84-1385-13362

11/85

1984 ASSESSMENT REPORT

on the

LIZARD CLAIMS

by

D.G. Mallalieu, Geologist
S. G. Enns, Geologist, Supervisor
G. Hendrickson, P. Geophysicist

Clearwater Area, Kamloops Mining Division
NTS 92/P16

Lat. 51°51'N Long. 120°120'W

Owned and Operated by: Kidd Creek Mines Ltd.

February 1985 Vancouver, B.C.

TABLE OF CONTENTS

TABLES

APPENDICES

LIST OF ILLUSTRATIONS

PLATES

The Lizard property looking west from the Lizard Grid. Ejas Lake is on the left. Prominent hills are Fennel Formation basalt.

SUMMARY

This report presents results of the 1984 fieldwork on the Lizard claims. The purpose of the Lizard project was to explore for gold mineralization associated with pyrrhotite in the black phyllite of the Eagle Bay Formation. Exploration was prompted by Eureka Resources' discovery of stratabound gold at Frasergold Creek. The gold occurs in iron carbonate horizons within phyllite. The recognition of anomalous gold in a piece of drill core from a hole drilled by Aquitaine Company of Canada Ltd. in 1978 prompted the staking of the Lizard claims.

The project-area covers two claims, Lizard 1 and 2 (40 units) which are wholly owned by Kidd Creek Mines Ltd. The claims are located approximately 50 km northwest of Clearwater, British Columbia.

Fieldwork was carried out from June 7 to August 25, 1984 and consisted of line cutting, geologic mapping, EM and magnetometer surveys and geochemical sampling.

The claims are underlain mainly by black phyllite, quartzite, subordinate quartz-muscovite schist and tuffs of the Eagle Bay Formation. The sequence appears to be an overturned isoclinal antiform. The best mineralized outcrop is a quartz-muscovite schist with up to 7% pyrite. It is Na_2O-depleted and K_2O-enriched, but no base metal sulphides were observed.

Geophysical results indicate the presence of a significant 400 m long, strongly conductive and magnetic zone on the Lizard grid. It is essentialy coincident with a 200 m-long Pb-Zn anomaly and is assoicated with pyritic quartz-sericitie schist at its north end, and with pyrrhotite-bearing black phyllite at its south end.

The magnetic conductor drilled by Aquitaine was confirmed on the GRIT #6 grid; it appears to terminate 150 m northwest of the old drill hole site. This conductor is separated by 1.5 km of swamp and appears to be on strike with the conductor on the Lizard grid.

The 1984 exploration expenditures on the Lizard claims totalled approximately $29,000, of which $16,000 has been applied as assessment work.

INTRODUCTION

Location, Access and Terrain

The Lizard Claim Group is located in central British Columbia at 120°20'W and 51°51'N: NTS 92P/16. The property is approximately 50 km northwest of Clearwater (Figure 1), within the bounds of Tree Farm Licence No. 18. Ejas and Maury Lakes are partially enclosed by the claim boundaries.

Access to the claims is by way of an extensive network of well maintained logging roads operated by Clearwater Timber Products Ltd.. A four-wheel drive spur road provides direct access to the Lizard Grid on the south part of the claims.

The project area lies within the northeastern part of the Shuswap Highland. Topography ranges from 1300m at Maury Lake, to 1700 m at the Lizard Grid. Ejas and Maury Lakes occupy a narrow swampy valley confined between rounded hills to the west, and Swayback Ridge to the east.

Thickness of glacial drift varies from 7 m in the region north of Ejas Lake (Dawson, 1978) to less than 1 m on Swayback Ridge. Glaciation has been sufficiently intense to limit outcrop to roadcuts and minor hills. Muskeg-type vegetation is dominant over the property. Better drained areas are occupied by black spruce and balsam.

Property History

The first reported mineral exploration in the area was conducted in 1966 (Salat, 1978). Early staking covered lead- silver-bearing float (10.68% Pb, 950g/t Ag) discovered south of Maury Lake. Reconnaissance soil sampling in this vicinity showed a few moderately anomalous zinc and copper values. This was followed by a ground magnetometer and EM survey.

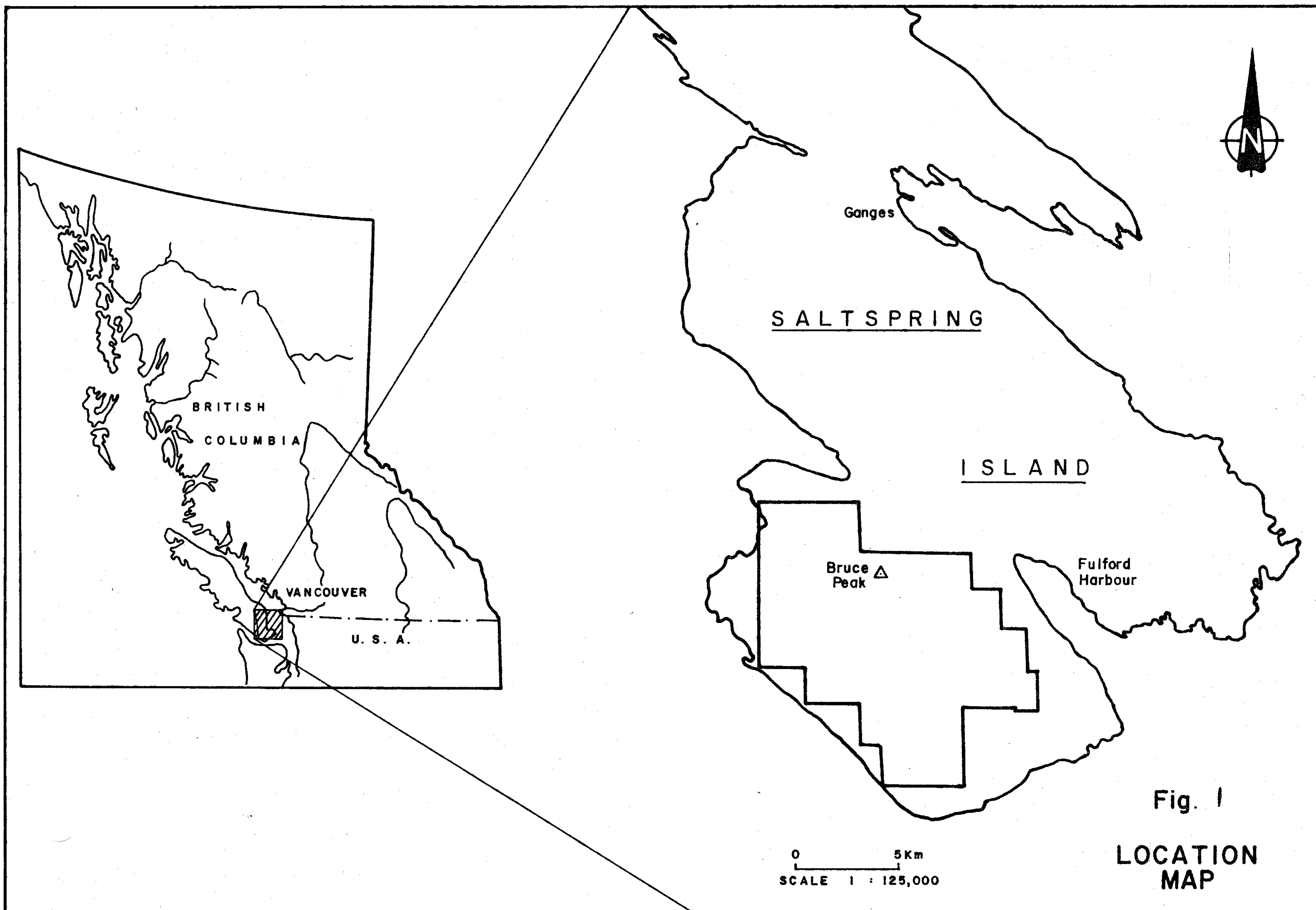


Fig. 1

LOCATION MAP

Aquitaine optioned the Grit Claims from Barrier Reef Resources Ltd. in May 1977. The total staked coverage consisted of 96 units or 2400 hectares (some of which included additional staking by Aquitaine). An airborne EM and magnetic survey was flown by Aerodat in June 1977 and subsequently followed by ground geophysics over selected grids (Boerner, pers. comm. 1984). A coincident magnetic and EM anomaly situated north of Ejas Lake was tested by a single diamond drill hole in January 1978 (Dawson, 1978). The conductor was found to be a narrow graphitic pyrrhotite section within black quartzose phyllite. A later analysis in 1983 of a piece of core indicated the presence of anomalous gold and silver in the graphitic pyrrhotite-bearing phyllite.

1984 WORK PROGRAM

The Lizard Claims (40 units) were staked in November, 1984 by Kerr, Dawson and Associated Ltd. of Kamloops, B.C. on behalf of Kidd Creek Mines Ltd. (KCM) (Figure 2).

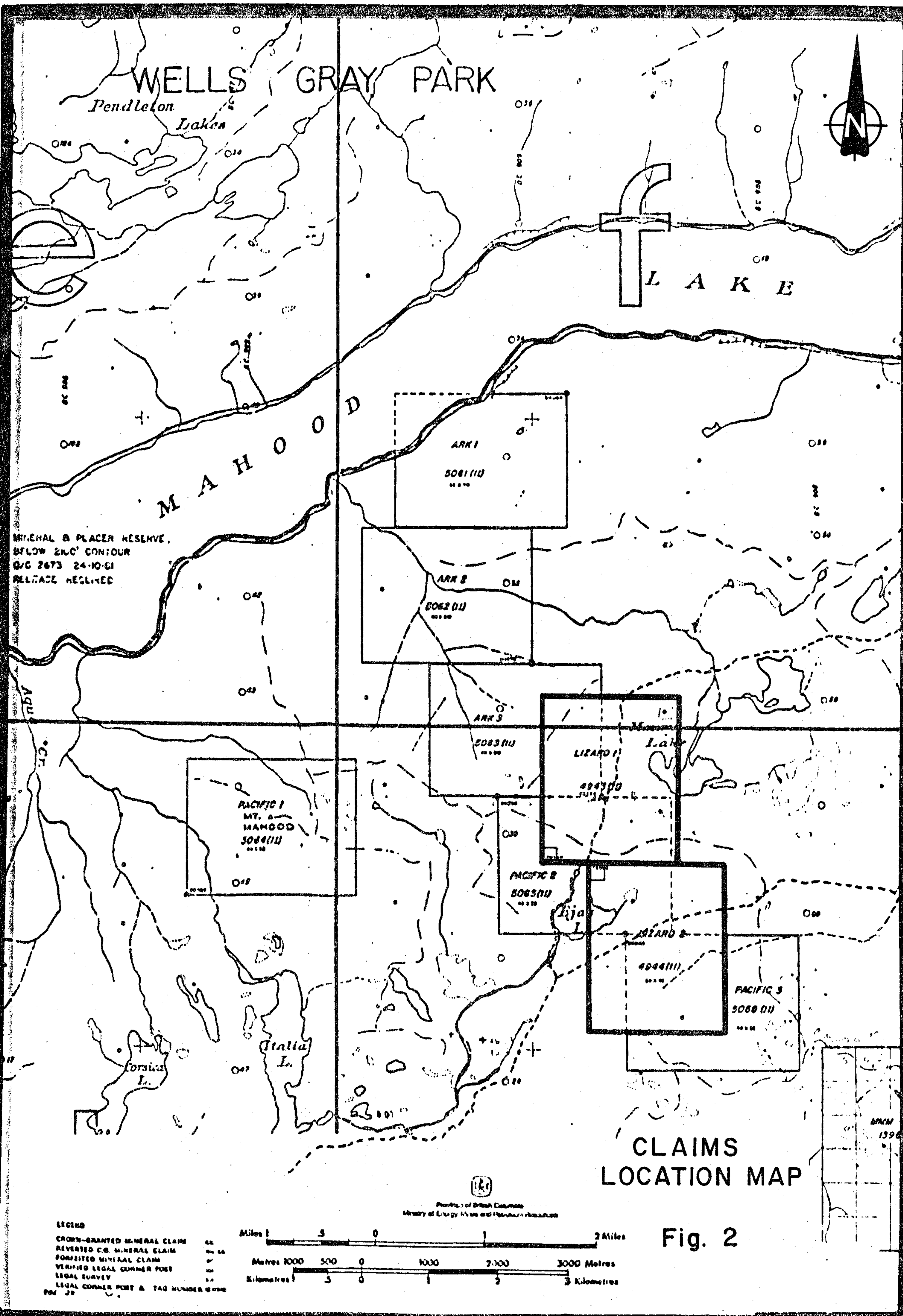
LIZARD 1, 2 - Claim Status

Claim	Units	Record No.	Location Date	Record Date
Lizard 1	20	4943	Nov 9/83	Nov 17/83
Lizard 2	20	4944	Nov 7/83	Nov 17/83

Field work was performed during the following periods:

June 7 to 20, July 7 to 10 and August 9 to 30.

Two grids (totalling 3.1 line-km) were established for geophysics and consisted of 1680 m on the



WELLS GRAY PARK
Pendleton Lakes
MAHOOD LAKE
MINERAL & PLACER RESERVE,
BELOW 2100' CONTOUR
O/C 2673 24-10-61
RELEASE REQUIRED
ARK 1
5061 (11)
ARK 2
5062 (11)
ARK 3
5063 (11)
LIZARD 1
4943 (11)
LIZARD 2
4944 (11)
PACIFIC 1
MT. MAHOOD
5064 (11)
PACIFIC 2
5065 (11)
PACIFIC 3
5066 (11)
Italia L.
Corsica L.
Lake
CLAIMS
LOCATION MAP
Province of British Columbia
Ministry of Energy, Mines and Petroleum Resources
LEGEND
CROWN-GRANTED MINERAL CLAIM
REVERTED C.G. MINERAL CLAIM
FORFEITED MINERAL CLAIM
VERIFIED LEGAL CORNER POST
LEGAL SURVEY
LEGAL CORNER POST & TAG NUMBER
Miles 1 .5 0 1 2 Miles
Metres 1000 500 0 1000 2000 3000 Metres
Kilometres 1 .5 0 1 2 3 Kilometres

Fig. 2

Lizard Grid and 1410 m on the Grit #6 Grid as indicated on the geology map. Soil sampling was subsequently carried out over portions of most lines at 20 m intervals, except for lines 100N through to 527N on Lizard Grid which were sampled in their entirety. Both grids were also covered by HLEM and magnetometer surveys.

Geologic mapping at a scale of 1:10,000 was conducted along all existing logging roads. Pace and compass traverses were used to map the northwest portion of the Lizard 1 claim, which was largely drift-covered.

Stream sediment and rock sampling were conducted over the entire property as governed by streams and outcrops.

GEOLOGY

Regional Geology

The Lizard claim group lies within the Fennel and Eagle Bay Formations of the Omineca Crystalline Belt, (Figure 3). This belt is a collage of mid-Proterozoic miogeoclinal rocks comprised of Paleozoic and lower Mesozoic volcanic and pelitic rocks and local Precambrian crystalline basement. The rocks were highly deformed and variably metamorphosed up to high-grades in mid-Mesozoic to early Tertiary time. These rocks are intruded by Jurassic and Cretaceous plutons (Monger et al, 1982).

Fennel and Eagle Bay Formations occupy the western part of the Omineca Crystalline Belt. The former correlates with the Antler Formation of the Slide Mountain Group, the latter is a part of the Mount Ida Group (Preto, 1982).

TABLE 1

ERA	PERIOD		CAMPBELL AND TIPPER, 1971	JONES, 1959	OKULITCH, 1979	PRETO *ET AL.*, THIS STUDY	READ, 1976
PALEOZOIC	TRIASSIC	U					
		M					
		L					
	PERMIAN				UNCONFORMITY FENNELL FORMATION		
	PENNSYLVANIAN		FAULT CONTACT, RELATIONSHIP UNCERTAIN		FAULT CONTACT MILFORD GROUP		MILFORD GROUP
	MISSISSIPPIAN	U	FENNELL FORMATION			EAGLE BAY FORMATION	
		L					
	DEVONIAN	U	FAULT CONTACT RELATIONSHIP UNCERTAIN			FENNELL FORMATION	
		M					
		L					UNCONFORMITY
	SILURIAN						LARDEAU GROUP
	ORDOVICIAN			?			
	CAMBRIAN	U			EAGLE BAY FORMATION		
		M		LARDEAU GROUP			
		L		BADSHOT FORMATION	TSHINAKIN LIMESTONE		BADSHOT FORMATION
PRECAMBRIAN	WINDERMERE			UNCONFORMITY CONTACT UNKNOWN EAGLE BAY FORMATION			
	PRE-WINDERMERE			SICAMOUS FORMATION			

Table 1 Proposed lithologic correlations of the Omineca Crystalline Belt west of the Shuswap and Monashee complexes with the stratigraphy of the Kootenay Arc. (Preto, 1981).

The Fennel Formation consists of volcanic greenstones with minor interbedded chert, argillite and phyllite, concordant bodies of quartz-porphyry and small carbonate lenses (Aggarwal et al, 1984). The Eagle Bay Formation includes a broad assemblage of mafic and felsic metavolcanic and metasedimentary rocks with numerous lenses of carbonate (Preto, 1981).

The stratigraphic and age relationships between these two formations are not well established. Campbell and Tipper (1971) proposed a reverse or thrust fault generating an unconformable contact. Preto (1979) suggested that the Eagle Bay conformably overlies the Fennel Formation. Preto and Schiarizza (1982) suggested that the Upper Mississippian to late Permian Fennel Formation is, in part, coeval with and, in part, overlies the Eagle Bay Formation of late Devonian to late Mississipian age.

North of the Lizard property is the Quesnel Trough, which is a linear belt of early Mesozoic volcanic and sedimentary rocks lying along the western margin of the Omineca Crystalline Belt. The Quesnel Trough is in fault contact on the west by the Cache Creek Group and on the east by older Paleozoic and Precambrian strata. The trough has been interpreted to represent an island arc assemblage formed at a consuming plate margin above an easterly dipping subduction zone which existed from late Triassic to early Jurassic time (Saleken and Simpson, 1984).

Property Geology

Introduction

Interest in the area formerly occupied by the Grit claims was revived by Eureka Resources' discovery of stratabound gold occurrences at Frasergold Creek. There, gold-pyrite mineralization occurs along an iron-carbonate-rich horizon within the Upper Triassic argillite sequence which has been highly deformed and metamorphosed to phyllite (Salaken and Simpson, 1984). Apparent similarities between the lithologies at Frasergold Creek and lithologies intersected by Aquitaine's single drill hole, together with encouraging Au values from a piece of core from the conductor zone (Au 0.02 oz/ton, Ag 0.38 oz/ton), prompted KCM's acquisition of the Lizard claims.

Lithology and Stratigraphy

Ten lithological units were mapped (Figures 4 and 5) on the Lizard property. Detailed descriptions of each map-unit are found in Appendix B.

The Eagle Bay Formation underlies greater than 80 percent of the Lizard claims. Quartzite (unit 2a) and phyllite (unit 2b) dominate; white quartz-muscovite schist (unit 2c), lapilli block tuff (unit 2e) and meta block ash flow (unit 2f) are subordinate.

The Fennel Formation is represented by basalt (unit 1a), and siltstone (unit 1c). The Eagle Bay Formation is interpreted to conformably overlie the Fennel Formation.

On the property, the metasedimentary rocks of the Eagle Bay Formation range from carbonate to quartzite-quartz-granule conglomerate to phyllite and andalusite schists (Appendix B). Pyrite and pyrrhotite totalling 2% and rarely, chalcopyrite (<1%) are disseminated throughout the metasedimentary rock, however, the sulphides are most common in the phyllites.

The rock units dip about 30° to the southwest.

Pyroclastic rock displays its greatest visible thickness in the northern part of the Lizard 1 claim. Feldspar-quartz crystal tuff (unit 2d), meta block-ash flow and minor interdigitations of sericite schist (metafelsic tuff) and phyllite are present. Quartz-muscovite schist and chlorite-quartz-muscovite schist (unit 2c) represent a small unit hosted in a sequence of quartzitic and phyllitic rocks in the southeastern part of Lizard 2 (Figure 5). The quartz-muscovite schist unit has been eroded to the south but its extent along strike to the north is presently unknown.

A total of eleven samples (9 igneous, 2 sedimentary) were selected for whole rock analysis. Two samples associated with pyrite mineralization appear to be pervasively altered. Selected plots of whole rock data are listed in Appendix H.

A MgO vs FeO variation diagram (Figure 9) shows that the plot points are scattered about a line delineating the Cascades trend. Seven of nine samples, when plotted on an alkali "igneous spectrum" diagram (Figure 10) fall outside of the envelope. Two samples associated with pyrite mineralization display Na_2O depletion when compared to typical modern volcanic terrane Na_2O contents (Condie and Moore, 1977). The other samples are interpreted to have undergone K_2O enrichment.

Whole rock geochemical analyses, given as computer print-out reports are included in Appendix G.

Interpretation of geologic data generated during the 1984 field season on the Lizard Project signficantly contradicts interpretations presented in previous reports (Salat, 1978, Campbell and Tipper, 1971).

Two previous map units (Sicamous Formation and quartz monzonite were found to be incorrect; they correlate better with lithologic descriptions of the Eagle Bay Formation. This correlation is consistent with the suggested north-northwesterly continuation of similar lithology from the Vernon map-area of the Eagle Bay Formation by Campbell and Tipper (1971), Preto (1981), Preto (1982) and Aggarwal et al (1984).

A previously mapped Cretaceous? crystalline quartz monzonite, lying west of Maury Lake is actually a massive pyroclastic flow, which exhibits increasingly stronger schistosity to the west.

Structure

Structural data on the Lizard claims was largely obtained from metasedimentary rocks, predominantly from the phyllite.

The metasedimentary - metavolcanic rock succession occurs within an overturned isoclinal (class 2) antiformal fold (Figures 4 and 5) with a shallow plunge to the northwest. Axial planes are parallel to schistosity. Two phases of folding have been defined; a third phase identified by Preto (1982) was not confirmed.

The primary phase of folding (F_1) is defined in ptygmatically folded quartz veins in phyllite (Plate

Plate 2a Ptygmatically folded quartz veins in black phyllite

Plate 2b Reverse kink band in black phyllite

2a). Parasitic folds with amplitudes greater than one metre are present on the south limb of the major antiform and reflect syn F_1 deformation.

F_2 is defined in ptygmatically folded quartz veins such that their axial planes are essentially normal to axial planes of F_1 veins.

Sporadially developed reverse kink bands may be structures which are either syn or post F_2 deformation.

The tectonic fabric as defined by schistosity parallel to bedding has a northwest strike direction. Maximum, minimum and median dips are 90°, 10° and 30° to the southwest, respectively (Figure 12).

Primary and secondary schistosities (S_1 and S_2 respectively) are ubiquitous throughout the phyllites. Both structures are parallel to bedding/banding. S_1 defines the dominant cleavage in the rock, S_2 defines the superimposed crenulation cleavage. S_3 is represented by lineations oblique to S_1 and S_2. It was observed locally but is not a well defined feature.

Faulting has not been observed on the property. The reverse or thrust fault proposed by Campbell and Tipper (1971) at the contact between the Fennel and Eagle Bay Formations has been discounted. A better understanding of structure and stratigraphy from recent government mapping in the general Clearwater region has eliminated the necessity for a thrust faulted contact between these formations.

Metamorphism

Both regional and contact metamorphism have affected the metasedimentary and metavolcanic rock units on the claims.

Regional lower greenschist facies metamorphism has affected both the Fennel and Eagle Bay Formations in this region (Preto, 1982, Aggarwal et al, 1984). Low-grade contact metamorphism has at least affected the southern part of Lizard 2. Prograde contact metamorphism has resulted in the generation of 'thermal biotite' in quartzitic rock as well as a low-grade metamorphic mineral assemblage in pelitic rock which has altered to andalusite and cordierite bearing schists (Appendix B, samples E17 and E18). The presence of cordierite indicates that parts of Lizard 2 have attained middle-grade contact metamorphic facies. The presence of rhyolite sills and dykes, shown on Figure 4 as map units 1b and 2c, indicates the proximity of intrusive plutonic rocks probably of Cretaceous age, which are the cause of contact metamorphism.

Mineralization

Mineralization on the Lizard claims is sparse.

The most significant showing on the property occurs on the Lizard 2 claim at the north end of the Lizard grid (Figure 4). A pyritic quartz-muscovite schist, containing up to 7 percent disseminated pyrite, minor pyrrhotite and rare chalcopyrite, displays random second order anomaly Au values.

Discussion

The problems of correlation of the Eagle Bay, Fennel and Sicamous Formations with Kootenay Arc Stratigraphy are still largely with us because of the lack of sufficiently detailed stratigraphic and paleontologic information from the Eagle Bay and Sicamous Formations.

The Lizard project is a locus for this problem. The Quesnel Trough, of Island Arc affinity (Salaken and Simpson, 1984), lies north of the property. To the south lie the Fennel and Eagle Bay Formations of Paleozoic age, thought to have formed in a tectonic setting similar to that of present-day oceanic islands or seamonts (Aggarwal et al, 1984).

The Quesnel Trough contains several stratabound gold deposits e.g. Frasergold, Megabuck, Jamboree and QR. The Chu Chua massive sulphide deposit lies in the Fennel Formation.

Geological mapping on the property revealed that the differences between the phyllitic members of the Eagle Bay Formation and those of the Quesnel Trough are subtle. Settings of mineralization similar to those of the Quesnel Trough were not encountered at Lizard.

GEOCHEMISTRY

Introduction

A total of 142 soil, 53 stream silt and 141 rock samples were collected on the Lizard property in 1984 and were submitted for geochemical analysis.

Soil sampling was carried out at 20 m intervals over cut lines of the Lizard and Grit #6 grids (Figures 13a,b,c, 15a,b). A total of 130 and 12 samples were collected, respectively over these grids. The B horizon-bedrock interface and C horizon-bedrock interface was routinely sampled. Depths to these interfaces ranged from 20 to 120 cm. For the most part, the depth required for sampling precluded the use of mattock or soil auger. A long-handled shovel, supplemented by trowel was found to be the most effective for sampling.

Twenty-five samples collected per man-day was considered to be good production.

Samples were collected by hand in Kraft paper envlopes, partially dried at room temperature, and delivered to Acme Analytical Laboratories Ltd., (Acme) Vancouver. The samples were dried at 60°C, sieved to -80 mesh and analysed. All pulp and oversize were retained.

The -80 mesh fraction was analysed as follows: A 0.500 g sample was digested with 3 ml 3:1:3 $HCl-HNO_3-H_2O$ at 95°C for one hour and diluted to 10 ml with water. The solution was analysed by inductively coupled plasma (ICP) for Ag, Cu, Pb, Zn. Using the same sample preparation as above, Atomic Absorption Spectrometry (AA) was performed on Au and Ba. In the case of Au, a larger sample (10 g) was used.

Stream sediment samples composed of relatively fine-grained silts and sands were collected from streams and runoffs on the claims and in the vicinity. Sample media was variable depending on stream conditions but mid-stream/side-stream bar material containing physically weathered detritus was considered optimum sample material. A 300 g sample was considered an optimum size for element homogeneity. Samples were collected in Kraft paper envlopes, dried at room temperature, then delivered to Acme in Vancouver where they were sieved to -80 mesh. This size fraction was analysed by methods described above. All pulp and oversize were retained.

All outcrops encountered in the course of geological mapping were geochemically sampled.

Sample masses ranged from 0.5 to 1.5 kg of unweathered material. All samples were pulverized to -100 mesh and analysed by methods outlined above. X-Ray Assay Laboratories Limited (X-RAY) of Don Mills, Ontario performed whole rock analysis by X-ray fluorescence (XRF) and 35-element analysis neutron activation analysis (NAA), and direct current plasma analysis (DCP) on selected samples (Appendix F).

Orientation Survey

A rudimentary orientation survey was conducted on the Lizard Grid (Figure 13 a, b, c) to determine the optimum soil horizon for analysis. The orientation was performed by sampling 'pits' at 20 m intervals on lines 200N and 100N. All horizons intersected were sampled i.e. A,B,C, B-bedrock interface, C-bedrock interface. Never were all horizons intersected at one locality.

Soil horizon development is poor on the Lizard Grid. The iron-rich B horizon is largely absent as is the leached lower A horizon.

Sieving at -80 mesh was considered sufficient for all analyses. Analyses were conducted by Acme of Vancouver. ICP and AA analysis were employed on Ag, Cu, Pb, Zn and Au, Ba respectively.

Data indicated that sampling the C horizonbedrock interface would maximize essentially all base metal analytical values. Conclusions could not be drawn from Au results, as all Au values were 5 ppb.

Presentation

The locations of all soil samples are displayed on Figures 13a and 15a, Appendix F. Soil results are indicated on Figures 13b,c and 15b. Stream geochemical anomalies are indicated on Figure 16a.

A total of 43 rock sample locations along line 357N are shown on Figure 5. Whole rock analysis locations are shown on the geology map, Figure 4.

Geochemical results for soil and stream sediments and for rock samples are listed by type in Appendix D.

The methods for the determination of first and second order geochemical anomalies are discussed in Appendix C. Tables 2, 3 and 4 list the definitions of threshold values used to determine anomalies.

Table 2: Definition of Soil Geochemical Anomalies

Element	First Order	Second Order	Background
Ag	> 1.5 ppm	> 0.7 ppm	0.1-0.2 ppm
Au	> 60 ppb	> 40 ppb	5 ppb
Ba	> 300 ppm	> 250 ppm	100 ppm
Cu	> 55 ppm	> 45 ppm	24 ppm
Pb	> 100 ppm	> 50 ppm	21 ppm
Zn	> 570 ppm	> 290 ppm	105 ppm

Table 3: Definition of Stream Sediment Anomalies

Element	First Order	Second Order	Background
Ag	> 1.5 ppm	n/a	0.1 ppm
Au	> 30 ppb	n/a	5 ppb
Ba	> 500 ppm	n/a	110 ppm
Cu	> 50 ppm	n/a	19 ppm
Pb	> 40 ppm	n/a	14 ppm
Zn	> 200 ppm	n/a	63 ppm

Table 4: Definition of Rock Geochemical Anomalies

Element	First Order	Second Order	Background
Ag	> 2.0 ppm	>1.0 ppm	0.3 ppm
Au	> 150 ppb	> 20 ppb	7 ppb
Ba	>1200 ppm	>700 ppm	100 ppm
Cu	> 75 ppm	> 60 ppm	25 ppm
Pb	> 50 ppm	> 30 ppm	7 ppm
Zn	> 300 ppm	>225 ppm	80 ppm

1984 Soil Sampling Results

Lizard Grid-Base metal soil anomalies

The most significatan base metal soil anomaly is indicated on Figure 13c. It is a first order Pb Zn anomaly with several second order Cu anomalous values. This anomly strikes northwest and extends from line 200N to line 405N. It corresponds closely to the strong EM conductor axis and the northern extent overlies an altered-looking, pyritic, quartz-muscovite schist.

Lizard Grid - Au, Ag soil anomalies

Precious metal soil anomalies are not considerd to be significant. They are present as uncommon, isolated, poorly reproduceable, anomalous samples. Some Ba-enrichment is also present in isolated anomalies.

Coincident, first order Au and second order Ag soil anomalies are restricted to two localities. The first anomaly on line 200N at 140E, exhibits Au and Ag values of 290 ppb and 25 ppm, respectively. The second anomaly (60 ppb, 0.7 ppm) is on line 300N at 100E. Both anomalies are isolated and display no downslope metal dispersion.

An isolated second order Au anomaly (55 ppb) on Line 405N at 60W, displays no base metal support. Sampling north of this location has not been sufficient to identify metal dispersion patterns.

A first order Ag anomaly (1.6 ppm) on line 200N at 20W has associated first order Pb, Zn and second order Cu values. Black phyllite outcrops to the south and is interpreted to underlie the sample site. Second order Ag soil anomalies are broadly associated with downslope dispersion of base metals.

1984 Stream Sampling Results

All anomalous stream silt geochemical values, with the exception of Au, are generated on a single stream draining west to the southern part of Maury Lake.

This drainage basin incorporates predominantly black phyllite, however, pyroclastic rock may be included at its northern extent.

A single Au anomaly (50 ppb) was generated in a runoff channel on the south side of Road 128 (Figure 16c), on the western end of line 527 N of the Lizard Grid. The result was not reproduceable.

1984 Rock Sampling Results

Samples, taken mostly from outcrops on the property, gave disappointing results.

First and second order anomalies (Table 4) within phyllitic and quartzitic rock are generally restricted to Cu and Pb; maximum values were 87 and 68 ppm, respectively. Twelve out of thirteen anomalous rock samples were from localities on the Lizard Grid, (this is likely a function of increased sample density, Figures 14a, b, c). A single sample of graphitic phyllite located approximately 2 km west of the northern lobe of Maury Lake displays anomalous Ag, Au values (1.2 ppm, 165 ppb).

A quartz-muscovite schist outcrop, 3 km east of the eastern Lizard 1 claim-boundary, generated Ag and Au values of 16.7 ppm and 315 ppb, respectively. This is associated with a first order, 388 ppm Pb anomaly. Quartz-muscovite schist, located at the northern end of the Lizard Grid (Figure 9), generated only second order Pb anomalies of approximately 37 ppm.

Quartz veins sampled in outcrop and a single vein from drill core generated the highest base metal, precious metal values of the project. An outcropping quartz vein, west of the southern lobe of Maury Lake, contains 1760 ppm Pb, 725 ppm Zn, 8.4 ppm Ag, and 90 ppb Au.

A 6 cm core sample from Aquitaine's drill hole G-78-1 assayed 0.020 oz/ton Au and 0.38 oz/ton Ag.

Massive non-mineralized basalt, found on the west side of Ejas Lake, was anomalous in Cu (Table 4). The values of 131 and 223 ppm are close to means set for international standards (Flanagan, 1983) so are not considered significant.

GEOPHYSICS

Introduction

During the period June 6 to August 24, a Kidd Creek geophysical crew conducted electromagnetic and magnetic surveys on the Lizard 1 & 2 claims. These claims are 100% owned by Kidd Creek Mines Ltd.

The purpose of this work was the ground-location and evaluation of conductors located by a previous (Aquitaine 1977) airborne electromagnetic survey, because conductors are frequently related to a combination of graphite and sulphide mineralization in association with base metals and gold. The equipment included an Apex Parametric Maxmin II electromagnetic system and two Scintrex MP-4 magnetometers, one of which was used as a base station.

Data Presentation

The data is presented in a plan of profiles form at a scale of 1:2000 (Figures 11a to 11c). The magnetic data is total field. The base field chosen for the magnetic survey is 58000 nanotesla.

In addition, a computer listing of the magnetic data is included as Appendix J. Magnetic profiles are machine-plotted beside these listings. Magnetic readings were taken every 10 metres.

The E.M. data is plotted at 1 cm = 20%. A solid line shows the in-phase component and a dashed line indicates the out-of-phase component.

Survey Procedure

The Lizard grid, consisting of 7 east-west lines, was established over the centre of the Lizard airborne anomaly. Line separation was 100 m, with a station separation of 20 m. This grid lies on a moderate, north-facing slope.

In addition to this grid, two new lines were established on the northwest side of the old GRIT #6 grid, which had been surveyed by the Aquitaine Company of Canada Ltd. in 1978. These two lines are more at right angles to the conductor than those of the old Aquitaine survey. Their purpose was to trace the conductor northwest to higher ground, where trenching might be possible. The GRIT #6 grid lies in swampy ground.

The Maxmin II electromagnetic system was used in the horizontal coplanar loop with a coil separation of 80 metres. Measurements were taken at two frequencies, 1777 Hz and 444 Hz.

For the magnetic survey, a base station magnetometer was run continuously (sampling every 10 seconds) to monitor the diurnal shift of the earth's magnetic field. A portable magnetometer was used with the sensor attached to a tall staff to ensure against errors created by magnetic objects on the operator. Both magnetometers were total field microprocessor-controlled instruments capable of performing automatic diurnal corrections and plotting when connected to each other and a suitable printer. These state-of-the-art instruments proved to be durable and very convenient to use under field conditions. A base station standard of 58000 nanotesla was assumed for all diurnal correction.

Overburden thickness is negligible on the Lizard grid, however, it averages 5 to 10 metres on the old GRIT #6 grid.

Discussion of Results

Electromagnetic and Magnetic Results

Lizard Grid

On the Lizard Grid, a strong dual conductor, known as the main conductor, was detected over approximately 400 m. The conductivity thickness product is quite variable, however, it is certain that good conductivity and width exist on lines 100N and 200N at the baseline. The spatial position of the dual conductor is indicated by shading on Figure 11a. Dip appears near vertical or steeply to the west. A second, much weaker, conductor is present on the east side of the grid. The host rock appears to be very weakly conductive as well.

The magnetic field over the Lizard grid is complex and suggests the presence of numerous pyrrhotite or magnetite stringers. One main magnetic anomaly correlates with the strong dual conductor. The conductor appears wider than the magnetic anomaly, therefore it is probable that only part of the conductor is magnetic. A steep to moderate, westerly dip is the general indication from the magnetic data.

In general, strong magnetic anomalies without associated conductors are probably due to magnetite. Strong magnetic anomalies with coincident strong conductors are probably related to pyrrhotite mineralization. Strong conductors without magnetic expression may be due to graphite and/or non-magnetic sulphide mineralization. Frequently, an anomaly is due to some combination of the above causes.

GRIT #6 grid

A strong conductor was detected on the new line 0 at 255E, which reconfirms the work done in 1978 and strongly suggests a steep NE dip. This conductor has good width and depth extent. The top of the conductor lies approximately 8 m below the surface. The 1978 drill hole was drilled down-dip, however, it is most probable that the hole managed to intersect all of this zone. A flanking, weak non-magnetic conductor exists parallel to and approximately 80 m west of the main conductor.

The step-out line, 150 metres to the NW (line 150N) failed to detect either the conductor or the magnetic anomaly, therefore the zones dies out somewhere between lines 0 and 150N. The fact that the magnetic anomaly disappears simultaneously with the conductor suggests they have the same source, which leads us to expect pyrrhotite mineralization. The magnetic anomaly is not simple and relates to at least two closely spaced sources.

The GRIT #6 anomaly is still open to the southeast and lies approximately 1.5 km NW along strike of the Lizard grid.

Conclusion

The conductive and magnetic zone delineated on the Lizard grid deserves either trenching or drilling. The EM and magnetic anomaly on the GRIT #6 grid is very attractive. This anomaly was drilled in 1978 by Aquitaine and found to be pyrrhotite. No gold anlaysis was conducted by Aquitaine, therefore the precious metal potential of the mineralization is unknown.

G. Hendrickson
Grant Hendrickson

S. Enns.
S. G. Enns

LIST OF REFERENCES

AGGARWAL, P.K., FUJII, T., and NESBITT, B.E., 1984. Magmatic composition and tectonic setting of altered, volcanic rocks of the Fennel Formation, British Columbia: Canadian Jour. Earth Sci, V 21 No. 7, pp. 743-752.

CAMPBELL, R.B. and TIPPER, H.W., 1971. Geology of Bonaparte Lake map-area, British Columbia: Geological Survey of Canada, Memoir 363, 100 p.

CONDIE, K.C. and MOORE, J.M., 1977. Geochemistry of Proterozoic Volcanic Rocks from the Grenville Province, Eastern Ontario: in Baragar, W.R.A., Coleman, L.C. and Hall, J.M. eds., Volcanic Regimes in Canada: Geol. Assoc. Canada, Spec. Paper No. 16 pp. 149-168.

DAWSON, J.M., 1978. Diamond Drill Hole Record, G-78-1: Unpublished Kerr-Dawson and Associates Ltd. Report, 7 p.

FLANAGAN, F.J., 1983. Descriptions and analyses of eight new U.S.G.S. rock standards: in Handbook of Exploration Geochemistry, Volume 3, Rock Geochemistry in Mineral Exploration, ed. G.J.S. Govett; Elsevier Scientific Publishing Company, Amsterdam, The Netherlands. pp. 390-393.

HUGHES, C.J., 1972. Spilites, keratophyres, and the igneous spectrum: Geol. Mag. 109, pp. 513-527.

IRVINE, T.N., AND BARAGAR, W.A.R, 1971. A guide to the chemical classification of the common volcanic rocks: Canadian Jour. Earth Sci. 8, pp. 523-548.

JONES, A.G., 1959. Vernon Map-Area, British Columbia: Geological Survey of Canada, Memoir 296, 186 p.

MACDONALD, G.A., 1968. Composition and origin of Hawaiian Lavas: Geol. Soc. Amer. Mem. 116, pp. 477-522.

MIYASHIRO, A. 1974. Volcanic rocks series in island arcs and active continental margins: Amer. Jour. Sci., 274. pp. 321-355.

MONGER, J.W.H., PRICE, R.A. and TEMPELMAN-KLUIT, P.J., 1982. Tectonic accretion and the origin of the two metamorphic and plutonic belts in the Canadian Cordillera: Geology. v. 10, pp. 70-75.

NEVIN, A.E., 1977. Report on the GRIT MASSIVE SULPHIDE PROSPECT, Kamloops M.D., British Columbia: Unpublished Barrier Reef Resources Ltd. Report. p. 9.

PRETO, V.A., 1979. Barrier Lakes-Adams Plateau area, British Columbia: Department of Energy, Mines and Resources. Paper 1979-1C, pp. 31-37.

PRETO, V.A., 1981. Omineca Crystalline Belt west of the Shuswap and Monashee Complexes Squilax to Kamloops, in Field Guides to Geology and Mineral Deposits, Calgary 1981 Annual Meeting. ed. R.I. Thompson and D.G. Cook: Geological Association of Canada pp. 366-372.

PRETO, V.A. and SCHIARIZZA, P. 1982. Geology and Mineral Deposits of the Eagle Bay and Fennel Formations from Adams Plateau to Clearwater, south-central B.C: in Programme and Abstracts, Cordilleran Section: The Geological Association of Canada pp. 22-24.

SALAT, H. 1978. Some Notes on the Grit Claims per our 1978 Observations and Results: Unpublished Aquitaine Company of Canada Ltd. Report. 5 p.

SALEKEN, L.W. and SIMPSON R.G., 1984. Cariboo-Quesnel Gold Belt, A geological overview: Western Miner, pp. 15-20.

STAUFFER, M.R., MUKHERJEE, A.C., and KOO, J., 1975. The Amisk Group, An Aphebian (?) Island Arc Deposit: Canadian Jour. Earth Sc., 12, pp. 2020-2035.

APPENDIX A

CONVENTION FOR THE SAMPLE NUMBERING SYSTEM

APPENDIX A

CONVENTION FOR THE SAMPLE NUMBERING SYSTEM

The convention for designating rock samples from the Lizard Project area is based on a sequence of four sets of letters and numbers. A typical sample e.g. DM-950-84-506 is discussed below:

DM-Sampler	First and last initials of the sampler. DM-David Mallalieu TM-Tim Huttemann
950-Project Number	950 designates the project.
84-Year	1984 specifies the year of sampling.
506-Sample Number	506 represents the number within a series.

The exceptions to this conventions are:

1) where only one letter set and one number is present e.g. E-14. This designates the sampler (Enns) and the number of a sample within a series, and,

2) where a rock sample is obtained from a soil sample pit or vicinity of a stream silt sample. In this case, the rock was given the number of the soil or stream silt sample based on the KCM sample identifier code, e.g. DA 05222.

APPENDIX B

PETROGRAPHIC-LITHOLOGIC DESCRIPTIONS

APPENDIX B

PETROGRAPHIC-LITHOLOGIC DESCRIPTIONS

Unit 2a QUARTZITE E-15 DM-950-84-478b, 489

Quartzite is typically a grey to black, massive to bedded rock composed dominantly of anhedral mosaic-textured quartz (0.2 mm, >70%). White mica (10%) occurs as patches 1.5 mm in diameter consisting of shredded plates (0.45 mm) or as anhedral to subhedral grains interstitial to quartz.

In thin section, microcrystalline opaque (graphite?) occurs as a dusting throughout or as concentrations (0.3 x 0.7 mm, 10%) sufficient to be opaque. It defines translucent wavey bands (0.2 mm), attributed to primary banding or deformation.

Laths, blebs (0.3 mm, 4%) of hematite/pyrrhotite are present as intergrowths along cleavage planes of white mica.

Sample DM-950-84-478b is a fine-grained pale white orthoquarzite. Anhedral quartz grains (0.04 mm) constitute 90% of the rock. Locally, bands (5%) of mosaic-textured quartz are up to 0.8 mm thick.

Section examination reveals subhedral, rectangular plates of white mica (0.003 x 0.02 mm, 7%) overgrow quartz and define a subtle lineation.

Sample DM-950-84-489 is impure quartzite. Unsorted, subrounded, vitreous, grey, quartz grains (3-5 mm, 25%) are set in an aphanitic black quartz-muscovite-rich matrix. In thin section the groundmass is found to be composed of angular to subangular quartz (0.02-0.2 mm, 50%) displaying sutured grain boundaries. Locally, angular grains (0.2 mm) form aggregates up to 1.5 mm in diameter.

Muscovite (0.01 x 0.04 mm, 10%) is interstitial to and overgrows matrix quartz. Biotite (7%) exhibits light brown to orange pleochroism. Anhedral plates (0.04 mm) are interstitial to equant, subrounded quartz grains and matrix minerals.

Microcrystalline carbonaceous? material (5%) occurs as a fine dusting throughout the rock. It is concentrated locally in association with biotite.

Unit 2a QUARTZ-WACKE, QUARTZ-GRANULE CONGLOMERATE

Quartz-wacke and quartz-granule conglomerate are gradational units. Discrimination between the units is largely qualitative depending upon the size of quartz clasts present. Given that the quartz clast content is ≥20% and/or clasts are ≥8 mm in diameter, the term quartz-granule conglomerate is preferable to quartz-wacke. The groundmass is equivalent to the quartzite and impure quartzite.

Unit 2b PHYLLITE, GRAPHITIC PHYLLITE

Phyllite, graphitic phyllite are black, well foliated, and locally crenulated rocks composed of fine-grained quartz, muscovite and graphite? Finely disseminated microscopic pyrite, pyrrhotite and rarely, chalcopyrite account for up to 5% of the mode.

GRAPHITIC PHYLLITE E-16

Graphitic phyllite is a black rock displaying contorted fine lamellae. In thin section, bands 0.05 mm in thickness are composed of non-metallic opaque (50%) and are deformed into discrete lenticles (0.45-2 mm). Spacing between bands ranges from 0.1 to 1.5 m.

Angular quartz grains (0.04-0.08 mm, 55%) display mosaic texture. Banding in quartz is defined by intervening graphite?

Aggregates of anhedral, white mica (0.05-0.2 mm, <2%) is interstitial to quartz.

Metallic, blocky opaque and hematite (0.1 mm and 0.04 mm, respectively), are randomly distributed throughout and account for 3% of the mode.

Unit 2b ANDALUSITE-BIOTITE-MUSCOVITE SCHIST E-18

Andalusite-biotite-muscovite schist is a schistose, black rock composed of muscovite and biotite (75%) hosting trapezoidhedral (0.75-2 mm) andalusite porphyroblasts (10%).

In thin section, aligned anhedral muscovite grains (<0.02 mm, 60%) generate a crenulation cleavage. Anhedral, blocky (0.04 mm, 15%) biotite participates in defining only a mild lineation. When fine-grained and elongate, it intergrows with muscovite.

Opaque (graphite?) lamellae 0.01 to 3.5 mm in thickness mimic the crenulation cleavage. Grains are <0.001 mm in diameter and account for 10% of the mode.

Andalusite is euhedral blocky to diamond-shaped. Porphyroblasts are rimmed by carbonaceous material (0.01 mm). Schistosity does not penetrate the grains.

Unit 2b CORDIERITE-MUSCOVITE-BIOTITE SCHIST E-17

Cordierite-muscovite-biotite schist is a shistose, lustrous, black rock composed of aphanitic, muscovite-biotite plates which host ellipsoidal cordierite porphyroblasts.

Thin section examination reveals that the crenulated matrix consists of biotite, muscovite and quartz. Biotite (45%) is anhedral platelike. Muscovite is needle-like (0.01 x 0.04 mm, 35%) and is intimately intergrown with biotite.

Crenulation cleavage is well defined, the amplitude of folds is 0.3 mm.

Unit 2c QUARTZ-MUSCOVITE SCHIST E-19, E-20

Quartz-muscovite schist is a moderately schistose grey to white rock. It consists of an aphanitic quartz-muscovite groundmass in which grey to black vitreous sub-polygonal to shard-like quartz crystals (7%) and varying amounts of pyrite (0.5%) are distributed.

Quartz displays two habits: i) broken crystals with minor resorption textures and ii) anhedral grains up to 0.2 mm in diameter accounting for 50% of the mode.

Thin section examiantion shows that muscovite (white mica) is subheral platey (0.02 x 0.08 mm, 40%). It is interstitial to anhedral quartz grains and displays a mild lineation. Locally, concentrations up to 0.35 mm in thickness exhibit crenulation cleavage.

Plagioclase (albite) occurs as anhedral grains with moderately developed albite twinning and Carlsbad twinning. It is present on the perimeter of quartz crystals or intersitial to quartz-white mica aggregates. White-mica overgrows the grains. It accounts for 1% of the mode.

Unit 2c CHLORITE-QUARTZ-MUSCOVITE SCHIST DM-941-84-259

Chlorite-quartz-muscovite schist is an analogous unit to the quartz-muscovite schist, however, fine-grained, anhedral, light green chlorite accounts for 10% of the rock.

Schistosity is only poorly developed. It is crenulated where present.

Unit 2d QUARTZ CRYSTAL TUFF DM-950-84-499

The quartz crystal tuff consists of augen-shaped quartz aggregates (3 x 8 mm) comprising 10% of the rock. The matrix is black, mildly schistose, and consists of quartz, white mica and minor iron oxide/ hydroxide.

Anhedral quartz grains (0.04 mm, 10%) are interstitial to muscovite and are locally concentrated in the hinge of crenulations. Aggregates (0.2 x 0.45 mm, <1%), act as perturbations in the micaceous matrix. Cleavage wraps around the grains.

Cordierite (2-3 mm, 20%) is pseudo-hexagonal in shape and is dusted with fine anhedral grains (0.03 mm) of biotite, accounting for 20% of their volume. Anhedral opaque grains (<0.02 mm, 3% crystal volume) are disseminated throughout.

Cordierite is encompassed in a 0.04 mm rim of non-pleochoric, light yellow poikiloblastic staurolite?

Unit 2b IMPURE CARBONATE E-14

The impure carbonate is massive, black, with subtle yellow-green patches 1.5 cm in diameter composed of carbonate and epidote aggregate.

In thin section, mats of anhedral, fine-grained carbonate (60%) contain anhedral epidote (0.04 mm) displaying polygonal granoblastic texture. The grains (20%) display low, 2° birefringence, no pleochroism. In plane polarized light the grains are yellowish-grey. Clinozoisite (0.7 mm, <5%) occurs as cloudy masses, yellowish to grey translucent, displaying no crystal structure.

Anhedral quartz (0.2 mm, 2%) grains are isolated within the epidote mat and in randomly distributed, oriented veinlets (1.5 mm, 10%). The veinlets are composed of polygonal grains (0.35 mm). Rare, anhedral grains of carbonate (<0.35 mm) are interstitial to the quartz. Subhedral plates of white mica (<0.35 mm, 5%) overgrow quartz.

Pyrite occurs as fine disseminations throughout (<<1%).

In thin section, quartz crystals (3%) are sub-equant and display embayments and sutured grain boundaries indicative of recrystallization. New grains in the pressure shadow of quartz cystals are equant (0.03 mm) and generate 'beards' up to 1.2 mm in length. Quartz in the groundmass (55%) is anhedral (0.08 mm). Long axes of the grains parallel foliation.

Schistosity is defined by white mica (15%) in bands up to 0.8 mm in thickness. Grains are subhedral, rectangular (0.01 x 0.04 mm). Grains interstitial/ overgrowing quartz (0.01 mm, 20%) reflect no structure.

Limonite? is amorphous, non-pleochroic, non-birefringent, rust-orange. It occurs as clots 1 mm in diameter, sub parallel to schistosity.

Subhedral, rectangular plates of biotite and mats/clots of shredded biotite and sheaf-like chlorite (0.04 mm) account for 3% of the mode.

Unit 2d FELDSPAR-QUARTZ CRYSTAL TUFF DM-941-84-236

Feldspar-quartz crystal tuff is a gradational unit to the quartz crystal tuff. It consists of clear to soft white, equant, shard-like and cuspate (2 mm) quartz crystals (10%) randomly distributed throughout a poorly foliated, aphanitic, dark grey to grey-green groundmass. Feldspar is anhedral to subhedral lath-like (2 mm, 10%). It is locally euhedral (7 x 10 mm), accounting for ≤3% of the mode. Euhedral plates (2 mm) of biotite (5%) occur in massive rock.

The matrix is similar to that described for quartz crystal tuff.

Unit 2e LAPILLI-BLOCK TUFF DM-950-84-501

Lapilli-black tuff (Plate) is a schistose, pale greenish-white, fine-grained rock. In section, grey

Plate 3a Lapill-block tuff displaying heterogeneous composition. Feldpsar crystal tuff blocks, and chloritized mafic volcanic blocks have elongated parallel to schistosity.

Plate 3b Lapilli-block tuff displaying hetrogeneous composition. Massive aphyric felsic volcanic, chloritized mafic volcanic and feldspar crystal tuff blocks are chaotically distributed throughout.

vitreous equant quartz crystals (1-2 mm, 5%) and anhedral feldspar (<1 mm, <10%), are set in a fine-grained quartz-sericite matrix. Lapilli and blocks of feldspar crystal tuff, chloritized mafic and massive aphyric felsic rock are elongate parallel to schistosity.

Feldspar crystal tuff blocks (10 x 100 cm, 5%) are beige, mildly schistose, and exhibit a pumaceous-textured weathering surface. They consist of anhedral, white feldspar crystals (<1 mm, 15%) hosted in fine-grained intermediate to felsic matrix.

Chloritized mafic clasts (1 x 10 cm) are massive, dark green, fine-grained. They account for 5% of the mode.

Massive aphyric felsic rock (7%) is snow white, round to elongate (1-5 cm, 1 x 4 cm, respectively). Schistosity wraps around the clasts. Locally, sericite schist and phyllite occur as interdigitations up to 40 cm in thickness.

Unit 2f META BLOCK-ASH FLOW DM 941-84-266d,e
DM-950-84-512

Meta block-ash flow consists of angular (10 x 20 cm) fine-grained, light green to white felsic clasts (25%) composed of anhedral, white feldspar (1mm, 50%) distributed through a fine-grained, peppermint green felsic matrix. Clasts are aligned parallel to subtle laminations. Fragments display a 5 mm thick, white reaction rim.

In thin section, it is found that 90% of the ash-rich part of the meta block-ash flow consists of anhedral quartz (0.01-0.02 mm) and anhedral to subhedral white mica (0.02-0.2 mm).

Isolated, anhedral quartz grains (0.75-1.5 mm) with minor resorption textures and recrystallized grain boundaries account for 1-2% of the mode. Grain boundaries consist of chaotically oriented, new grains (0.08 mm). The quartz crystals act as pressure shadows for recrystallized quartz aggregates (beards) 1.5 mm in length.

Matrix quartz (50%) is mosaically textured and displays a mild lineation.

White mica (30-45%) occurs as anhedral to subhedral grains in the interstices between quartz grains and locally as bands up to 0.75 mm in thickness. Mats (<1.5 mm in diameter) are composed of randomly oriented grain <0.2 mm along the c-axis.

Chlorite (3%) occupies the interstices between quartz grains and the interface between matrix quartz and white mica mats.

Sample DM-941-84-266d exhibits a slight gneissic fabric generated by white elongate patches (4 x 15 mm) composed of quartz, carbonate and white mica aggregate. Carbonate (30%) is anhedral, up to 0.75 mm in diameter.

A thin section of sample DM-950-84-512 shows bands of white mica 1.5 mm thick, composed of subhedral grains (0.02 x 0.04 mm) exhibit minor crenulation cleavage and refract around quartz grain perturbations.

Unit 2g, 1b QUARTZ/FELDSPAR-PHYRIC RHYOLITE DYKE E-21
DM-941-84-261

Quartz/feldspar rhyolite dyke is massive grey with a matrix of anhedral quartz and plagioclase (<0.2 mm) comprising 50% of the rock. Phenocrysts of biotite (3-7%) are blocky to pseudo-hexagonal (1.5-5 mm).

Subhedral blocky to lath-like albite phenocrysts (1.5-12 mm) account for 1-40% modal percent.

Groundmass composition is variable given individual dykes.

Thin section examination of E-21 and DM-941-84-261, shows that sample E-21 is composed of anhedral quartz and plagioclase grains with myrmektic texture.

Sample DM-941-84-261 is composed of anhedral quartz (0.02 mm, 70%) with overgrowing and interstitial rectangular plates (0.01 mm) of white mica. It is present in 40% of the section. Locally, concentrations are sufficient to obliterate underlying quartz grains.

Holocrystalline albite displays reverse zoning, albite and Carlsbad twinning. Phenocrysts are euhedral to subhedral and are locally clouded by patches of fine-grained white mica (0.5 mm).

Ti-rich biotite - pleochroic, straw-yellow to red-brown and Fe-rich biotite - pleochroic, straw-yellow to slime-green are randomly distributed throughout. Intergrowths of chlorite along cleavage planes are indicative of retrograde metamorphism.

Anhedral grains of ilmenite (0.02 mm) are disseminated throughout.

Unit 1a BASALT, DIABASE DM-941-84-270, TH-950-84-350

Basalt is a dark green, aphanitic to fine-grained, massive rock. Subophitic texture is locally exhibited by subhedral lath-like plagioclase and actinolite (0.8 mm, 50:50 distribution). Randomly oriented white quartz veinlets (<1 mm, 1%) occur in fine-grained phases of the rock.

Massive fine- to medium-grained, medium green diabase displays subophitic textured subhedral lath-like plagioclase (1-1.5 mm, 50%) randomly distributed throughout a predominantly actinolitic matrix. Actinolite is dark green, subhedral lath-like to blocky (<1 mm) accounting for 50% of the mode.

Unit 1c SILTSTONE

Siltstone occurs in contact with basalt southeast of the southern lobe of Ejas Lake.

The rock is fine-grained, black and is composed of feldspar, hornblende, biotite aggregate. Grains are euhedral and typically much less than 1 mm in diameter. A micro-gneissic fabric is defined by steaks of feldspar (1 x 10 mm). The rock has a gritty texture and is porous to HCl.

APPENDIX C

METHODS FOR DETERMINATION OF FIRST AND SECOND ORDER GEOCHEMICAL ANOMALIES

APPENDIX C

METHODS FOR DETERMINATION OF FIRST AND SECOND ORDER GEOCHEMICAL ANOMALIES

Soil geochemical background values were determined through calculation of medians and inspection of plotted results. First and second order geochemical anomalies were defined as analytical values greater than or equal to those associated with the 2.5 and 5.0 percentiles on a histogram. In the case of Pb, the values were re-adjusted by visual inspection of results.

The population density was not sufficient in most cases to warrant extensive statistical evaluation.

Given the number of stream sediment samples (53, total includes duplicates) that are disseminated throughout several populations, statistical analysis could not be justified. All interpretations are based solely on visual inspection of plotted results (Figure 16).

Rock geochemistry was performed on nine populations. One population, composed solely of pelitic rock, typically black phyllite, consists of 56 individuals. This (Appendix E), was considered large enough to warrant statistical evaluation in the form of cumulative frequency distribution plots.

Background values are given by the intersection of the line with the 50 percentile ordinate. A semi-quantitative interpretation of threshold values i.e. lower limit first, second order anomalies was based on 1) significant breaks in the curve and 2) intersection of the 2.5 percentile ordinate with the curve. Qualitative judgment was exercised where thresholds resulting from either above criteria were such that due to analytical imprecision results would not be reproduceable.

The remaining eight populations of lithological samples, (comprised of 85 individuals, with the largest population composed of 26 individuals), did not warrant statistical analysis for threshold values.

Individuals within the quartz vein and sericite schist populations have anomalous geochemical values when using the threshholds suggested in Table 4.

APPENDIX D

GEOCHEMICAL RESULTS

SOIL SAMPLE
GEOCHEMICAL RESULTS

KIDD CREEK PROJECT # 950 FILE # 84-1222

SAMPLE#	CU PPM	PB PPM	ZN PPM	AG PPM	AU* PPB	BA* PPM
SA 20601	35	22	236	.1	5	80
SA 20602	15	14	86	.2	5	50
SA 20603	15	11	89	.2	5	55
SA 20604	19	14	89	.1	5	65
SA 20605	22	21	98	.3	5	65
SA 20606	33	29	115	.5	5	90
SA 20607	23	60	150	1.1	70	75
SA 20608	50	117	139	2.5	290	165
SA 20609	14	22	87	.5	55	35
SA 20610	20	16	91	.3	5	35
SA 20611	24	25	132	.2	5	40
SA 20612	32	24	190	.1	5	65
SA 20613	15	21	68	.2	5	35
SA 20614	20	18	107	.1	5	55
SA 20615	21	20	109	.1	5	35
SA 20616	22	17	181	.1	5	35
SA 20617	21	18	169	.1	5	25
SA 20618	14	20	117	.1	5	36
SA 20619	17	29	135	.1	5	35
SA 20620	16	30	129	.2	5	24
SA 20621	24	32	181	.3	5	36
SA 20622	42	163	1049	.9	5	85
SA 20623	36	75	233	.3	5	65
SA 20624	26	35	136	.2	5	60
SA 20625	30	34	151	.4	5	65
SA 20626	27	24	127	.1	5	42
SA 20627	25	44	99	.3	5	40
SA 20628	29	35	104	.1	5	48
SA 20629	14	15	32	.1	5	35
SA 20630	28	15	109	.3	5	50
SA 20631	15	17	85	.3	5	55
SA 20632	25	17	126	.2	5	78
SA 20633	20	11	86	.1	5	48
SA 20634	20	19	76	.2	5	54
SA 20635	27	21	88	.2	5	50
SA 20636	21	12	104	.2	10	36
SA 20637	32	24	67	.3	35	95
STD A-1/AU 0.5	29	39	184	.3	500	-

SOIL SAMPLE
GEOCHEMICAL RESULTS

KIDD CREEK   PROJECT # 950   FILE # 84-1222

SAMPLE#	CU PPM	PB PPM	ZN PPM	AG PPM	AU* PPB	BA* PPM
SA 20638	20	19	110	.4	5	105
SA 20639	23	19	105	.3	5	50
SA 20640	25	16	99	.1	5	72
SA 20641	24	18	63	.2	5	22
SA 20642	11	13	103	.4	5	34
SA 20643	28	20	169	.4	5	83
SA 20644	22	16	103	.2	5	65
SA 20645	27	20	197	.5	5	85
SA 20646	41	31	194	.3	10	105
SA 20647	21	21	113	.4	5	55
SA 20648	35	40	170	.1	5	62
SA 20649	21	36	127	.3	5	60
SA 20650	33	27	161	.4	5	55
SA 20651	34	31	109	.5	5	50
SA 20652	31	29	88	.1	5	38
SA 20653	23	20	85	.2	5	33
SA 20654	21	29	53	.2	5	22
SA 20655	26	20	92	.4	5	50
SA 20656	31	20	171	.3	5	60
SA 20657	43	17	262	.3	5	60
SA 20658	36	19	217	.4	5	50
STD A-1/AU 0.5	30	39	186	.3	500	-

FILE # 84-1545

SAMPLE#	CU PPM	PB PPM	ZN PPM	AG PPM	AU* PPB	BA* PPM
SA-20659	23	16	165	.1	15	160
SA-20660	26	26	85	.3	25	120
SA-20661	21	23	100	.3	80	140
SA-20662	15	27	108	.2	25	160
SA-20663	16	14	94	.2	15	140
SA-20664	21	14	86	.3	30	160
SA-20665	18	16	78	.2	15	120
SA-20666	23	28	163	.3	30	160
SA-20667	19	29	62	.1	25	150
SA-20668	17	16	60	.1	10	120
SA-20669	18	31	104	.2	30	80
SA-20670	20	29	71	.7	60	90
SA-20671	21	26	50	.1	5	90
SA-20672	28	22	110	.1	35	80
SA-20673	32	45	216	.2	40	100

SOIL SAMPLE
GEOCHEMICAL RESULTS

KIDD CREEK   PROJECT # 950   FILE # 84-1545

SAMPLE#	CU PPM	PB PPM	ZN PPM	AG PPM	AU* PPB	BA* PPM
SA-20674	24	34	94	.3	25	80
SA-20675	76	46	306	.1	20	360
SA-20676	26	37	157	.1	20	160
SA-20677	16	15	105	.1	30	110
SA-20678	99	22	196	.4	210	60
SA-20679	31	20	162	.1	20	120
SA-20680	15	13	59	.1	20	120
SA-20681	26	14	121	.1	10	110
SA-20682	26	65	269	.4	10	120
SA-20683	30	40	168	.4	55	220
SA-20684	17	26	172	.1	30	160
SA-20685	23	18	96	.3	30	210
SA-20686	33	16	107	.3	25	130
SA-20687	32	18	104	.2	30	120
SA-20688	27	14	94	.1	5	120
SA-20689	20	14	90	.1	5	110
SA-20690	28	26	124	.4	30	220
SA-20691	11	49	34	.4	5	210
SA-20692	17	14	46	.6	5	80
SA-20693	21	18	110	.1	10	120
SA-20694	14	15	108	.4	5	220
SA-20695	13	15	77	.2	20	230
SA-20696	12	12	57	.3	5	300
SA-20801	12	30	75	.2	5	140
SA-20802	18	34	31	.1	5	150
SA-20803	50	190	929	1.6	5	420
SA-20804	54	123	340	.6	5	260
SA-20805	36	72	225	.3	10	220
SA-20806	40	65	119	.4	5	240
SA-20807	26	32	129	.3	5	210
SA-20808	38	37	152	.1	5	240
SA-20809	27	29	145	.3	5	220
SA-20810	34	54	161	.5	5	110
SA-20811	49	191	531	.8	5	280
SA-20812	27	107	569	.7	5	220
SA-20813	24	24	74	.1	5	180
SA-20814	27	38	109	.4	5	210
SA-20815	24	29	86	.3	5	180
STD A-1/AU 0.5	30	39	188	.3	500	-

SOIL SAMPLE
GEOCHEMICAL RESULTS

KIDD CREEK PROJECT # 950 FILE # 84-2347

SAMPLE#	CU PPM	PB PPM	ZN PPM	AG PPM	AU* PPB	BA* PPM
SA-20697	32	13	130	.1	5	346
SA-20698	115	26	205	.3	105	176
SA-20699	33	19	258	.1	5	233
SA-20700	24	17	114	.2	5	176
SA-20701	18	15	108	.6	5	233
SA-20702	36	20	129	.1	5	317
SA-20703	12	18	47	.1	5	176
SA-20704	33	23	187	.2	5	173
SA-20705	25	25	53	.2	5	131
SA-20706	33	16	161	.2	15	145
SA-20707	36	26	141	.1	5	117
SA-20708	28	19	106	.1	5	117
SA-20709	34	52	121	.1	5	145
SA-20710	49	505	77	.7	5	173
SA-20711	25	131	94	.5	5	173
SA-20712	48	65	485	.4	5	201
SA-20713	70	241	628	.3	15	258
SA-20714	18	35	70	.4	5	145
SA-20715	40	35	90	.3	5	201
SA-20716	32	26	129	.3	5	230
SA-20717	27	29	167	.3	10	258
SA-20718	118	25	216	.1	210	117
SA-20719	26	15	112	.2	5	173
SA-20720	13	20	79	.2	15	173
SA-20721	22	26	58	.2	5	117
SA-20722	19	16	55	.1	5	173
SA-20723	16	13	76	.1	10	145
SA-20724	22	20	76	.2	5	818
SA-20725	15	17	73	.2	5	230
SA-20726	21	18	53	.1	5	201
SA-20727	19	15	65	.1	5	187
SA-20728	16	14	49	.1	5	328
SA-20729	14	15	43	.1	5	145
SA-20730	15	10	48	.1	5	187
SA-20731	26	23	86	.4	5	230
SA-20732	18	13	53	.1	5	201
SA-20733	17	16	53	.1	5	173
SA-20734	15	14	75	.1	5	231
SA-20735	21	21	106	.2	5	191
SA-20736	115	25	213	.3	50	48
STD C/AU-0.5	58	40	123	7.0	500	-

STREAM SEDIMENT
GEOCHEMICAL RESULTS

KIDD CREEK PROJECT # 950 FILE # 84-1222

SAMPLE#	CU PPM	PB PPM	ZN PPM	AG PPM	AU* PPB	BA* PPM
DA 05201	29	26	95	.7	5	150
DA 05202	21	17	55	.4	5	75
DA 05203	34	27	166	.6	5	110
DA 05204	33	23	93	.8	5	130
DA 05205	28	20	77	.5	5	85
DA 05206	24	16	127	.8	5	120
DA 05207	30	33	131	.6	5	140
DA 05208	56	44	200	1.8	5	190
DA 05209	14	14	54	.3	5	63
DA 05210	41	16	76	.6	5	77
DA 05211	11	12	61	.1	5	70
DA 05212	17	13	60	.1	5	72
DA 05213	16	13	59	.1	5	45
DA 05214	23	21	114	.6	5	115
DA 05215	18	14	63	.1	5	54
DA 05216	18	14	57	.1	5	62
DA 05217	14	11	43	.1	5	45
DA 05218	20	14	81	.1	5	45
DA 05219	15	10	61	.1	5	66
DA 05220	16	15	105	.2	5	90
DA 05221	28	31	119	1.1	5	30
DA 05222	33	19	124	.1	5	96
DA 05223	19	17	69	.1	5	90
DA 05224	17	11	51	.1	10	50
DA 05225	20	14	70	.1	15	54
DA 05226	15	14	50	.1	5	65
DA 05227	16	14	61	.1	5	46
DA 05228	16	12	54	.1	5	55
DA 05229	16	8	50	.1	50	50
DA 05230	15	12	53	.3	5	105
DA 05231	17	12	53	.1	10	45
DA 05232	15	13	56	.1	5	51
DA 05233	17	16	60	.1	5	59
STD A-1/AU 0.5	30	40	188	.3	510	-

STREAM SEDIMENT
GEOCHEMICAL RESULTS

KIDD CREEK PROJECT # 950 FILE # 84-1545

SAMPLE#	CU PPM	PB PPM	ZN PPM	AG PPM	AU* PPB	BA* PPM
DA-05234	18	12	57	.1	5	180
DA-05235	18	10	55	.1	5	160
DA-05236	18	14	72	.2	5	170
DA-05237	20	11	61	.1	5	180
DA-05238	20	12	61	.1	5	180
DA-05239	21	12	59	.2	5	140
DA-05240	97	22	192	.6	95	80
DA-05241	30	36	154	.4	5	190
DA-05242	26	34	149	.3	5	180
DA-05243	51	40	187	1.4	5	520
DA-05244	53	45	190	1.5	5	500
DA-05245	52	31	204	1.5	5	480
DA-05246	55	34	203	1.6	5	520
DA-05247	47	25	181	1.2	5	400
DA-05248	46	26	177	1.2	5	360
DA-05249	17	10	58	.1	5	190
DA-05250	18	9	55	.1	10	180
DA-05251	19	12	56	.3	5	260
DA-05252	21	13	66	.3	5	180
DA-05253	20	13	68	.2	5	190
DA-05254	17	9	50	.1	5	160
STD A-1/AU 0.5	30	39	184	.3	520	-

PHYLLITIC ROCK (Population 1)

KIDD CREEK   PROJECT # 950

SAMPLE#	CU PPM	PB PPM	ZN PPM	AG PPM	AU* PPB	BA* PPM
AB-18516	47	68	145	.5	5	43
AB-18517	68	9	119	.1	5	43
AB-18518	50	12	128	.3	5	43
AB-18519	25	10	70	.1	5	65
AB-18522	46	17	84	.1	5	140
AB-18523	64	15	97	.3	5	119
AB-18525	38	12	118	.1	5	216
AB-18529	47	7	59	.1	5	669
AB-18530	26	8	60	.1	5	151
AB-18533	30	8	74	.1	5	108
AB-18535	61	11	129	.4	5	43
AB-18537	33	5	71	.2	5	65
AB-18538	24	11	57	.3	5	307
AB-18539	23	7	44	.1	5	185
AB-18542	24	15	96	.1	5	193
AB-18545	15	16	101	.1	5	109
AB-18547	2	12	23	.2	5	269
AB-18549	2	1	1	.1	5	200
AB-18550	8	18	13	1.2	265	596
AB-18559	16	6	73	.1	5	154
AB-18560	3	3	3	.7	5	535
AB-18562	9	4	2	.4	5	558

QUARTZOSE ROCK

SAMPLE#	CU PPM	PB PPM	ZN PPM	AG PPM	AU* PPB	BA* PPM	C %
AB 16829	15	22	73	.1	5	22	.18
AB 16831	4	7	49	.1	5	54	.16
AB 16834	4	4	33	.1	5	105	
AB 16842	3	7	19	.1	5	23	
AB 16848	44	22	55	.1	5	12	
AB 16860	2	29	8	.1	5	12	
AB 16866	13	9	40	.1	10	35	
AB-16883	33	55	210	.7	5	220	
AB-16884	21	9	89	.2	5	60	
AB-18508	18	7	32	.1	5	43	
AB-18509	16	18	216	.1	5	65	
AB-18511	39	33	86	.2	5	22	
AB-18512	34	17	106	.1	5	43	
AB-18520	36	12	121	.1	5	43	
AB-18521	38	50	133	.4	5	65	
AB-18524	66	9	156	.1	5	140	
AB-18526	7	5	32	.1	5	65	
AB-18527	11	15	41	.1	5	54	
AB-18528	16	7	53	.1	5	173	
AB-18534	45	8	134	.1	5	324	
AB-18536	18	23	52	.1	5	43	
AB-18540	11	2	44	.1	5	154	
AB-18541	44	11	89	.1	5	154	
AB-18543	13	5	121	.1	5	200	
AB-18544	13	11	26	.1	5	63	
AB-18563	3	3	2	.1	5	512	

QUARTZ VEIN

AB 16830	2	1	12	.1	5	135
AB 16836	7	5	42	.1	5	78
AB 16838	9	1760	725	8.4	90	3
AB 16858	3	5	3	.1	5	35
AB 16859	3	3	4	.1	5	10

QUARTZ VEIN

KIDD CREEK PROJECT # 950

SAMPLE#	CU PPM	PB PPM	ZN PPM	AG PPM	AU* PPB	BA* PPM
AB 16861	5	4	5	.1	5	5
AB 16864	4	15	5	.1	85	11
AB 16867	2	3	1	.1	5	4
AB 16868	1	2	4	.1	5	3
AB 16870	1	2	1	.1	10	10
AB 16878	10	5	13	.1	5	24
AB 16879	7	4	12	.1	5	12
AB 16880	3	3	6	.1	15	3
AB-16902	2	3	3	.1	5	10
AB-16903	2	4	2	.1	5	10
AB-18531	11	3	14	.1	5	54
AB-18532	7	177	10	.7	5	43
AB-18548	3	43	5	.1	5	154
AB-18552	3	4	12	.1	5	109
AB-18553	2	1	1	.1	5	63
AB-18554	2	5	2	.1	5	63
AB-18555	2	1	3	.1	5	63

SERICITIC SCHIST

SAMPLE#	CU PPM	PB PPM	ZN PPM	AG PPM	AU* PPB	BA* PPM
AB 16851	3	35	18	.3	75	25
AB 16852	6	10	42	.3	15	24
AB 16853	6	26	45	.5	115	25
AB 16854	2	8	18	.1	5	35
AB 16855	2	20	34	.1	15	65
AB 16876	33	388	19	16.7	315	22
AB-16894	5	23	7	.3	15	640
AB-16895	3	35	5	.2	5	240
AB-16898	34	2	108	.1	5	440
AB-16899	5	38	9	.3	5	120
AB-16900	2	38	4	.1	5	120
AB-16901	15	36	31	.3	5	220
AB-18502	12	22	41	.1	5	129
AB-18503	10	19	39	.1	5	65
AB-18504	5	11	22	.1	5	43

SERICITIC SCHIST

KIDD CREEK PROJECT # 950

SAMPLE#	CU PPM	PB PPM	ZN PPM	AG PPM	AU* PPB	BA* PPM
AB-18505	4	5	12	.1	5	280
AB-18506	5	17	5	.1	5	65
AB-18515	17	18	14	.1	5	43
AB-18561	13	7	6	.3	5	657

FELSIC ASH TUFF

AB 16850	5	13	55	.1	5	90
AB 16862	1	17	1	.1	5	65
AB 16863	2	6	2	.1	5	60
AB 16865	1	9	35	.1	5	35

FELSIC CRYSTAL TUFF

AB 16833	1	4	32	.1	5	65
AB-18546	2	7	26	.1	5	154
AB-18551	4	4	15	.1	5	154

MAFIC FLOW/INTRUSION

AB 16835	9	4	62	.1	5	60
AB 16839	131	27	39	.2	5	4
AB 16841	223	5	16	.1	5	3
AB 16869	10	4	11	.1	5	10

FELSIC DYKE ROCK

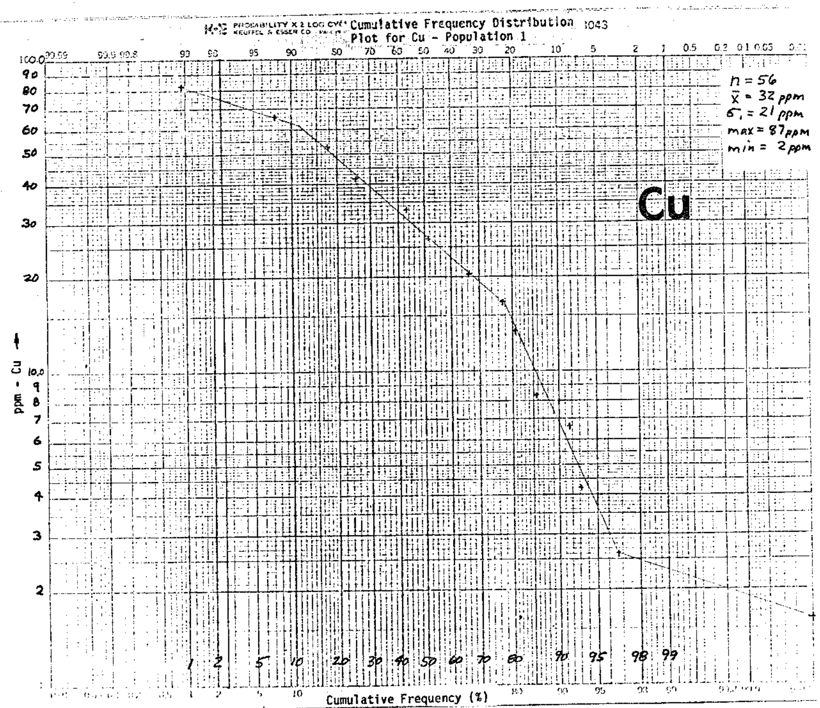
AB 16840	6	17	40	.1	5	35
AB 16849	7	10	14	.1	5	30
AB 16856	1	1	26	.1	10	30

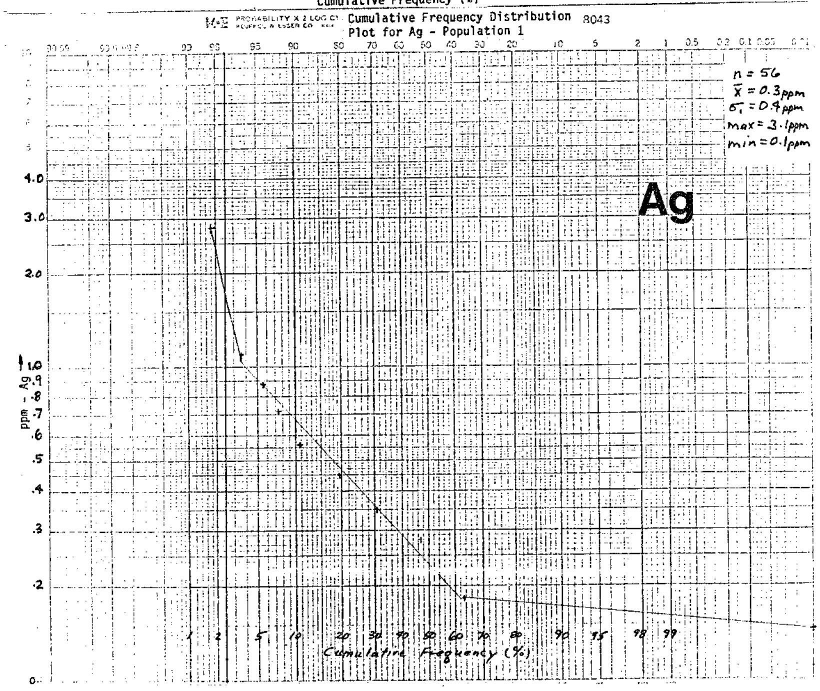
SILTSTONE

AB-18557	2	3	1	.1	5	238

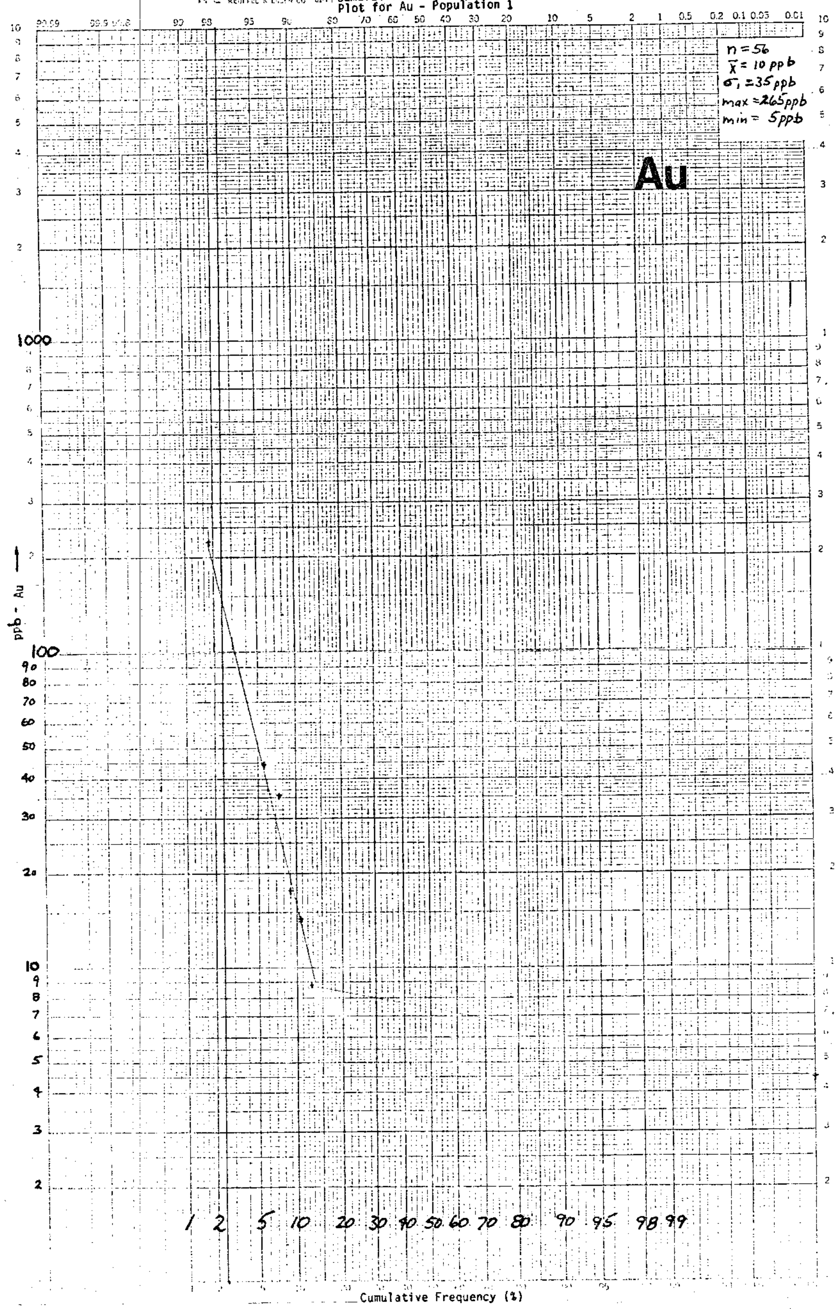
APPENDIX E

LOG-PROBABILITY PLOTS OF Cu, Ag, Au, Pb, Zn, Ba FROM POPULATION 1 (PHYLLITIC ROCK)

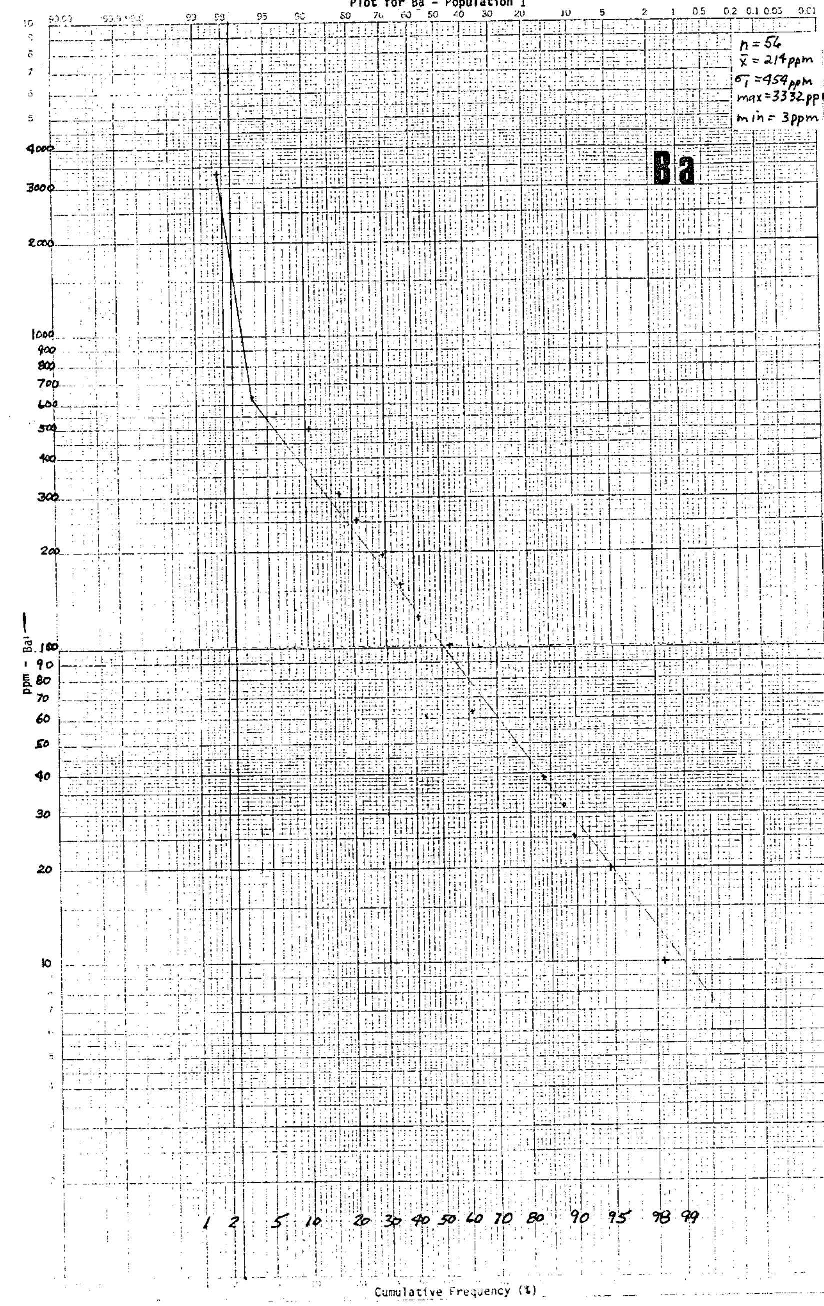

K+E PROBABILITY X 2 LOG CYCLES KEUFFEL & ESSER CO.
Cumulative Frequency Distribution
Plot for Cu - Population 1
8043
n = 56
x̄ = 32 ppm
σ = 21 ppm
max = 87 ppm
min = 2 ppm
Cu
ppm - Cu
Cumulative Frequency (%)

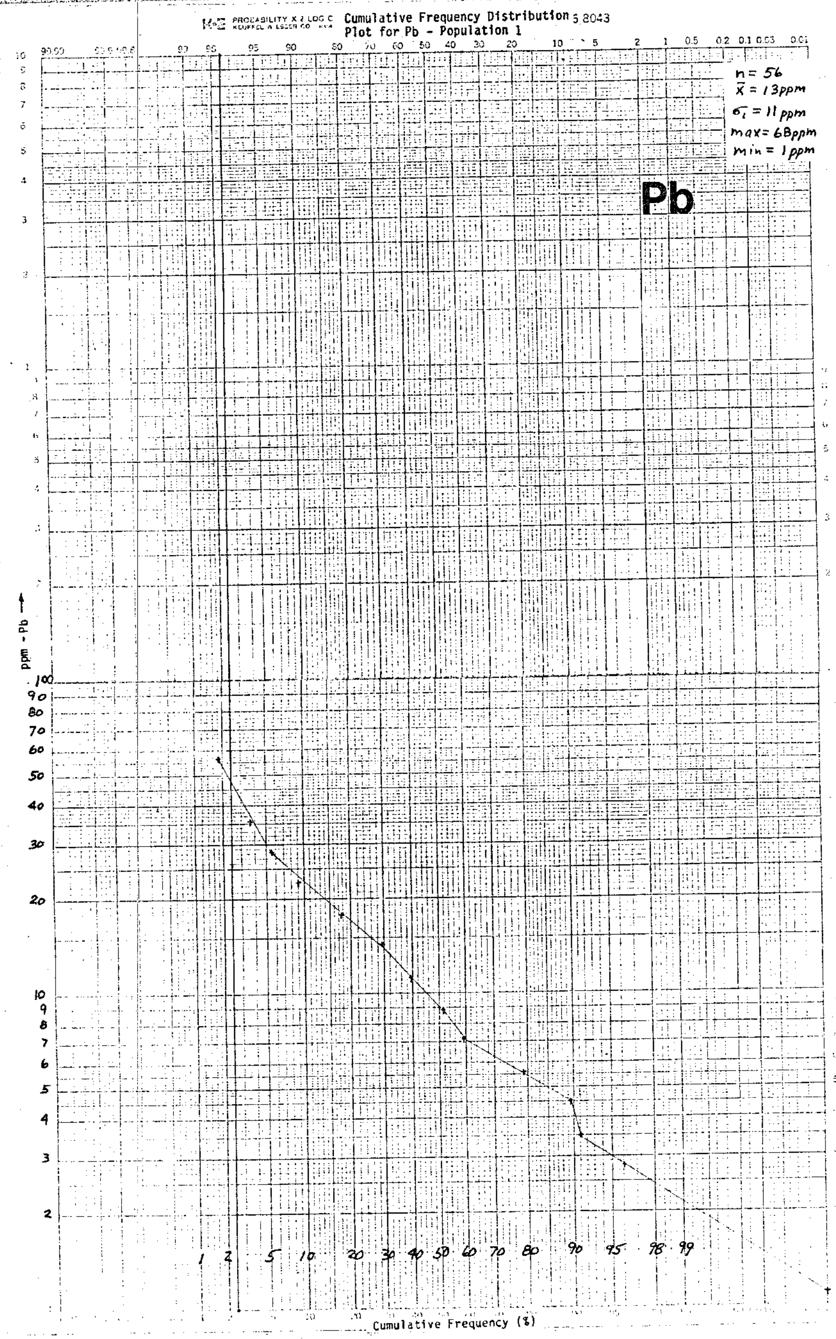

K+E PROBABILITY X 2 LOG CYCLES KEUFFEL & ESSER CO.
Cumulative Frequency Distribution
Plot for Ag - Population 1
8043
n = 56
x̄ = 0.3 ppm
σ = 0.4 ppm
max = 3.1 ppm
min = 0.1 ppm
Ag
ppm - Ag
Cumulative Frequency (%)

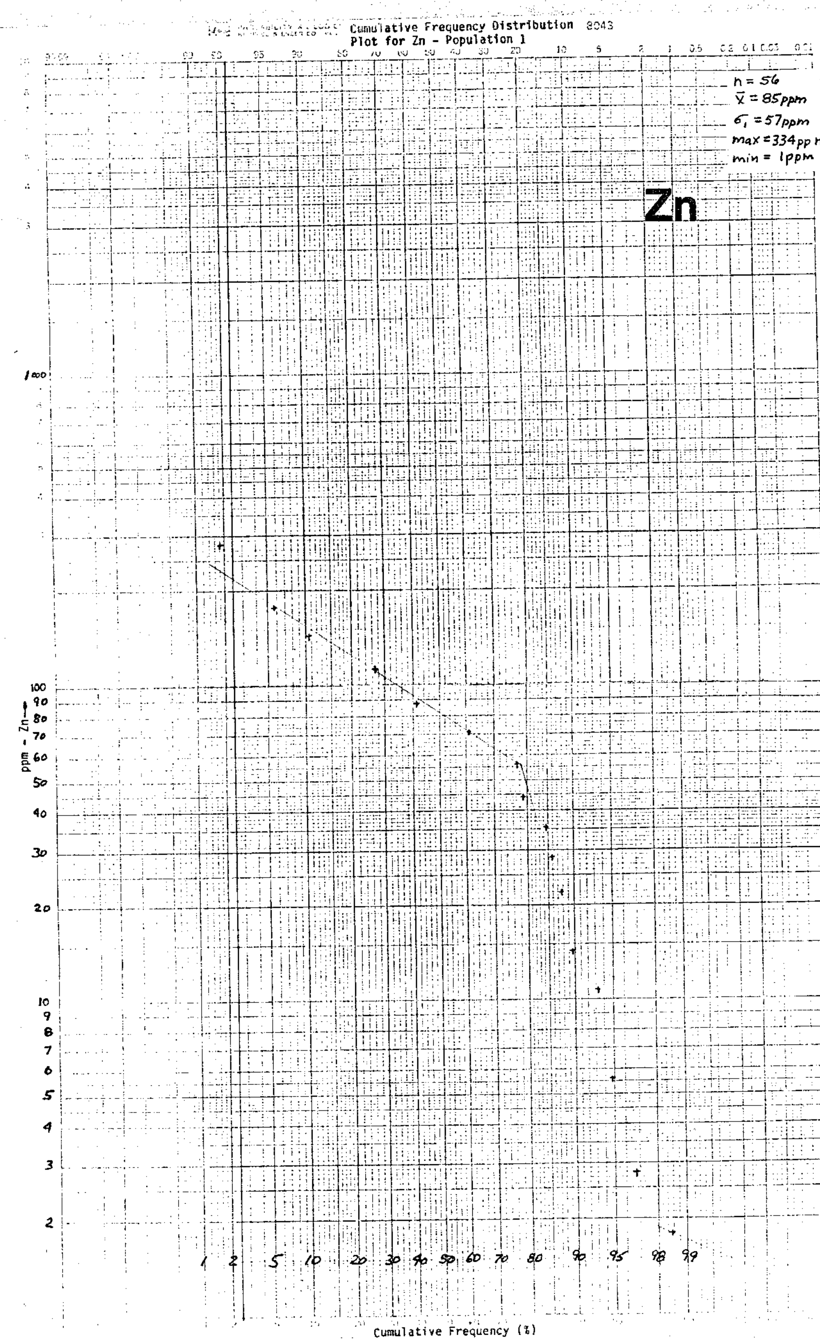
Cumulative Frequency Distribution Plot for Au - Population 1



Cumulative Frequency Distribution Plot for Ba - Population 1

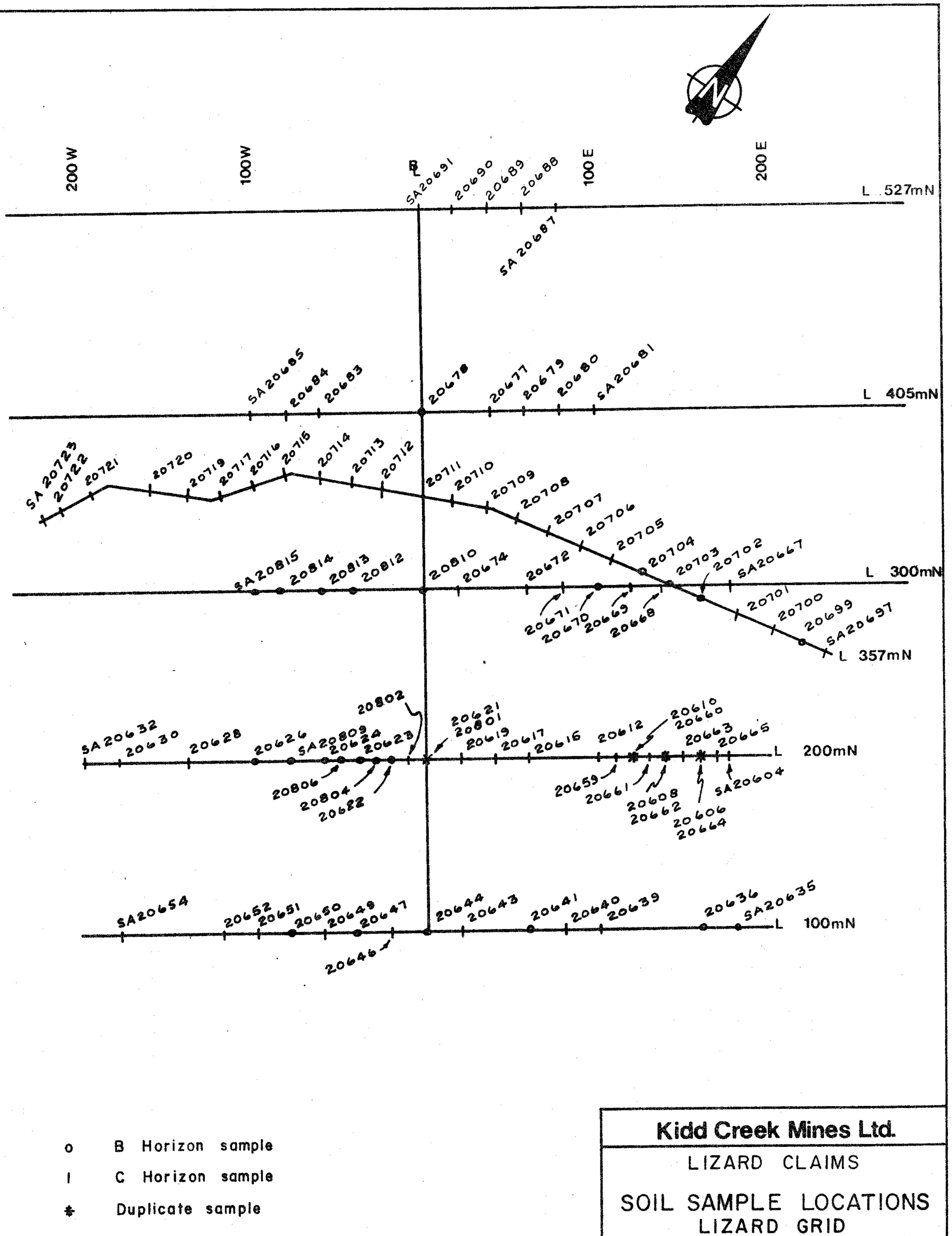



Cumulative Frequency Distribution
Plot for Pb - Population 1
n = 56
x̄ = 13ppm
σ₁ = 11 ppm
max = 68ppm
min = 1ppm
Pb
ppm - Pb
Cumulative Frequency (%)


Cumulative Frequency Distribution 8043
Plot for Zn - Population 1
n = 56
x̄ = 85ppm
σ₁ = 57ppm
max = 334ppm
min = 1ppm
Zn
ppm - Zn
Cumulative Frequency (%)

APPENDIX F

SOIL AND ROCK GEOCHEMISTRY



Kidd Creek Mines Ltd.

LIZARD CLAIMS

SOIL SAMPLE LOCATIONS
LIZARD GRID

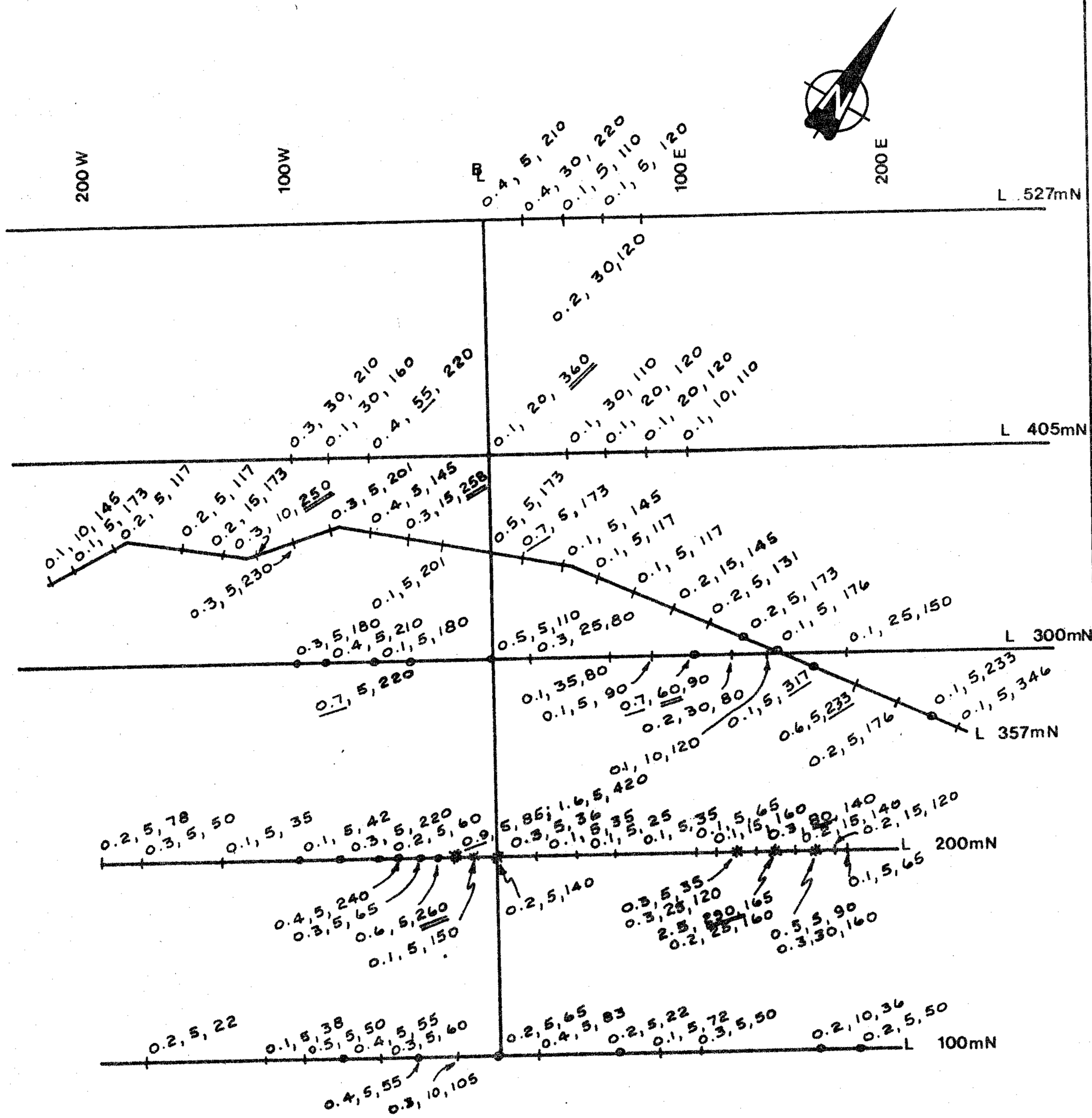
NTS 92P/16 Proj.950

WORK BY	DRAWN BY	DATE: JAN. 1985

0 20 40 60 80 100 m

Figure: 13a

NCI - 556



0.2, 5, 22 – Ag, Au, Ba Results

ANOMALY	FIRST ORDER	SECOND ORDER	
Ag	>1.5	>0.7	ppm
Au	> 60	> 40	ppb
Ba	>300	>250	ppm

Kidd Creek Mines Ltd.

LIZARD CLAIMS

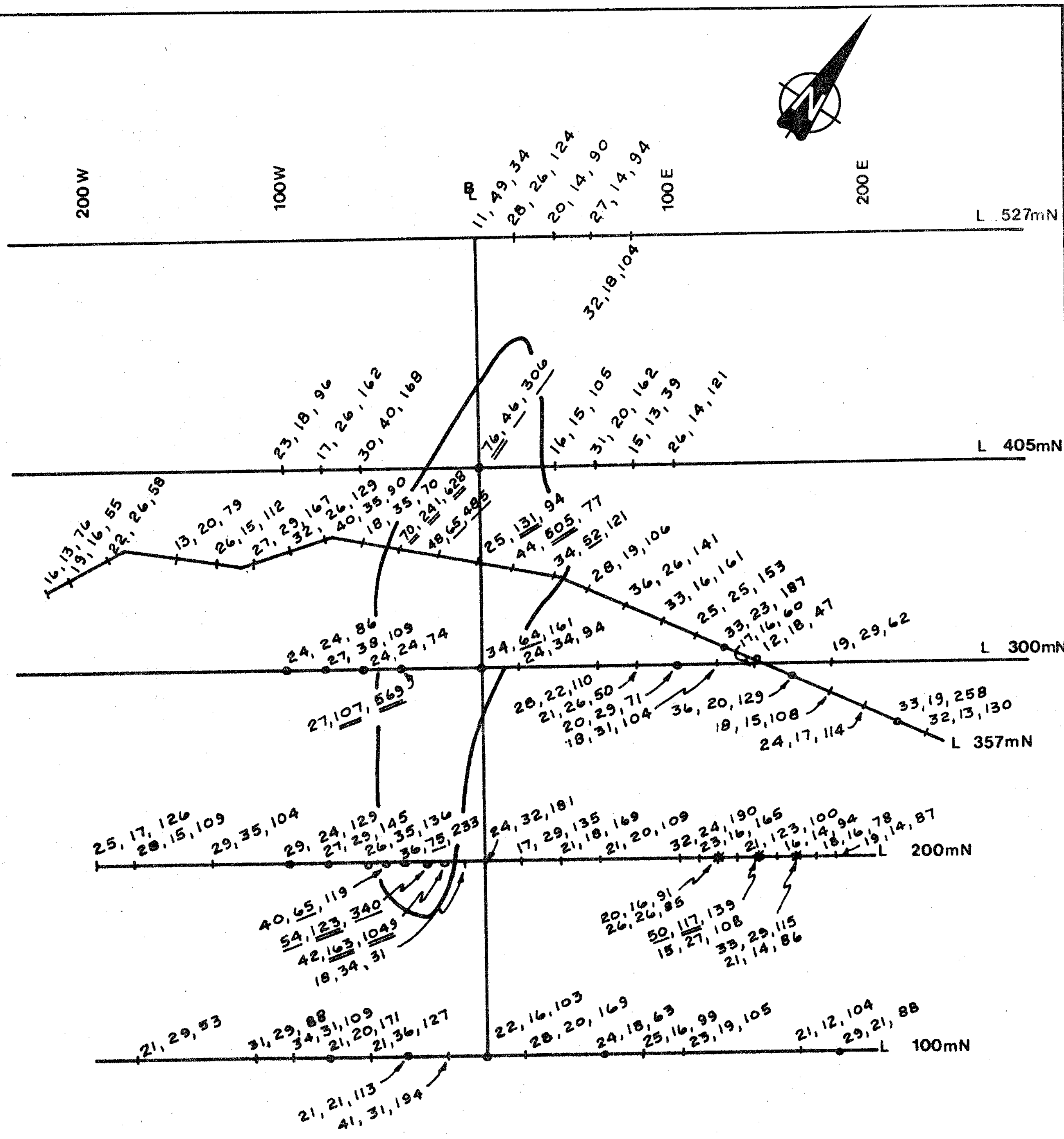
Ag, Au, Ba SOIL RESULTS
LIZARD GRID

WORK BY | DRAWN BY | DATE: JAN. 1985

0 20 40 60 80 100m

Figure: 13 b

NCI - 556



Soil Anomaly

31, 29, 88 - Cu, Pb, Zn Results

ANOMALY	FIRST ORDER	SECOND ORDER	
Cu	>55	>45	ppm
Pb	>100	>50	ppm
Zn	>570	>290	ppm

Kidd Creek Mines Ltd.

LIZARD CLAIMS

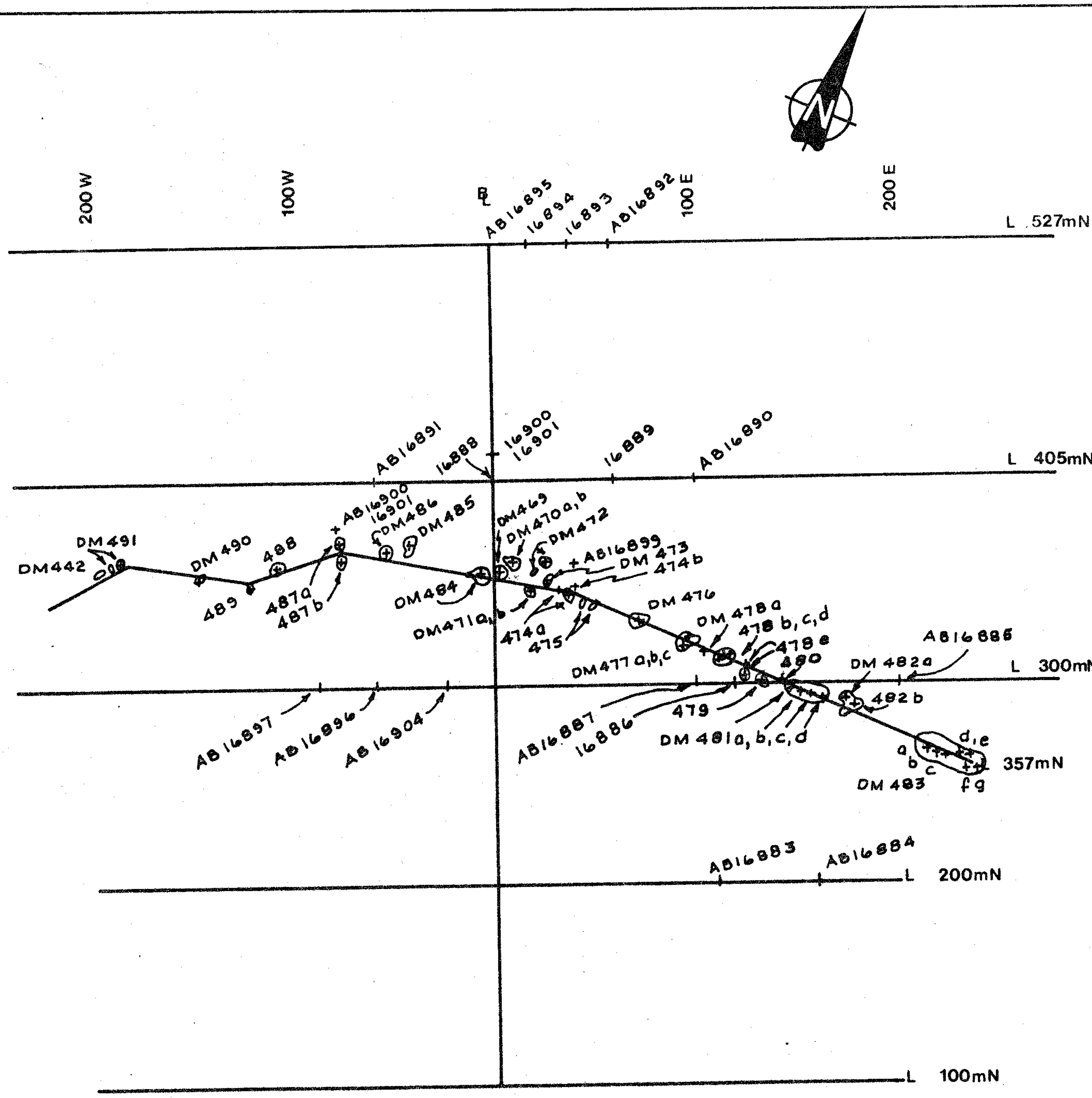
Cu, Pb, Zn SOIL RESULTS
LIZARD GRID

WORK BY | DRAWN BY | DATE: JAN. 1985

0 20 40 60 80 100 m

Figure: 13c

NCI - 556



Rock sample & outcrop

I Soil sample

Kidd Creek Mines Ltd.

LIZARD CLAIMS

ROCK GEOCHEMISTRY
SAMPLE LOCATIONS
LIZARD GRID

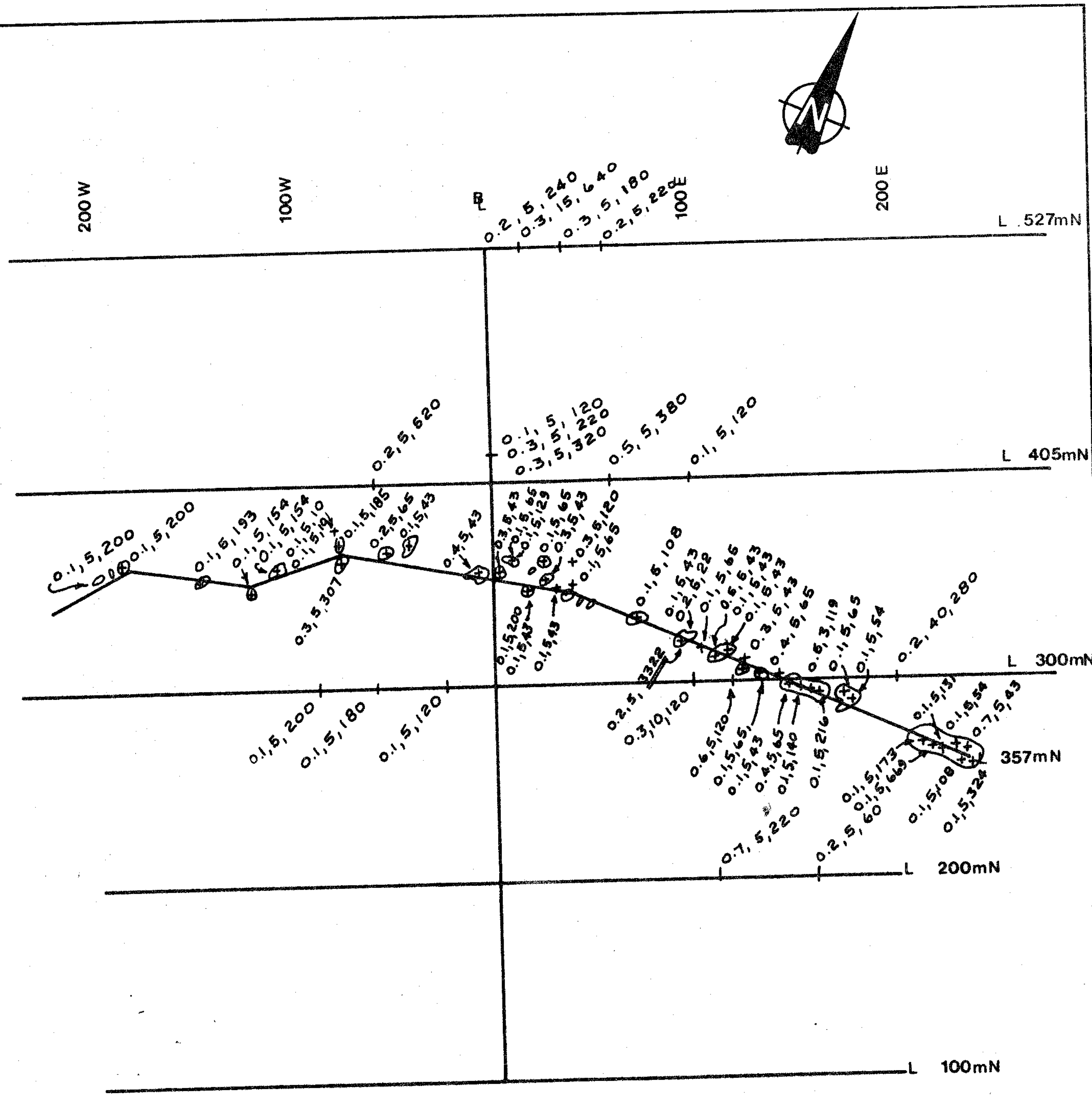
NTS 92P/16 Proj. 950

WORK BY	DRAWN BY	DATE: JAN. 1985

0 20 40 60 80 100 m

Figure: 14 a

NCI - 556



ANOMALY	FIRST ORDER	SECOND ORDER	
Ag			
Au	>150	>20	ppb
Ba	>1200	>700	ppm

Kidd Creek Mines Ltd.

LIZARD CLAIMS

ROCK GEOCHEMISTRY RESULTS Ag, Au, Ba

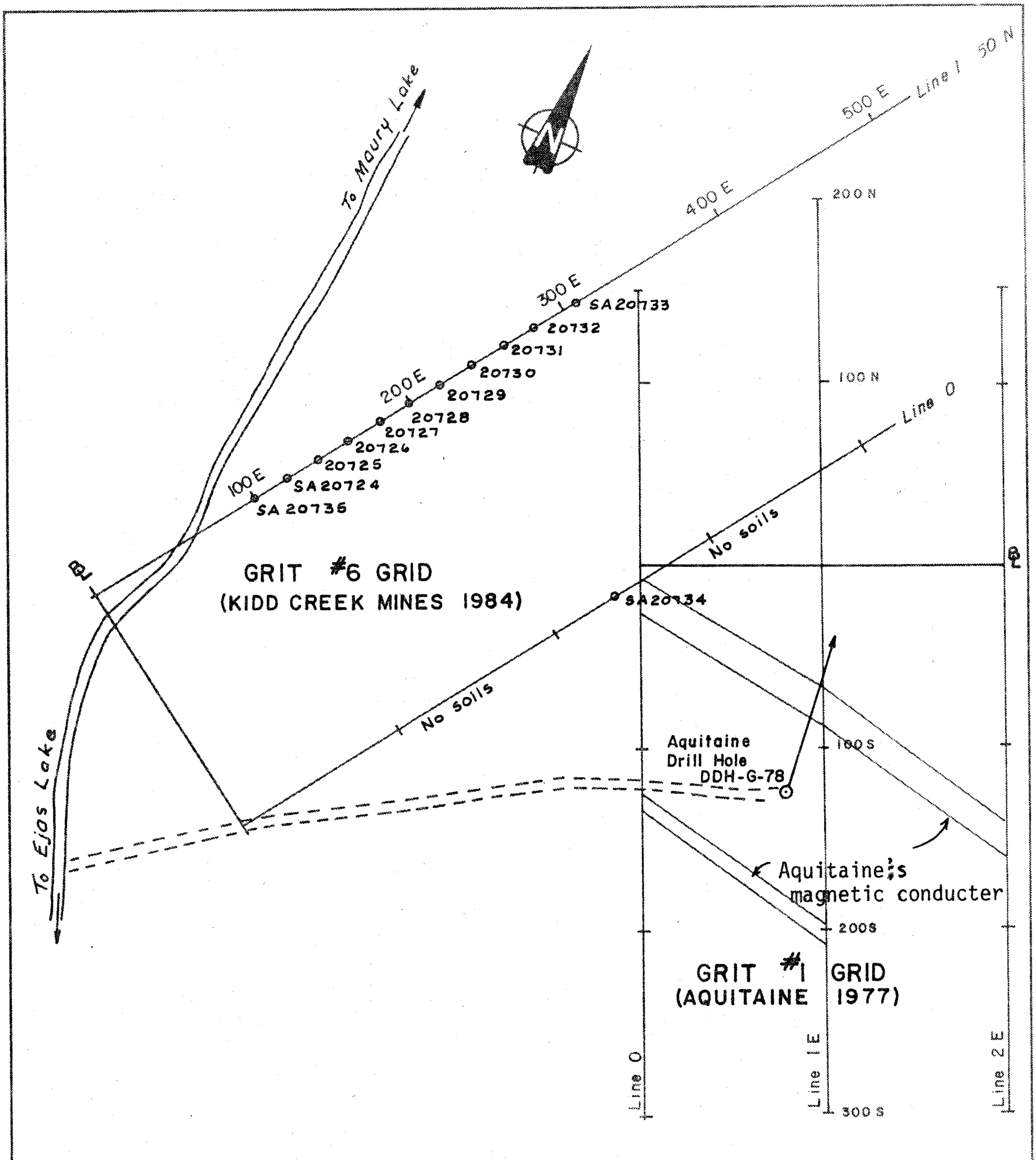
LIZARD GRID

WORK BY	DRAWN BY	DATE: JAN. 1985

0 20 40 60 80 100 m

Figure: 14 b

NCI - 556



Kidd Creek Mines Ltd.

LIZARD CLAIMS

GRIT #6 GRID

SOIL SAMPLE LOCATIONS

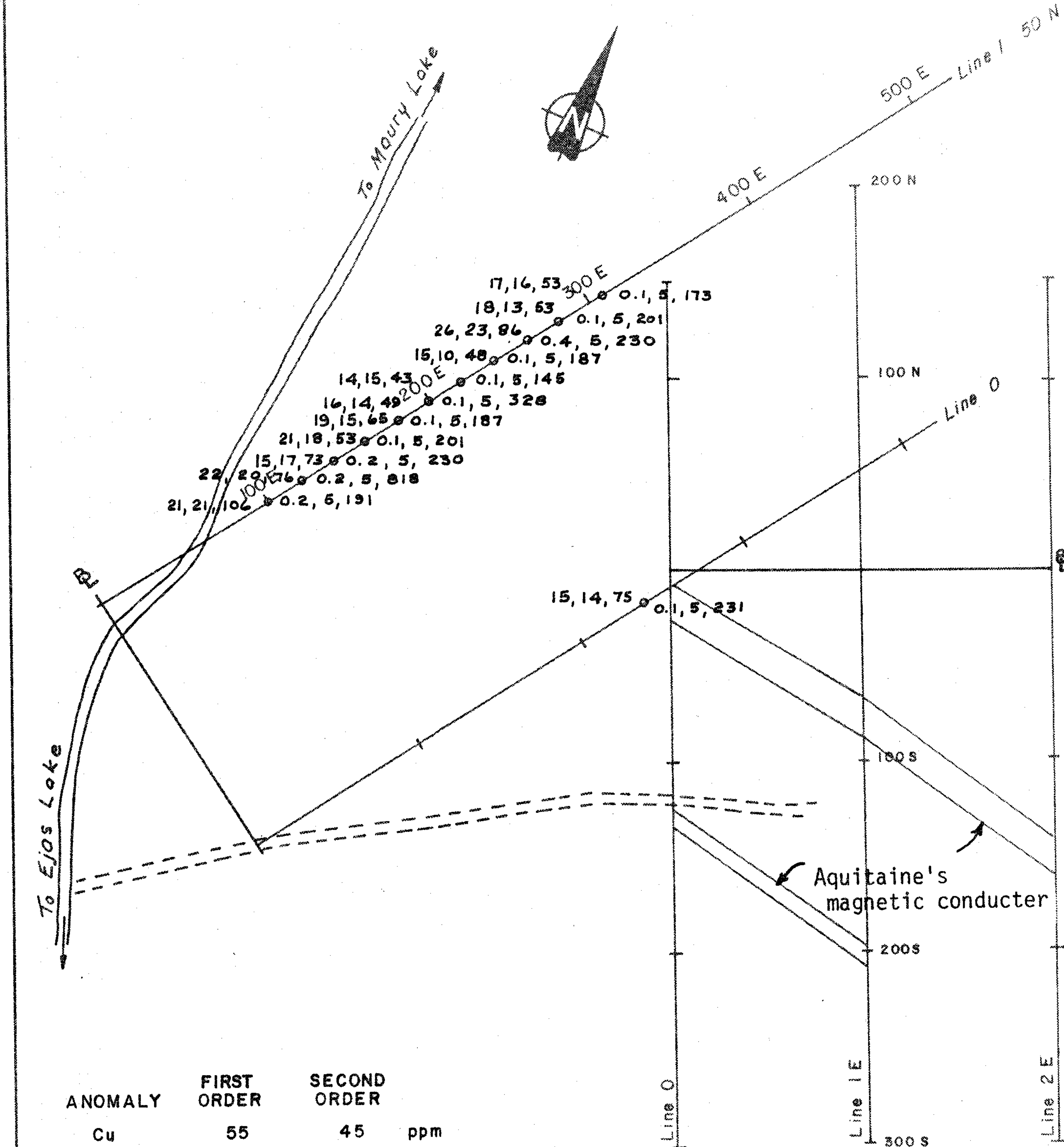
NTS 92P/16 Proj. 950

WORK BY | DRAWN BY | DATE: JAN. 21, 1985

0 20 40 60 80 100 m

Figure: 15a

NCI - 556



ANOMALY	FIRST ORDER	SECOND ORDER	
Cu	55	45	ppm
Pb	100	50	ppm
Zn	570	290	ppm
Ag	1.5	0.7	ppm
Au	60	40	ppb
Ba	300	250	ppm

Cu, Pb, Zn o Ag, Au, Ba
21, 21, 106 0.2, 5, 191

Kidd Creek Mines Ltd.

LIZARD CLAIMS

Cu, Pb, Zn, Ag, Au, Ba

SOIL RESULTS - GRIT #6 GRID

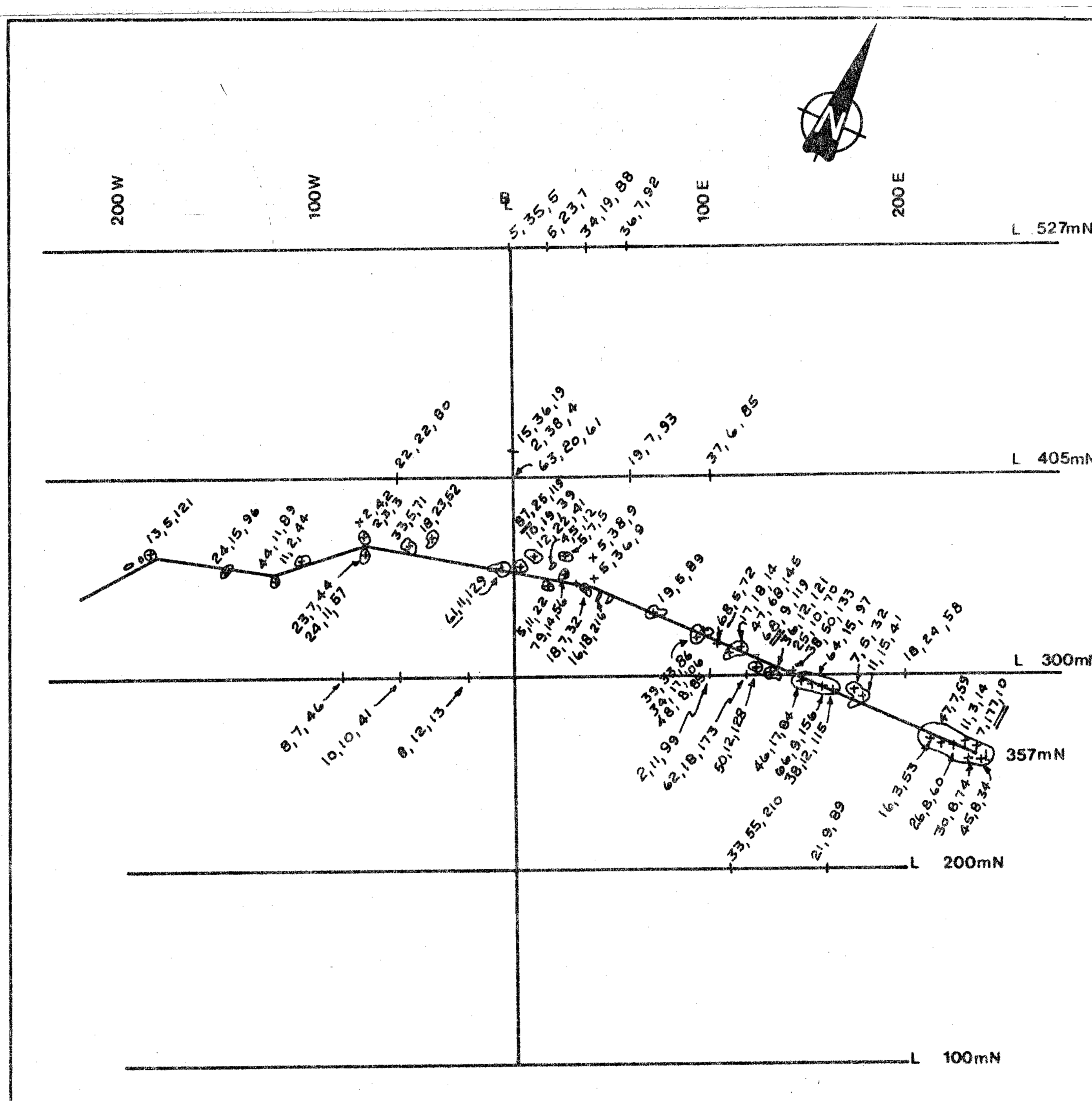
NTS 92P/16 Proj. 950

WORK BY | DRAWN BY | DATE JAN. 21, 1985

0 20 40 60 80 100 m

Figure: 15 b

NCI - 556



ANOMALY	FIRST ORDER	SECOND ORDER	
Cu	75	60	ppm
Pb	> 50	> 30	ppm
Zn	> 300	>225	ppm

Kidd Creek Mines Ltd.

LIZARD CLAIMS

ROCK GEOCHEMISTRY
RESULTS - Cu, Pb, Zn
LIZARD GRID

WORK BY | DRAWN BY | DATE: JAN. 1985

0 20 40 60 80 100 m

Figure: 14 c

NCI - 556

APPENDIX G

MAJOR, MINOR OXIDE & TRACE ELEMENT ANALYSES OF SELECTED ROCKS

==== K I D D   C R E E K   M I N E S   L T D ====
=== KIDD CREEK MINESITE COMPUTER SYSTEM ===

REPORT #2000

PAGE 1
PRINTED 22-OCT-84
11:45:44

SAMPLE ID # AB16851

WHOLE ROCK GEOCHEMICAL ANALYSIS

LAB REPORT # 22063
TOWNSHIP :
NTS : 092P16
UTM ZONE : 10
SAMPLE TYPE : GRAB SAMPLE,THIN SECTION

FIELD NUMBER : DM94184259
LOT : 0   CONCESSION :
GRID COORDINATES :   E :   685950.0   N :   5747600.0   EL :   0.0

PROJECT #
PROVINCE : BRITISH COLUMBIA
PROJECT :

FIELD NAME : METAMORPHIC ,FELSIC,FINE.
FINAL NAME :
ALTERATION : PERVASIVE ,SERICITIZATION,STRONG.
MINERALIZATION : DISSEMINATED AND BLEBS,5-20% ,PYRITE.
FORMATION :

SAMPLED BY : D.MALLALIEU   DATE : 14-JUN-84
ANALYZED BY : XRAL   DATE : 24-AUG-84

ANALYTICAL
TECHNIQUE : X-RAY FLUORESCENCE

	WT %	NORMALIZED ANHYDROUS WT %	NORMALIZED ANHYDROUS CATION %	NORMS	
SIO2	77.40	80.03	77.85	Q	62.10
AL203	11.30	11.68	13.40	C	8.33
FE203	3.33	2.03	1.48	OR	21.32
FEO	0.00	1.27	1.04	AB	3.70
CAO	0.12	0.12	0.13	AN	0.15
MGO	0.45	0.47	0.67	LC	0.00
NA20	0.38	0.39	0.74	NE	0.00
K20	3.32	3.43	4.26	KP	0.00
TIO2	0.46	0.48	0.35	AC	0.00
P205	0.07	0.07	0.06	DI	0.00
MNO	0.02	0.02	0.02	HE	0.00
S	0.00	0.00	0.00	EN	1.35
NIO	0.00	0.00	0.00	FS	0.00
CR203	0.00	0.00	0.00	FO	0.00
CO2	0.00	0.00	0.00	FA	0.00
H20+	0.00	0.00	0.00	WO	0.00
H20-	0.00	0.00	0.00	LN	0.00
LOI	3.08	0.00	0.00	MT	2.12
				IL	0.70
TOTAL	96.71	100.00	100.00	CR	0.00
				HM	0.07
				AP	0.16
				PO	0.00
				NS	0.00
				KS	0.00
				RU	0.00
				AG	0.00
				OL	0.00
				OPX	1.35
				CPX	0.00
				AB*	3.70

CLASSIFICATIONS AND INDICES

NA20+K20   3.83   SIO2   80.03   SUBALKALINE

OL*   1.51   NE*   3.31   Q*   95.18   SUBALKALINE

CPX   0.00   OL   0.00   OPX   100.00   SUBALKALINE

A   51.77   F   41.93   M   6.30   THOLEITIC

AL203   11.68   NORM PLAG   3.86   THOLEITIC

AN   0.59   AB*   14.72   OR   84.69   K-RICH SERIES

CI   4.23   NORM PLAG   3.86   RHYOLITE

JENSEN   THOLEIITIC RHYOLITE
AL   79.01   FE   17.02   MG   3.98

COLOR INDEX :   4.23
HASHIMOTO INDEX :   88.29

TRACE ELEMENTS (P.P.M.)   AU,PT (P.P.B.)

CR	30.00:RB	140.00:SR	100.00:Y	20.00:ZR	130.00:NB	20.00:AU	90.00:SC	15.00:CO	-1.00:
NI	3.00:CU	4.00:ZN	31.00:AS	90.00:SE	-3.00:BR	-1.00:RB	160.00:SR	-500.00:MO	-5.00:
AG	0.50:CD	-0.20:SB	1.40:CS	2.90:BA	1200.00:LA	27.90:CE	55.00:ND	20.00:SM	3.80:
EU	0.70:YB	2.00:LU	0.36:HF	4.00:TA	-1.00:W	0.30:PB	32.00:BI	-0.50:TH	8.60:
U	1.90:								

COMMENTS : PYRITIC WHITE SERICITE SCHIST
PYTITE AS DISSEMINATIONS,7%

SAMPLE ID # AB16852

WHOLE ROCK GEOCHEMICAL ANALYSIS

LAB REPORT # 22063
TOWNSHIP :
NTS : 92P16
UTM ZONE : 10
SAMPLE TYPE : GRAB SAMPLE

FIELD NUMBER : DM95084259
LOT : 0 CONCESSION :
GRID COORDINATES : E : 685950.0 N : 5747600.0 EL : 0.0

PROJECT #
PROVINCE : BRITISH COLUMBIA
PROJECT :

FIELD NAME : METAMORPHIC ,FELSIC,FINE.
FINAL NAME :
ALTERATION : PERVASIVE ,SERICITIZATION,STRONG.
MINERALIZATION : DISSEMINATED AND BLEBS,5-20% ,PYRITE.
FORMATION :

SAMPLED BY : D.MALLALIEU DATE : 14-JUN-84
ANALYZED BY : XRAL DATE : 24-AUG-84

ANALYTICAL
TECHNIQUE : X-RAY FLUORESCENCE

	WT %	NORMALIZED ANHYDROUS WT %	NORMALIZED ANHYDROUS CATION %		NORMS
SIO2	66.30	69.12	66.18	Q	38.15
AL203	14.40	15.01	16.94	C	4.75
FE203	4.98	2.18	1.57	OR	24.03
FEO	0.00	2.71	2.17	AB	4.64
CAO	3.19	3.33	3.41	AN	16.14
MGO	2.22	2.31	3.30	LC	0.00
NA20	0.48	0.50	0.93	NE	0.00
K20	3.77	3.93	4.81	KP	0.00
TIO2	0.59	0.62	0.44	AC	0.00
P205	0.13	0.14	0.11	DI	0.00
MNO	0.15	0.16	0.13	HE	0.00
S	0.00	0.00	0.00	EN	6.61
NIO	0.00	0.00	0.00	FS	2.14
CR203	0.00	0.00	0.00	FO	0.00
CO2	0.00	0.00	0.00	FA	0.00
H20+	0.00	0.00	0.00	WO	0.00
H20-	0.00	0.00	0.00	LN	0.00
LOI	3.70	0.00	0.00	MT	2.36
				IL	0.89
TOTAL	95.92	100.00	100.00	CR	0.00
				HM	0.00
				AP	0.29
				PO	0.00
				NS	0.00
				KS	0.00
				RU	0.00
				AG	0.00
				OL	0.00
				OPX	8.75
				CPX	0.00
				AB*	4.64

CLASSIFICATIONS AND INDICES

NA20+K20 4.43 SIO2 69.12 SUBALKALINE

OL* 12.73 NE* 5.41 Q* 81.87 SUBALKALINE

CPX 0.00 OL 0.00 OPX 100.00 SUBALKALINE

A 38.81 F 40.92 M 20.27 THOLEITIC

AL203 15.01 NORM PLAG 77.66 THOLEITIC

AN 36.02 AB* 10.36 OR 53.62 K-RICH SERIES

CI 11.99 NORM PLAG 77.66 BASALT

JENSEN CALC-ALKALINE ANDESITE
AL 69.00 FE 17.55 MG 13.45

COLOR INDEX : 11.99
HASHIMOTO INDEX : 62.01

TRACE ELEMENTS (P.P.M.) AU,PT (P.P.B.)

CR	30.00:RB	140.00:SR	290.00:Y	40.00:ZR	190.00:NB	20.00:AU	-20.00:SC	20.00:CO	10.00:
NI	12.00:CU	10.00:ZN	64.00:AS	49.00:SE	-3.00:BR	-1.00:RB	170.00:SR	-500.00:MO	-5.00:
AG	1.00:CD	-0.20:SB	0.90:CS	3.70:BA	1600.00:LA	41.00:CE	80.00:ND	30.00:SM	6.50:
EU	1.10:YB	3.00:LU	0.55:HF	5.00:TA	-0.10:W	-3.00:PB	26.00:BI	-0.50:TH	12.00:
U	3.50:								

COMMENTS : CHLORITE SERICITE SCHIST
PALE YELLOW WHITE PYRITE,7%

==== K I D D   C R E E K   M I N E S   L T D ====
=== KIDD CREEK MINESITE COMPUTER SYSTEM ===

REPORT #2000

PRINTED 22-OCT-84
11:48:15

SAMPLE ID # AB16899

WHOLE ROCK GEOCHEMICAL ANALYSIS

LAB REPORT # 22063
TOWNSHIP :
NTS : 92P16
UTM ZONE : 10
SAMPLE TYPE : GRAB SAMPLE,THIN SECTION

FIELD NUMBER : DM95084396
LOT : 0 CONCESSION :
GRID COORDINATES : E : 40.0 N : 360.0 EL : 0.0

PROJECT #
PROVINCE : BRITISH COLUMBIA
PROJECT :

FIELD NAME : VOLCANICLASTIC,FELSIC,ASH,QUARTZ PORPHYRITIC,TECTONIZED.
FINAL NAME :
ALTERATION : PERVASIVE ,SERICITIZATION,STRONG.
MINERALIZATION : DISSEMINATED AND BLEBS,1-5%,PYRITE.
FORMATION :

SAMPLED BY : D.MALLALIEU
ANALYZED BY : XRAL

DATE : 10-JUL-84
DATE : 24-AUG-84

ANALYTICAL
TECHNIQUE : X-RAY FLUORESCENCE

	WT %	NORMALIZED ANHYDROUS WT %	NORMALIZED ANHYDROUS CATION %		NORMS
SIO2	70.20	73.27	69.76	Q	42.90
AL2O3	14.80	15.45	17.34	C	8.98
FE2O3	4.44	1.94	1.39	OR	22.91
FEO	0.00	2.42	1.93	AB	18.98
CAO	0.08	0.08	0.09	AN	-0.07
MGO	0.53	0.55	0.78	LC	0.00
NA2O	1.97	2.06	3.80	NE	0.00
K2O	3.61	3.77	4.58	KP	0.00
TIO2	0.36	0.38	0.27	AC	0.00
P2O5	0.07	0.07	0.06	DI	0.00
MNO	0.01	0.01	0.01	HE	0.00
S	0.00	0.00	0.00	EN	1.57
NIO	0.00	0.00	0.00	FS	1.95
CR2O3	0.00	0.00	0.00	FO	0.00
CO2	0.00	0.00	0.00	FA	0.00
H2O+	0.00	0.00	0.00	WO	0.00
H2O-	0.00	0.00	0.00	LN	0.00
LOI	3.85	0.00	0.00	MT	2.09
				IL	0.54
TOTAL	95.81	100.00	100.00	CR	0.00
				HM	0.00
				AP	0.16
				FO	0.00
				NS	0.00
				KS	0.00
				RU	0.00
				AG	0.00
				OL	0.00
				OPX	3.52
				CPX	0.00
				AB*	18.98

CLASSIFICATIONS AND INDICES

NA2O+K2O 5.82 SIO2 73.27 SUBALKALINE

OL* 4.03 NE* 17.41 Q* 78.55 SUBALKALINE

CPX 0.00 OL 0.00 OPX 100.00 SUBALKALINE

A 55.22 F 39.54 M 5.24 THOLEITIC

AL2O3 15.45 NORM PLAG 0.00 CALC-ALKALINE

AN 0.00 AB* 45.31 OR 54.69 K-RICH SERIES

CI 6.14 NORM PLAG 0.00 RHYOLITE

JENSEN THOLEIITIC RHYOLITE
AL 79.82 FE 16.57 MG 3.61

COLOR INDEX : 6.14
HASHIMOTO INDEX : 66.88

TRACE ELEMENTS (P.P.M.) AU,PT (P.P.B.)

CR	10.00:RB	170.00:SR	40.00:Y	40.00:ZR	160.00:NB	20.00:AU	20.00:SC	20.00:CO	0.30:
NI	5.00:CU	5.50:ZN	15.00:AS	44.00:SE	-3.00:BR	-1.00:RB	170.00:SR	-500.00:MO	0.50:
AG	-0.50:CD	-0.20:SB	2.60:CS	3.00:BA	1400.00:LA	46.50:CE	89.00:ND	40.00:SM	5.80:
EU	1.10:YB	3.00:LU	0.50:HF	0.50:TA	-1.00:W	-3.00:PB	40.00:BI	-0.50:TH	15.00:
U	3.80:								

COMMENTS : QUARTZ SERICITE SCHIST. QUARTZ CRYSTALS EQUANT. (5MM,5%)
FINE GRAINED PALE YELLOW PYRITE ACCOUNTS FOR 5%

==== K I D D   C R E E K   M I N E S   L T D ====
=== KIDD CREEK MINESITE COMPUTER SYSTEM ===

REPORT #2000

PRINTED 22-OCT-84
11:49:16

SAMPLE ID # AB16900

WHOLE ROCK GEOCHEMICAL ANALYSIS

LAB REPORT # 22063
TOWNSHIP :
NTS : 92P16
UTM ZONE : 10
SAMPLE TYPE : GRAB SAMPLE,THIN SECTION

FIELD NUMBER : DM94184397A
LOT : 0 CONCESSION :
GRID COORDINATES : E : 0.0 N : 415.0 EL : 0.0

PROJECT #
PROVINCE : BRITISH COLUMBIA
PROJECT :

FIELD NAME : VOLCANICLASTIC,FELSIC,ASH,QUARTZ PORPHYRITIC,TECTONIZED,LOOK AT COMMENTS FILE.
FINAL NAME :
ALTERATION : PERVASIVE ,SERICITIZATION,STRONG.
MINERALIZATION : DISSEMINATED AND BLEBS,1-5%,PYRITE.
FORMATION :

SAMPLED BY : D.MALLALIEU   DATE : 10-JUL-84
ANALYZED BY : XRAL   DATE : 24-AUG-84

ANALYTICAL TECHNIQUE : X-RAY FLUORESCENCE

	WT %	NORMALIZED ANHYDROUS WT %	NORMALIZED ANHYDROUS CATION %
SIO2	74.00	75.84	71.64
AL2O3	15.50	15.88	17.69
FE2O3	1.19	1.22	0.87
FEO	0.00	0.00	0.00
CAO	0.08	0.08	0.08
MGO	0.49	0.50	0.71
NA2O	2.21	2.26	4.15
K2O	3.69	3.78	4.56
TIO2	0.38	0.39	0.28
P2O5	0.03	0.03	0.02
MNO	0.01	0.01	0.01
S	0.00	0.00	0.00
NIO	0.00	0.00	0.00
CR2O3	0.00	0.00	0.00
CO2	0.00	0.00	0.00
H2O+	0.00	0.00	0.00
H2O-	0.00	0.00	0.00
LOI	2.16	0.00	0.00
TOTAL	97.58	100.00	100.00

	NORMS
Q	44.72
C	8.89
OR	22.81
AB	20.74
AN	0.21
LC	0.00
NE	0.00
KP	0.00
AC	0.00
DI	0.00
HE	0.00
EN	1.41
FS	0.00
FO	0.00
FA	0.00
WO	0.00
LN	0.00
MT	0.00
IL	0.02
CR	0.00
HM	0.87
AP	0.07
PO	0.00
NS	0.00
KS	0.00
RU	0.27
AG	0.00
OL	0.00
OPX	1.41
CPX	0.00
AB*	20.74

CLASSIFICATIONS AND INDICES

NA2O+K2O	6.05	SIO2			75.84	SUBALKALINE
OL*	1.59	NE*	18.61	Q*	79.81	SUBALKALINE
CPX	0.00	OL	0.00	OPX	100.00	SUBALKALINE
A	79.08	F	14.35	M	6.57	CALC-ALKALINE
AL2O3	15.88	NORM PLAG			1.00	CALC-ALKALINE
AN	0.48	AB*	47.39	OR	52.13	K-RICH SERIES
CI	2.30	NORM PLAG			1.00	RHYOLITE

JENSEN CALC-ALKALINE RHYOLITE
AL 90.49 FE 5.89 MG 3.62

COLOR INDEX : 2.30
HASHIMOTO INDEX : 64.61

TRACE ELEMENTS (P.P.M.) AU,PT (P.P.B.)

CR	30.00:RB	180.00:SR	60.00:Y	20.00:ZR	120.00:NB	20.00:AU	-20.00:SC	11.00:CO	-1.00:
NI	3.00:CU	3.00:ZN	11.00:AS	29.00:SE	-3.00:BR	-1.00:RB	170.00:SR	-500.00:MO	-5.00:
AG	-0.50:CD	-0.20:SB	5.60:CS	3.30:BA	1400.00:LA	48.80:CE	82.00:ND	30.00:SM	6.10:
EU	1.00:YB	3.00:LU	0.38:HF	5.00:TA	-1.00:W	-3.00:PB	36.00:BI	-0.50:TH	16.00:
U	2.70:								

COMMENTS : RUBBLY O/C ON B/L 415N
QUARTZ SERICITE SCHIST,QTZ BLUE GREY EQUANT (6MM,25%) PY DISSEMINATIONS <3% _

**** KIDD CREEK MINES LTD ****
*** KIDD CREEK MINESITE COMPUTER SYSTEM ***

REPORT #2000

PRINTED 22-OCT-84 11:50:53

SAMPLE ID # AB18556

WHOLE ROCK GEOCHEMICAL ANALYSIS

LAB REPORT # 22598
TOWNSHIP :
NTS : 092P16
UTM ZONE : 10
SAMPLE TYPE : GRAB SAMPLE

FIELD NUMBER : DM95084500
LOT : 0 CONCESSION :
GRID COORDINATES : E : 684380.0 N : 5750400.0 EL : 0.0

PROJECT #
PROVINCE : BRITISH COLUMBIA
PROJECT :

FIELD NAME : VOLCANICLASTIC,FELSIC,ASH,TECTONIZED,CRYSTAL ,LOOK AT COMMENTS FILE.
FINAL NAME :
ALTERATION : METAMORPHOSED ,LOOK AT COMMENTS,NO COMMENT.
MINERALIZATION : DISSEMINATED AND BLEBS,<1% ,PYRITE.
FORMATION :

SAMPLED BY : D.MALLALIEU DATE : 19-AUG-84
ANALYZED BY : XRAY DATE : 04-OCT-84

ANALYTICAL TECHNIQUE : X-RAY FLUORESCENCE

	WT %	NORMALIZED ANHYDROUS WT %	NORMALIZED ANHYDROUS CATION %	NORMS	
SIO2	74.20	75.72	71.15	Q	39.73
AL203	13.80	14.08	15.60	C	4.70
FE203	2.01	1.86	1.31	OR	16.47
FEO	0.00	0.17	0.14	AB	32.35
CAO	0.67	0.68	0.69	AN	2.83
MGO	0.70	0.71	1.00	LC	0.00
NA20	3.48	3.55	6.47	NE	0.00
K20	2.69	2.75	3.29	KP	0.00
TIO2	0.32	0.33	0.23	AC	0.00
P205	0.09	0.09	0.07	DI	0.00
MNO	0.05	0.05	0.04	HE	0.00
S	0.00	0.00	0.00	EN	2.00
NIO	0.00	0.00	0.00	FS	0.00
CR203	0.00	0.00	0.00	FO	0.00
CO2	0.00	0.00	0.00	FA	0.00
H20+	0.00	0.00	0.00	WO	0.00
H20-	0.00	0.00	0.00	LN	0.00
LOI	1.93	0.00	0.00	MT	0.00
				IL	0.36
TOTAL	97.99	100.00	100.00	CR	0.00
				HM	1.31
				AP	0.20
				PO	0.00
				NS	0.00
				KS	0.00
				RU	0.05
				AG	0.00
				OL	0.00
				OPX	2.00
				CPX	0.00
				AB*	32.35

CLASSIFICATIONS AND INDICES

NA20+K20	6.30	SIO2			75.72	SUBALKALINE
OL*	2.03	NE*	26.20	Q*	71.77	SUBALKALINE
CPX	0.00	OL	0.00	OPX	100.00	SUBALKALINE
A	71.09	F	20.84	M	8.07	CALC-ALKALINE
AL203	14.08	NORM PLAG			8.05	CALC-ALKALINE
AN	5.48	AB*	62.63	OR	31.89	K-RICH SERIES
CI	3.67	NORM PLAG			8.05	RHYOLITE

JENSEN CALC-ALKALINE RHYOLITE
AL 85.14 FE 9.40 MG 5.46

COLOR INDEX : 3.67
HASHIMOTO INDEX : 44.96

TRACE ELEMENTS (P.P.M.) AU,PT (P.P.B.)

CR	10.00:RB	100.00:SR	110.00:Y	30.00:ZR	150.00:NB	30.00:AU	-20.00:SC	8.70:CO	3.00:
NI	5.00:CU	4.50:ZN	47.00:AS	-2.00:SE	-3.00:BR	-1.00:RB	100.00:SR	-500.00:MO	-5.00:
AG	-0.50:CD	-0.20:SB	-0.20:CS	2.30:BA	1200.00:LA	44.90:CE	84.00:ND	30.00:SM	5.70:
EU	0.80:YB	2.00:LU	0.41:HF	6.00:TA	-1.00:W	-3.00:PB	18.00:BI	-0.50:TH	15.00:
U	2.10:								

COMMENTS : QUARTZ PHYRIC DACITE TO RHYODACITE (CRYSTAL TUFF)

==== KIDD CREEK MINES LTD ====
=== KIDD CREEK MINESITE COMPUTER SYSTEM ===

REPORT #2000 — PAGE 1

SAMPLE ID # AB18564 — PRINTED 22-OCT-84 11:52:15

WHOLE ROCK GEOCHEMICAL ANALYSIS

LAB REPORT # 22598
TOWNSHIP :
NTS : 092P16
UTM ZONE : 10
SAMPLE TYPE : GRAB SAMPLE

FIELD NUMBER : DM95084512
LOT : 0 CONCESSION :
GRID COORDINATES : E : 689000.0 N : 5747880.0 EL : 0.0

PROJECT #
PROVINCE : BRITISH COLUMBIA
PROJECT :

FIELD NAME : VOLCANIC,FELSIC,FINE,AUTOBRECCIATED,MASSIVE ,LOOK AT COMMENTS.
FINAL NAME :
ALTERATION : METAMORPHOSED ,LOOK AT COMMENTS,NO COMMENT.
MINERALIZATION : NODULES ,1-5%,PYRITE.
FORMATION :

SAMPLED BY : D. MALLALIEU — DATE : 20-AUG-84
ANALYZED BY : XRAY — DATE : 04-OCT-84

ANALYTICAL TECHNIQUE : X-RAY FLUORESCENCE

	WT %	NORMALIZED ANHYDROUS WT %	NORMALIZED ANHYDROUS CATION %
SIO2	68.10	69.17	65.41
AL2O3	16.20	16.45	18.34
FE2O3	4.86	2.15	1.53
FEO	0.00	2.50	1.98
CAO	3.57	3.63	3.67
MGO	1.21	1.23	1.73
NA2O	2.92	2.97	5.44
K2O	1.03	1.05	1.26
TIO2	0.62	0.63	0.45
P2O5	0.14	0.14	0.11
MNO	0.08	0.08	0.07
S	0.00	0.00	0.00
NIO	0.00	0.00	0.00
CR2O3	0.00	0.00	0.00
CO2	0.00	0.00	0.00
H2O+	0.00	0.00	0.00
H2O-	0.00	0.00	0.00
LOI	1.70	0.00	0.00
TOTAL	98.46	100.00	100.00

	NORMS
Q	35.78
C	4.67
OR	6.32
AB	27.19
AN	17.42
LC	0.00
NE	0.00
KP	0.00
AC	0.00
DI	0.00
HE	0.00
EN	3.46
FS	1.66
FO	0.00
FA	0.00
WO	0.00
LN	0.00
MT	2.30
IL	0.90
CR	0.00
HM	0.00
AP	0.30
PO	0.00
NS	0.00
KS	0.00
RU	0.00
AG	0.00
OL	0.00
OPX	5.13
CPX	0.00
AB*	27.19

CLASSIFICATIONS AND INDICES

NA2O+K2O	4.01	SIO2			69.17	SUBALKALINE
OL*	5.65	NE*	23.96	Q*	70.40	SUBALKALINE
CPX	0.00	OL	0.00	OPX	100.00	SUBALKALINE
A	41.43	F	45.87	M	12.69	THOLEITIC
AL2O3	16.45	NORM PLAG			39.05	CALC-ALKALINE
AN	34.21	AB*	53.39	OR	12.41	AVERAGE SERIES
CI	8.32	NORM PLAG			39.05	ANDESITE

JENSEN CALC-ALKALINE DACITE
AL 76.11 FE 16.71 MG 7.19

COLOR INDEX : 8.32
HASHIMOTO INDEX : 25.66

TRACE ELEMENTS (P.P.M.) AU,PT (P.P.B.)

CR	170.00:RB	60.00:SR	820.00:Y	20.00:ZR	100.00:NB	20.00:AU	-20.00:SC	40.00:CO	11.00:
NI	26.00:CU	5.50:ZN	86.00:AS	3.00:SE	-3.00:BR	-1.00:RB	60.00:SR	600.00:MO	-5.00:
AG	-0.50:CD	-0.20:SB	-0.20:CS	1.60:BA	1100.00:LA	28.40:CE	52.00:ND	20.00:SM	3.70:
EU	0.70:YB	1.00:LU	0.31:HF	0.40:TA	2.00:W	-0.30:PB	44.00:BI	-0.50:TH	11.00:
U	1.60:								

COMMENTS : SAME AS DM94184257
LOCALLY PYRITE NODULES PRESENT (2CM,1%).HETEROLITHIC FLOW BRECCIA? FRAGS (20X10CM) ,ANGULAR FELSIC IN COMP.

==== K I D D   C R E E K   M I N E S   L T D ====
=== KIDD CREEK MINESITE COMPUTER SYSTEM ===

REPORT #2000 — PAGE 1
PRINTED 22-OCT-84 11:53:47

SAMPLE ID # AB18567 — WHOLE ROCK GEOCHEMICAL ANALYSIS

LAB REPORT # 22598 — FIELD NUMBER : DM94184254 — PROJECT #
TOWNSHIP : — LOT : 0 CONCESSION : — PROVINCE : BRITISH COLUMBIA
NTS : 092P16 — PROJECT :
UTM ZONE : 10 — GRID COORDINATES : E : 685755.0 N : 5746790.0 EL : 0.0
SAMPLE TYPE : GRAB SAMPLE

FIELD NAME : SEDIMENTARY ,SANDSTONE AND WACKE ,GRANULE,TECTONIZED,LOOK AT COMMENTS.
FINAL NAME :
ALTERATION :
MINERALIZATION : DISSEMINATED AND BLEBS,<1% ,PYRITE.
FORMATION :

SAMPLED BY : D. MALLALIEU — DATE : 06-SEP-84 — ANALYTICAL
ANALYZED BY : XRAY — DATE : 04-OCT-84 — TECHNIQUE : X-RAY FLUORESCENCE

	WT %	NORMALIZED ANHYDROUS WT %	NORMALIZED ANHYDROUS CATION %		NORMS
SIO2	69.00	72.22	69.56	Q	47.58
AL2O3	14.00	14.65	16.64	C	10.17
FE2O3	5.76	2.24	1.62	OR	22.47
FEO	0.00	3.41	2.75	AB	6.65
CAO	0.52	0.54	0.56	AN	1.60
MGO	1.56	1.63	2.34	LC	0.00
NA2O	0.68	0.71	1.33	NE	0.00
K2O	3.49	3.65	4.49	KP	0.00
TIO2	0.64	0.67	0.49	AC	0.00
P2O5	0.17	0.18	0.15	DI	0.00
MNO	0.09	0.09	0.08	HE	0.00
S	0.00	0.00	0.00	EN	4.69
NIO	0.00	0.00	0.00	FS	3.05
CR2O3	0.00	0.00	0.00	FO	0.00
CO2	0.00	0.00	0.00	FA	0.00
H2O+	0.00	0.00	0.00	WO	0.00
H2O-	0.00	0.00	0.00	LN	0.00
LOI	3.00	0.00	0.00	MT	2.44
				IL	0.97
TOTAL	95.55	100.00	100.00	CR	0.00
				HM	0.00
				AP	0.39
				PO	0.00
				NS	0.00
				KS	0.00
				RU	0.00
				AG	0.00
				OL	0.00
				OPX	7.74
				CPX	0.00
				AB*	6.65

CLASSIFICATIONS AND INDICES

NA2O+K2O 4.36 SIO2 72.22 SUBALKALINE
OL* 9.37 NE* 6.43 Q* 84.20 SUBALKALINE
CPX 0.00 OL 0.00 OPX 100.00 SUBALKALINE
A 38.21 F 47.49 M 14.30 THOLEITIC
AL2O3 14.65 NORM PLAG 19.38 CALC-ALKALINE
AN 5.20 AB* 21.64 OR 73.16 K-RICH SERIES
CI 11.15 NORM PLAG 19.38 DACITE

JENSEN THOLEIITIC DACITE
AL 69.57 FE 20.63 MG 9.80

COLOR INDEX : 11.15
HASHIMOTO INDEX : 80.80

TRACE ELEMENTS (P.P.M.) AU.PT (P.P.B.)

CR	260.00:RB	140.00:SR	30.00:Y	30.00:ZR	200.00:NB	20.00:AU	-20.00:SC	13.00:CO	18.00:
NI	48.00:CU	58.00:ZN	75.00:AS	3.00:SE	3.00:BR	-1.00:RB	160.00:SR	-500.00:MO	9.00:
AG	0.50:CD	-0.20:SB	-0.20:CS	2.70:BA	800.00:LA	47.30:CE	88.00:ND	30.00:SM	6.10:
EU	1.00:YB	2.00:LU	0.38:HF	7.00:TA	1.00:W	-3.00:PB	46.00:BI	-0.50:TH	15.00:
U	3.80:								

COMMENTS : QUARTZ WACKE- IMPURE QUARTZITE, EQUANT QUARTZ GRAINS (1-2MM,10%) RANDOMLY DISTRIBUTED THROUGHOUT, SLIGHTLY MICACEOUS , MILD SCHISTOSITY

==== K I D D   C R E E K   M I N E S   L T D ====
=== KIDD CREEK MINESITE COMPUTER SYSTEM ===

REPORT #2000 | PAGE 1
PRINTED 22-OCT-84
11:54:46

SAMPLE ID # AB18568

WHOLE ROCK GEOCHEMICAL ANALYSIS

LAB REPORT # 22598
TOWNSHIP :
NTS : 092P16
UTM ZONE : 10
SAMPLE TYPE : GRAB SAMPLE,THIN SECTION

FIELD NUMBER : DM94184266D
LOT : 0 CONCESSION :
GRID COORDINATES : E : 687725.0 N : 5748840.0 EL : 0.0

PROJECT #
PROVINCE : BRITISH COLUMBIA
PROJECT :

FIELD NAME : VOLCANIC,FELSIC,FINE,FLOW BANDED OR FLOW LAMINATED,TECTONIZED,LOOK AT COMMENTS.
FINAL NAME :
ALTERATION : UNKNOWN ,SERICITIZATION,STRONG.
MINERALIZATION : DISSEMINATED AND BLEBS,<1% ,PYRITE.
FORMATION :

SAMPLED BY : D. MALLALIEU DATE : 06-SEP-84
ANALYZED BY : XRAY DATE : 04-OCT-84

ANALYTICAL
TECHNIQUE : X-RAY FLUORESCENCE

	WT %	NORMALIZED ANHYDROUS WT %	NORMALIZED ANHYDROUS CATION %		NORMS
SIO2	67.20	70.68	66.61	Q	34.91
AL2O3	12.70	13.36	14.84	C	0.00
FE2O3	2.64	1.74	1.23	OR	8.04
FEO	0.00	0.94	0.74	AB	18.35
CAO	5.94	6.25	6.31	AN	23.90
MGO	3.22	3.39	4.76	LC	0.00
NA2O	1.91	2.01	3.67	NE	0.00
K2O	1.27	1.34	1.61	KP	0.00
TIO2	0.15	0.16	0.11	AC	0.00
P2O5	0.05	0.05	0.04	DI	5.72
MNO	0.10	0.11	0.08	HE	0.11
S	0.00	0.00	0.00	EN	6.65
NIO	0.00	0.00	0.00	FS	0.13
CR2O3	0.00	0.00	0.00	FO	0.00
CO2	0.00	0.00	0.00	FA	0.00
H2O+	0.00	0.00	0.00	WO	0.00
H2O-	0.00	0.00	0.00	LN	0.00
LOI	4.08	0.00	0.00	MT	1.85
				IL	0.22
TOTAL	95.08	100.00	100.00	CR	0.00
				HM	0.00
				AP	0.11
				PO	0.00
				NS	0.00
				KS	0.00
				RU	0.00
				AG	0.00
				OL	0.00
				OPX	6.79
				CPX	5.84
				AB*	18.35

CLASSIFICATIONS AND INDICES

NA2O+K2O	3.34	SIO2			70.68	SUBALKALINE
OL*	8.48	NE*	18.34	Q*	73.18	SUBALKALINE
CPX	46.23	OL	0.00	OPX	53.77	SUBALKALINE
A	36.24	F	27.07	M	36.69	CALC-ALKALINE
AL2O3	13.36	NORM PLAG			56.57	THOLEITIC
AN	47.52	AB*	36.49	OR	15.98	AVERAGE SERIES
CI	14.69	NORM PLAG			56.57	HIGH ALUMINA BASALT

JENSEN CALC-ALKALINE ANDESITE
AL 68.19 FE 9.95 MG 21.86

COLOR INDEX : 14.69
HASHIMOTO INDEX : 36.39

TRACE ELEMENTS (P.P.M.) AU,PT (P.P.B.)

CR	130.00:RB	60.00:SR	1150.00:Y	30.00:ZR	120.00:NB	20.00:AU	-20.00:SC	4.50:CO	3.00:
NI	14.00:CU	4.00:ZN	80.00:AS	-2.00:SE	-3.00:BR	-1.00:RB	50.00:SR	1100.00:MO	-5.00:
AG	0.50:CD	-0.20:SB	0.30:CS	2.80:BA	1500.00:LA	59.60:CE	102.00:ND	30.00:SM	5.50:
EU	1.00:YB	2.00:LU	0.39:HF	6.00:TA	2.00:W	-3.00:PB	48.00:BI	-0.50:TH	18.00:
U	2.20:								

COMMENTS : ASH FLOW, FINE GRAINED,DISPLAYING A SLIGHT GNEISSIC FABRIC GENERATED BY QUARTZ CARBONATE, AND WHITE MICA.

==== K I D D   C R E E K   M I N E S   L T D ====
=== KIDD CREEK MINESITE COMPUTER SYSTEM ===

REPORT #2000 | PAGE 1
PRINTED 22-OCT-84 11:55:47

SAMPLE ID # AB18569

WHOLE ROCK GEOCHEMICAL ANALYSIS

LAB REPORT # 22598
TOWNSHIP :
NTS : 092P16
UTM ZONE : 10
SAMPLE TYPE : GRAB SAMPLE

FIELD NUMBER : TH95084357
LOT : 0 CONCESSION :
GRID COORDINATES : E : 686540.0 N : 5748825.0 EL : 0.0

PROJECT #
PROVINCE : BRITISH COLUMBIA
PROJECT :

FIELD NAME : IGNEOUS ,INTERMEDIATE,FINE,EQUIGRANULAR,QUARTZ AND FELDSPAR PORPHYRITIC,MASSIVE.
FINAL NAME :
ALTERATION :
MINERALIZATION : NIL ,NIL ,NO COMMENT.
FORMATION :

SAMPLED BY : T. HUTTEMANN — DATE : 06-SEP-84
ANALYZED BY : XRAY — DATE : 04-OCT-84
ANALYTICAL TECHNIQUE : X-RAY FLUORESCENCE

	WT %	NORMALIZED ANHYDROUS WT %	NORMALIZED ANHYDROUS CATION %		NORMS
SIO2	61.70	64.56	59.84	Q	9.97
AL203	16.70	17.47	19.09	C	0.00
FE203	2.57	1.94	1.35	OR	47.69
FEO	0.00	0.68	0.53	AB	24.54
CAO	2.98	3.12	3.10	AN	11.62
MGO	0.87	0.91	1.26	LC	0.00
NA20	2.61	2.73	4.91	NE	0.00
K20	7.70	8.06	9.54	KP	0.00
TIO2	0.35	0.37	0.26	AC	0.00
P205	0.10	0.10	0.08	DI	2.55
MNO	0.06	0.06	0.05	HE	0.00
S	0.00	0.00	0.00	EN	1.24
NIO	0.00	0.00	0.00	FS	0.00
CR203	0.00	0.00	0.00	FO	0.00
CO2	0.00	0.00	0.00	FA	0.00
H20+	0.00	0.00	0.00	WO	0.00
H20-	0.00	0.00	0.00	LN	0.00
LOI	3.16	0.00	0.00	MT	0.96
				IL	0.51
TOTAL	95.57	100.00	100.00	CR	0.00
				HM	0.71
				AP	0.22
				PO	0.00
				NS	0.00
				KS	0.00
				RU	0.00
				AG	0.00
				OL	0.00
				OPX	1.24
				CPX	2.55
				AB*	24.54

CLASSIFICATIONS AND INDICES

NA20+K20	10.79	SIO2			64.56	ALKALINE
OL*	2.60	NE*	41.19	Q*	56.21	SUBALKALINE
CPX	67.23	OL	0.00	OPX	32.77	ALKALINE
A	76.41	F	17.14	M	6.45	CALC-ALKALINE
AL203	17.47	NORM PLAG			32.13	CALC-ALKALINE
AN	13.85	AB*	29.27	OR	56.88	SODIC
CI	5.97	NORM PLAG			32.13	MUGEARITE

JENSEN CALC-ALKALINE RHYOLITE
AL 84.74 FE 9.68 MG 5.58

COLOR INDEX : 5.97
HASHIMOTO INDEX : 60.52

TRACE ELEMENTS (P.P.M.) AU,PT (P.P.B.)

CR	100.00:RB	170.00:SR	270.00:Y	30.00:ZR	140.00:NB	20.00:AU	-20.00:SC	10.00:CO	5.00:
NI	8.00:CU	3.50:ZN	34.00:AS	2.00:SE	-3.00:BR	-1.00:RB	210.00:SR	-500.00:MO	6.00:
AG	-0.50:CD	-0.20:SB	-0.20:CS	2.60:BA	2900.00:LA	50.50:CE	94.00:ND	40.00:SM	6.20:
EU	1.60:YB	2.00:LU	0.45:HF	8.00:TA	1.00:W	3.00:PB	22.00:BI	-0.50:TH	18.00:
U	3.40:								

COMMENTS : INTERMEDIATE COMPOSITION LEUCOCRATIC HYPABYSSAL INTRUSION

==== K I D D   C R E E K   M I N E S   L T D ====
=== KIDD CREEK MINESITE COMPUTER SYSTEM ===

REPORT #2000

PRINTED 22-OCT-84
11:56:47

SAMPLE ID # AB18570

WHOLE ROCK GEOCHEMICAL ANALYSIS

LAB REPORT # 22598
TOWNSHIP :
NTS : 092P16
UTM ZONE : 10
SAMPLE TYPE : GRAB SAMPLE,THIN SECTION

FIELD NUMBER : DM95084478B
LOT : 0 CONCESSION :
GRID COORDINATES : E : 686030.0 N : 5747350.0 EL : 0.0

PROJECT #
PROVINCE : BRITISH COLUMBIA
PROJECT :

FIELD NAME : SEDIMENTARY ,SANDSTONE AND WACKE ,SILT,LAMINATED ,LOOK AT COMMENTS.
FINAL NAME :
ALTERATION :
MINERALIZATION : NIL ,NIL ,NO COMMENT.
FORMATION :

SAMPLED BY : D. MALLALIEU   DATE : 06-SEP-84
ANALYZED BY : XRAY   DATE : 04-OCT-84

ANALYTICAL TECHNIQUE : X-RAY FLUORESCENCE

	WT %	NORMALIZED ANHYDROUS WT %	NORMALIZED ANHYDROUS CATION %		NORMS
SIO2	90.70	92.47	91.33	Q	83.98
AL2O3	3.33	3.39	3.95	C	1.23
FE2O3	1.40	1.43	1.06	OR	4.37
FEO	0.00	0.00	0.00	AB	4.20
CAO	0.52	0.53	0.56	AN	2.52
MGO	0.80	0.82	1.20	LC	0.00
NA2O	0.43	0.44	0.84	NE	0.00
K2O	0.68	0.69	0.87	KP	0.00
TIO2	0.16	0.16	0.12	AC	0.00
P2O5	0.04	0.04	0.03	DI	0.00
MNO	0.03	0.03	0.03	HE	0.00
S	0.00	0.00	0.00	EN	2.40
NIO	0.00	0.00	0.00	FS	0.00
CR2O3	0.00	0.00	0.00	FO	0.00
CO2	0.00	0.00	0.00	FA	0.00
H2O+	0.00	0.00	0.00	WO	0.00
H2O-	0.00	0.00	0.00	LN	0.00
LOI	1.47	0.00	0.00	MT	0.00
				IL	0.05
TOTAL	98.09	100.00	100.00	CR	0.00
				HM	1.06
				AP	0.09
				PO	0.00
				NS	0.00
				KS	0.00
				RU	0.10
				AG	0.00
				OL	0.00
				OPX	2.40
				CPX	0.00
				AB*	4.20

CLASSIFICATIONS AND INDICES

NA2O+K2O 1.13 SIO2 92.47 SUBALKALINE

OL* 1.99 NE* 2.78 Q* 95.23 SUBALKALINE

CPX 0.00 OL 0.00 OPX 100.00 SUBALKALINE

A 35.02 F 39.74 M 25.24 THOLEITIC

AL2O3 3.39 NORM PLAG 37.52 THOLEITIC

AN 22.73 AB* 37.85 OR 39.43 K-RICH SERIES

CI 3.51 NORM PLAG 37.52 DACITE

JENSEN CALC-ALKALINE ANDESITE
AL 62.14 FE 18.99 MG 18.87

COLOR INDEX : 3.51
HASHIMOTO INDEX : 60.91

TRACE ELEMENTS (P.P.M.) AU,PT (P.P.B.)

CR	280.00:RB	40.00:SR	120.00:Y	10.00:ZR	20.00:NB	20.00:AU	-20.00:SC	5.80:CO	2.00:
NI	10.00:CU	24.00:ZN	25.00:AS	13.00:SE	-3.00:BR	-1.00:RB	40.00:SR	-500.00:MO	6.00:
AG	-0.50:CD	-0.20:SB	0.50:CS	0.80:BA	600.00:LA	12.00:CE	18.00:ND	10.00:SM	1.50:
EU	0.50:YB	1.00:LU	0.16:HF	1.00:TA	-1.00:W	-3.00:PB	12.00:BI	-0.50:TH	2.30:
U	0.90:								

COMMENTS : P0161/12NE

==== K I D D C R E E K M I N E S L T D ====
=== KIDD CREEK MINESITE COMPUTER SYSTEM ===

REPORT #2000

PRINTED 22-OCT-84 11:57:47

SAMPLE ID # AB18571

WHOLE ROCK GEOCHEMICAL ANALYSIS

LAB REPORT # 22598
FIELD NUMBER : DM95084499
PROJECT #
TOWNSHIP :
LOT : 0 CONCESSION :
PROVINCE : BRITISH COLUMBIA
NTS : 092P16
PROJECT :
UTM ZONE : 10
GRID COORDINATES : E : 684475.0 N : 5750380.0 EL : 0.0
SAMPLE TYPE : GRAB SAMPLE,THIN SECTION

FIELD NAME : VOLCANIC,FELSIC,FINE,TECTONIZED,QUARTZ PORPHYRITIC,LOOK AT COMMENTS.
FINAL NAME :
ALTERATION : METAMORPHOSED ,SERICITIZATION,MODERATE.
MINERALIZATION : NIL ,NIL ,NO COMMENT.
FORMATION :

SAMPLED BY : D. MALLALIEU
DATE : 06-SEP-84
ANALYZED BY : XRAY
DATE : 04-OCT-84
ANALYTICAL TECHNIQUE : X-RAY FLUORESCENCE

	WT %	NORMALIZED ANHYDROUS WT %	NORMALIZED ANHYDROUS CATION %		NORMS
SIO2	71.70	74.51	70.89	Q	44.43
AL2O3	14.50	15.07	16.90	C	7.39
FE2O3	2.76	1.90	1.36	OR	23.61
FEO	0.00	0.87	0.69	AB	16.48
CAO	0.82	0.85	0.87	AN	3.71
MGO	0.62	0.64	0.91	LC	0.00
NA2O	1.72	1.79	3.30	NE	0.00
K2O	3.74	3.89	4.72	KP	0.00
TIO2	0.33	0.34	0.25	AC	0.00
P2O5	0.09	0.09	0.08	DI	0.00
MNO	0.04	0.04	0.03	HE	0.00
S	0.00	0.00	0.00	EN	1.83
NIO	0.00	0.00	0.00	FS	0.00
CR2O3	0.00	0.00	0.00	FO	0.00
CO2	0.00	0.00	0.00	FA	0.00
H2O+	0.00	0.00	0.00	WO	0.00
H2O-	0.00	0.00	0.00	LN	0.00
LOI	2.70	0.00	0.00	MT	1.44
				IL	0.49
TOTAL	96.23	100.00	100.00	CR	0.00
				HM	0.40
				AP	0.20
				PO	0.00
				NS	0.00
				KS	0.00
				RU	0.00
				AG	0.00
				OL	0.00
				OPX	1.83
				CPX	0.00
				AB*	16.48

CLASSIFICATIONS AND INDICES

NA2O+K2O	5.67	SIO2			74.51	SUBALKALINE
OL*	2.18	NE*	15.76	Q*	82.05	SUBALKALINE
CPX	0.00	OL	0.00	OPX	100.00	SUBALKALINE
A	63.76	F	29.00	M	7.24	CALC-ALKALINE
AL2O3	15.07	NORM PLAG			18.39	CALC-ALKALINE
AN	8.48	AB*	37.63	OR	53.90	K-RICH SERIES
CI	4.16	NORM PLAG			18.39	DACITE

JENSEN CALC-ALKALINE RHYOLITE
AL 83.89 FE 11.58 MG 4.54

COLOR INDEX : 4.16
HASHIMOTO INDEX : 63.19

TRACE ELEMENTS (P.P.M.) AU,PT (P.P.B.)

CR	150.00:RB	150.00:SR	50.00:Y	10.00:ZR	130.00:NB	20.00:AU	-20.00:SC	10.00:CO	3.00:
NI	9.00:CU	4.00:ZN	50.00:AS	4.00:SE	-3.00:BR	1.00:RB	170.00:SR	-500.00:MO	6.00:
AG	-0.50:CD	-0.20:SB	-0.20:CS	3.30:BA	1600.00:LA	50.10:CE	89.00:ND	30.00:SM	6.00:
EU	0.70:YB	3.00:LU	0.46:HF	6.00:TA	1.00:W	4.00:PB	14.00:BI	-0.50:TH	17.00:
U	2.30:								

COMMENTS : PS329/65SW
QUARTZ CRYSTAL TUFF, RHYODACITIC COMPOSITION.

APPENDIX H

WHOLE ROCK ANALYSES PLOTS

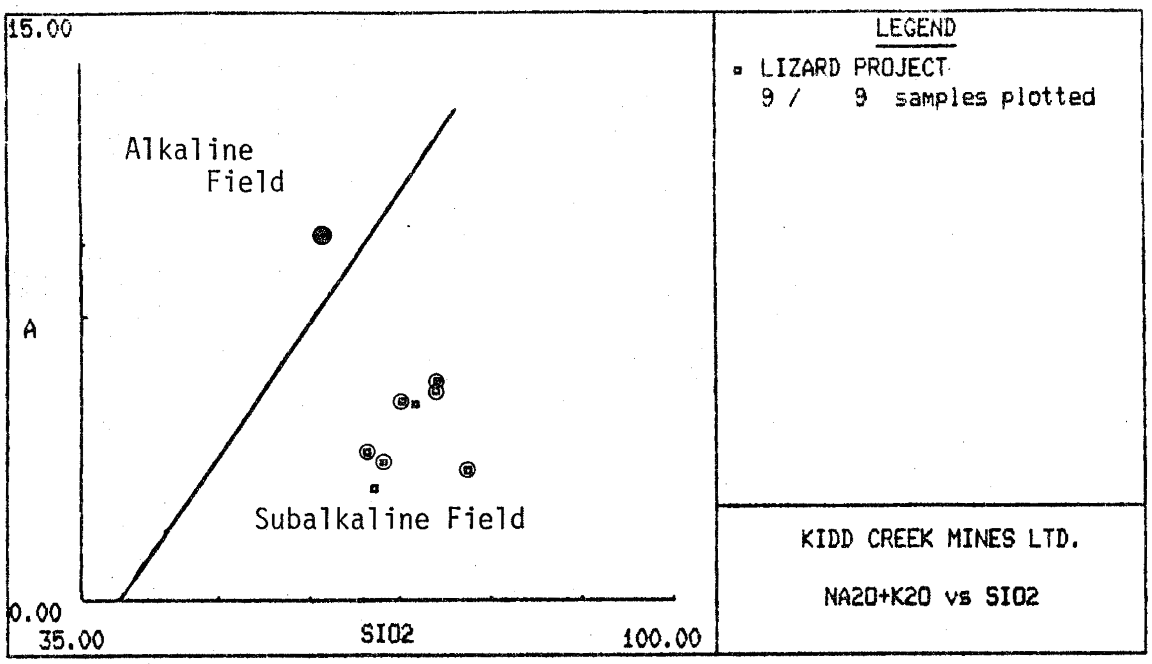
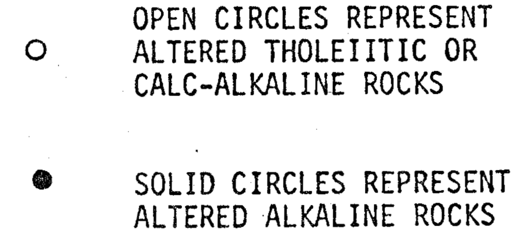


Fig.6 Separation of alkaline and subalkaline volcanic suites (after Macdonald,1968).



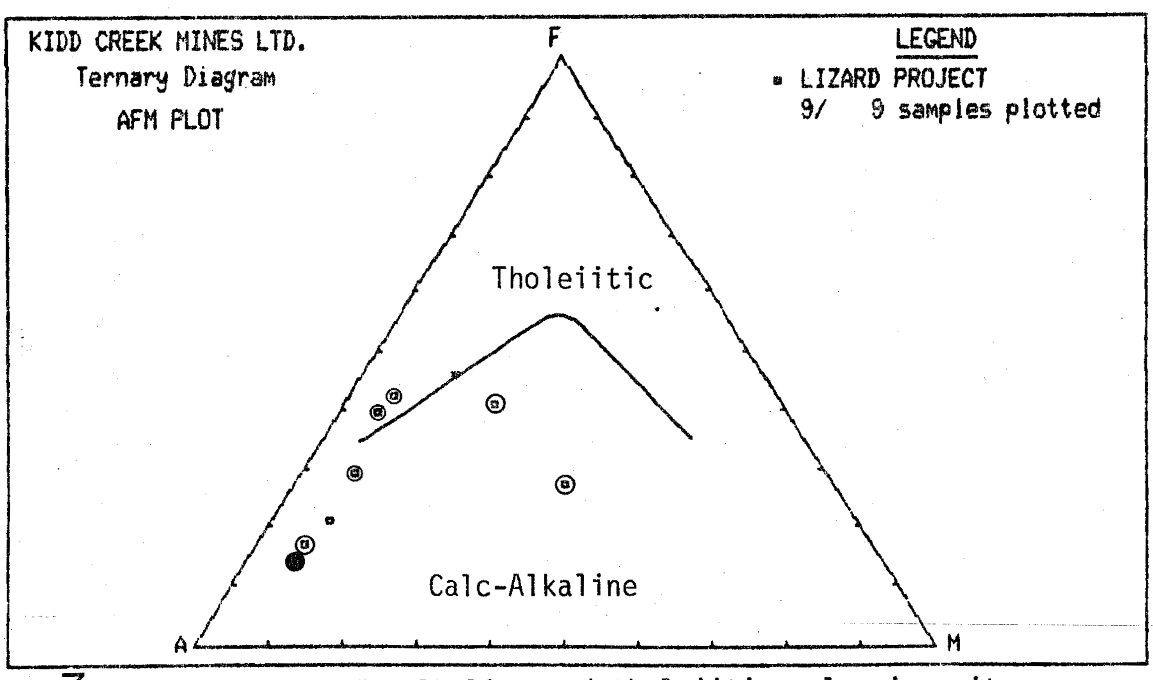


Fig.7 Separation of calc-alkaline and tholeiitic volcanic suites (after Irvine and Baragar, 1971).

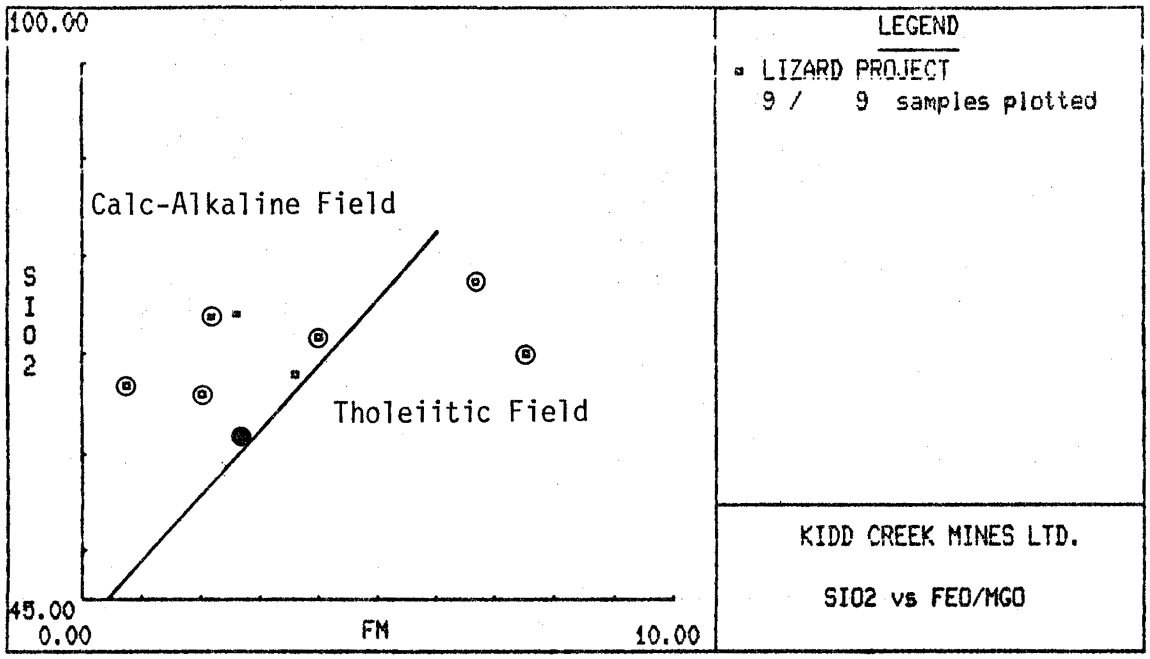


Fig. 8 Silica-total iron(as FeO)/magnesium plot and separation of subalkaline lava suites (after Miyashiro, 1974).

○ OPEN CIRCLES REPRESENT ALTERED THOLEIITIC OR CALC-ALKALINE ROCKS

● SOLID CIRCLES REPRESENT ALTERED ALKALINE ROCKS

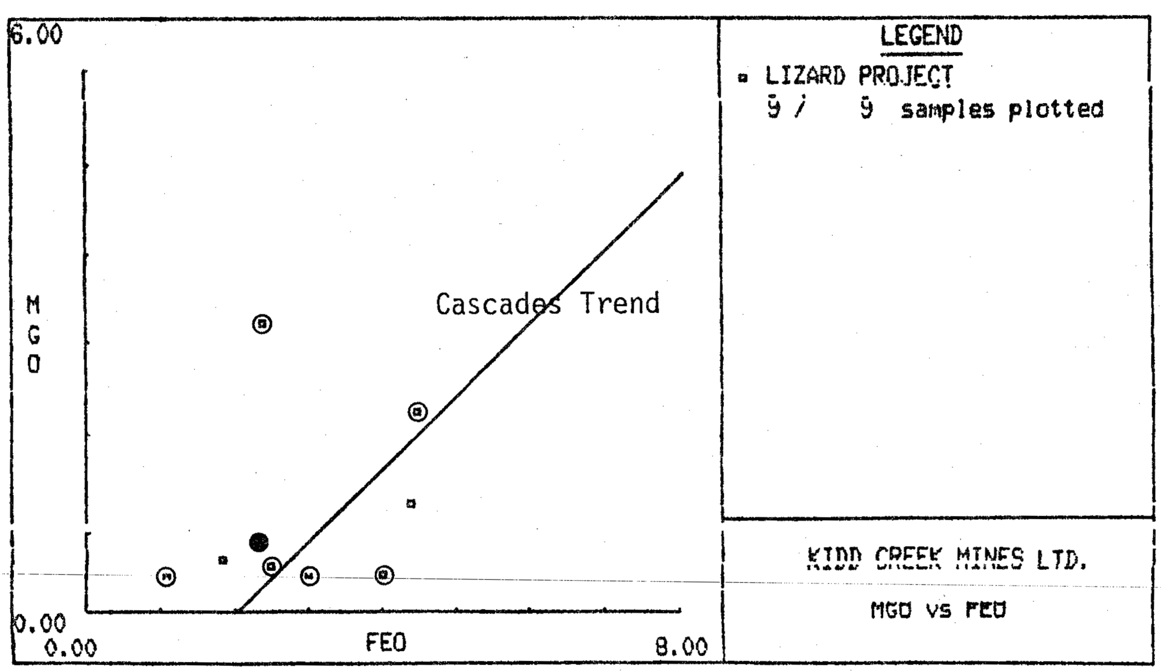


Fig. 9 Typical calc-alkaline (Cascades) trend on a MgO-FeO plot (after Stauffer et al, 1975).

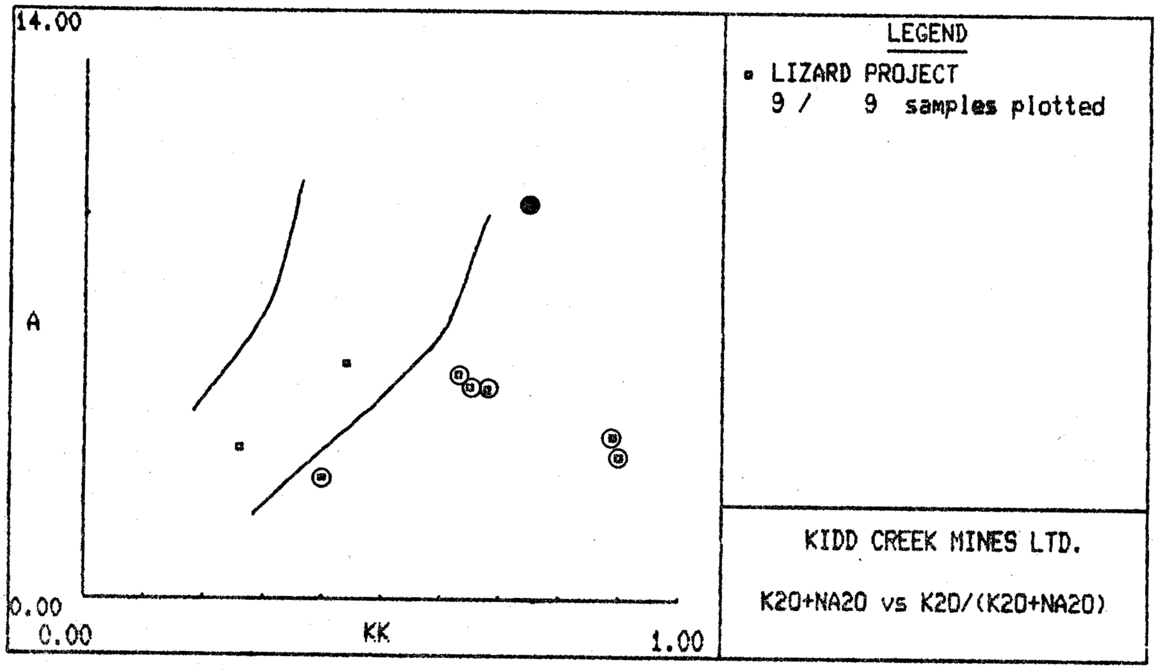


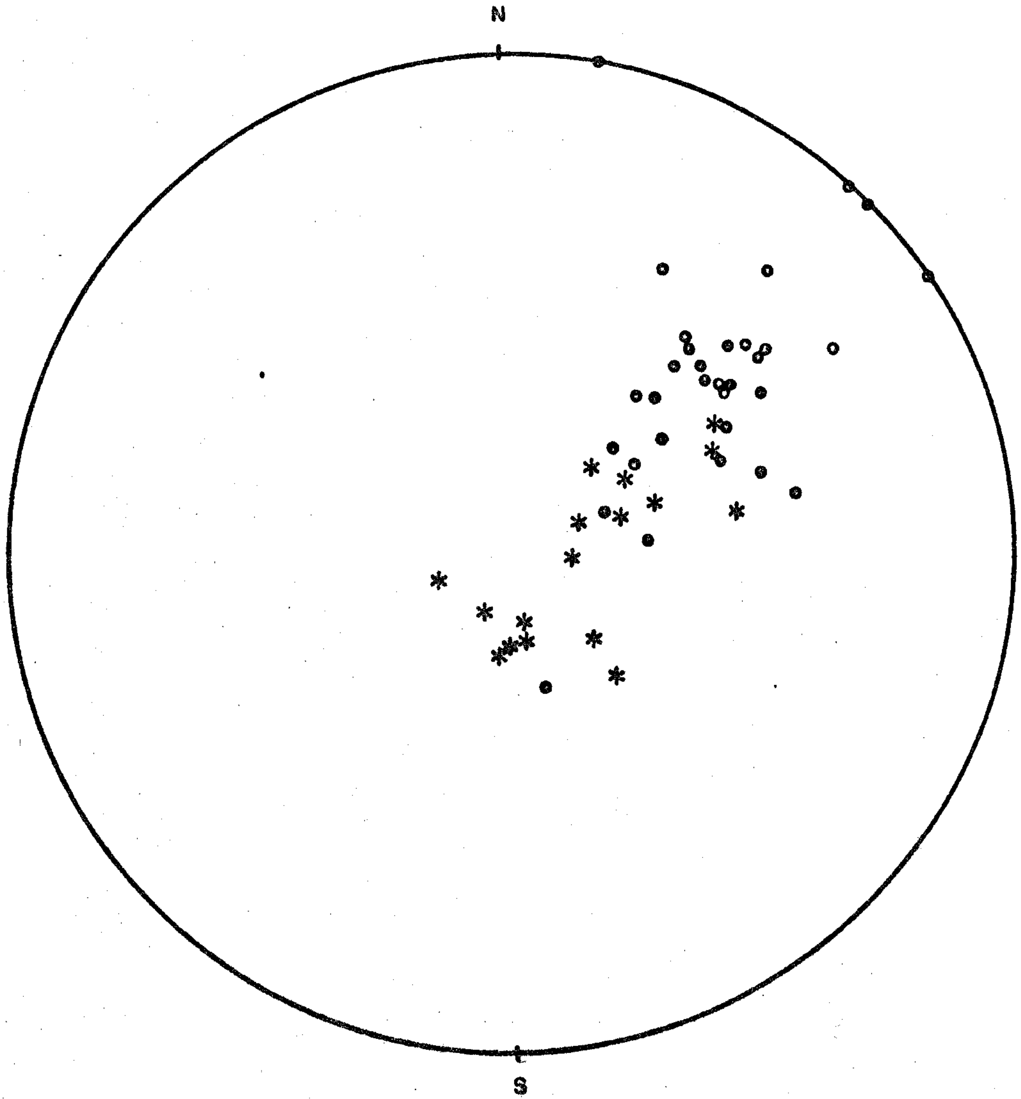
Fig. 10 The alkali "igneous spectrum" (after Hughes, 1972).

○ OPEN CIRCLES REPRESENT ALTERED THOLEIITIC OR CALC-ALKALINE ROCKS

● SOLID CIRCLES REPRESENT ALTERED ALKALINE ROCKS

APPENDIX I

LOWER HEMISPHERE EQUAL-AREA PROJECTION OF SCHISTOSITY/BEDDING



KEY

* Schistosity/Bedding – Line 357m N
Lizard Grid
n= 17

o Schistosity/Bedding
Lizard I,II
n= 33

Kidd Creek Mines Ltd.

LOWER HEMISPHERE EQUAL - AREA PROJECTION OF SCHISTOSITY/BEDDING

NTS 092 P/16 Proj. 950

WORK BY	DRAWN BY	DATE
	D. M	OCT. 5/ 1984

Figure: 12

NCI - 556

APPENDIX J

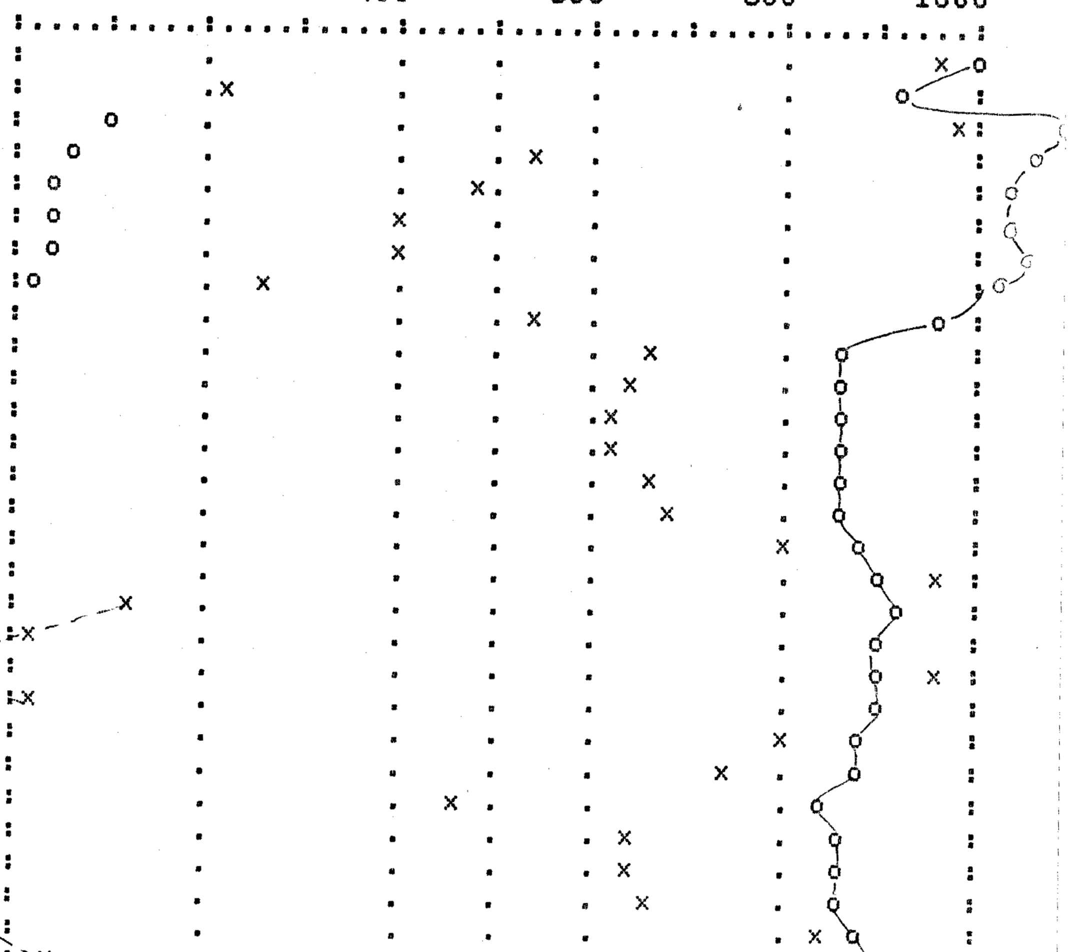
MAGNETIC PROFILES - GRIT #6 GRID, LIZARD GRID

420.E 57935.6 -10.7

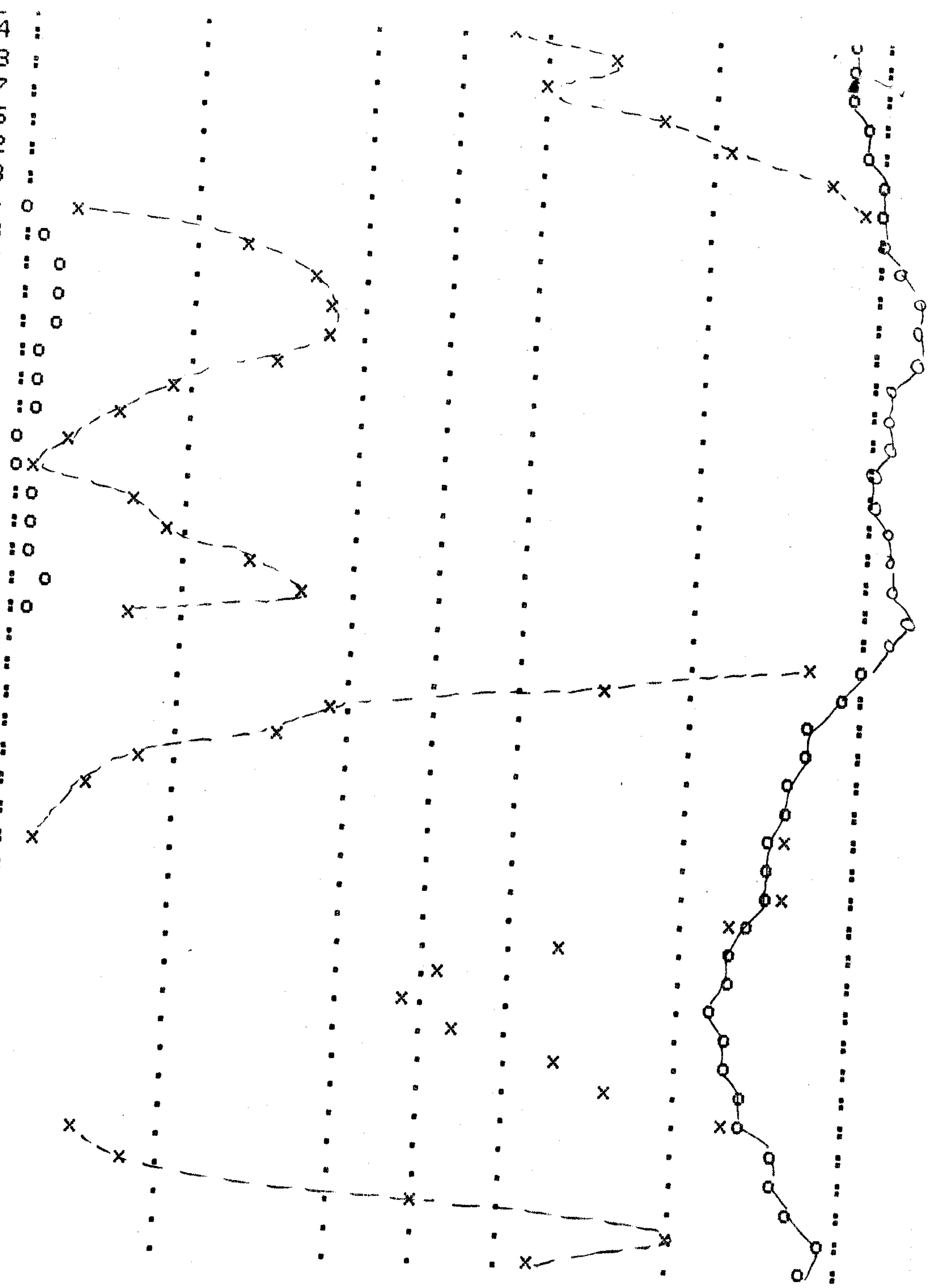
CINTREX V1.3 Magnetometer
ase Field 58000. *=Uncorrected Data Ser No:998988.
ine: 150.N Grid: GRIT# 6. Job: 1. Date: 84/08/17 Operator: 1.

Total Field (Gammas) 0 20 40 60 80 100
Total Field (Gammas) 0 200 400 600 800 1000

tation	Mag Fld	Change
220.W	57996.4	
210.W	57922.3	-74.1
200.W	58098.1	175.8
190.W	58054.6	-43.5
180.W	58047.2	-7.4
170.W	58040.7	-6.5
160.W	58040.8	0.1
150.W	58025.1	-15.7
140.W	57954.0	-71.1
130.W	57865.4	-88.6
120.W	57863.5	-1.9
110.W	57861.1	-2.4
100.W	57862.7	1.6
90.W	57865.4	2.7
80.W	57867.9	2.5
70.W	57880.6	12.7
60.W	57895.6	15.0
50.W	57911.3	15.7
40.W	57901.5	-9.8
30.W	57895.9	-5.6
20.W	57901.9	6.0
10.W	57879.5	-22.4
0.	57874.9	-4.6
10.E	57845.6	-29.3
20.E	57864.7	19.1
30.E	57864.3	-.4
40.E	57866.5	2.2
50.E	57884.0	17.5
60.E	57904.7	20.7



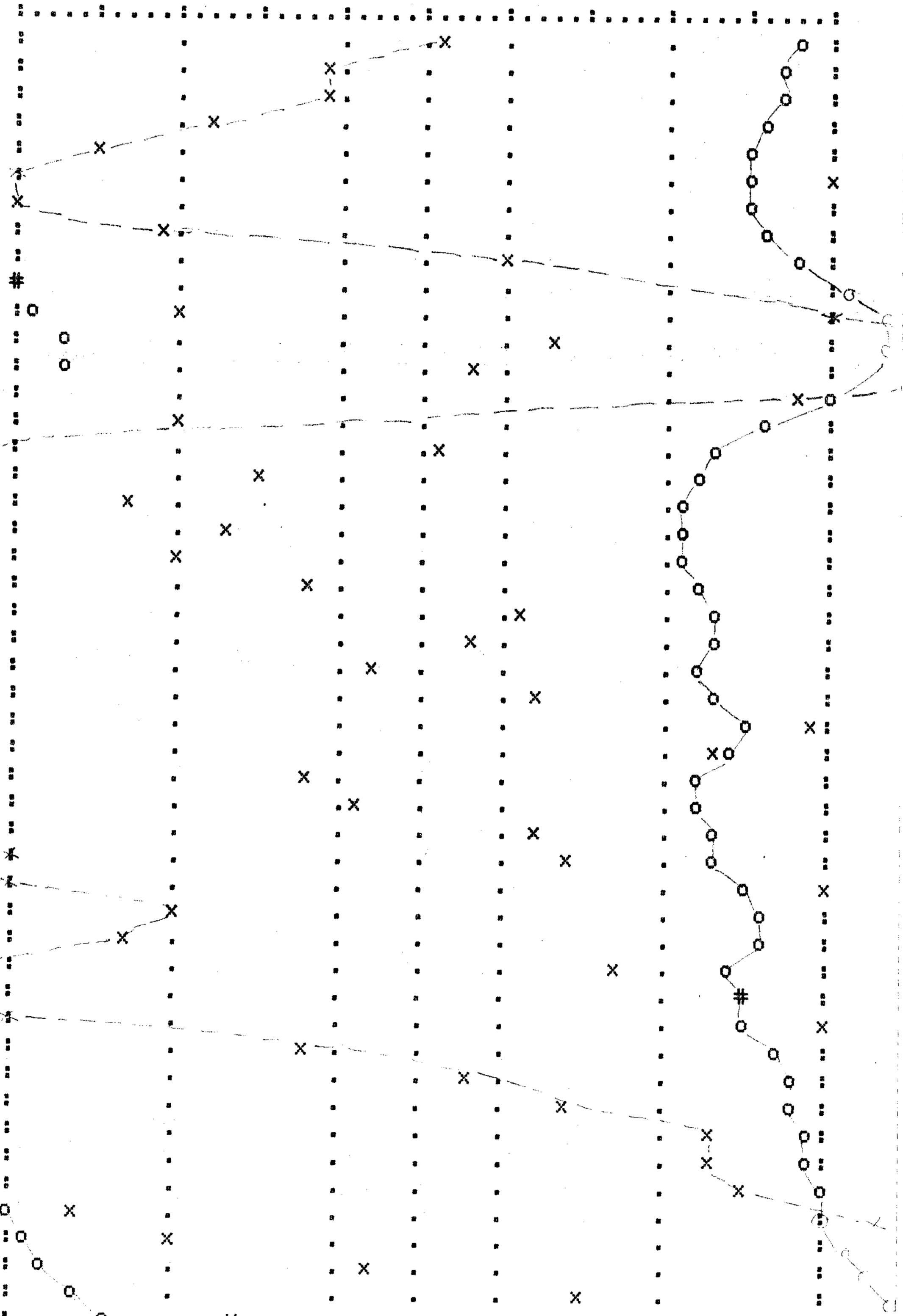
100.E	57968.1	11.4
110.E	57960.8	-7.3
120.E	57974.5	13.7
130.E	57981.1	6.6
140.E	57994.3	13.2
150.E	57998.1	3.8
160.E	58005.5	7.4
170.E	58026.3	20.8
180.E	58033.2	6.9
190.E	58036.1	2.9
200.E	58036.9	0.8
210.E	58029.8	-7.1
220.E	58017.9	-11.9
230.E	58012.2	-5.7
240.E	58005.9	-6.3
250.E	58002.1	-3.8
260.E	58014.5	12.4
270.E	58018.9	4.4
280.E	58027.7	8.8
290.E	58033.6	5.9
300.E	58014.2	-19.4
310.E	57993.4	-20.8
320.E	57970.3	-23.1
330.E	57937.8	-32.5
340.E	57931.5	-6.3
350.E	57915.4	-16.1
360.E	57910.9	-4.5
370.E	57891.1	-19.8
380.E	57903.4	12.3
390.E	57891.8	-11.6
400.E	57886.5	-5.3
410.E	57866.7	-19.8
420.E	57852.7	-14.0
430.E	57847.1	-5.6
440.E	57853.2	6.1
450.E	57865.8	12.6
460.E	57872.2	6.4
470.E	57885.9	13.7
480.E	57910.3	24.4
490.E	57915.7	5.4
500.E	57949.0	33.3
510.E	57980.9	31.9
520.E	57963.0	-17.9



PROFILES - GRIT #6 GRID
LIZARD GRID

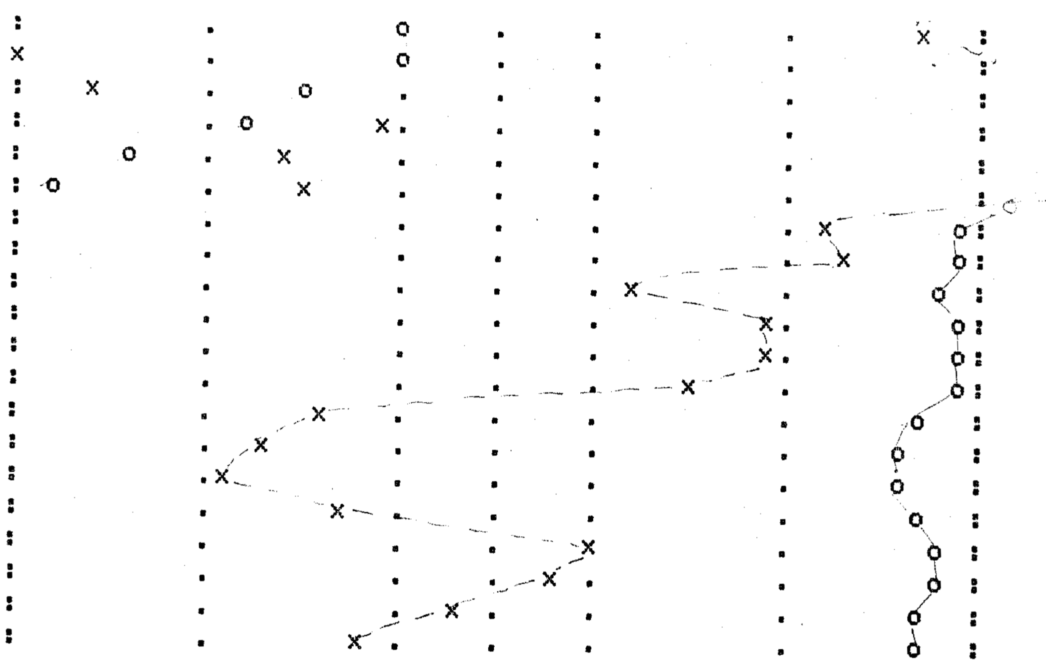
SCINTREX V1.3 Magnetometer
Base Field 58000. *=Uncorrected Data Ser No:998988.
Line: L0. Grid: GRIT #6. Job: 1. Date: 84/08/14 Operator: 1.

x Total Field (Gammas) 0 20 40 60 80 100
o Total Field (Gammas) 0 200 400 600 800 1000



Station	Mag Fld	Change
280.W	57951.9	
270.W	57937.1	-14.8
260.W	57938.5	1.4
250.W	57923.9	-14.6
240.W	57909.5	-14.4
230.W	57899.0	-10.5
220.W	57900.4	1.4
210.W	57917.4	17.0
200.W	57960.2	42.8
190.W	58000.2	40.0
180.W	58020.8	20.6
170.W	58066.0	45.2
160.W	58056.8	-9.2
150.W	57995.1	-61.7
140.W	57919.8	-75.3
130.W	57852.4	-67.4
120.W	57830.8	-21.6
110.W	57813.9	-16.9
100.W	57826.1	12.2
90.W	57819.7	-6.4
80.W	57836.2	16.5
70.W	57862.3	26.1
60.W	57855.5	-6.8
50.W	57844.5	-11.0
40.W	57864.2	19.7
30.W	57897.7	33.5
20.W	57886.7	-11.0
10.W	57836.2	-50.5
0.	57842.3	6.1
10.E	57863.8	21.5
20.E	57868.7	4.9
30.E	57899.8	31.1
40.E	57920.2	20.4
50.E	57913.7	-6.5
60.E	57873.9	-39.8
70.E	57890.7	16.8
80.E	57899.9	9.2
90.E	57935.9	36.0
100.E	57955.3	19.4
110.E	57968.3	13.0
120.E	57986.7	18.4
130.E	57985.0	-1.7
140.E	57990.0	5.0
150.E	58008.1	18.1
160.E	58019.9	11.8
170.E	58044.4	24.5
180.E	58070.7	26.3
190.E	58127.8	57.1

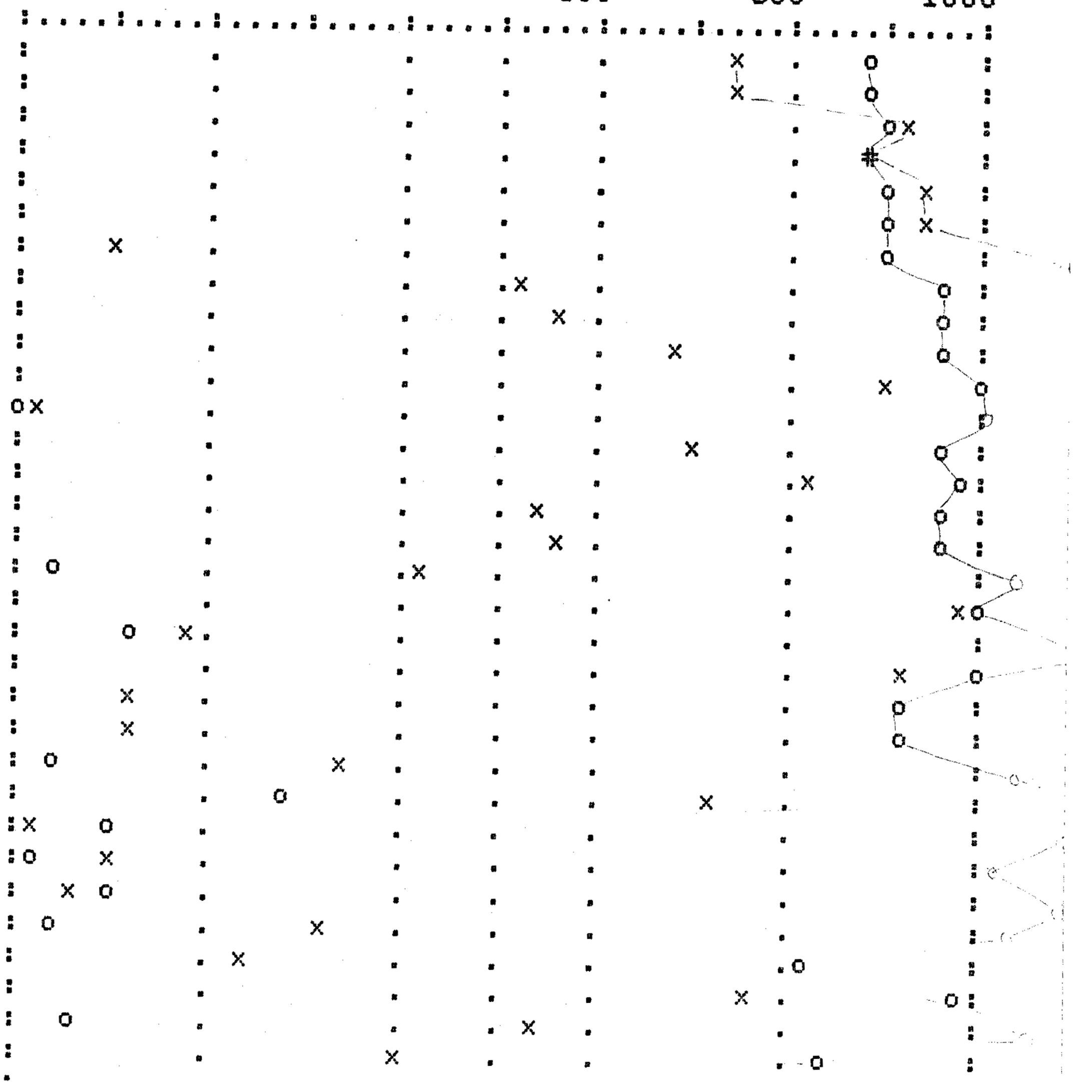
Station	Mag Fld	Change
230.E	58394.3	73.8
240.E	58400.4	6.1
250.E	58308.7	-91.7
260.E	58237.7	-71.0
270.E	58127.0	-110.7
280.E	58030.4	-96.6
290.E	57984.5	-45.9
300.E	57985.3	0.8
310.E	57963.6	-21.7
320.E	57978.4	14.8
330.E	57978.7	0.3
340.E	57970.5	-8.2
350.E	57931.5	-39.0
360.E	57925.1	-6.4
370.E	57921.2	-3.9
380.E	57933.5	12.3
390.E	57960.8	27.3
400.E	57955.8	-5.0
410.E	57946.3	-9.5
420.E	57935.6	-10.7



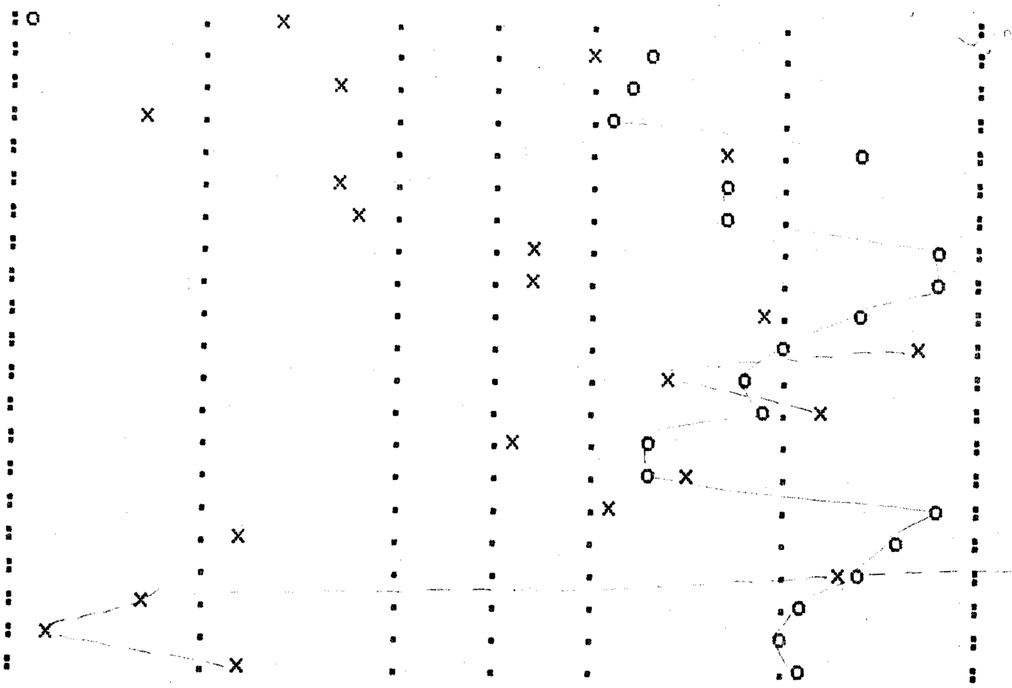
CINTREX V1.3 Magnetometer
ase Field 58000. *=Uncorrected Data Ser No:998988.
ine: 300.N Grid:L/BARD 1. Job: 1. Date: 84/08/14 Operator: 1.

Total Field (Gammas) 0 20 40 60 80 100
Total Field (Gammas) 0 200 400 600 800 1000

tation	Mag Fld	Change
280.W	57873.2	
270.W	57874.8	1.6
260.W	57891.3	16.5
250.W	57888.7	-2.6
240.W	57893.1	4.4
230.W	57893.6	0.5
220.W	57909.8	16.2
210.W	57951.7	41.9
200.W	57955.0	3.3
190.W	57967.9	12.9
180.W	57990.7	22.8
170.W	58002.1	11.4
160.W	57969.6	-32.5
150.W	57982.1	12.5
140.W	57953.4	-28.7
130.W	57955.3	1.9
120.W	58042.5	87.2
110.W	57998.1	-44.4
100.W	58118.2	120.1
90.W	57991.3	-126.9
80.W	57911.9	-79.4
70.W	57912.8	0.9
60.W	58033.8	121.0
50.W	58271.7	237.9
40.W	58102.9	-168.8
30.W	58010.2	-92.7
20.W	58106.4	96.2
10.W	58032.2	-74.2
0.	57823.3	-208.9
10.E	57976.9	153.6
20.E	58053.2	76.3
30.E	57839.0	-214.2
40.E	57596.9	-242.1



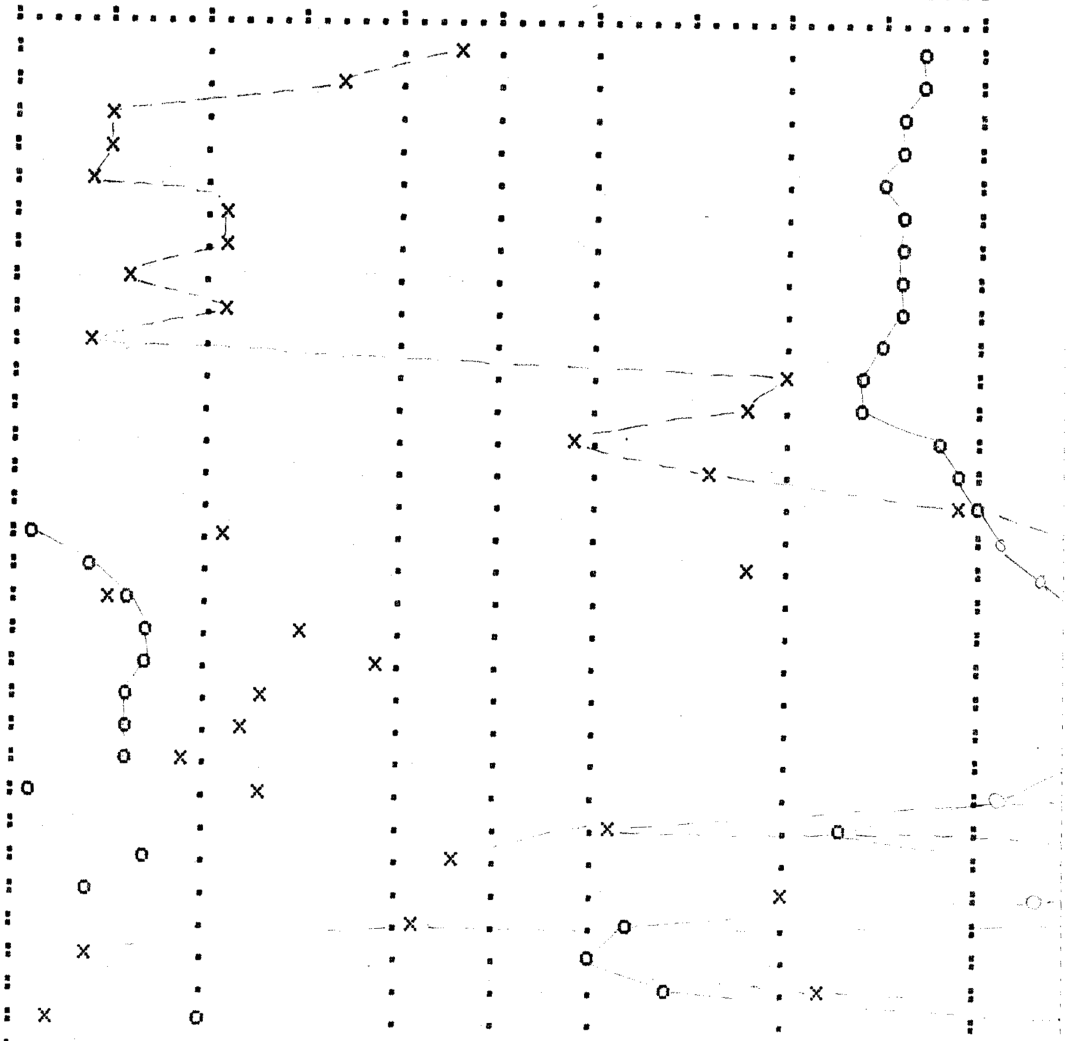
80.E	58027.3	37.6
90.E	57659.6	-367.7
100.E	57634.1	-25.5
110.E	57614.3	-19.8
120.E	57873.2	258.9
130.E	57733.0	-140.2
140.E	57736.4	3.4
150.E	57953.9	217.5
160.E	57953.5	-.4
170.E	57878.4	-75.1
180.E	57794.6	-83.8
190.E	57768.6	-26.0
200.E	57783.7	15.1
210.E	57651.3	-132.4
220.E	57669.8	18.5
230.E	57962.2	292.4
240.E	57924.3	-37.9
250.E	57886.7	-37.6
260.E	57814.9	-71.8
270.E	57804.9	-10.0
280.E	57824.9	20.0



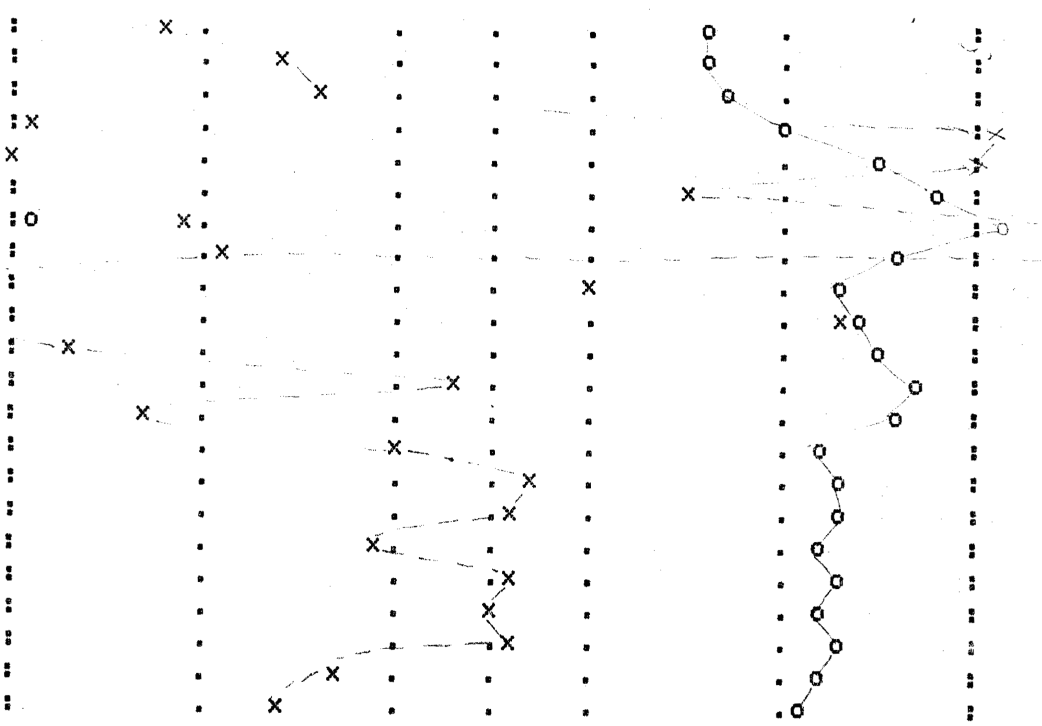
CINTREX V1.3 Magnetometer
ase Field 58000. *=Uncorrected Data Ser No:998988.
ine: 405.N Grid:LIZARD1. Job: 1. Date: 84/08/14 Operator: 1.

Total Field (Gammas) 0 20 40 60 80 100
Total Field (Gammas) 0 200 400 600 800 1000

tation	Mag Fld	Change
280.W	57946.5	
270.W	57934.4	-12.1
260.W	57910.9	-23.5
250.W	57910.1	-.8
240.W	57907.0	-3.1
230.W	57921.7	14.7
220.W	57921.2	-.5
210.W	57911.0	-10.2
200.W	57922.6	11.6
190.W	57907.7	-14.9
180.W	57880.7	-27.0
170.W	57875.0	-5.7
160.W	57958.0	83.0
150.W	57971.3	13.3
140.W	57998.4	27.1
130.W	58021.3	22.9
120.W	58075.5	54.2
110.W	58110.6	35.1
100.W	58130.7	20.1
90.W	58138.0	7.3
80.W	58126.1	-11.9
70.W	58123.6	-2.5
60.W	58117.3	-6.3
50.W	58025.7	-91.6
40.W	57862.4	-163.3
30.W	58146.4	284.0
20.W	58080.1	-66.3
10.W	57641.0	-439.1
0.	57607.2	-33.8
10.E	57683.6	76.4
20.E	58203.6	520.0
30.E	57747.6	-456.0



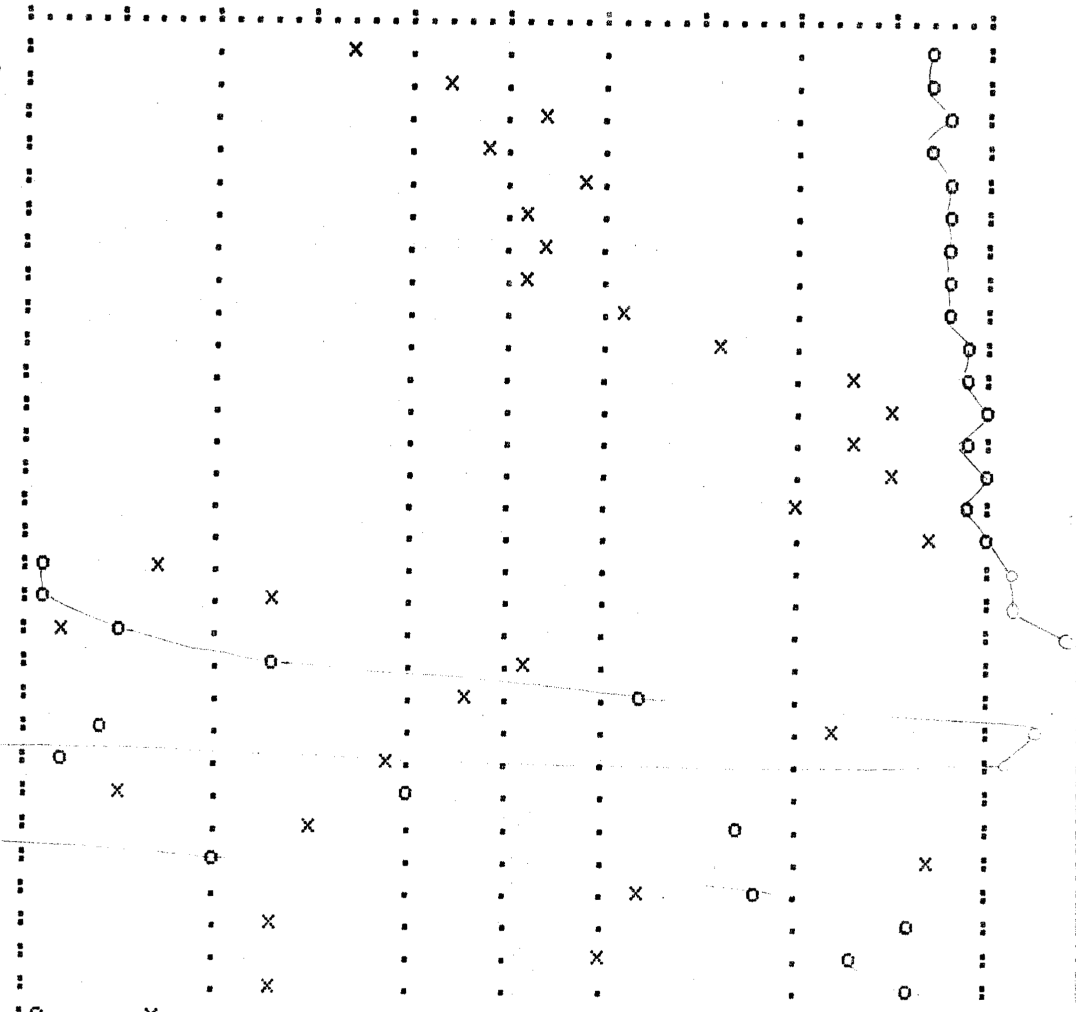
70.E	57715.2	58.2
80.E	57727.7	12.5
90.E	57731.2	3.5
100.E	57802.1	70.9
110.E	57900.8	98.7
120.E	57969.9	69.1
130.E	58017.2	47.3
140.E	57922.9	-94.3
150.E	57860.2	-62.7
160.E	57886.9	26.7
170.E	57905.2	18.3
180.E	57946.9	41.7
190.E	57914.3	-32.6
200.E	57839.3	-75.0
210.E	57853.2	13.9
220.E	57852.1	-1.1
230.E	57837.9	-14.2
240.E	57852.2	14.3
250.E	57849.6	-2.6
260.E	57851.0	1.4
270.E	57834.3	-16.7
280.E	57827.6	-6.7



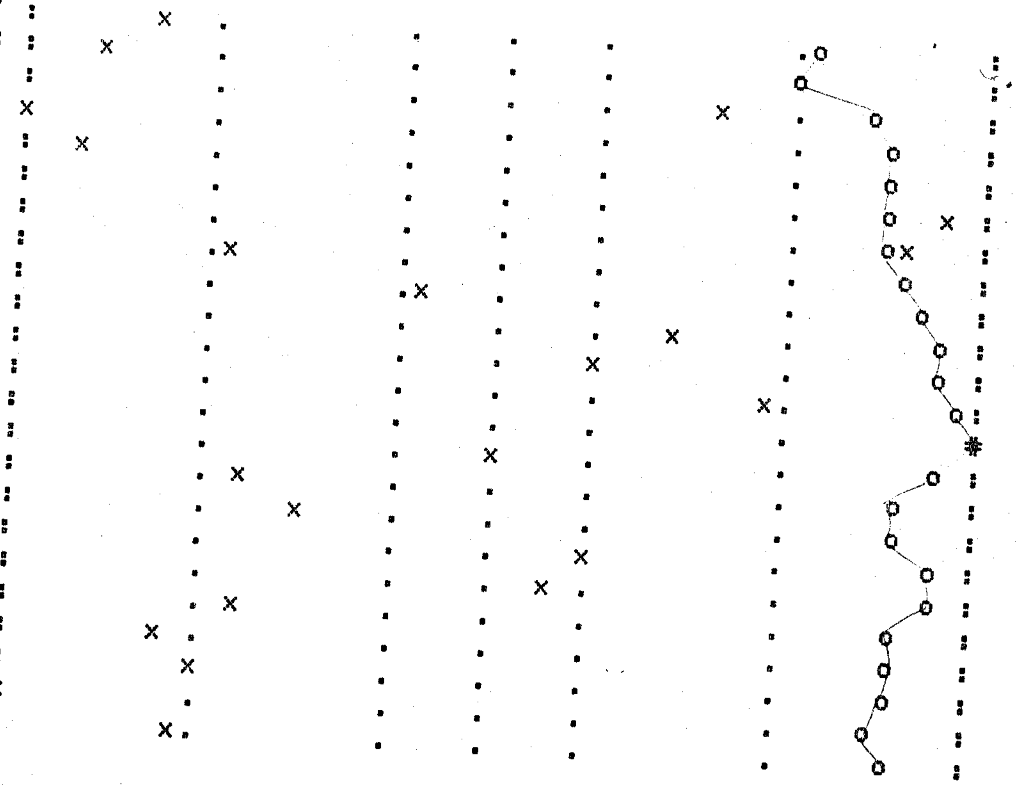
CINTREX V1.3 Magnetometer
ase Field 58000. *=Uncorrected Data Ser No:998988.
ine: 527.N Grid: LIZARD 1. Job: 1. Date: 84/08/14 Operator: 1.

Total Field (Gammas) 0 20 40 60 80 100
Total Field (Gammas) 0 200 400 600 800 1000

tation	Mag Fld	Change
280.W	57933.0	
270.W	57943.7	10.7
260.W	57954.1	10.4
250.W	57948.6	-5.5
240.W	57957.2	8.6
230.W	57952.6	-4.6
220.W	57953.2	0.6
210.W	57951.4	-1.8
200.W	57962.8	11.4
190.W	57971.1	8.3
180.W	57986.3	15.2
170.W	57990.2	3.9
160.W	57985.0	-5.2
150.W	57990.4	5.4
140.W	57980.1	-10.3
130.W	57993.7	13.6
120.W	58014.4	20.7
110.W	58025.4	11.0
100.W	58103.8	78.4
90.W	58251.3	147.5
80.W	58646.5	395.2
70.W	59084.8	438.3
60.W	59038.7	-46.1
50.W	57409.0	-1629.7
40.W	55730.5	-1678.5
30.W	57194.5	1464.0
20.W	57763.0	568.5
10.W	57925.2	162.2
0.	57860.8	-64.4
10.E	57925.8	65.0
20.E	58014.6	88.8



60.E	57813.1	-53.7
70.E	57807.3	-5.8
80.E	57872.3	65.0
90.E	57900.2	27.9
100.E	57906.9	6.7
110.E	57896.3	-10.6
120.E	57891.1	-5.2
130.E	57922.9	31.8
140.E	57941.1	18.2
150.E	57968.1	27.0
160.E	57960.2	-7.9
170.E	57978.9	18.7
180.E	57999.2	20.3
190.E	57950.6	-48.6
200.E	57923.0	-27.6
210.E	57929.2	6.2
220.E	57959.7	30.5
230.E	57955.8	-3.9
240.E	57923.5	-32.3
250.E	57915.0	-8.5
260.E	57920.5	5.5
270.E	57900.6	-19.9
280.E	57917.2	16.6

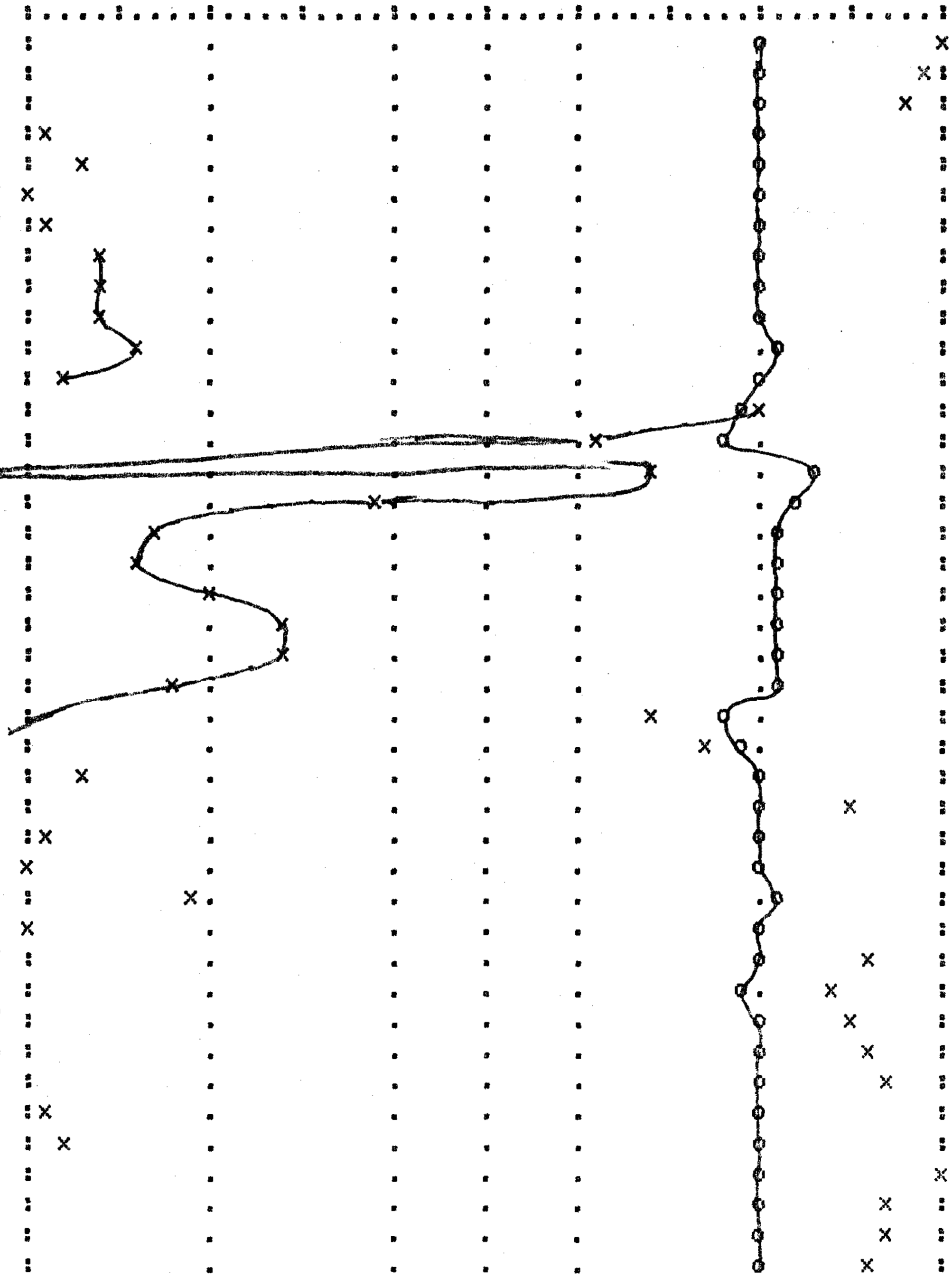


LIZARD GRID (GRID 1) PROFILE
DDH PROFILE

SCINTREX V1.3 Magnetometer
Base Field 58000. *=Uncorrected Data Ser No:998988.
Line: 200.N Grid: LIZARD 1. Job: 2. Date: 84/06/16 Operator: 1.

x Total Field (Gammas) 0 200 400 600 800 1000
o Total Field (Gammas) 0 2000 4000 6000 8000 10000

Station	Mag Fld	Change
200.W	57990.9	
190.W	57975.0	-15.9
180.W	57967.9	-7.1
170.W	58021.8	53.9
160.W	58060.8	39.0
150.W	58002.6	-58.2
140.W	58020.8	18.2
130.W	58072.1	51.3
120.W	58083.8	11.7
110.W	58083.7	-.1
100.W	58122.2	38.5
90.W	58038.9	-83.3
80.W	57807.6	-231.3
70.W	57611.3	-196.3
60.W	58685.8	1074.5
50.W	58375.6	-310.2
40.W	58135.6	-240.0
30.W	58112.5	-23.1
20.W	58198.1	85.6
10.W	58280.8	82.7
0.	58282.2	1.4
10.E	58151.6	-130.6
20.E	57689.8	-461.8
30.E	57746.3	56.5
40.E	58064.7	318.4
50.E	57901.7	-163.0
60.E	58021.2	119.5
70.E	58001.4	-19.8
80.E	58172.0	170.6
90.E	58000.7	-171.3
100.E	57910.8	-89.9
110.E	57883.4	-27.4
120.E	57908.1	24.7
130.E	57920.9	12.8
140.E	57941.3	20.4
150.E	58016.7	75.4
160.E	58042.7	26.0
170.E	57998.3	-44.4
180.E	57931.2	-67.1
190.E	57938.2	7.0
200.E	57920.9	-17.3

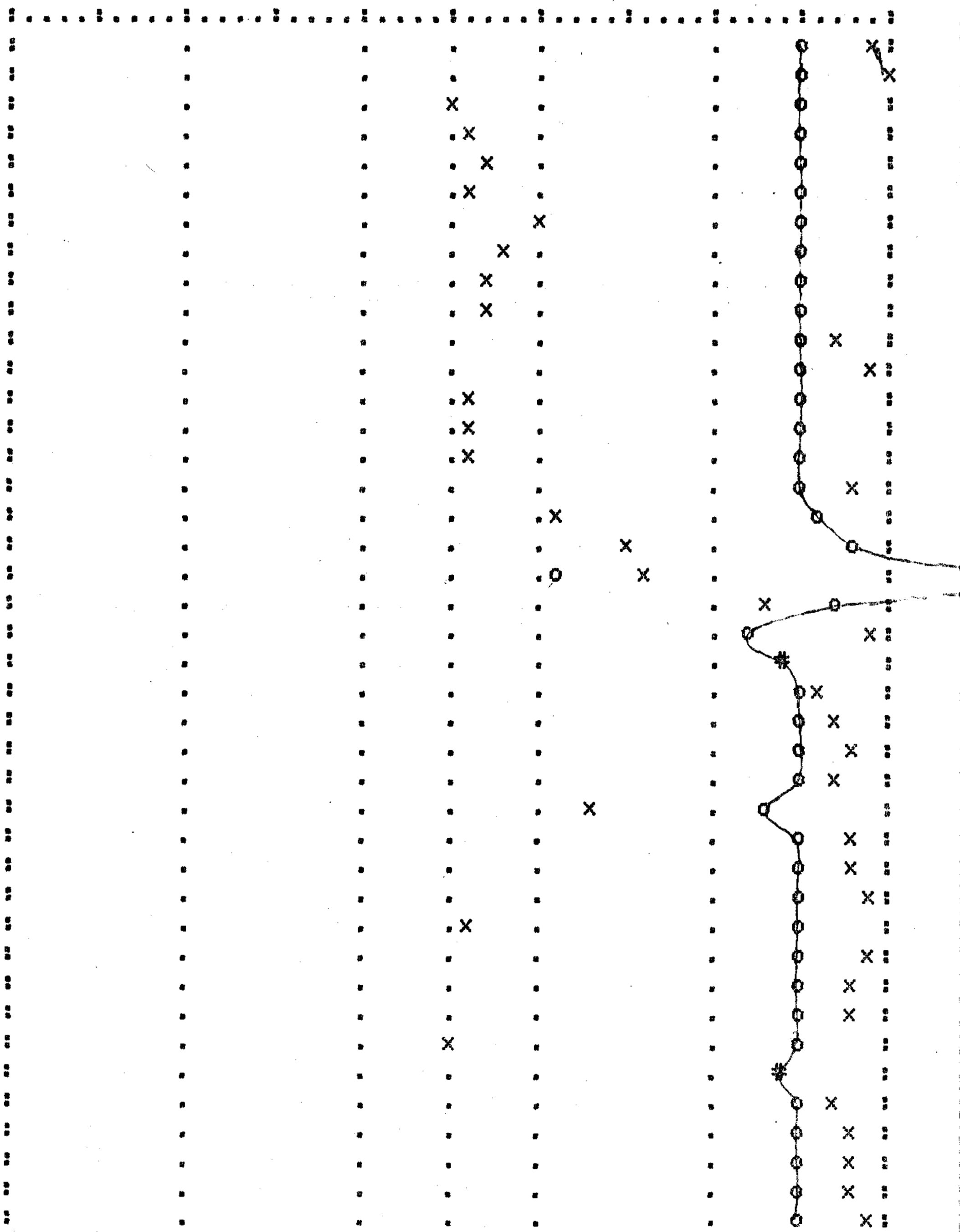


LIZARD GRID (GRID 1) PROFILES

SCINTREX V1.3 Magnetometer
Base Field 58000. *=Uncorrected Data Ser No:998988.
Line: 100.S Grid: LIZARD 1. Job: 1. Date: 84/06/15 Operator: 1.

x Total Field (Gammas) -800 -400 - 0 + 400 800
o Total Field (Gammas) -8000 -4000 - 0 + 4000 8000

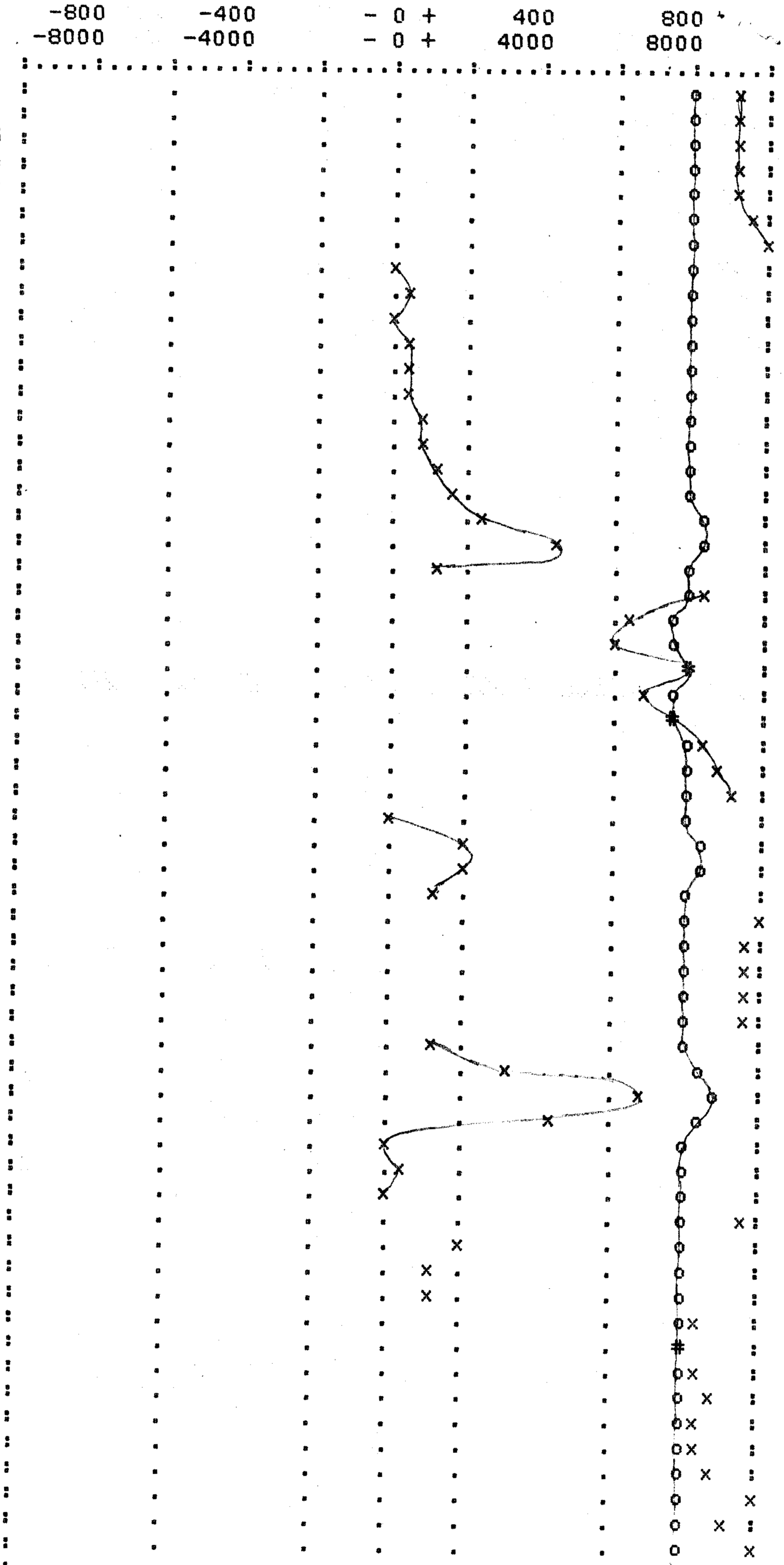
Station	Mag Fld	Change
200.W	57978.7	
190.W	57992.4	13.7
180.W	58004.5	12.1
170.W	58020.0	15.5
160.W	58063.5	43.5
150.W	58052.9	-10.6
140.W	58194.0	141.1
130.W	58100.2	-93.8
120.W	58061.1	-39.1
110.W	58076.9	15.8
100.W	57870.7	-206.2
90.W	57966.1	95.4
80.W	58028.5	62.4
70.W	58028.7	0.2
60.W	58029.7	1.0
50.W	57925.0	-104.7
40.W	58231.6	306.6
30.W	59394.1	1162.5
20.W	62425.1	3031.0
10.W	58736.2	-3688.9
0.	56963.6	-1772.6
10.E	57740.1	776.5
20.E	57839.1	99.0
30.E	57886.0	46.9
40.E	57917.2	31.2
50.E	57860.7	-56.5
60.E	57311.4	-549.3
70.E	57914.4	603.0
80.E	57902.0	-12.4
90.E	57966.6	64.6
100.E	58020.4	53.8
110.E	57970.8	-49.6
120.E	57900.9	-69.9
130.E	57936.0	35.1
140.E	58002.0	66.0
150.E	57750.7	-251.3
160.E	57865.5	114.8
170.E	57926.8	61.3
180.E	57921.9	-4.9
190.E	57922.4	0.5
200.E	57952.7	30.3



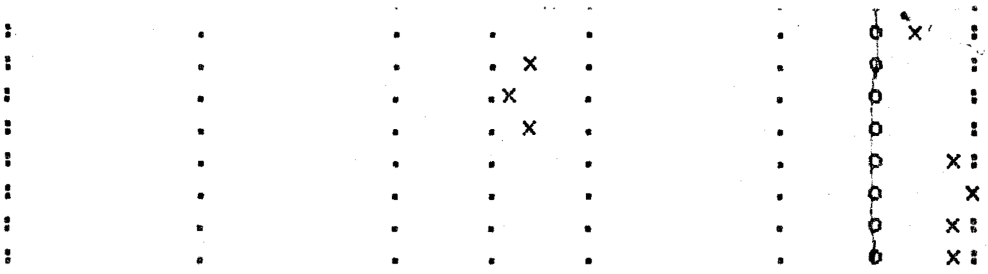
CINTREX V1.3 Magnetometer

x Total Field (Gammas)
o Total Field (Gammas)

Station	Mag Fld	Change
420.W	57931.9	
410.W	57933.0	1.1
400.W	57934.5	1.5
390.W	57932.0	-2.5
380.W	57938.8	6.8
370.W	57963.1	24.3
360.W	57994.0	30.9
350.W	58004.9	10.9
340.W	58028.6	23.7
330.W	58019.7	-8.9
320.W	58030.5	10.8
310.W	58037.2	6.7
300.W	58054.3	17.1
290.W	58061.1	6.8
280.W	58079.2	18.1
270.W	58108.6	29.4
260.W	58143.8	35.2
250.W	58242.6	98.8
240.W	58426.2	183.6
230.W	58135.8	-290.4
220.W	57850.9	-284.9
210.W	57654.5	-196.4
200.W	57584.0	-70.5
190.W	57812.5	228.5
180.W	57692.7	-119.8
170.W	57760.1	67.4
160.W	57837.1	77.0
150.W	57895.9	58.8
140.W	57938.1	42.2
130.W	58004.2	66.1
120.W	58214.9	210.7
110.W	58204.8	-10.1
100.W	58109.4	-95.4
90.W	57992.1	-117.3
80.W	57971.1	-21.0
70.W	57966.3	-4.8
60.W	57978.8	12.5
50.W	57974.9	-3.9
40.W	58106.0	131.1
30.W	58313.4	207.4
20.W	58669.7	356.3
10.W	58423.8	-245.9
0.	58014.0	-409.8
10.E	58037.1	23.1
20.E	58001.0	-36.1
30.E	57973.4	-27.6
40.E	58183.3	209.9
50.E	58110.0	-73.3
60.E	58104.1	-5.9
70.E	57859.2	-244.9
80.E	57803.0	-56.2
90.E	57853.0	50.0
100.E	57872.7	19.7
110.E	57839.6	-33.1
120.E	57856.4	16.8
130.E	57877.0	20.6
140.E	57990.0	113.0
150.E	57938.8	-51.2
160.E	57985.7	46.9
170.E	57966.0	-19.7



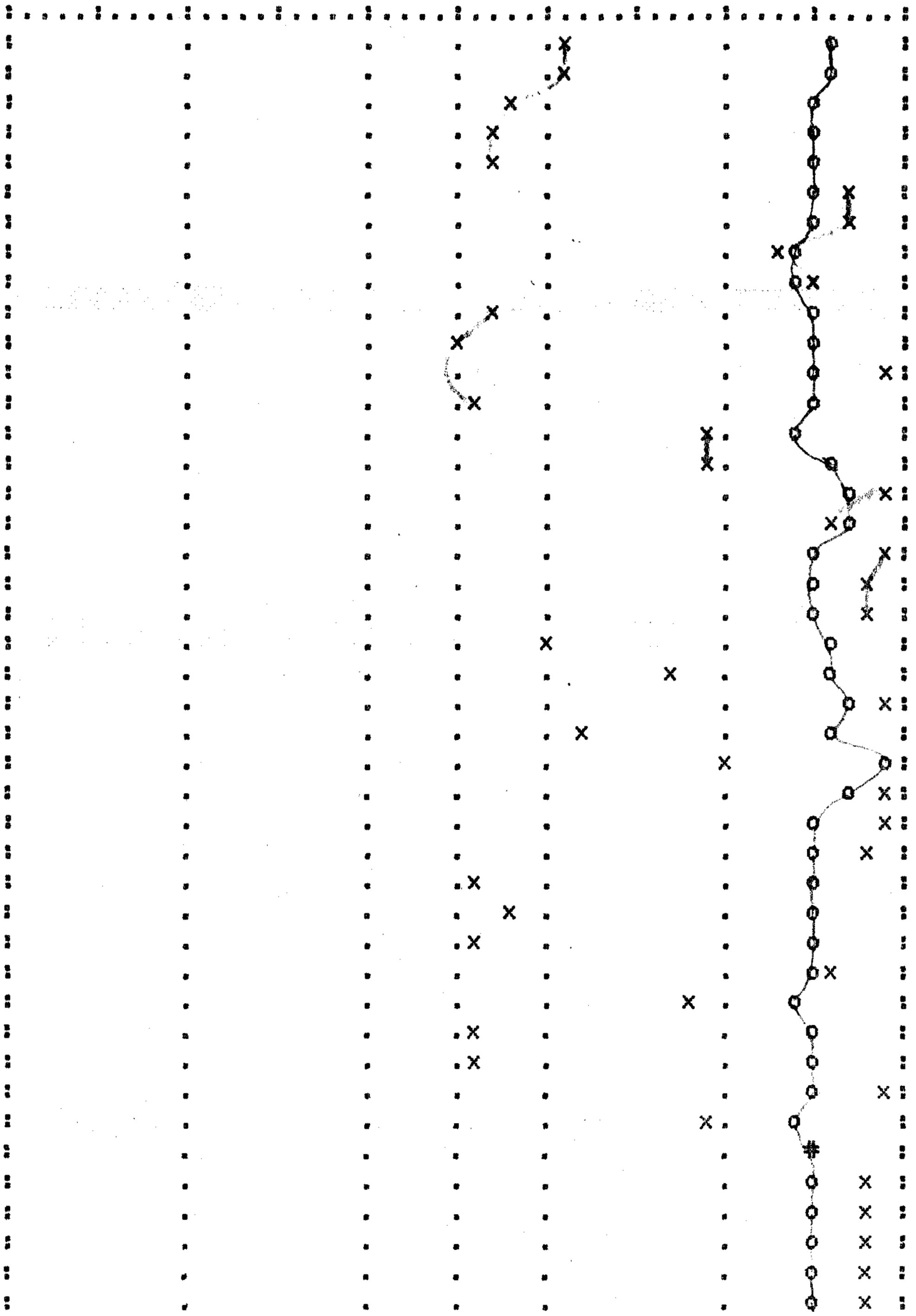
210.E	57861.6	-268.7
220.E	58079.5	217.9
230.E	58022.5	-57.0
240.E	58069.8	47.3
250.E	57945.2	-124.6
260.E	57992.1	46.9
270.E	57961.2	-30.9
280.E	57957.2	-4.0



SCINTREX V1.3 Magnetometer
Base Field 58000. *=Uncorrected Data Ser No:998988.
Line: 100.N Grid: LIZARD 1. Job: 1. Date: 84/06/15 Operator: 1.

x Total Field (Gammas) -800 -400 - 0 + 400 800
o Total Field (Gammas) -8000 -4000 - 0 + 4000 8000

Station	Mag Fld	Change
200.W	58224.9	
190.W	58235.0	10.1
180.W	58133.2	-101.8
170.W	58084.2	-49.0
160.W	58091.7	7.5
150.W	57887.7	-204.0
140.W	57891.2	3.5
130.W	57714.9	-176.3
120.W	57781.0	66.1
110.W	58086.9	305.9
100.W	58016.0	-70.9
90.W	57965.5	-50.5
80.W	58043.3	77.8
70.W	57551.7	-491.6
60.W	58540.3	988.6
50.W	58972.9	432.6
40.W	58840.4	-132.5
30.W	57952.1	-888.3
20.W	57917.8	-34.3
10.W	57907.3	-10.5
0.	58201.6	294.3
10.E	58495.3	293.7
20.E	58962.6	467.3
30.E	58298.2	-664.4
40.E	59581.8	1283.6
50.E	58966.3	-615.5
60.E	57949.5	-1016.8
70.E	57938.0	-11.5
80.E	58033.7	95.7
90.E	58111.6	77.9
100.E	58044.4	-67.2
110.E	57823.0	-221.4
120.E	57532.8	-290.2
130.E	58041.9	509.1
140.E	58048.3	6.4
150.E	57942.4	-105.9
160.E	57571.3	-371.1
170.E	57811.0	239.7
180.E	57902.5	91.5
190.E	57901.4	-1.1
200.E	57922.4	21.0
210.E	57935.6	13.2
220.E	57900.6	-35.0



APPENDIX K

SUMMARY OF PROJECT COST AND

STATEMENT OF EXPENDITURES FOR ASSESSMENT

PROJECT AND PROGRAM COST - 1984

Project: Lizard Claims   Project # 950   AFE # E-329

01	Salaries and Wages	CDN$ 13,635.46
02	Fringe Benefits	
03	Camp Expense	5,439.14
04	Shipping and Storage	
05	Travel Expenses	334.00
06	Management	
07	Office and Technical Supplies	117.35
08	Communications	30.01
11	Geological Programs	69.75
12	Geophysical Programs	
13	Geochemical Programs	3,456.51
14	Photogrametry	
15	Drafting, Publications and Maps	
16	Assaying Charges	20.75
17	Auto Operation and Maintenance	1,620.46
18	Aircraft Charter - Fixed Wing	
19	Aircraft Charter - Helicopter	
21	Equipment Purchases and Maintenance	
22	Heavy Equipment Contracting	
23	Surveying and Line-cutting	
24	Drilling and Logging	
25	Exploration Mining	
28	Metallurgical Testing	
29	Bulk Sampling	
30	Consultants	
60	Legal Expenses	
61	Property Acquisition - Purchase	
63	Property Acquisition - Staking	3,927.99
65	Government Fees	800.00
66	Option Payments	
68	Tolls and Trespass Charges	
	Other	
	TOTAL	29,451.41

APPENDIX K

STATEMENT OF EXPENDITURES FOR ASSESSMENT

SUMMARY OF WORK: Geological mapping, geophysical survey, geochemical sampling.

PERIOD OF WORK: June 6 to August 30, 1984

COSTS:

Personnel

D. Mallalieu, geologist 37 days @ $88/day	3,256.00	
T. Huttemann, assistant 37 days @ $72/day	2,664.00	
G. Enns, geologist 4 days @ $192/day	768.00	
G. Hendrickson, geophsycist 5 days @ $192/day	960.00	
	7,648.00	7,648.00

Room and Board

83 man-days @ $37.50		3,112.50

Transportation

Redhawk Rentals, Burnaby		
Toyota Diesel 4x4-5 wks @ 250	1,250	
Fuel	300	
	1,550	1,550.00

Geochemical Analysis

Acme Laboratories, Vancouver,		
195 soil and silt samples for Cu,Pb,Zn,Ag,Au and Ba @ $11.60	2,262.00	
43 rocks samples for Cu,Pb,Zn,Ag,Au and Ba @ $13.75	591.25	
	2,853.25	2,853.25
XRay Lab, Don Mills, Ont.		
8 rock samples for major oxide and multi-element analysis plus preparation @ $42.00		336.00

APPENDIX K
STATEMENT OF EXPENDITURES FOR ASSESSMENT

Thin Sections

Vancouver Petrographics, Fort Langley, B.C.

22 thin sections @ $7.75	170.75	
1 oversize section @ 45.00	45.00	
	215.00	215.00
Report Preparation		750.00
		$16,464.75

16,000 of this work to applied to:

Lizard I Rec. No. 4943 (Nov) 4 years	10,000
Lizard 2 Rec. No. 4944 (Nov) 3 years	6,000

APPENDIX L

STATEMENTS OF QUALIFICATIONS

STATEMENT OF QUALIFICATIONS

NAME: David Mallalieu

ADDRESS: 701 - 1281 West Georgia, Vancouver, B.C. V6E 3J7

EDUCATION: B.Sc. - Honours Geology, 1983
Carleton University

EXPERIENCE:

May-Sept 1981	Mattagami Lake Exploration Ltd. Junior Geological Assistant
May-Sept 1982	Mattagami Lake Exploration Ltd. Senior Geological Assistant
April-Dec 1983	Billiton Canada Ltd. - Vancouver Senior Geological Assistant
May-Dec 1984	Kidd Creek Mines Ltd. Geologist

STATEMENT OF QUALIFICATIONS

NAME:	S. G. Enns
ADDRESS:	701 - 1281 West Georgia, Vancouver, B.C. V6E 3J7
EDUCATION:	B.Sc. - Honours Geology 1967 University of Manitoba
	M. Sc. - Economic Geology 1971 University of Manitoba

EXPERIENCE:

Geol. Assist.	Manitoba Mines Branch	- 1964 (field season)
Geol. Assist.	Sherritt Gordon Mins	- 1965 (field season)
Geol. Assist.	Amax Exploration Inc.	- 1966-70 (field season)
Geologist	Cerro Mining of Canada	- 1971
Geologist	Hudson's Bay Oil & Gas	- 1972
Geologist	BP Minerals Canada	- 1973-75
Geologist	BP Alaska Exploration	- 1975-79
Geologist	Amax of Canada	- 1979-81
Geologist	Kidd Creek Mines Ltd.	- 1982 - present

STATEMENT OF QUALIFICATIONS

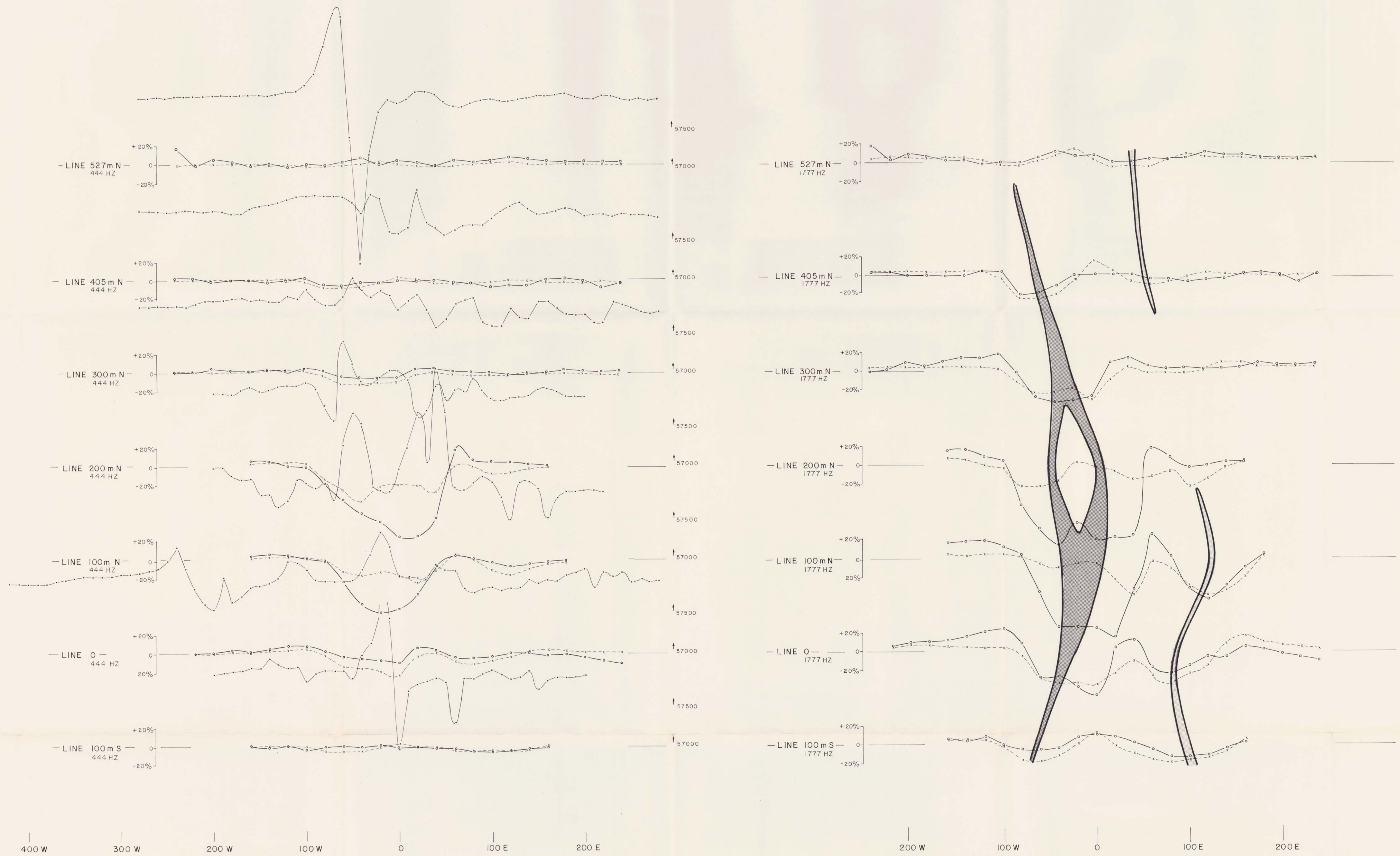
NAME: Tim Huttemann

ADDRESS: 701 - 1281 West Georgia, Vancouver, B.C. V6E 3J7

EDUCATION: B.Sc. - III year, applied mathematics
University of British Columbia

EXPERIENCE:

Summer 81	Newmont - geological, geophysical assistant
Summer 82	Newmont - geological, geophysical assistant
Summer 83	Kidd Creek Mines - geophysical assistant
Summer 84	Kidd Creek Mines - geophysical, geological assistant.



LEGEND

- Magnetic Total Field Strength
- Quadrature (%) } EM
- Inphase Component (%) } EM
- Conductor Axis; strong / weak

GEOLOGICAL BRANCH
ASSESSMENT REPORT

13,362

Kidd Creek Mines Ltd.

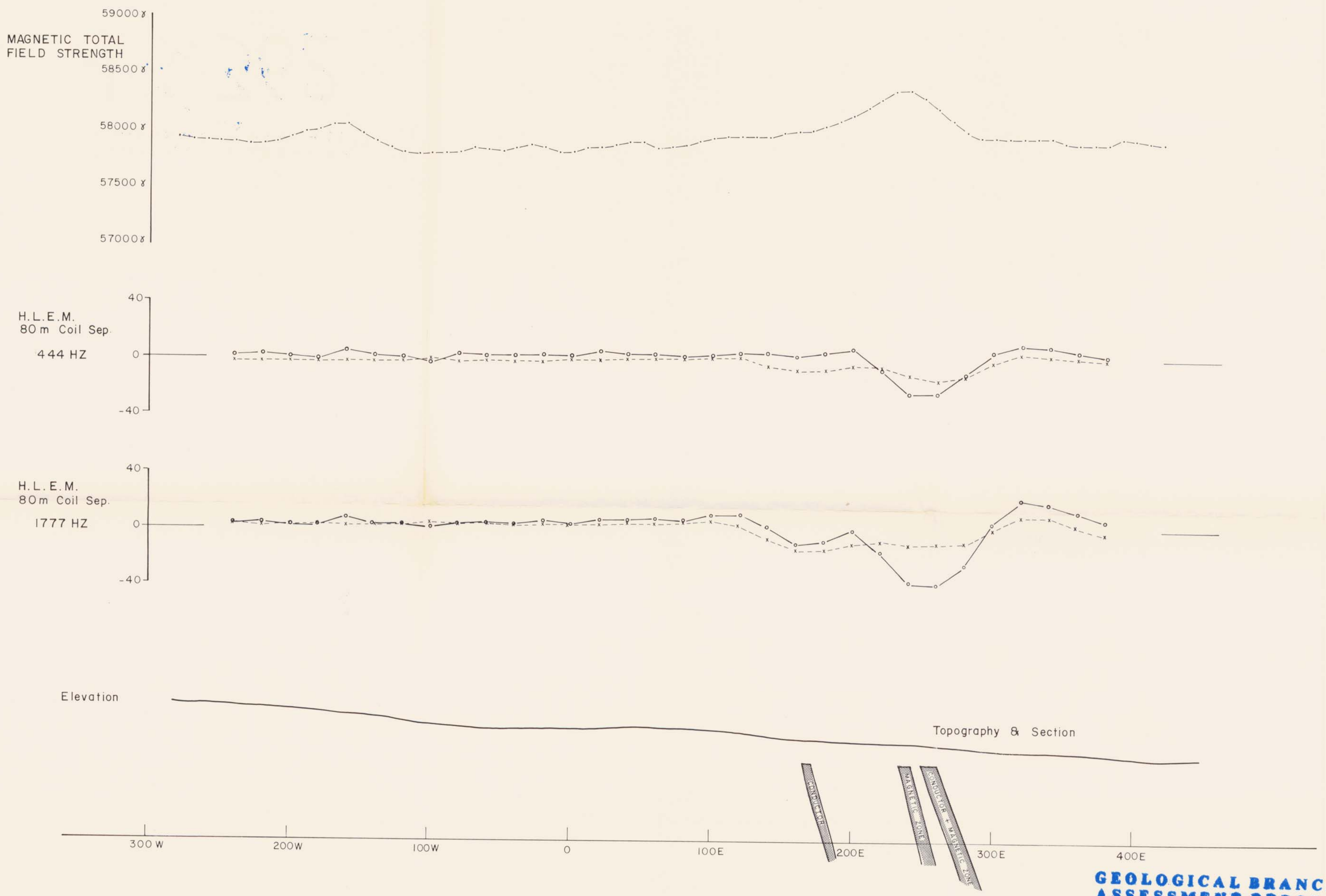
LIZARD CLAIMS
LIZARD GRID

Horizontal Coplanar Loop Electromagnetic Survey and Total Magnetic Field Strength

NTS 92 P/16		Proj. 950
WORK BY: GH	DRAWN BY: ER	DATE: NOVEMBER 22, 1984

SCALE IN METRES 1 : 2000 (0 – 100 – 200 m)

Figure: 11a



GEOLOGICAL BRANCH ASSESSMENT REPORT

13,362

LEGEND

- o——o In Phase (Percent)
- x- - -x Quadrature (Percent)
- ·——· Magnetic Total Field Strength (Nanotesla)

Kidd Creek Mines Ltd.

LIZARD CLAIMS

GRIT # 6

LINE 0 PROFILE

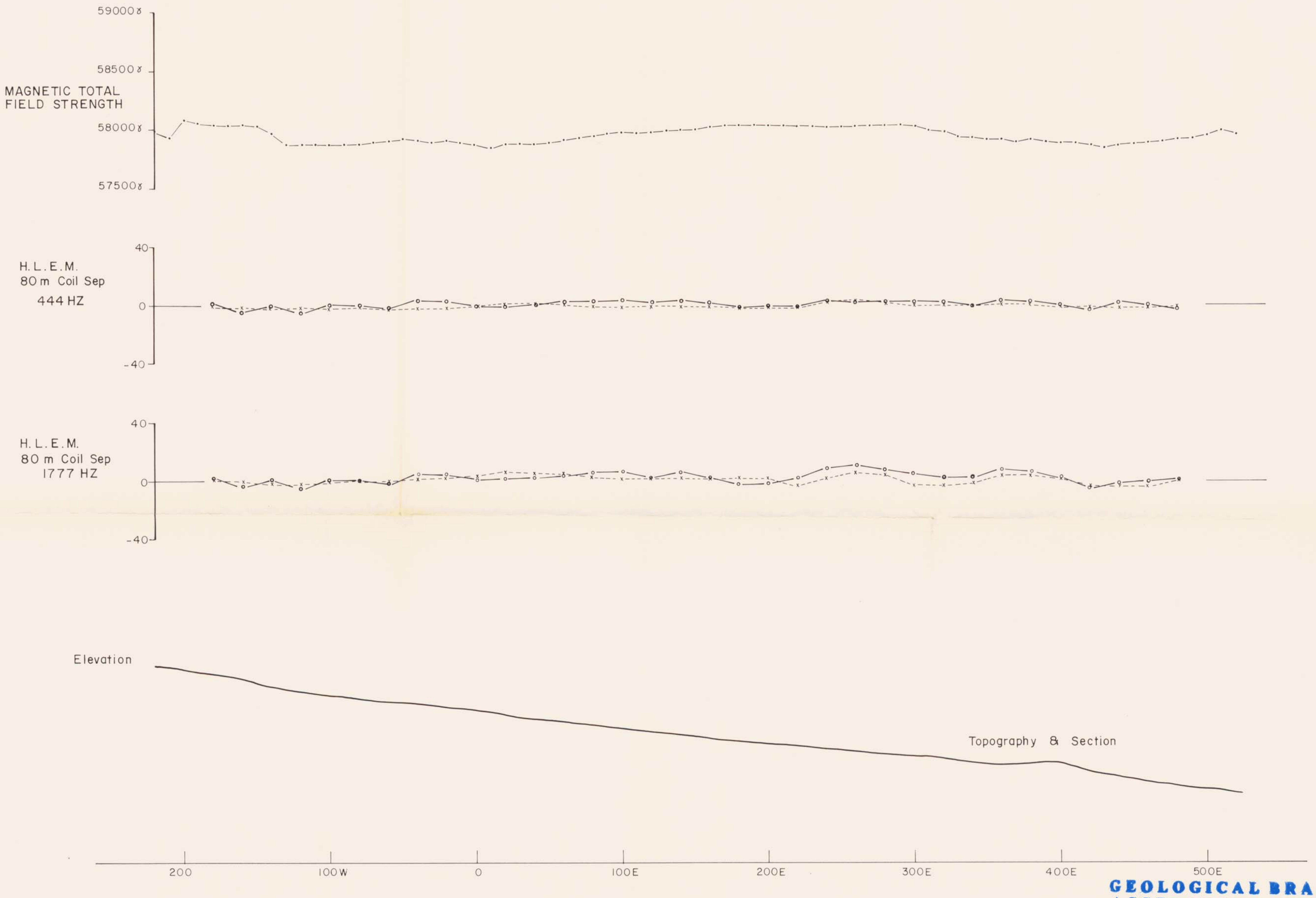
Bearing 238°

NTS 92P/16 Proj. 950

WORK BY	DRAWN BY	
GH	ER	DATE: NOV. 29/1984

SCALE IN METRES 1 : 2000 (0 50 100)

Figure: 11b



GEOLOGICAL BRANCH
ASSESSMENT REPORT

13,362

LEGEND

In Phase (Percent)

Quadrature (Percent)

Magnetic Total Field Strength (Nanotesla)

Kidd Creek Mines Ltd.

LIZARD CLAIMS

GRIT #6

LINE 1+50N PROFILE

Bearing 238°

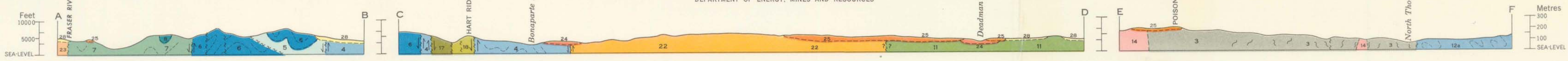
NTS 92P/16 Proj. 950

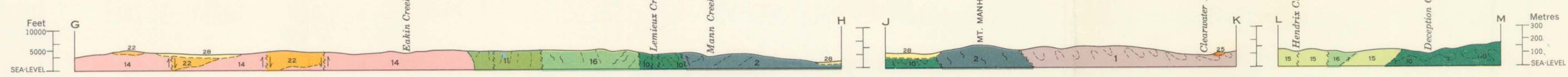
WORK BY	DRAWN BY	DATE: NOV. 30/1984
GH	ER	

SCALE IN METRES 0 50 100 1 : 2000

Figure: 11c

GEOLOGICAL SURVEY OF CANADA
DEPARTMENT OF ENERGY, MINES AND RESOURCES





Diagrammatic cross-sections along lines A-B, C-D, E-F, G-H, J-K and L-M

LEGEND

CENOZOIC

QUATERNARY
RECENT

- **29** Blocky basalt flows

PLEISTOCENE AND RECENT

- **28** Till, gravel, clay, silt, alluvium, (few if any bedrock exposures)

PLEISTOCENE OR RECENT

- **27** Basaltic cinder cone (incorporates cobbles of older rocks)

TERTIARY OR QUATERNARY
PLIOCENE OR PLEISTOCENE

- **26** 26a, basaltic arenite, conglomerate breccia, rubble, basaltic flows, locally pillowed; 26b, extinct basaltic volcanoes, basaltic flows and cinder deposits

TERTIARY
MIOCENE AND/OR PLIOCENE

- **25** Plateau lava; olivine basalt, basalt andesite, related ash and breccia beds; basaltic arenite; 25a, olivine gabbro plugs

MIOCENE

- **24** DEADMAN RIVER FORMATION: shale, sandstone, tuff, diatomite, conglomerate, breccia

OLIGOCENE

- **23** Andesite, dacite, felsite, related tuff and breccia; greywacke, shale; minor lignite and conglomerate

EOCENE AND (?) OLIGOCENE
KAMLOOPS GROUP (21, 22)

- **22** SKULL HILL FORMATION: dacite, trachyte, basalt, andesite, rhyolite, related breccias

EOCENE

- **21** CHU CHUA FORMATION: conglomerate, sandy shale, arkose, coal

MESOZOIC

CRETACEOUS

- **20** RAFT AND BALDY BATHOLITHS AND SIMILAR GRANITIC ROCKS: biotite quartz monzonite and granodiorite; minor pegmatite, aplite, biotite-hornblende, quartz monzonite; 20a, quartz diorite, diorite, granodiorite (may include some older rocks); 20b, aplite, leuco-quartz monzonite and granite

APTIAN AND/OR ALBIAN
JACKASS MOUNTAIN GROUP

- **19** Greywacke, shale, siltstone; minor arkose and lenses of pebble conglomerate

JURASSIC (?)

- **18** Shale, grit
- **17** Chert-pebble conglomerate, greywacke

JURASSIC
SINEMURIAN TO (?) MIDDLE JURASSIC

- **16** Porphyritic augite andesite breccia and conglomerate; minor andesite, arenite, tuff, argillite, and flows (may include some 11; 16a, isolated areas of hornblende andesite (may be all or partly intrusive)
- **15** Andesitic arenite, siltstone, grit, breccia and tuff; local granite bearing conglomerate, greywacke; minor argillite and flows (may include some 11)

TRIASSIC OR JURASSIC
RHAETIAN OR HETTANGIAN

- **14** THUYA AND TAKOMKANE BATHOLITHS AND SIMILAR GRANITIC ROCKS: hornblende-biotite quartz diorite and granodiorite, minor hornblende diorite, monzonite, gabbro, hornblendite; 14a, diorite and syenodiorite; 14b, leuco-quartz monzonite and granodiorite
- **13** 13a, fine- to medium-grained, pink to brown and grey syenite and monzonite; 13b, medium-grained, creamy-buff, locally coarsely porphyritic (K-feldspar) syenite and monzonite

TRIASSIC
KARNIAN AND NORIAN
NICOLA GROUP

- **11** Augite andesite flows and breccia, tuff, argillite, greywacke, grey limestone; 11a, includes minor 3 and 10
- **10** Black shale, argillite, phyllite, siltstone, black limestone

PERMIAN AND/OR TRIASSIC

- **9** Serpentinite and serpentinized peridotite

LATE PERMIAN (?) EARLY AND/OR MIDDLE TRIASSIC
PAVILION GROUP (7, 8)

- **8** Tuff, chert, argillite, limestone, greywacke, andesitic and basaltic flows
- **7** Chert, argillite, siltstone; minor tuff and limestone

PALEOZOIC

PERMIAN
GUADALUPIAN
CACHE CREEK GROUP (4 to 6)

- **6** MARBLE CANYON FORMATION: massive limestone, limestone breccia and chert; minor argillite, tuff, andesitic and basaltic flows

WOLFCAMPIAN TO GUADALUPIAN

- **5** Argillite, basaltic flows, tuff, chert, limestone
- **4** Basic volcanic flows, tuff, ribbon chert, limestone, argillite
- **12** 12a, quartzite, quartz-phyllite, quartz-granule conglomerate, argillite, phyllite, calcareous phyllite, marble, greenschist, greenstone; 12b, dark grey and black argillite, siltstone, phyllite, minor limestone (Metamorphic equivalents 1, 2, 3, 10)

PENNSYLVANIAN AND PERMIAN
MORROWAN TO GUADALUPIAN

- **3** Volcanic arenite, greenstone, argillite, phyllite; minor quartz-mica schist, limestone, basaltic and andesitic flows, amphibolite, conglomerate and breccia; includes small bodies of 16a

MISSISSIPPIAN AND/OR LATER
SLIDE MOUNTAIN GROUP

- **2** FENNELL FORMATION: pillow lava flows, greenstone, foliated greenstone, greenschist, argillite, chert, minor amphibolite, limestone, breccia

PROTEROZOIC (?)

WINDERMERE OR CAMBRIAN AND LATER
KAZA OR CARIBOO GROUP

- **1** Feldspathic quartz-mica schist, locally garnetiferous, micaceous quartzite, black siliceous phyllite, quartz-hornblende-mica schist, marble, chlorite schist, greenstone, amphibolite

SHUSWAP METAMORPHIC COMPLEX

- **A** Micaceous quartzo-feldspathic gneiss, quartz-mica schist, amphibolite, micaceous quartzite, pegmatite

Rock outcrop .... ×
Geological boundary (approximate) ....
Bedding, tops unknown (inclined, vertical) ....
Bedding (as shown on cross-sections) ....
Schistosity, cleavage (horizontal, inclined, vertical) ....
Foliation (as shown on cross-sections) ....
Lineation (horizontal, inclined) ....
Fault (approximate, assumed) ....
Thrust fault (approximate, assumed) ....
Anticline (defined, approximate) ....
Syncline (defined, approximate) ....
Fossil locality .... Ⓕ
Mineral occurrence .... Zn ×

MINERALS

Coal	Coal	Molybdenite	mo
Copper	Cu	Silver	Ag
Diatomite	diat	Volcanic ash	ash
Gold	Au	Zinc	Zn
Lead	Pb		

Geology by R.B. Campbell and H.W. Tipper 1964, 1965

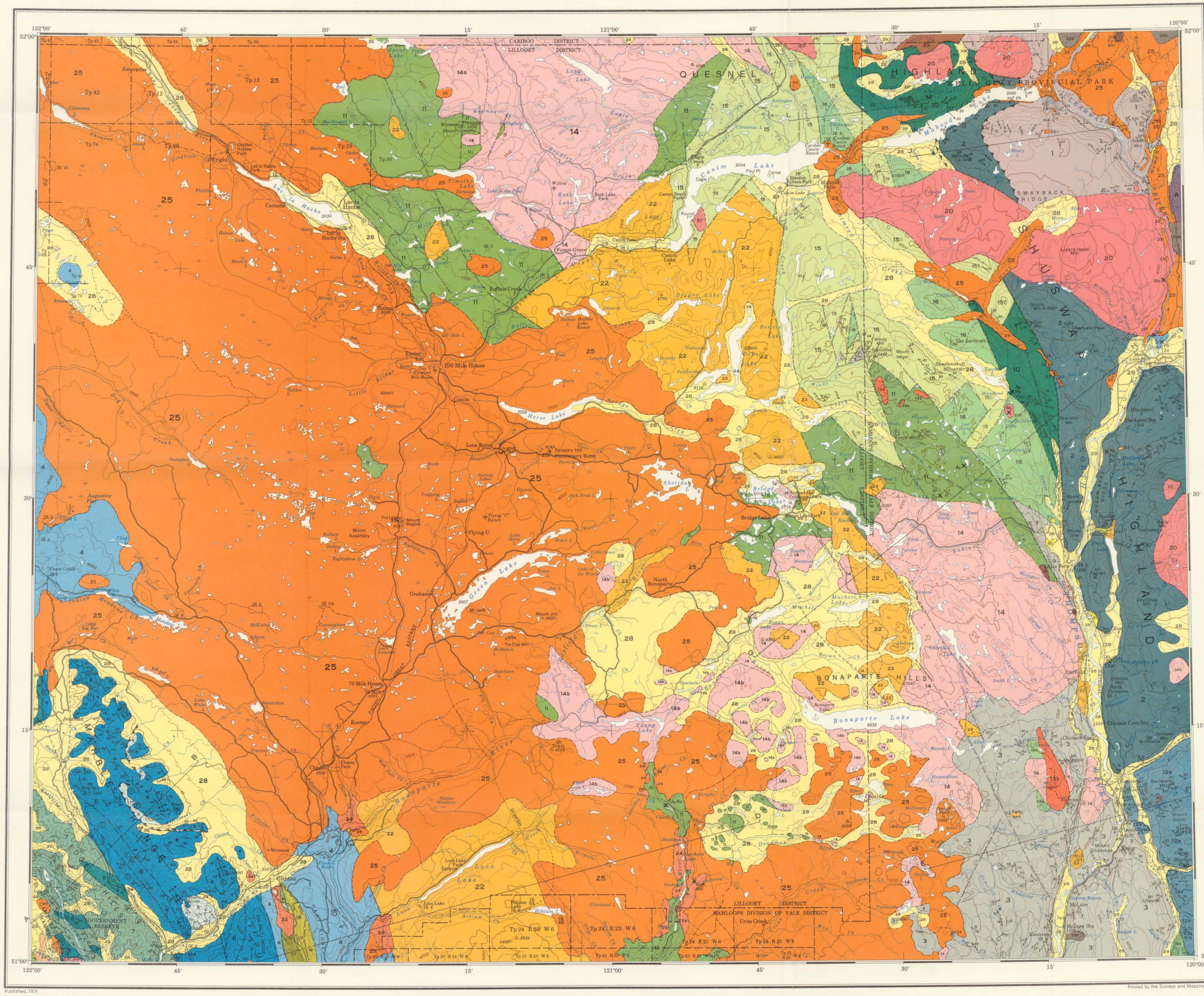
To accompany Memoir 363 by R.B. Campbell and H.W. Tipper

Geological cartography by the Geological Survey of Canada

Base-map compiled by the Department of Lands, Forests and Water Resources, British Columbia, 1966. Produced by the Surveys and Mapping Branch, 1969

Magnetic declination 1970 varies from 23°23′ easterly at centre of east edge to 23°36′ easterly at centre of west edge. Mean annual change decreasing 3.3′

Copies of the topographical edition of this map may be obtained from the Map Distribution Office, Department of Energy, Mines and Resources, Ottawa



Published, 1971
Copies of this map may be obtained from the Geological Survey of Canada, Ottawa

Printed by the Surveys and Mapping Branch

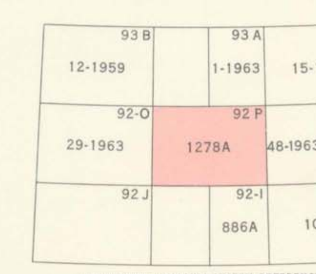
INDEX MAP

MAP 1278A
GEOLOGY
BONAPARTE LAKE
BRITISH COLUMBIA

Scale 1:250,000

Miles 4 0 4 8 12 Miles
Kilometres 6 0 6 12 18 Kilometres

Kidd Creek Mines Ltd.
BONAPARTE LAKE, B.C.
GEOLOGY
DATE: 10/1/85
SCALE 1 : 250,000
Figure: 3



NATIONAL TOPOGRAPHIC SYSTEM REFERENCE AND INDEX TO GEOLOGICAL SURVEY OF CANADA MAPS

BONAPARTE LAKE
BRITISH COLUMBIA

LEGEND

+	Stream sediment sample (1984)
•	Soil sample (1978)
18/14/57/62	Cu ppm / Pb ppm / Zn ppm / Ba ppm
50	First order soil anomaly
45	Second order soil anomaly
56	First order stream sediment anomaly
*	Duplicate analysis

GEOLOGICAL BRANCH ASSESSMENT REPORT

13,362

Kidd Creek Mines Ltd.

LIZARD CLAIMS

GEOCHEMISTRY (1984) & SELECTED SOIL GEOCHEMISTRY (1978)
Cu, Pb, Zn, Ba

NTS 92P/16 — Proj. 950

WORK BY	DRAWN BY	DATE
DM / TH	ER	NOV. 21 / 1984

SCALE IN METRES 1:10,000

Figure: **16 b**

LEGEND

+	Stream sediment sample (1984)
●	Soil sample (1978)
0.1/5/45	Ag ppm / Au ppb / Ba ppm
1.5	First order soil anomaly
0.8	Second order soil anomaly
1.8	First order stream sediment anomaly
*	Duplicate analysis
Note :	Single values denote Ag only

GEOLOGICAL BRANCH
ASSESSMENT REPORT

13,362

Kidd Creek Mines Ltd.

LIZARD CLAIMS

GEOCHEMISTRY (1984) & SELECTED SOIL GEOCHEMISTRY (1978) Ag, Au, Ba

NTS 92P/16 Proj. 950

WORK BY	DRAWN BY	DATE: DEC. 3 / 1984
DM/TH	ER	

20 0 20 40 60 80 m
SCALE IN METRES 1 : 10,000

Figure: 16c

+ Stream sediment sample (1984)

• Soil sample (1978)

⁎ Duplicate analysis

GEOLOGICAL BRANCH ASSESSMENT REPORT

13,362

Kidd Creek Mines Ltd.

LIZARD CLAIMS

LOCATION MAP
STREAM SEDIMENT SAMPLES AND
SELECTED SOIL SAMPLES

NTS 92/P16 Proj 950

WORK BY	DRAWN BY	DATE
DM/TH	ER	NOV. 16, 1984

SCALE IN METRES 1:10,000

Figure: **16a**

LEGEND

Intrusive Rocks

2g / 1b	Rhyolite sills / dykes

Eagle Bay Formation

2a	Quartzite, Quartz-wacke, Impure quartzite, Quartz-granule conglomerate
2b	Phyllite, Graphitic phyllite, Andalusite-biotite-muscovite schist, Cordierite-muscovite-biotite-schist, Biotite-quartz schist, Impure carbonate
2c	Quartz-muscovite schist, Chlorite-quartz-muscovite schist
2d	Feldspar-quartz crystal tuff
2e	Lapilli-block tuff
2f	Block-ash flow

Fennel Formation

1a	Basalt
1c	Siltstone

SYMBOLS

- Whole rock analysis
- Outcrop defined
- Outcrop - position approximate
- Debris
- Geological contact - defined
- Geological contact - interpreted
- Geological contact (formational) - interpreted
- Strike and dip of bedding (horizontal, inclined, vertical, dip not specified)
- Tops of bedding - inclined
- Strike and dip of gneissosity, cleavage, foliation (horizontal, inclined, vertical, dip not specified)
- Plunge of minor folds
- Pitch of a line in the plane of gneissosity, cleavage, foliation
- Antiformal axis - defined, assumed
- Plunge of fold axis
- Synformal axis - defined, assumed
- Fault (defined, approximate, assumed)
- Sample locations, stream sediment

GEOLOGICAL BRANCH ASSESSMENT REPORT

13,362

Kidd Creek Mines Ltd.

LIZARD CLAIMS

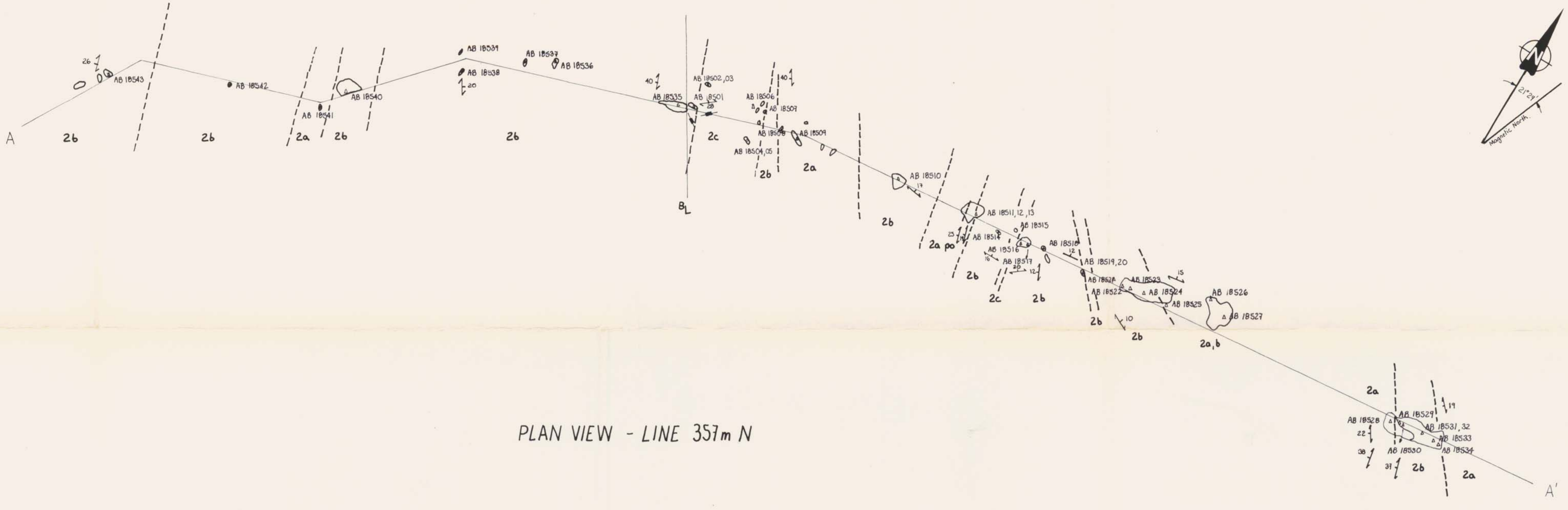
GEOLOGY

NTS 92P/16 Proj. 950

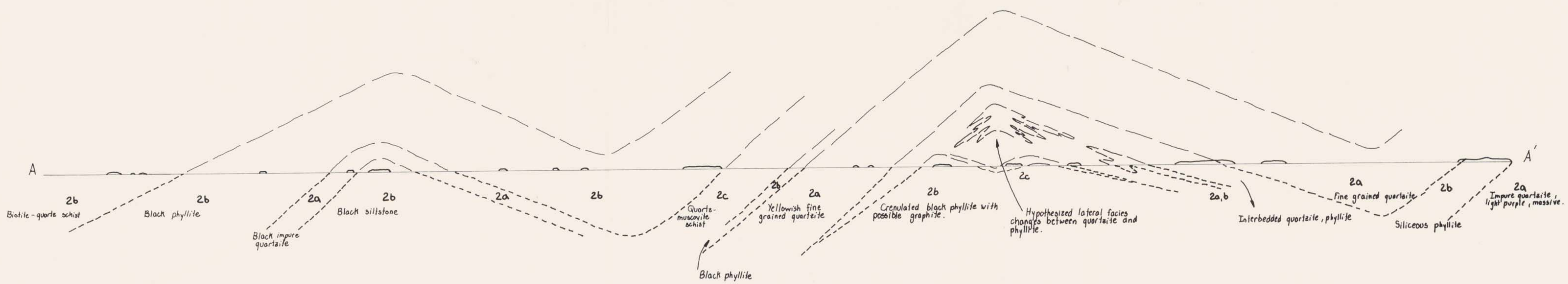
WORK BY	DRAWN BY	DATE: JAN. 7, 1985
DM	ER	

SCALE IN METRES 1 : 10,000 (20 0 20 40 60 80 m)

Figure: 4



PLAN VIEW - LINE 357m N



SCHEMATIC CROSS SECTION - LINE 357m N

LEGEND

EAGLE BAY FORMATION

2a Quartzite, Quartz-wacke, Impure quartzite, Quartz-granule conglomerate.

2b Phyllite, Graphitic phyllite, Andalusite-biotite-muscovite schist, Cordierite-muscovite biotite schist, Biotite-quartz schist, Impure carbonate.

2c Quartz-muscovite schist, Chlorite-quartz -muscovite schist.

Outcrop
Debris
Geological contact-defined, approximate hypothesized.
Bedding-(horizontal, inclined, vertical)
Schistosity, gneissosity, cleavage, foliation -(horizontal, inclined, vertical)
Jointing-(horizontal, inclined, vertical)

Py Pyrite
Po Pyrrhotite
Cpy Chalcopyrite
AB 18539 Rock Geochemical Sample

GEOLOGICAL BRANCH ASSESSMENT REPORT

13,362

Kidd Creek Mines Ltd.

LIZARD CLAIMS

PLAN VIEW and SCHEMATIC CROSS SECTION of LINE 357m N (LIZARD GRID)

NTS 92P/16 Proj. 950

WORK BY	DRAWN BY	DATE: DECEMBER 10, 1984
DGM	DGM	

20 10 0 20 40 60 80 m
SCALE IN METRES 1 : 1000

Figure: 5