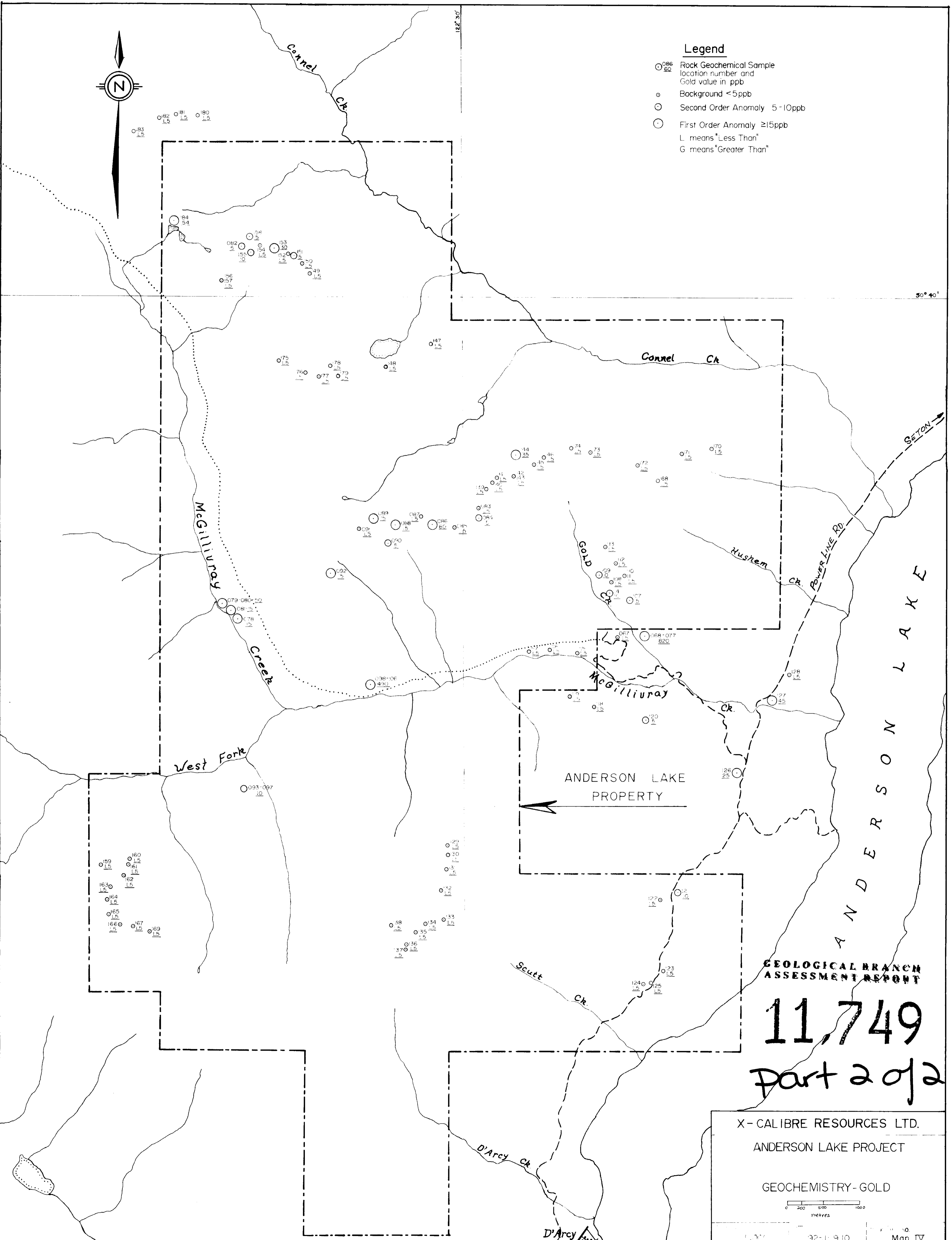
part 2 of 2

X-CALIBRE RESOURCES LTD.
 ANDERSON LAKE PROJECT
 Geology
 SCALE 1:25,000 NTS 92-J-9,10 FIGURE No. MAP III



Legend

- ⁰⁸⁶₈₂ Rock Geochemical Sample location number and Gold value in ppb
- Background <5ppb
- Second Order Anomaly 5-10ppb
- First Order Anomaly ≥15ppb
- L means "Less Than"
- G means "Greater Than"



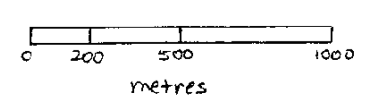
ANDERSON LAKE PROPERTY

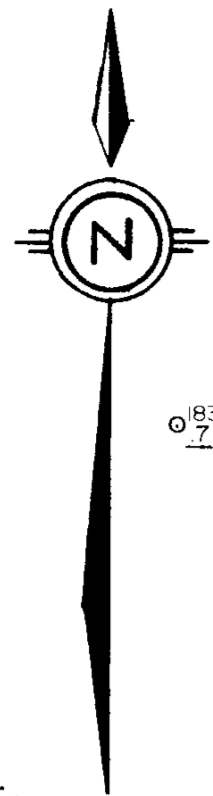
GEOLOGICAL BRANCH ASSESSMENT REPORT

11,749
part 2 of 2

X-CALIBRE RESOURCES LTD.
 ANDERSON LAKE PROJECT

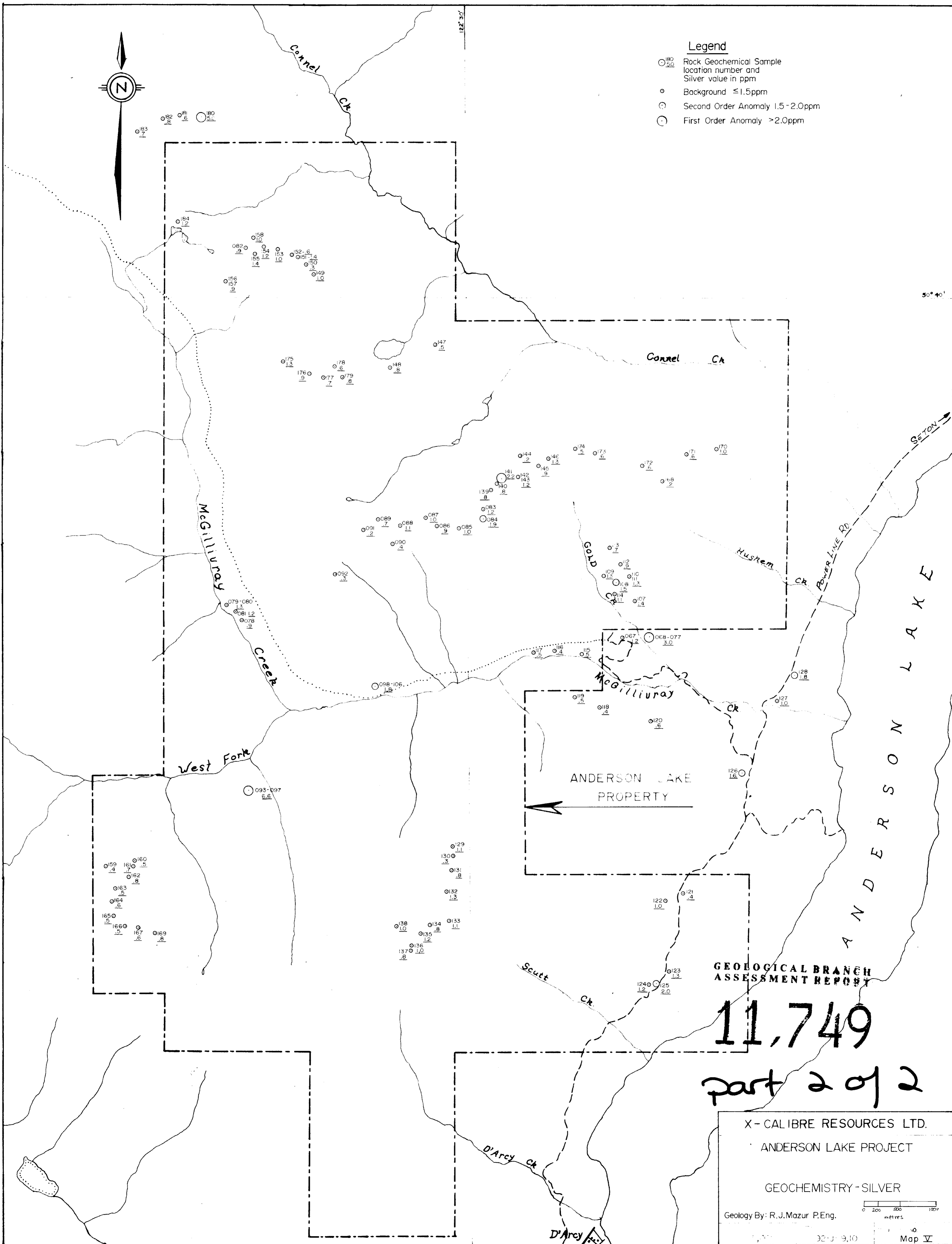
GEOCHEMISTRY - GOLD





Legend

- ₁₈₀/_{2.5} Rock Geochemical Sample location number and Silver value in ppm
- Background ≤1.5ppm
- Second Order Anomaly 1.5-2.0ppm
- First Order Anomaly >2.0ppm



GEOLOGICAL BRANCH
ASSESSMENT REPORT

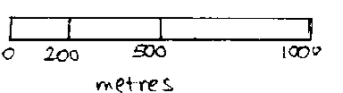
11,749

part 2 of 2

X-CALIBRE RESOURCES LTD.
ANDERSON LAKE PROJECT

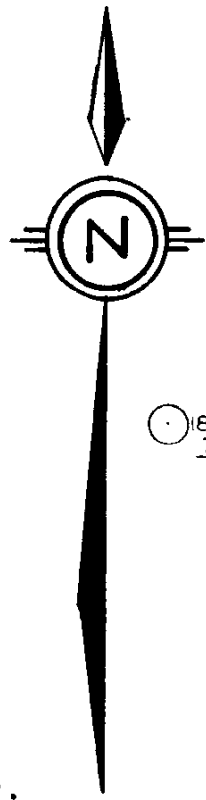
GEOCHEMISTRY - SILVER

Geology By: R.J. Mazur P.Eng.



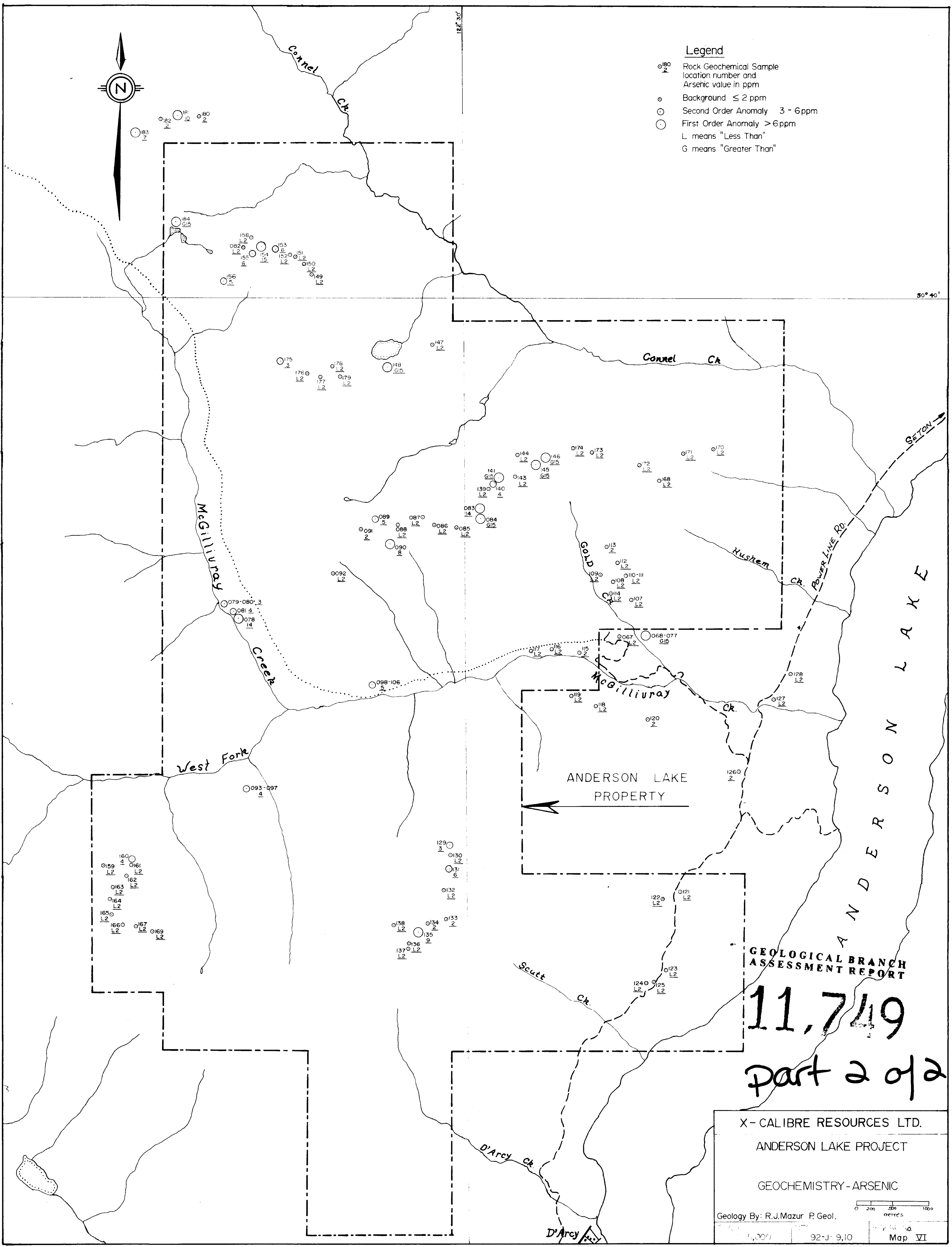
2003-09-10

Map V



Legend

- ¹⁸⁰/₂ Rock Geochemical Sample location number and Arsenic value in ppm
- Background ≤ 2 ppm
- Second Order Anomaly 3 - 6ppm
- First Order Anomaly > 6ppm
- L means "Less Than"
- G means "Greater Than"



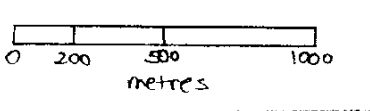
ANDERSON LAKE PROPERTY

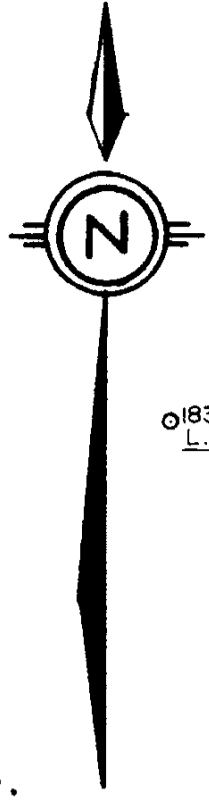
GEOLOGICAL BRANCH
ASSESSMENT REPORT

11,749
part 2 of 2

X - CALIBRE RESOURCES LTD.
ANDERSON LAKE PROJECT
GEOCHEMISTRY - ARSENIC

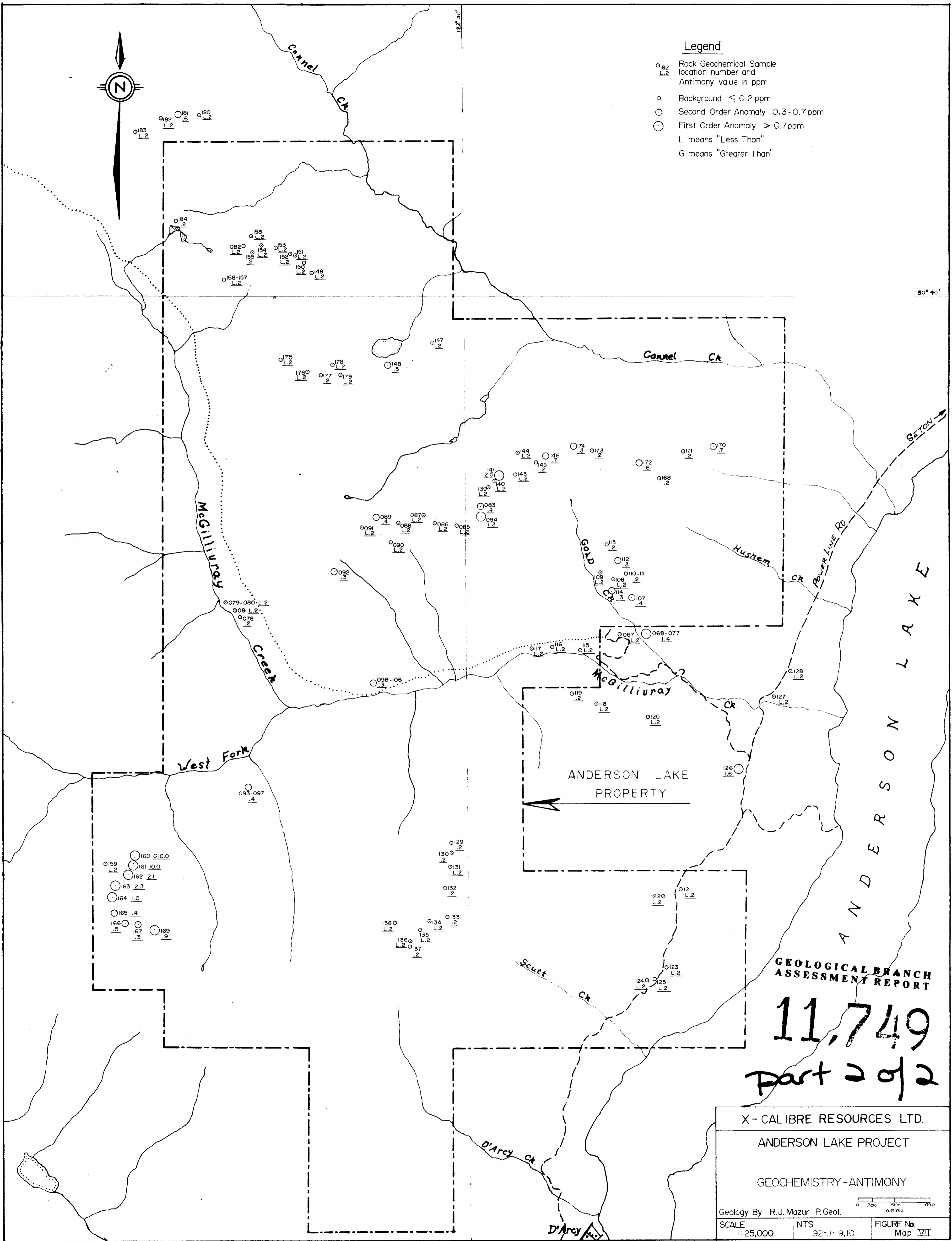
Geology By: R.J. Mazur P. Geol.





Legend

- 182 L.2
Rock Geochemical Sample location number and Antimony value in ppm
- Background ≤ 0.2 ppm
- Second Order Anomaly 0.3-0.7 ppm
- First Order Anomaly > 0.7 ppm
- L means "Less Than"
- G means "Greater Than"



50° 40'

ANDERSON LAKE PROPERTY

ANDERSON LAKE

○ 159 L.2
 ○ 160 G10.0
 ○ 161 10.0
 ○ 162 2.1
 ○ 163 2.3
 ○ 164 1.0
 ○ 165 .4
 ○ 166 .5
 ○ 167 .3
 ○ 169 .9

GEOLOGICAL BRANCH ASSESSMENT REPORT

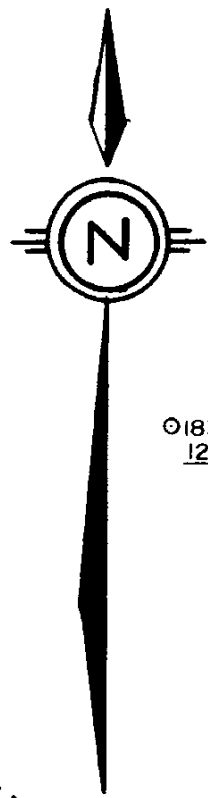
11,749
Part 2 of 2

X-CALIBRE RESOURCES LTD.
 ANDERSON LAKE PROJECT
 GEOCHEMISTRY-ANTIMONY

Geology By R.J. Mazur P.Geol.

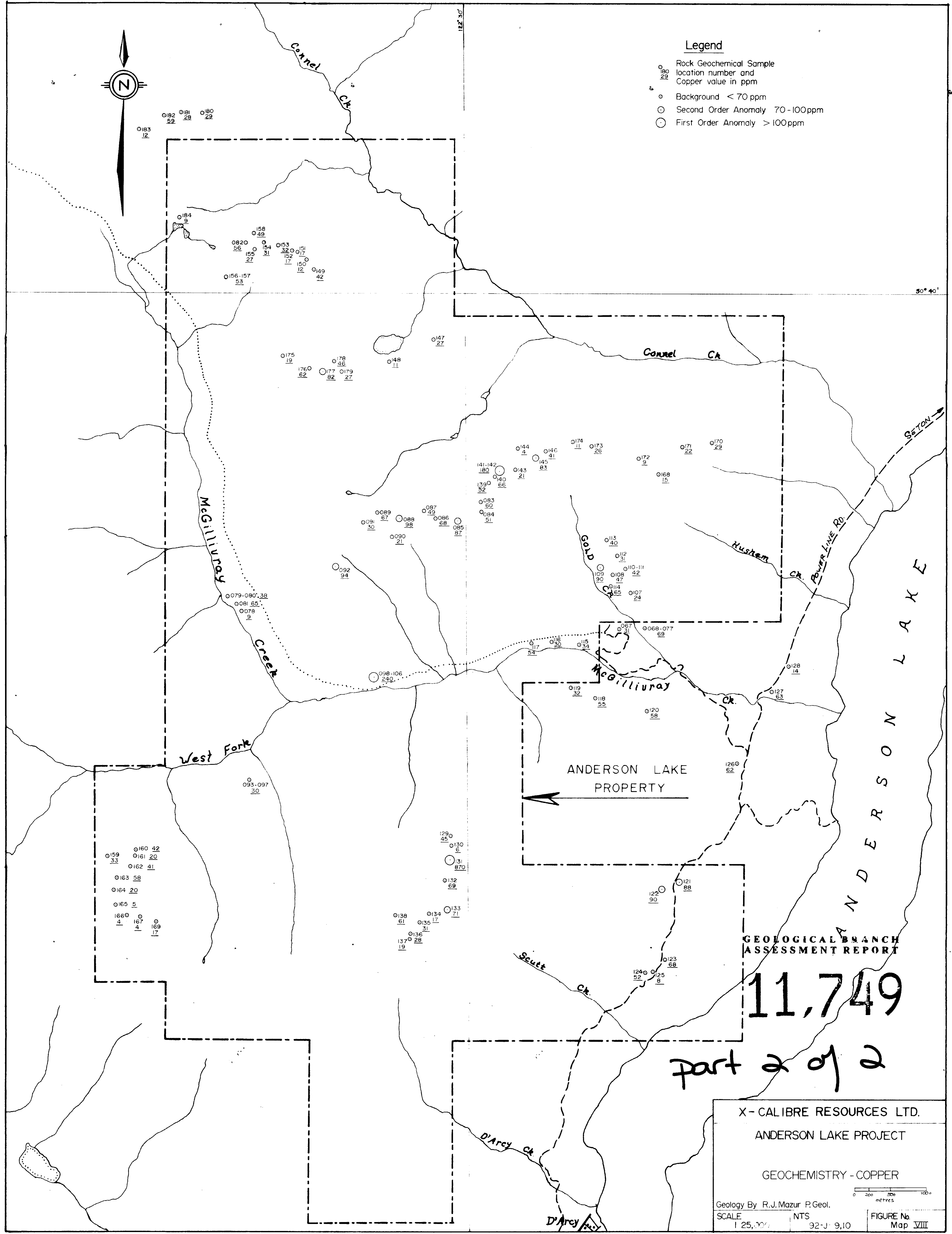
SCALE 1:25,000 NTS 92-J-9,10 FIGURE No. Map VII

0 200 400 600 METRES



Legend

- Rock Geochemical Sample location number and Copper value in ppm
- Background < 70 ppm
- Second Order Anomaly 70 - 100ppm
- First Order Anomaly > 100ppm



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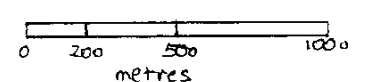
GEOLOGICAL BRANCH
ASSESSMENT REPORT

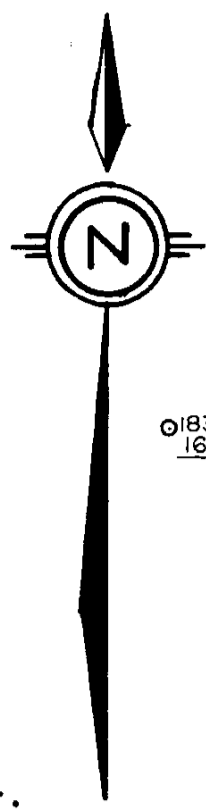
11,749

part 2 of 2

X - CALIBRE RESOURCES LTD.
 ANDERSON LAKE PROJECT
 GEOCHEMISTRY - COPPER

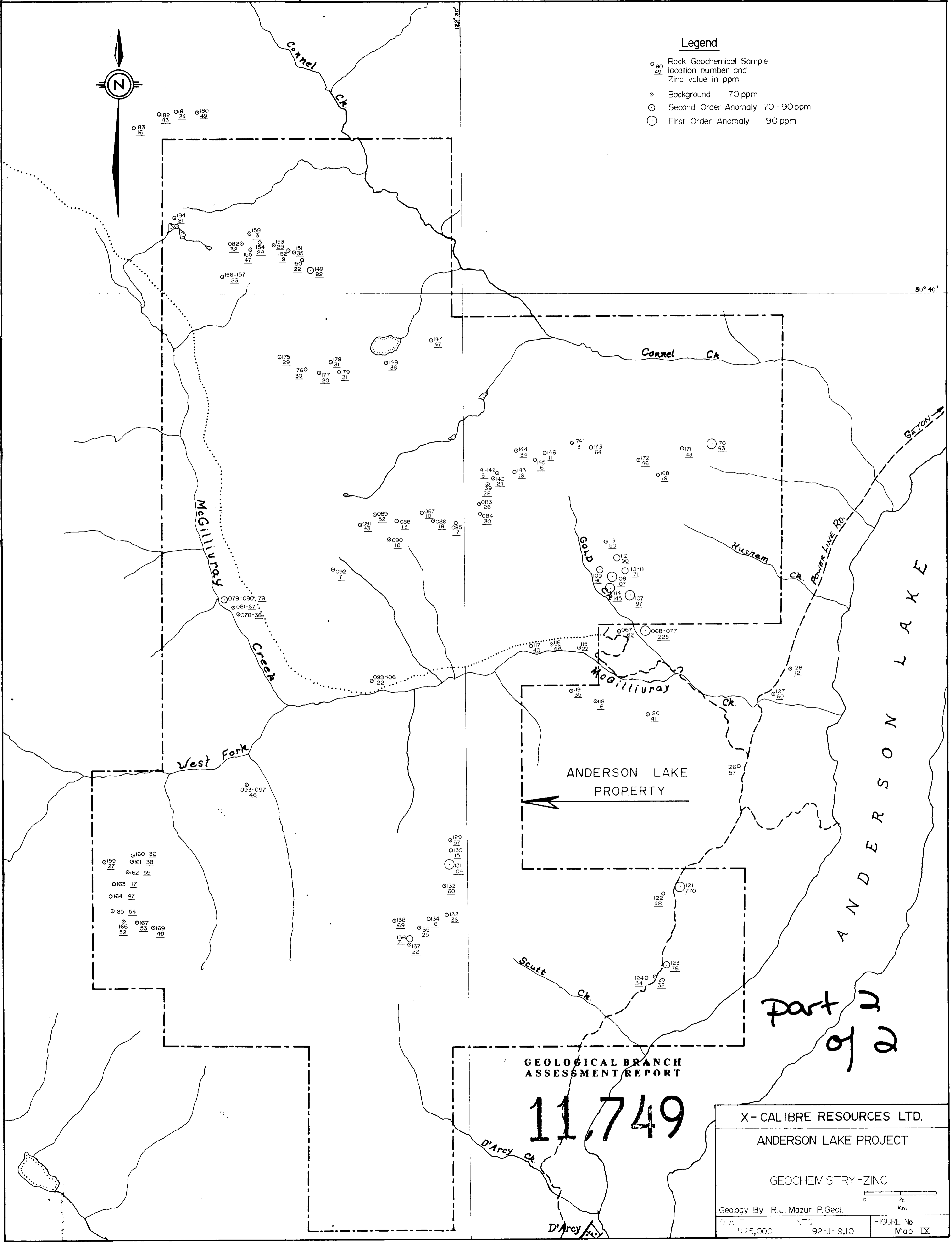
Geology By R.J. Mazur P. Geol.
 SCALE 1:25,000 NTS 92-J-9,10
 FIGURE No. Map VIII





Legend

- ₁₈₀₄₉ Rock Geochemical Sample location number and Zinc value in ppm
- Background 70 ppm
- Second Order Anomaly 70-90ppm
- First Order Anomaly 90 ppm

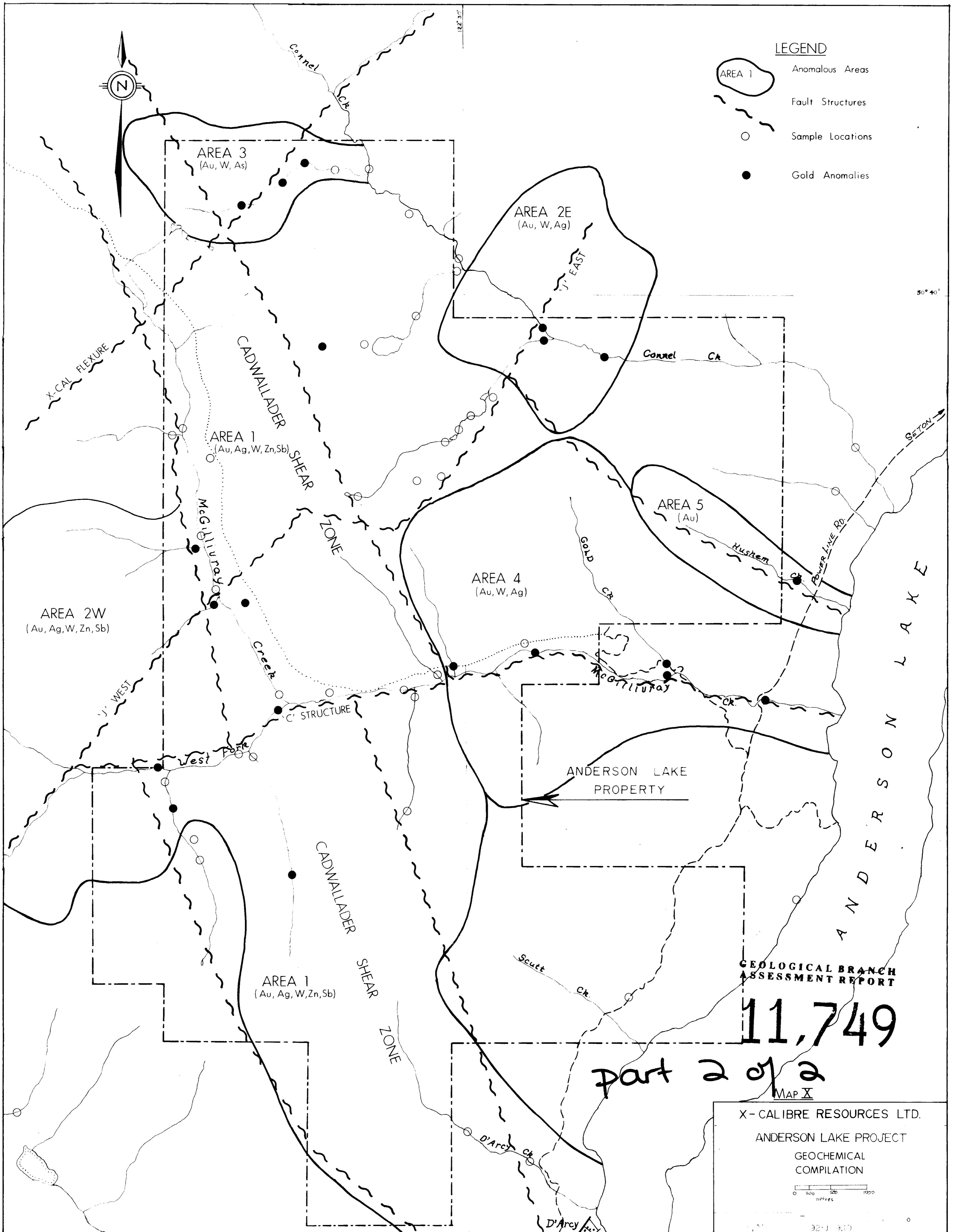


**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

11,749

part 2
of 2

X-CALIBRE RESOURCES LTD.		
ANDERSON LAKE PROJECT		
GEOCHEMISTRY - ZINC		
Geology By R.J. Mazur P.Geol.		
SCALE 1:25,000	NTS 92-J-9,10	FIGURE No. Map IX



LEGEND

- AREA 1 Anomalous Areas
- Fault Structures
- Sample Locations
- Gold Anomalies

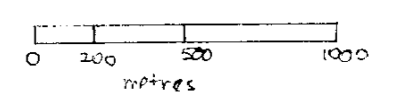
**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

11,749

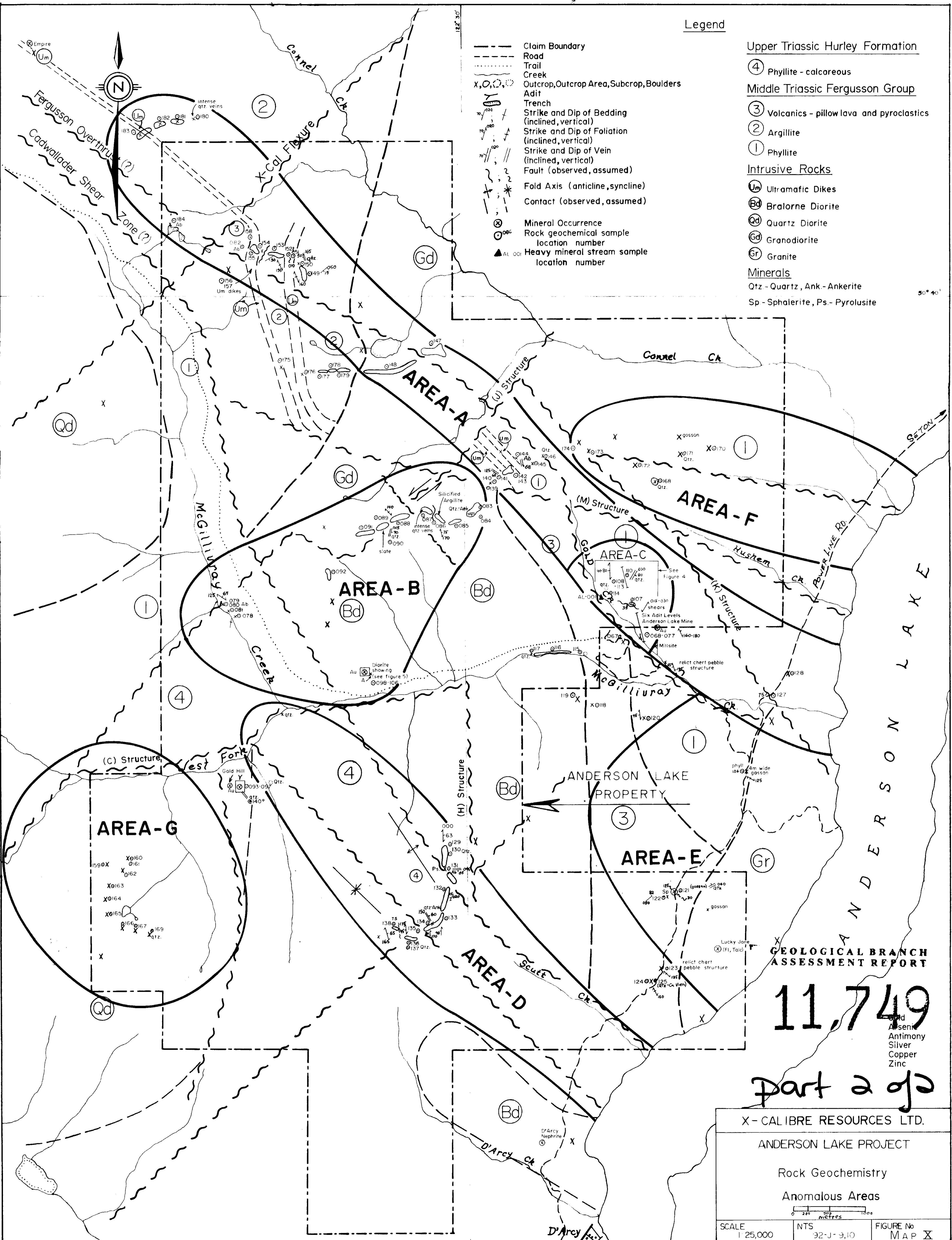
part 2 of 2

MAP X

X-CALIBRE RESOURCES LTD.
ANDERSON LAKE PROJECT
GEOCHEMICAL
COMPILATION



32-J-3,10



Legend

- Claim Boundary
- - - Road
- ... Trail
- ~ Creek
- X, O, Q, etc. Outcrop, Outcrop Area, Subcrop, Boulders
- Adit
- Trench
- Strike and Dip of Bedding (inclined, vertical)
- Strike and Dip of Foliation (inclined, vertical)
- Strike and Dip of Vein (inclined, vertical)
- Fault (observed, assumed)
- Fold Axis (anticline, syncline)
- Contact (observed, assumed)
- Mineral Occurrence
- Rock geochemical sample location number
- ▲ Heavy mineral stream sample location number

Upper Triassic Hurley Formation

④ Phyllite - calcareous

Middle Triassic Fergusson Group

③ Volcanics - pillow lava and pyroclastics

② Argillite

① Phyllite

Intrusive Rocks

Um Ultramafic Dikes

Bd Bralorne Diorite

Qd Quartz Diorite

Gd Granodiorite

Gr Granite

Minerals

Qtz - Quartz, Ank - Ankerite

Sp - Sphalerite, Ps - Pyrolusite

50° 40'

GEOLOGICAL BRANCH ASSESSMENT REPORT

11,749

Gold
Arsenic
Antimony
Silver
Copper
Zinc

Part 2 of 2

X-CALIBRE RESOURCES LTD.

ANDERSON LAKE PROJECT

Rock Geochemistry

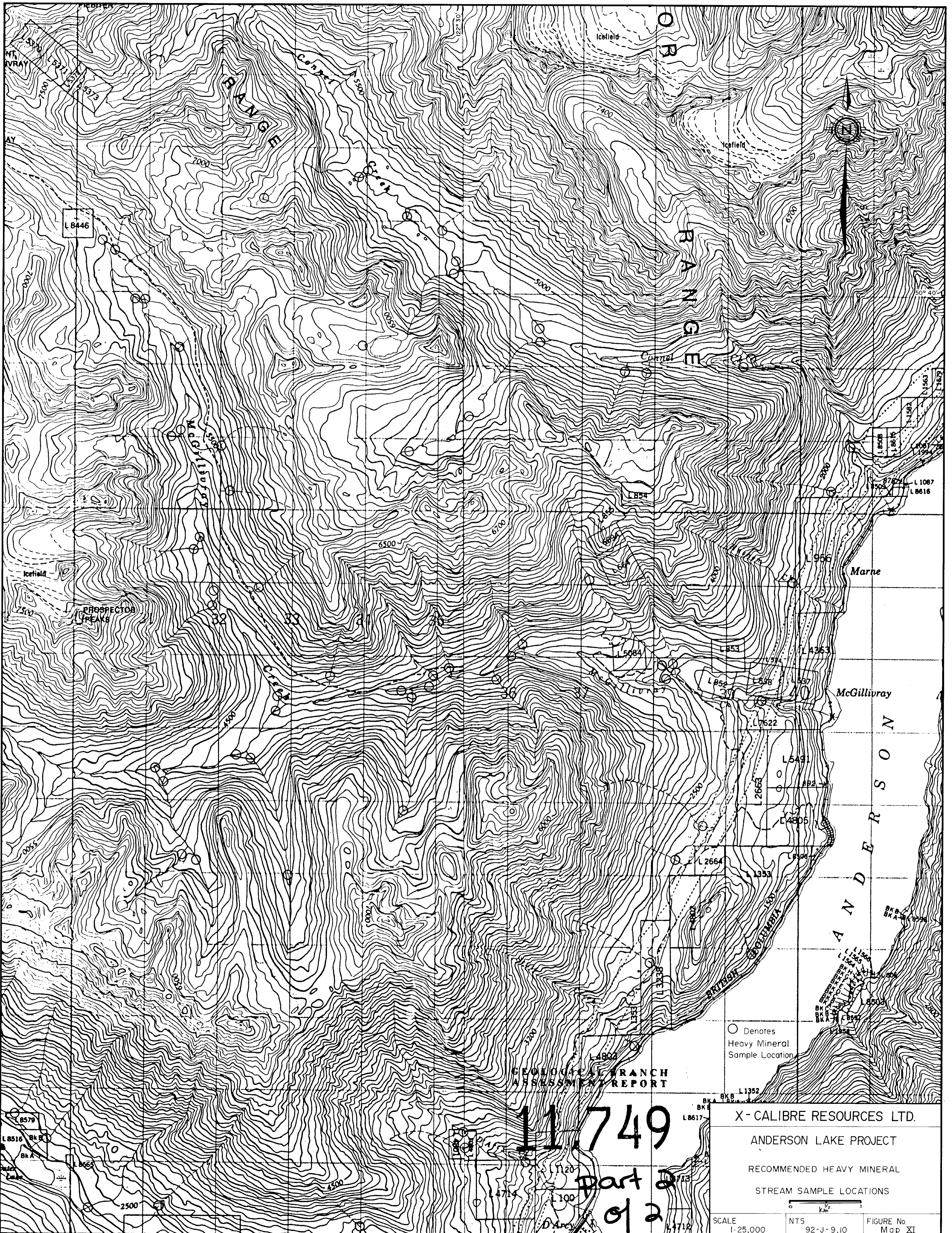
Anomalous Areas

0 200 400 metres

SCALE 1:25,000

NTS 32-J-9,10

FIGURE No MAP X



L 8446

BRAND

ORANGE

Marne

McGillivray

ANDERSON

GEOLOGICAL BRANCH
ASSESSMENT REPORT

11749

part 2
of 2

○ Denotes
Heavy Mineral
Sample Location

X-CALIBRE RESOURCES LTD.
ANDERSON LAKE PROJECT
RECOMMENDED HEAVY MINERAL
STREAM SAMPLE LOCATIONS

SCALE 1:25,000 NTS 92-J-9,10 FIGURE No. Map XI