GEOPHYSICAL REPORT
ON THE
McVICAR GROUP

Squamish Area, Vancouver Mining Division

NTS 92G/11E
Lat. 49°40'N Long. 123°03'W

by

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Owned and Operated by:
Kidd Creek Mines Ltd.

part 1 of 2

October, 1982

Vancouver, B.C.

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INTRODUCTION

Location, Access and Terrain

The Baldwin-McVicar properties (Lat. 49°40'N, Long. 123°03'W) are located in southwestern British Columbia, about 8 km east-southeast of the port of Squamish (Figure 1). The claims are situated between two major, northwest flowing drainages; Stawamus River and Raffuse Creek (Figure 2).

Access is by 4-wheel drive vehicle along a main haulage logging road heading east from Squamish, thence along an abandoned logging road on the western slopes above Raffuse Creek.

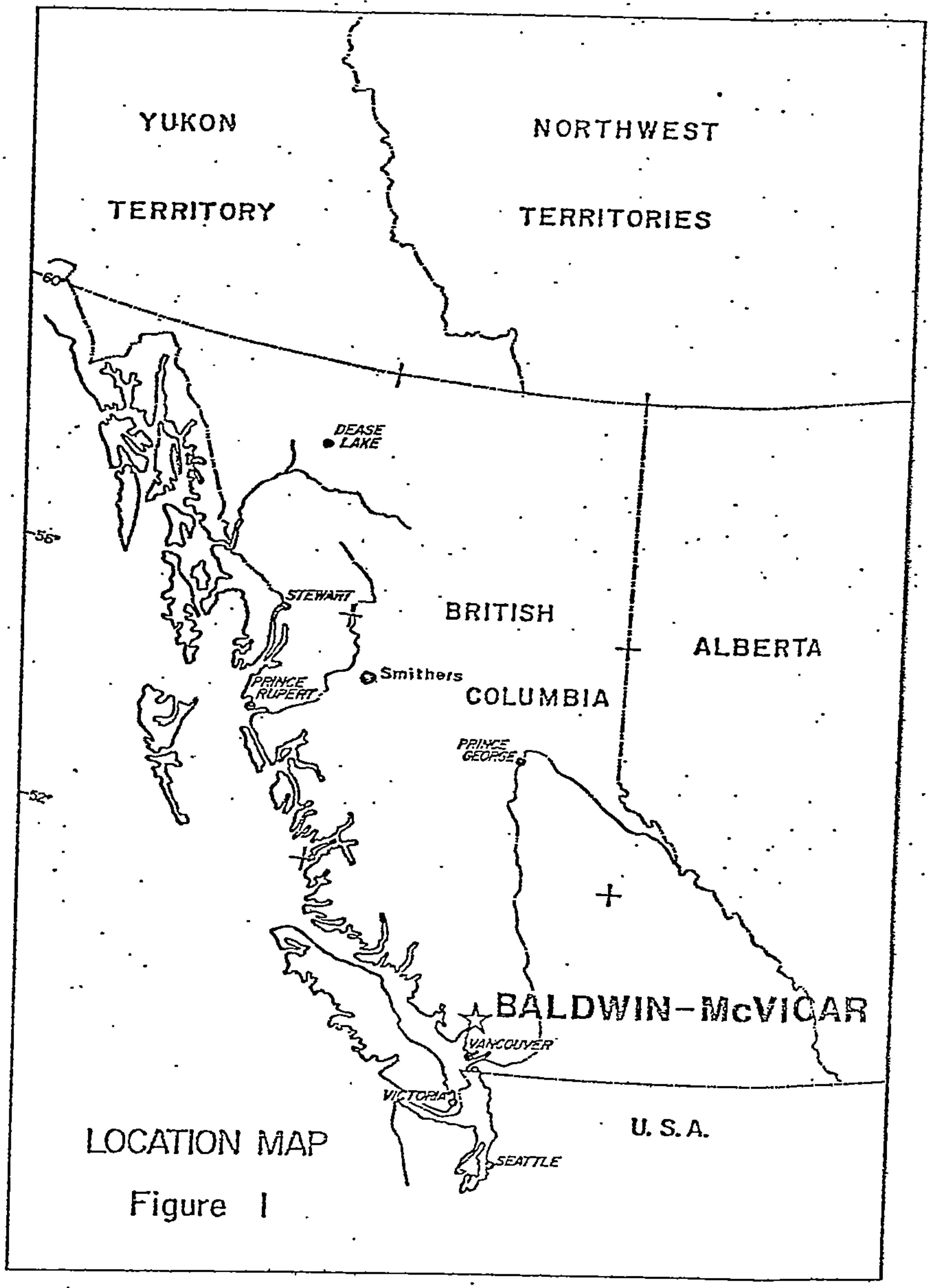
The terrain is rugged with elevations ranging from 400 m in the main valleys to 1500 m along the ridges. Tributary creeks, feeding the main drainages, are deeply incised.

Most of the area is timbered or "clear cut" by recent logging operations. The older logged areas are covered with a second growth of bushes and shrubs. Above 1400 m the vegetation changes from coniferous forest to more open alpine vegetation

The climate is moderate. The higher elevations receive abundant snowfall during the winter months; much of this snow remains until mid-summer.

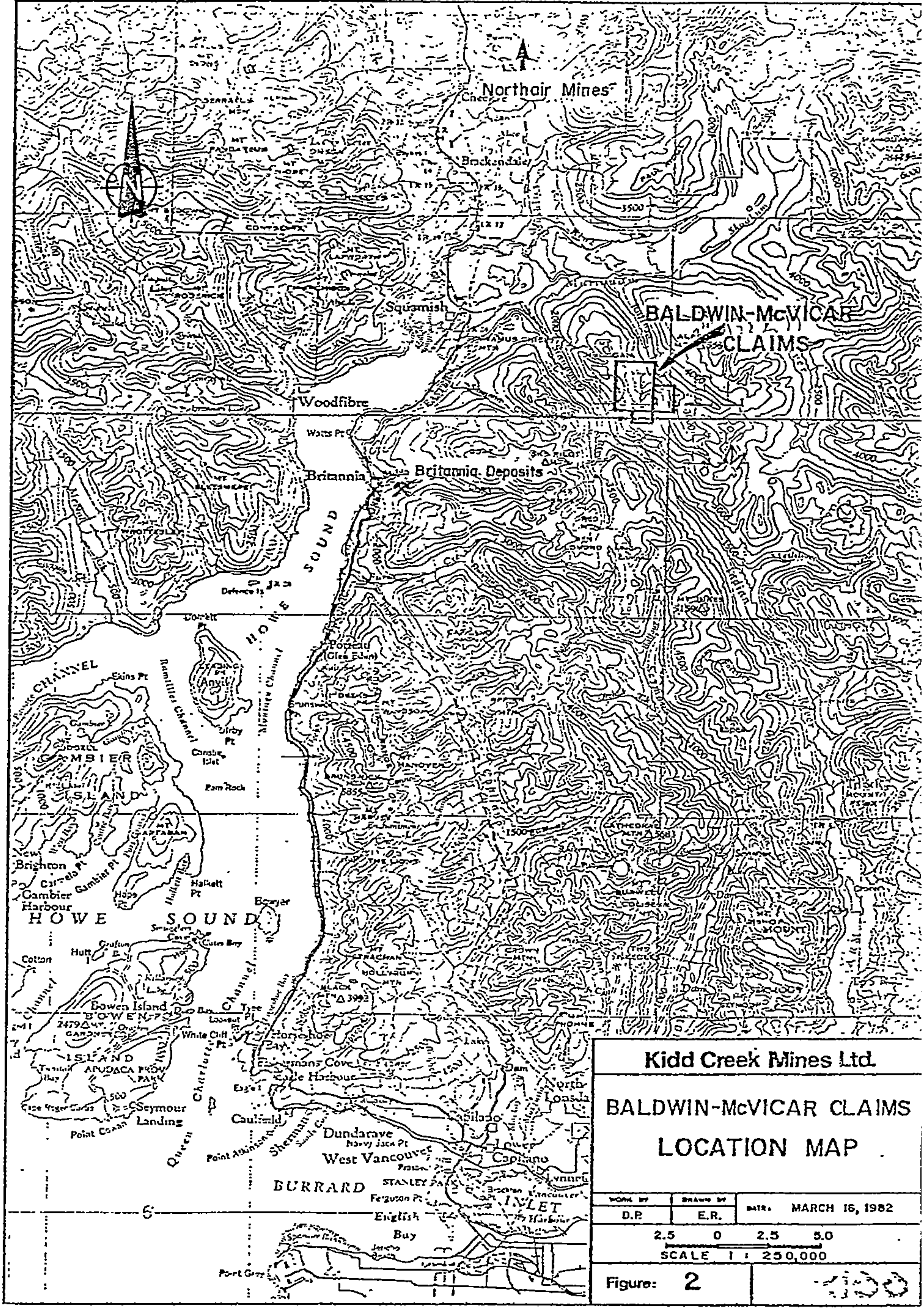
Property History and Definition

The McVicar mineral showings were discovered and explored in the early 1900's. Work included trenching and the driving of short adits. Britannia Mining and Smelting Company optioned the "McVicar"



LOCATION MAP

Figure I



Kidd Creek Mines Ltd.

BALDWIN-McVICAR CLAIMS

LOCATION MAP

WORK BY	DRAWN BY	DATE: MARCH 16, 1982
D.P.	E.R.	

2.5 0 2.5 5.0

SCALE 1 : 250,000

Figure: 2

properties, and eventually tested the more impressive showings by diamond drilling. In 1946, the "McVicar" properties were acquired by Western Surf Inlet Company and diamond drilling was carried out during the summers of 1953 and 1954. Reports on the property by Victor Dolmage, consulting geologist, summarize this work. In 1969, the property was optioned to Croydon Mines, who conducted a regional wide-spread TURAM-EM survey. During the 1971-72 season, 4072 feet of NQ diamond drilling was carried out under the joint venture agreement between Croydon Mines and Dowa Mining Company of Japan; results were generally disappointing. In 1977, Texasgulf Canada Ltd., now Kidd Creek Mines Ltd., staked the Baldwin 1, 2 and 3 claims adjoining the McVicar Crown Grants and subsequently optioned the grants from Matachewan Consolidated Mines Ltd., who had acquired the interests of Western Surf Inlet. The Baldwin 4 and 5 claims were staked by Texasgulf Canada Ltd. in the summer of 1978, on favourable ground to the immediate north.

During 1978, geological mapping (1:5000 and 1:500), trench sampling soil and silt sampling and geophysical orientation surveys were conducted by Texasgulf over the Baldwin-McVicar area.

In 1981, 855.5 m of BQ diamond drilling was carried out in the vicinity of the Whistler showings on the property with discouraging results.

The property now consists of 28 units aggregating 700 hectares in 3 MGS claims, the Baldwin 1, 2 and 3 claims and 12 Crown Granted claims, the McVicar claims (Figures 3a, 3b). The Baldwin 4 and 5 claims were allowed to lapse in 1979.

Summary of Work Completed

Geophysical surveys

During the period June 9 - 11, 1982, a helicopter-borne combined magnetic, VLF-EM, electromagnetic survey, totalling 300 line-kilometres, was flown over the Baldwin-McVicar property and adjacent area in the Indian River Belt. The survey was flown in order to identify massive sulphide targets. Subsequently, from August 18 to 31, 1982, follow-up (magnetics; HLEM; IP) surveys and geologic examination were carried out, on the property, over the better conductors located during the airborne survey.

Work Distribution

The helicopter-borne geophysical survey included the entire McVicar Group (Figures 3a, 3b) which consists of the following claims and Crown Granted claims

Baldwin 1	Record No. 202	Grouse Fr. CG	Lot No. 6157
Baldwin 2	Record No. 203	Harding CG	Lot No. 6152
Baldwin 3	Record No. 208	Rainstorm CG	Lot No. 6153
Whistler CG	Lot No. 6160	Cabin Fr CG	Lot No. 6158
Heather CG	Lot No. 6159	Noonday CG	Lot No. 6154
Lily CG	Lot No. 6161	Slide Fr. CG	Lot No. 6156
Rose CG	Lot No. 6163	Mamquam CG	Lot No. 6155
		Violet CG	Lot No. 6162

Ground follow-up surveys were confined to the Baldwin 2 and 3 claims; Whistler, Lily and Grouse Fraction Crown Granted claims.

GEOLOGY

The property is underlain by a structurally complex pile of intermediate to felsic volcanic and volcaniclastic rocks belonging to the Cretaceous Gambier Group and located within the Indian River Pendant. This pendant lies within the Coast Crystalline Complex and is connected to the Britannia Pendant to the southwest by a 'bridge' of volcanic rock.

Local showings of massive and stringer sulphides, associated with quartz stockworks and silicified zones, are hosted in this southwesterly dipping pile of rocks. Limited exposure in conductor localities hampered detailed geologic examination. A geology map of the property, is shown in Figure 4 (DeLancey, 1978).

GEOPHYSICS

Airborne and limited ground follow-up geophysical surveys were conducted, as follows, to identify massive sulphide targets.

Helicopter-borne Electromagnetic, Magnetic, VLF-EM Survey

A combined electromagnetic, magnetic, VLF-EM helicopter-borne survey was conducted over the McVicar Group and adjacent areas from June 9 to June 11, 1981 (Figure 3). A total of 300 line-kilometres at approximately 200 metre line-kilometre spacing was flown by Aerodat Ltd., for Kidd Creek Mines Ltd., using a helicopter operated by Quasar Aviation. Details and results of the survey are contained in their report, included as Appendix A, and Figures 5 to 7.

Ground Surveys

A limited follow-up geophysical program was conducted by Kidd Creek Mines Ltd. personnel on the McVicar Group from August 18 to August 31, 1982 following receipt of preliminary results from the airborne survey. Magnetic (0.6 line-km), horizontal loop electromagnetic (3.4 line-km) and induced polarization (3.2 line-km) surveys checked several weak airborne anomalies as indicated in Figure 6. Ground anomalies are named after the flight number on which they were recorded eg "21A" would be the first anomaly recorded on flight line 21. Induced polarization work in the "old grid" area checked an anomaly discovered in 1981.

Survey procedure, instrumentation, results and a discussion of the results, as reported by G. Hendrikson, are contained in Appendix B and Figures 6; 8-13.

CONCLUSION

The helicopter-borne geophpysical survey located a number of low conductance conductors, typical of "structural"-type conductors or very minor mineralization. No conductive sulphide deposit appears to exist within 70 m of the surface. Ground investigations of the weak anomalies gave negative results.

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APPENDIX A

REPORT ON COMBINED HELICOPTER-BORNE MAGNETIC, VLFL-EM AND ELECTROMAGNETIC SURVEY

REPORT ON
COMBINED HELICOPTER-BORNE
MAGNETIC, VLF-EM AND ELECTROMAGNETIC
SURVEY
SQUAMISH, BRITISH COLUMBIA

for

KIDD CREEK MINES LIMITED

by

AERODAT LIMITED

JUNE 1982

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LIST OF MAPS

(Scale 1:10,000)

Maps

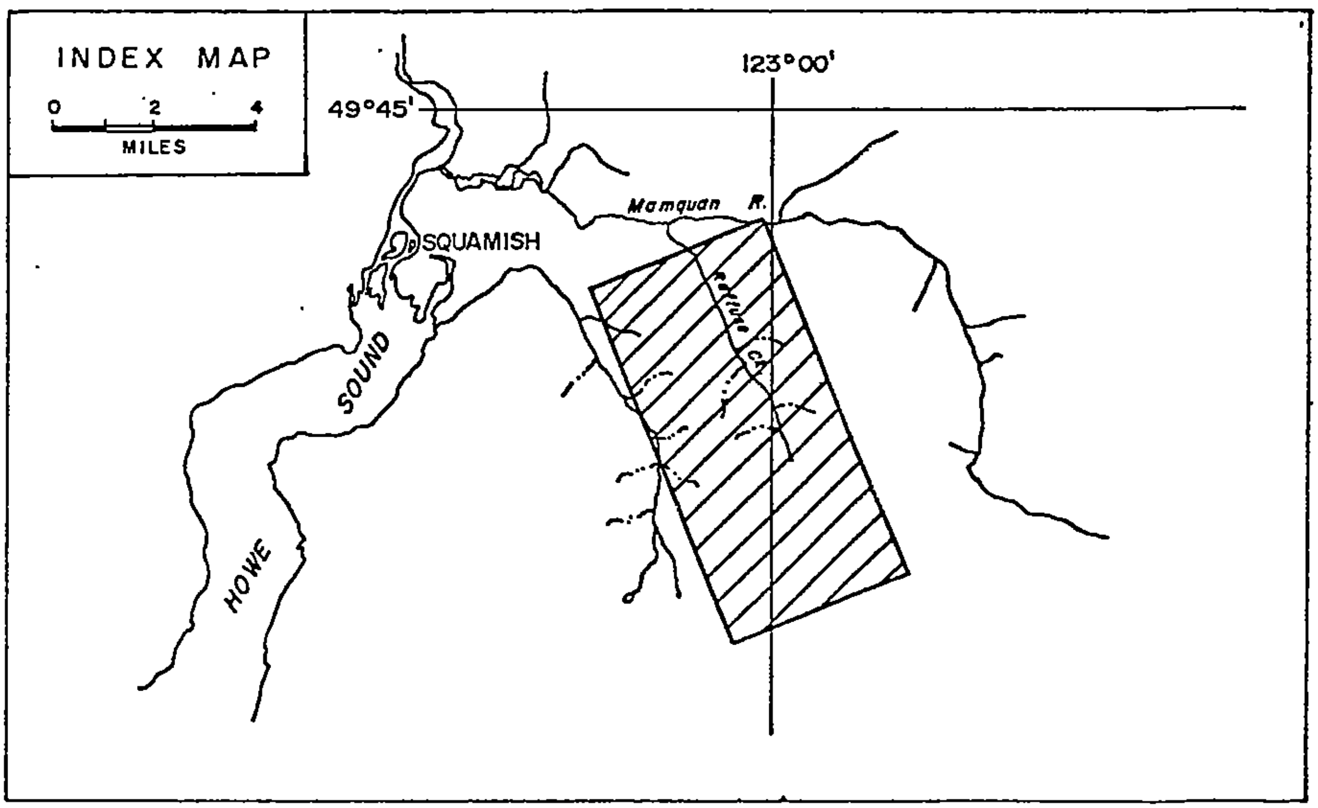
1. INTRODUCTION

This report describes an airborne geophysical survey carried out on behalf of Kidd Creek Mines Limited by Aerodat Limited. Equipment operated included a 3 frequency electromagnetic system, a magnetometer and a VLF-EM system, as well as a Motorola MRS III radar positioning system.

The survey, located in the vicinity of Squamish B. C., was flown during the period June 9 to June 11, 1982 from an operations base at Squamish. A total of 300 line kilometers was flown.

2. SURVEY AREA

The survey area is indicated on the map below. The flight lines were flown in a roughly NE/SW direction parallel to the survey boundary at a mean spacing of 200 meters.



3. AIRCRAFT EQUIPMENT AND PERSONNEL

3.1 Aircraft

The helicopter used for the survey was Bell 206L owned and operated by Quasar Aviation. Installation of the geophysical and ancillary equipment was carried out by Aerodat at Squamish. The helicopter was operated at a mean terrain clearance of 60 meters, where safety permitted.

3.2 Equipment

3.2.1 Electromagnetic System

The electromagnetic system was an Aerodat/ Geonics/Geotech 3 frequency system. Two vertical coaxial coil pairs were operated at 935 and 4570 Hz and a horizontal coplanar coil pair at 4270 Hz. The transmitter-receiver separation was 6 meters. In-phase and quadrature signals were measured simultaneously for the 3 frequencies with a time-constant of 0.1 seconds. The EM bird was towed 30 meters below the helicopter.

3.2.2 VLF-EM System

The VLF-EM system was Herz Totem 2A. This instrument measures the total field and quadrature components of the two selected frequencies; Jim Creek, Washington (NLK/24.8 KHz) and Cutler, Maine (NAA/17.8 KHz). The sensor was towed in a bird 15 meters below the helicopter.

3.2.3 Magnetometer

The magnetometer was a Geometrics G-803 proton precession type. The sensitivity of the instrument was 1 gamma at a 1 second sample rate. The sensor was towed in a bird 15 meters below the helicopter.

3.2.4 Magnetic Base Station

An IFG proton precession type magnetometer was operated at the base of operations to record diurnal variations of the earths magnetic field. The clock of the base station was synchronized with that of the airborne system to facilitate later correlation.

3.2.5 Radar Altimeter

A Hoffman HRA-100 radar altimeter was used to record terrain clearance. The output from the instrument is a linear function of altitude for maximum accuracy.

3.2.6 Tracking Camera

A Geocam tracking camera was used to record flight path on 35 mm film. The camera was operated in frame mode and the fiducial numbers for cross reference to the analog and digital data were imprinted on the margin of the film.

3.2.7 Analog Recorders

A RMS 16-channel dot-matrix recorder was used to display the data during the survey. The chart speed was 2 mm/sec. and in addition to manual and time fiducials the following data was recorded:

Input		Channel #	Scale
Altimeter		00	10 ft./mm (500 ft. at top edge of chart)
VLF-EM	Total Field "Maine"	02	2.5%/mm
	Quadrature "Maine"	04	2.5%/mm
	Total Field "Washington"	03	2.5%/mm
	Quadrature "Washington"	05	2.5%/mm
EM	Quadrature 4270 Hz	06	2 ppm/mm
	In-phase 4270 Hz	07	2 ppm/mm
	Quadrature 4570 Hz	08	1 ppm/mm
	In-phase 4570 Hz	09	1 ppm/mm
	Quadrature 935 Hz	10	1 ppm/mm
	In-phase 935 Hz	11	1 ppm/mm
Magnetometer		01	2 gammas/mm

3.2.8 Digital Recorder

A Perle DAC/NAV data system recorded the survey data on cassette magnetic tape. Information recorded was as follows:

Equipment	Interval
EM	0.1 seconds
VLF-EM	1.0 seconds
Magnetometer	1.0 seconds
Altimeter	1.0 seconds
Fiducial (time)	1.0 seconds
Fiducial (manual)	0.2 seconds
Mini-Ranger	0.2 seconds

3.2.9 Navigation System

A Motorola Mini-Ranger III radar positioning system was used to provide precise positioning control. Transponders located in the vicinity of the survey area were monitored by the airborne system to determine range-range data several times per second. The instrument operates at radar frequencies and is limited to line of sight range. The relief in the survey area sufficiently limited its overall effectiveness and its use for general navigation and flight path recovery was abandoned.

3.3 Personnel

Personnel directly involved with the survey operation were as follows:

Pilot: S. Rogers

Equipment Operator/Technician: P. Moisan

4. DATA PRESENTATION

4.1 Flight Path Recovery

Navigation and flight path determination was carried out visually using a photomosaic base provided by Kidd Creek. For compilation purposes the plotted fiducials were transferred from the photomosaic to an enlarged topographic map base.

4.2 Electromagnetic

The Aerodat 3 frequency system utilizes 2 different transmitter/receiver coil geometries. The traditional coaxial coil configuration is operated at 2 frequencies, 935 and 4570 Hz and a second horizontal coplanar coil configuration is operated at 4270 Hz.

A given conductive source within the detection range of the system will couple differently with the coaxial as opposed to coplanar coil pairs. As a result the characteristic shape of the anomaly may differ significantly between geometries.

In the case of a thin steeply dipping dyke-like feature, the coaxial coil pair yield a symmetric peak directly over the conductor whereas the coplanar coil pair yield a minimum flanked by positive side lobes. As the dip of the conductor decreases the coaxial anomaly shape changes slightly but in the case of the coplanar coil pair the side lobe on the down dip side strengthens relative to that on the up dip side. This asymmetry characteristic may be used for estimating dip.

As the thickness of the conductor increases the coaxial response shape changes slightly. However, in the case of the coplanar coils the minimum response directly over the conductor diminishes in amplitude relative to the positive side lobes and in the limiting case of a sphere or horizontal sheet-like conductor the minimum will disappear completely.

In general the coaxial coil pairs operated at two frequencies provide a conductive response range sufficiently broad to ensure a good response from geologic conductors. The coplanar coil pair provides additional information well suited to the interpretation of the structure of the conductive anomaly.

The Airborne Electromagnetic Survey Map shows inphase anomaly amplitude in parts per million (ppm) of the primary field strength, and apparent conductances. The apparent conductance is determined by applying the inphase and quadrature anomaly amplitudes of the (4570 Hz) coaxial coil configuration to the phasor diagram for the vertical half-plane model. The relationship of apparent conductance to true conductance, which in the case of narrow, slab-like bodies is the product of the electrical conductivity and average thickness, depends upon how closely the body approximates the sheet-like form, and upon how nearly at right angles its strike direction is to the flight line of the aircraft.

Conductance in mhos is the reciprocal of resistance in ohms and is a geologic parameter because it is characteristic of the conductor alone. It is generally independent of frequency and flying height (or depth of burial) and relatively independent of conductor strike length and dip. The inphase amplitude is a function of both flying height and dip, and is more strongly affected by conductor size than is conductance. Although the conductances presented are apparent only, they are most useful for comparative evaluation of conductors.

Apparent conductance values are divided into 10 ranges shown on the map legend. These are represented on the map as a number within a circle at the anomaly location. This procedure generally tends to make the work of diagnosis easier and is also useful in planning follow-up procedures.

Also determined from the phasor curves but not shown in the Airborne Electromagnetic Survey Map are the apparent depths to the conductors. Although the phasor curves are often able to distinguish between conditions of comparatively thick and thin overburden, the depth estimates are not generally reliable.

Some of the more common reasons for this area:

(i) the conductivity of the body may change with depth

(ii) the conductor plunges

(iii) the dip is substantially less than vertical

(iv) interference from conductive overburden or host rock has distorted the anomalies

(v) the body has too short a strike length to give a good half-plane response

Any of the conditions enumerated above may affect the anomaly amplitudes. Some will cause roughly proportionate changes in both phases, so that the depth estimates tend to be more seriously affected than the conductance estimates.

The conductance values are divided into groups, and the symbols given in the Interpretation Map indicate the range into which each analysis falls. This procedure generally tends to make the work of diagnosis easier. Most overburdens have apparent conductances which fall into the lowest range on the scale (< 2 mhos), whereas conductive clay deposits may have apparent conductances in the next higher range (2-4 mhos). Also included as a general rule in the two lowest ranges are the very weak bedrock conductors, such as unmineralized faults and shears, referred to as "structural" conductors.

The higher ranges in the scale of apparent conductances (> 4 mhos) indicate that a significant fraction of the electrical conduction is electronic rather than electrolytic in nature. Materials which conduct electronically are limited to the metallic sulphides and to graphite. Thus, the higher apparent conductance categories are generally limited to graphite - and to sulphide-bearing rocks, and are referred to as "mineralized" conductors.

The apparent conductance of a rock unit, in mhos, is very largely an indicator of its electrical properties. The value is affected to some extent by the strike length of the body (if it is short), and by the dip; but these effects are comparatively minor, and are unlikely to cause more than a 30% change. A strong conductance (> 20 mhos) indicates well-connected mineralization extending throughout a fairly large region, and this often suggests either graphitic zones or massive sulphides. Disseminated sulphides, which typically occur in porphyry type deposits, generally have low to moderate conductances.

A listing of responses together with amplitude (in ppm), apparent conductances, apparent depths to the conductor and sensor height is provided in the appendix. Profiles of inphase and quadrature EM response are shown along the flight lines. These profiles are transcribed and plotted from magnetic tape recorded in flight, after assignment of a suitable base level.

The "Electromagnetic Survey Interpretation Map" presents the flight path together with anomaly symbols indicating the inphase response in ppm and estimated conductance based on the coaxial coil pair operated at 4570 Hz.

Also indicated on this map are interpreted conductor axes. These axes have been identified by analysis of profile shape from line to line and drawn only where a reasonable correlation of response shape could be identified.

Where the conductor axis is coincident with a magnetic anomaly or likely due to cultural interference such as power lines it is identified by a code shown in the map legend.

4.3 Magnetics

The Total Field Magnetic Map shows contours of the total magnetic field, uncorrected for regional variation.

A correction for diurnal variation was made by direct subtraction of the recorded magnetic base station variation. Whether an EM anomaly with a magnetic correlation is more likely to be caused by a sulphide deposit than one without depends on the type of mineralization. An apparent coincidence between an EM and a magnetic anomaly may be caused by a conductor which is also magnetic, or by a conductor which lies in close proximity to a magnetic body. The majority of conductors which are also magnetic are sulphides containing pyrrhotite and/or magnetite. Conductive and magnetic bodies in close association can be, and often are, graphite and magnetite. It is often very difficult to distinguish between these cases. If the conductor is also magnetic, it will usually produce an EM anomaly whose general pattern resembles that of the magnetics. Depending on the magnetic permeability of the conducting body, the amplitude of the inphase EM anomaly will be weakened, and if the conductivity is also weak, the inphase EM anomaly may even be reversed in sign.

APPENDIX I

Anomaly List

5. RECOMMENDATIONS

The Electromagnetic Interpretation Map presents a number of conductors identified by the survey. The calculated apparent conductance is consistently low and typical of "structural" type conductors or very minor mineralization. On this basis alone high priority follow up investigation cannot be recommended for any of the anomalies.

A complicating factor, apparent in many of the electromagnetic responses, has been the influence of nearby magnetic features on the in-phase response, leading to negative or reduced response levels. This phenomenon will lead to an under-estimate of conductance.

As a result it is recommended that all of the anomalies be considered by geologists familiar with the area, who can assign follow up priority for the conductors on the basis of favourable geologic association.

Respectfully submitted,

AERODAT LIMITED.

REGISTERED PROFESSIONAL ENGINEER
R. L. S. HOGG
PROVINCE OF ONTARIO

September 22, 1982.

R. L. Scott Hogg, B.A.Sc., P. Eng.

FLIGHT	LINE	ANOMALY	CATAGORY	FREQUENCY 4570 INPHASE	QUAD.	CONDUCTOR CTP MHOS	DEPTH MTRS	BIRD HEIGHT MTRS
1	1	A	0	0.0	0.7	0	0	32
1	1	B	0	-0.4	1.9	0	0	12
1	1	C	0	-1.4	2.8	0	0	8
1	1	D	0	0.5	1.1	0	50	33
1	2	A	0	-0.3	0.5	0	0	40
1	2	B	0	0.0	1.5	0	0	16
1	2	C	0	-0.1	0.9	0	0	22
1	2	D	0	-0.8	0.9	0	0	14
1	2	E	0	0.0	0.8	0	0	42
1	3	A	0	0.2	0.7	0	24	61
1	3	B	0	-3.0	1.1	0	0	11
1	3	C	0	-1.9	0.7	0	0	13
1	3	D	0	-4.5	1.7	0	0	15
1	3	E	0	-3.4	1.2	0	0	14
1	3	F	0	-0.2	0.6	0	0	16
1	3	G	0	0.6	0.8	0	70	34
1	3	H	0	0.2	0.9	0	38	33
1	4	A	0	-7.9	5.4	0	0	5
1	4	B	0	-6.8	2.8	0	0	12
1	4	C	0	-3.8	1.6	0	0	9
1	4	D	0	0.4	0.4	0	99	38
1	4	E	0	0.0	0.7	0	0	29
1	5	A	0	0.1	0.6	0	0	27
1	5	B	0	-2.8	1.9	0	0	19
1	5	C	0	-2.8	1.4	0	0	20
1	5	D	0	-1.0	1.2	0	0	13
3	6	A	0	0.0	1.1	0	0	49
3	6	B	0	-3.8	0.9	0	0	21
3	6	C	0	-1.8	0.5	0	0	36
3	6	D	0	0.1	0.3	0	0	56
3	7	A	0	0.0	0.6	0	0	58
3	7	B	0	-0.3	0.8	0	0	43
3	7	C	0	-0.7	0.7	0	0	30
3	7	D	0	-0.8	0.8	0	0	19
3	8	A	0	0.0	1.9	0	0	15
3	8	B	0	-0.6	2.1	0	0	11
3	8	C	0	-0.1	1.9	0	0	22
3	8	D	0	-0.8	1.0	0	0	32

Estimated depth may be unreliable because the stronger part of the conductor may be deeper or to one side of the flight line, or because of a shallow dip or overburden effects.

FLIGHT	LINE	ANOMALY	CATAGORY	FREQUENCY 4570 INPHASE	QUAD.	CONDUCTOR CTP MHOS	DEPTH MTRS	BIRD HEIGHT MTRS
3	8	E	0	-0.7	1.0	0	0	40
3	8	F	0	-3.3	2.8	0	0	21
3	9	A	0	0.6	1.1	0	53	33
3	9	B	0	-0.1	0.7	0	0	33
3	9	C	0	-0.5	1.7	0	0	19
3	9	D	0	-0.5	1.7	0	0	15
3	10	A	0	0.2	0.2	0	103	72
3	11	A	0	0.2	0.4	0	80	41
3	12	A	0	0.0	0.4	0	0	41
3	13	A	0	0.1	0.4	0	0	36
3	14	A	0	0.0	0.3	0	0	44
3	14	B	0	-0.5	0.1	0	0	37
4	15	A	0	-0.3	2.6	0	0	21
4	15	B	0	0.0	2.3	0	0	29
5	171	A	0	0.0	0.0	0	0	0
5	171	B	0	0.2	0.4	0	74	47
5	171	C	0	-0.3	1.1	0	0	39
5	18	A	0	-1.3	0.1	0	0	23
5	18	B	0	0.1	0.7	0	0	39
5	18	C	0	0.2	0.5	0	63	43
5	19	A	0	0.5	1.5	0	24	44
5	19	B	0	0.0	0.7	0	0	56
5	19	C	0	0.1	1.2	0	0	58
5	19	D	0	-7.2	0.0	0	0	0
5	20	A	0	0.5	1.3	0	32	43
5	21	A	0	0.0	0.8	0	0	50
5	21	B	0	0.2	1.0	0	24	43
5	21	C	0	0.0	1.3	0	0	39
5	22	A	0	-0.4	1.1	0	0	34
5	22	B	0	0.5	1.5	0	36	32
5	23	A	0	-0.8	1.0	0	0	31

Estimated depth may be unreliable because the stronger part of the conductor may be deeper or to one side of the flight line, or because of a shallow dip or overburden effects.

FLIGHT	LINE	ANOMALY	CATAGORY	FREQUENCY 4570 INPHASE	QUAD.	CONDUCTOR CTP MHOS	DEPTH MTRS	BIRD HEIGHT MTRS
5	23	B	0	0.7	0.8	0	45	61
5	24	A	0	0.1	1.3	0	0	51
5	24	B	0	-0.1	1.0	0	0	29
5	25	A	0	0.1	1.0	0	0	36
5	25	B	0	0.0	0.9	0	0	27
6	26	A	0	0.2	2.9	0	7	25
6	26	B	0	0.5	1.7	0	25	38
6	26	C	0	0.6	4.0	0	27	11
6	27	A	0	0.0	1.7	0	0	24
6	27	B	0	1.7	5.1	0	2	43
6	27	C	0	1.0	4.6	0	17	23
6	27	D	0	-4.2	0.0	0	0	2
6	28	A	0	0.4	1.3	0	31	39
6	28	B	0	0.9	1.2	0	21	69
6	29	A	0	1.3	1.4	0	13	75
6	29	B	0	0.4	2.3	0	33	14
6	30	A	0	0.0	1.1	0	0	17
6	30	B	0	2.5	4.8	0	15	36
6	30	C	0	1.9	4.2	0	33	18
6	30	D	0	0.1	0.9	0	0	39
6	31	A	0	2.3	2.8	0	3	65
6	31	B	0	-0.7	0.9	0	0	14
6	31	C	0	-0.3	0.8	0	0	15
6	31	D	0	-0.6	2.2	0	0	11
6	31	E	0	-0.4	2.7	0	0	17
6	32	A	0	0.1	1.6	0	0	14
6	32	B	0	0.0	1.5	0	0	12
6	32	C	0	0.1	1.6	0	0	28
6	32	D	0	0.6	1.2	0	41	41
6	33	A	0	0.7	1.3	0	43	38
6	33	B	0	-0.2	1.3	0	0	24
6	33	C	0	-0.4	2.7	0	0	16
6	34	A	0	0.3	0.7	0	41	54
6	34	B	0	0.5	0.6	0	64	53

Estimated depth may be unreliable because the stronger part of the conductor may be deeper or to one side of the flight line, or because of a shallow dip or overburden effects.

FLIGHT	LINE	ANOMALY	CATAGORY	FREQUENCY 4570 INPHASE	QUAD.	CONDUCTOR CTP MHOS	DEPTH MTRS	BIRD HEIGHT MTRS
6	34	C	0	0.2	1.2	0	24	35
6	35	A	0	0.5	1.2	0	19	59
6	35	B	0	0.3	0.6	0	93	12
6	35	C	0	0.4	1.7	0	31	28
6	36	A	0	0.2	1.5	0	0	56
6	36	B	0	0.2	0.6	0	59	35
6	36	C	0	-0.8	1.0	0	0	6
6	37	A	0	0.7	1.0	0	37	58
6	37	B	0	0.3	0.6	0	71	34
6	37	C	0	0.2	0.4	0	71	50
6	38	A	0	0.5	0.6	0	87	30
6	38	B	0	1.2	0.7	0	55	57
6	38	C	0	0.7	1.5	0	47	28
6	39	A	0	0.6	0.8	0	48	56
6	39	B	0	0.2	1.4	0	41	13
6	39	C	0	-0.7	0.8	0	0	2
6	39	D	0	0.0	0.8	0	0	26
6	40	A	0	0.1	1.0	0	0	41
6	40	B	0	-0.3	1.1	0	0	14
6	41	A	0	0.6	1.1	0	48	39
6	42	A	0	0.2	1.7	0	20	27
6	44	A	0	0.0	0.5	0	0	30
6	45	A	0	0.2	0.8	0	41	36
6	46	A	0	0.0	0.6	0	0	29
6	48	A	0	1.0	2.3	0	51	13
6	50	A	0	0.0	0.7	0	0	0
6	51	A	0	-1.4	1.0	0	0	11
6	521	A	0	0.2	0.5	0	54	52
6	53	A	0	-0.1	1.2	0	0	35

Estimated depth may be unreliable because the stronger part of the conductor may be deeper or to one side of the flight line, or because of a shallow dip or overburden effects.

FLIGHT	LINE	ANOMALY	CATAGORY	FREQUENCY 4570 INPHASE	QUAD.	CONDUCTOR CTP MHOS	DEPTH MTRS	BIRD HEIGHT MTRS
6	54	A	0	-0.1	0.5	0	0	28
6	55	A	0	0.0	0.6	0	0	22
6	55	B	0	-0.7	1.8	0	0	13
6	56	A	0	-3.3	0.5	0	0	26
6	56	B	0	-0.9	1.2	0	0	14
6	58	A	0	0.3	0.7	0	39	57
6	59	A	0	0.4	0.9	0	47	41
6	60	A	0	0.3	2.7	0	23	15
6	60	B	0	0.0	1.7	0	0	18
6	61	A	0	-0.4	0.8	0	0	21
6	61	B	0	-3.6	0.2	0	0	11
6	61	C	0	0.0	1.8	0	0	31

Estimated depth may be unreliable because the stronger part of the conductor may be deeper or to one side of the flight line, or because of a shallow dip or overburden effects.

APPENDIX B

EXTRACT FROM A REPORT ENTITLED

Report on Geophysical Work
Carried out on the Baldwin McVicar Property
by
Grant Hendrikson P.Eng

EQUIPMENT

Quantity	Type
1	Apex Parametrics MaxMin II
1	Scintrex I.P.R. 10 receiver
1	Scintrex 250 watt transmitter
2	Exploranium Geometrics G 856 Magnetometer

SURVEY PROCEDURE

Electromagnetic surveying in rough topography requires well chained and controlled lines to allow for corrections to be made to the in-phase data. Corrections arise from coil separation variation and the necessity of keeping the coils coplanar. Survey stations were accurately established at 20 m horizontal intervals. The 80 m coil separation was compatable with the type of anomalies to be followed up. In certain cases where inclinometer data was not available, Induced Polarization survey was done in place of electromagnetic surveying.

Induced Polarization surveying was done with a Schlumberger array. This array provides simple anomaly shape, it is least affected by topography and signal to noise is improved. To avoid coupling problems the current line was separated from the receiving line by a few meters. Also 3 slices of the decay curve were monitored to watch the shape of the decay curve. In any event, the high resistivities in the survey area preclude most coupling problems. Electrode contacts were not a problem.

Ground lines were oriented to cross the airborne anomalies at close to right angles. In most areas lines had to be cut since the new growth in the clear-cut areas is quite dense. Line was extended well past the anomaly position to compensate for any difficulty in positioning the airborne anomaly.

The magnetic surveying was corrected for diurnal variation by the use of a station magnetometer. This correction did not exceed eight nanotesla over the course of the survey.

Topographical profiles were constructed from the portable inclinometer data. The geophysical data are presented in profiles plotted above the topography. In this type of terrain, topographical profiles are a valuable aid in interpretation and any subsequent drilling.

None of the anomalies looked at on the ground can be considered as priority follow-up targets. Therefore, only one line was surveyed across each anomaly. If any encouragement had been found, additional flanking lines would have been surveyed.

DISCUSSION OF THE RESULTS

Anomaly 23B and 22A

The ground geophysical data suggest a geologic contact at approximately 0+40E. From 0+40E to approximately 2+00E, resistivity and chargeability drop while magnetic field strength increases slightly. The change in level of the in-phase E.M. data is due to this drop in resistivity. The probable cause of anomaly 23B is a change in geology to a sedimentary-type rock.

Anomaly 22A may be related to the small magnetic anomaly at 1+40W. The two magnetic anomalies west of the road are typical of narrow, west-dipping lenses. The higher resistivities and chargeabilities are more typical of volcanic rock. The high resistivities associated with a lower magnetic background at the west end of the line suggest more felsic rock.

The chargeability values indicate no sulfide-rich zone exists near surface.

Some consideration should be given to additional lines to the north of this line to better investigate 22A and 21C.

Anomaly 30B and C

The noisy, high frequency (3555 Hz) results are quite indicative of conductive overburden overlaying an irregular bedrock surface.

This overburden is very likely the cause of anomalies 30B and C; thus no further work is warranted.

Anomaly 33C and 34A and B (line 11N-extension east)

Anomalies 33C and 34A were thought to be the strike extension of the same anomaly. Field investigation found a large logging cable situated at the location of 34A and striking toward, but not quite reaching, 33C. This cable was approximately 6 cm in diameter. Road construction and slumping had partially buried the cable. By extending line 11 past the north end of the cable, we were able to test this area. The results were negative. The cable is very likely the cause of 34A and 33C.

Another smaller cable crossed the line at approximately 12+00E and it probably caused the E.M. response at 12+40E. This response also looks like coil separation error.

The ground E.M. data indicate the overburden is thickening in the valley starting at approximately 14+00E. Conductive overburden is the likely case of 34B.

Anomaly 38B and Magnetic Anomaly Test

The purpose of this line was twofold:

(a) To investigate the anomaly 38B and,

(b) To test the discrete magnetic anomaly to the north to see if sulfide minerals caused the anomaly.

The ground data indicate 38B is due to a thickening of the overburden in the valley floor (gradual drop in resistivity and chargeability values).

The high resistivities accompanied with no increase in chargeability indicate that a sulfide mineral does not cause the magnetic anomaly and support the geologists' suggestion of an intrusive body containing magnetite.

Anomaly 37A and 38A

No ground explanation of this anomaly was recorded; thus, a structural-type conductor is probably the cause. The air photo shows a straight feature that may be a linear. This feature was also observed on the ground and first thought to be a logging road; however, no evidence of road construction or logging was noted. It appears more likely to be a drainage feature, perhaps along an old fault zone. Induced Polarization surveying of this line should be considered.

Old Grid (Lines 9 and 10N)

(Note: The "old grid" lines were numbered consecutively 1 to 11N. Line separation was 60 m; thus Line 1 is 60N, Line 2 is 120N, etc.)

Line 10N

The 40 m dipole dipole work of 1981 is compatible with the 1982 work. No anomaly is apparent in either survey other than the increase in background centered around 1+50W. The 20 m dipole dipole work does not fit. The apparent anomaly at 150W (190 milliseconds) is indicative of a body with appreciable width and good depth extent, the type of body that should have responded to the 40 m dipole dipole survey and this year's survey. The 20 m dipole dipole data should be ignored.

Line 9N

The 1981 40 m dipole dipole survey agrees fairly well with this year's work. A modest I.P. anomaly of limited depth extent is located around 0+35W. The amplitude of the 1981 readings is suspect.

A perusal of the 1981 data suggests a narrow, continuous zone, probably a sulfide vein, exists at the following locations:

Line 9N	0+35W
Line 8N	0+25W
Line 7N	0+20E
Line 6N	0+50E

The above coordinates define a modest sulfide body of:

Strike Length	≃180 m
Width	< 5 m
Depth Extent	< 50 m
Dip	Steeply west

The picture at either end of this zone is confused. Instead of a narrow, discrete zone, mineralization appears disseminated over a wider area. Weak, uninteresting responses were noticed on other lines with the exception of 11N where chargeability is increasing. Additional I.P. surveying to the north of 11N is recommended.

Figure II is included to show the depth of investigation characteristics of the Schlumberger array.

CONCLUSION

The airborne E.M. survey indicates no conductive sulfide deposit exists within 70 m of the surface. Ground investigations of the weak anomalies are negative. Vein-type deposits or mineralization with a high content of sphalerite and low content of pyrite and pyrrhotite may only weakly respond to E.M. methods. These difficult prospecting targets could be found and outlined by reconnaissance Induced Polarization survey.

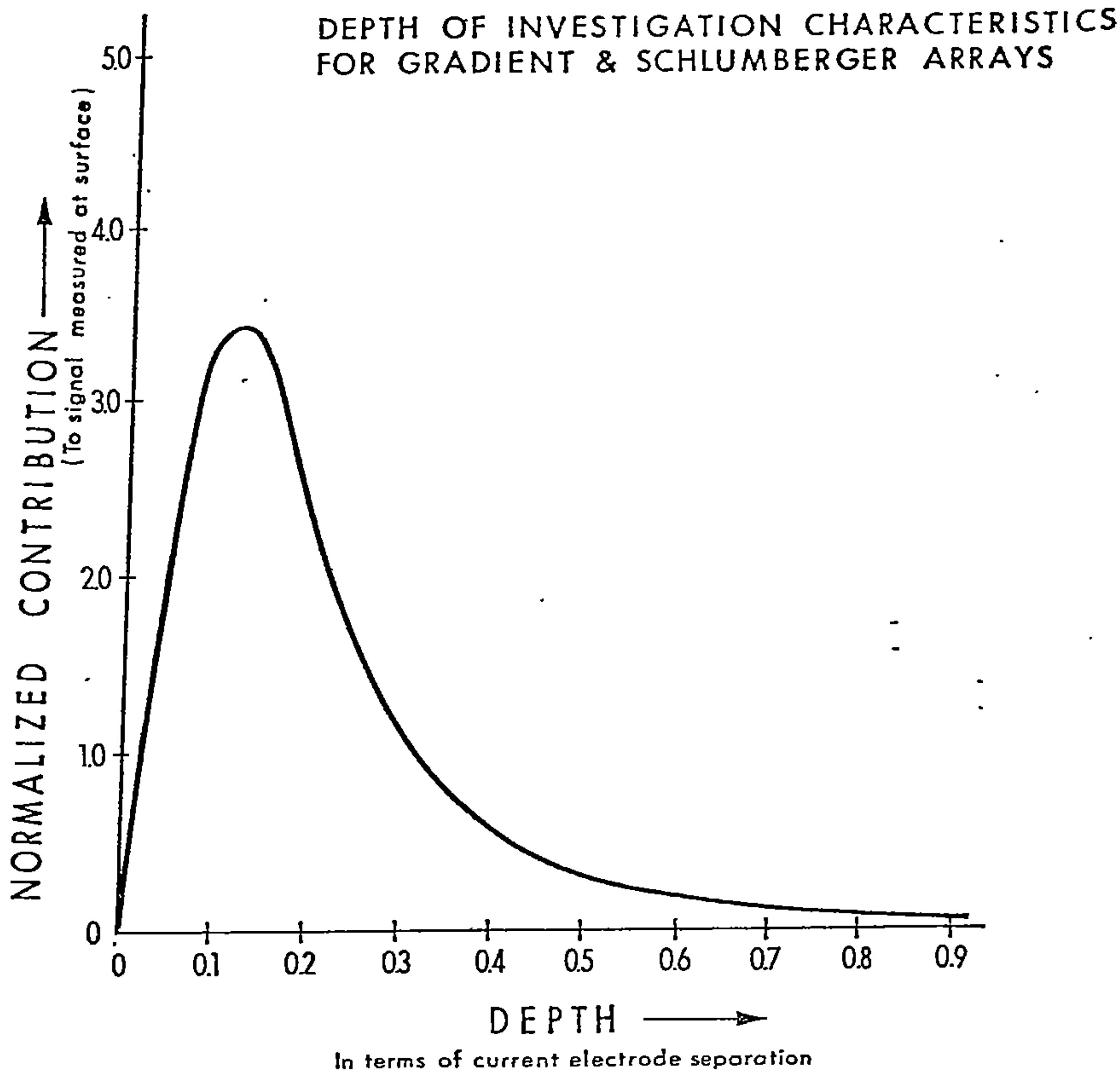
It must be remembered, however, that massive sulfide deposits are generally indicated in an excellent fashion by E.M. methods.

G. Hendrickson

GH/jad

G. Hendrickson

Figure II



Taken from a paper by: B.B. Bhattacharya & Indrajit Dutta
Geophysics Vol.47 No.8 page 1201

APPENDIX C

STATEMENT OF QUALIFICATIONS

APPENDIX C
STATEMENT OF QUALIFICATIONS

Shelley C. James - geologist

I obtained a B.Sc. Hons. degree in geology from the University of the Witwatersrand, South Africa in 1971. I have been engaged in exploration in South Africa (O'Kiep Copper Company, a Newmont subsidiary, and Union Carbide Exploration Corporation) and in Canada (Canadian Superior Exploration Ltd. and Kidd Creek Mines Ltd.) from 1972 to the present. I am a member of the Geological Society of South Africa and a fellow of the Geological Association of Canada.

G. Hendrikson - geophysicist

G. Hendrikson is employed as a staff geophysicist by Kidd Creek Mines Ltd. and is a registered professional engineer in the Province of Alberta.

R.L. Scott Hogg - geophysicist

R.L. Scott Hogg is a registered professional engineer in the Province of Ontario.

APPENDIX D

STATEMENT OF EXPENDITURES

APPENDIX D

STATEMENT OF EXPENDITURES
(HELICOPTER-BORNE GEOPHYSICAL SURVEY)

Aerodat Ltd. (invoice)

300 line-kilometre @ $40 per kilometer; mobilization and demobilization	$15,500.00
Quasar Helicopter Ltd. (invoice) 4-12 June, Bell 206L-1; 26.3 hrs at $495 per hour, fuel and crew costs	$15,348.25
McVicar Group pro-rated share:	
75% of total survey cost of $30,848.25	$23,136.19

APPENDIX D

STATEMENT OF EXPENDITURES

(GROUND FOLLOW-UP GEOPHYSICAL SURVEY)

Kidd Creek Mines Ltd. Personnel August 18-31, 1982

SALARIES AND FRINGE BENEFITS

G. Hendrikson - geophysicist Period: Aug 18, 19, 21-26	8 days @ $216	$1,728.00	
P. DeLancey - Geologist, Manager Period: Aug 18	1 day @ $250	250.00	
S. James - Geologist Period: Aug 18, 22-27	7 days @ $200	1,400.00	
D. Frew - Geophysical asst. Period: Aug 18-31	14 days @ $70	980.00	
D. Flentge - Geophysical asst. Period: Aug 18-31	14 days @ $54	756.00	
S. Boerner - Geophysical asst. Period: Aug 18-31	14 days @ $50	700.00	
F. Renaudat - Technician, line cutter Period: Aug 18, 19, 21-17	9 days @ $90	810.00	
		$6,624.00	6,624.00

ROOM AND BOARD

Kidd Creek Mines Ltd. personnal: 63 man-days @ $60/day	3,780.00

GEOPHYSICAL EQUIPMENT RENTAL

Exploranium equipment rental; insurance @ 2138.85/mo (invoice) Pro-rated McVicar share: 14 days @ $2,138.85 per/month	965.93

ACTION TRAVEL; COMMUNICATIONS; EQUIPMENT SHIPMENT	2,866.26

TRANSPORTATION

4-wheel drive vehicle (rental, fuel) 14 days @ $1,000 per month	500.00
TOTAL	$14,736.19

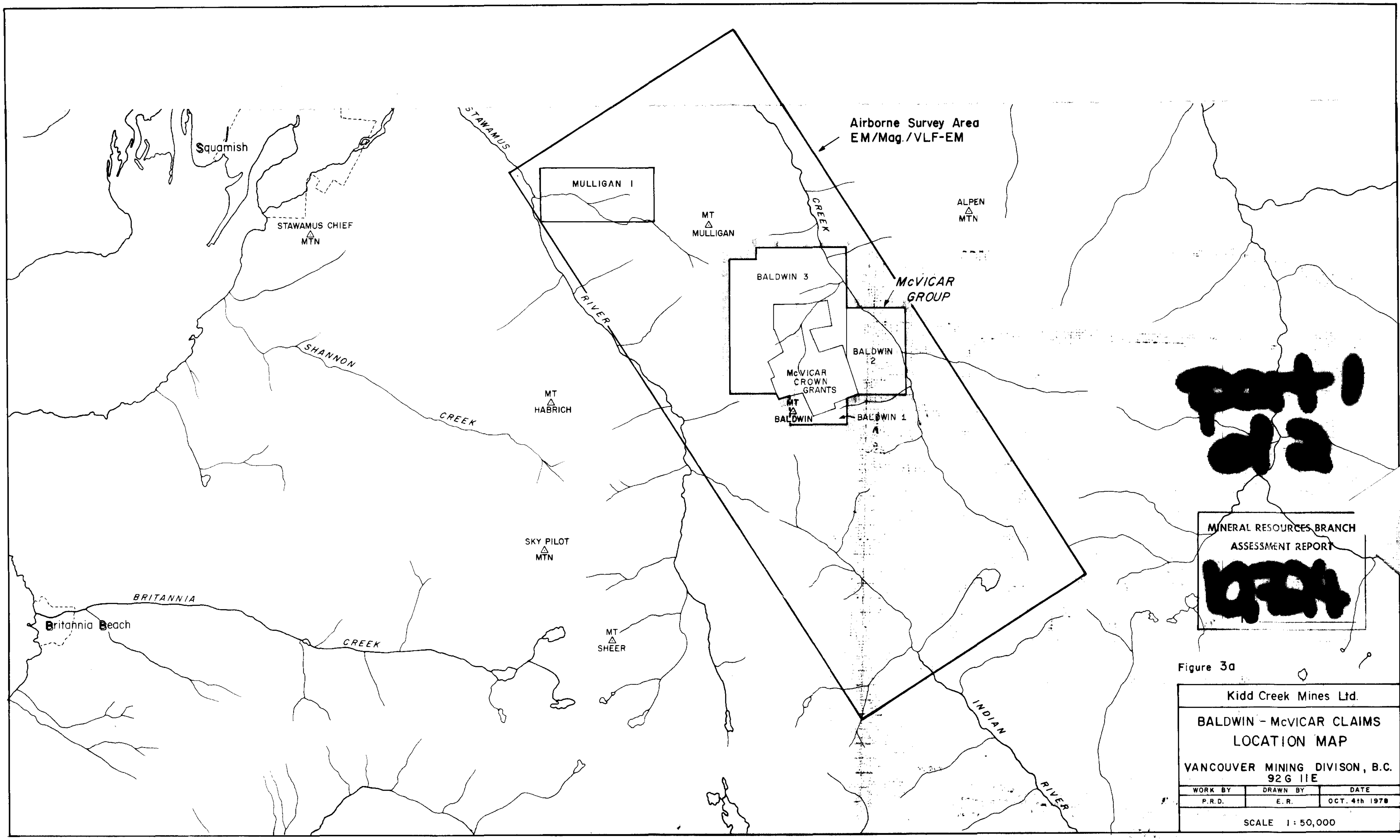


Figure 3a

Kidd Creek Mines Ltd.

BALDWIN - McVICAR CLAIMS
LOCATION MAP

VANCOUVER MINING DIVISON, B.C.
92G 11E

WORK BY	DRAWN BY	DATE
P.R.D.	E.R.	OCT. 4th 1978

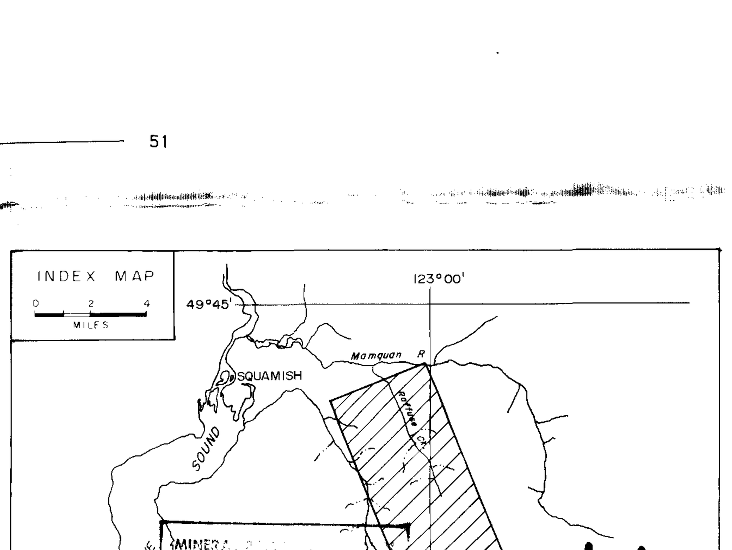
SCALE 1 : 50,000

LEGEND

100 gammas

50 gammas

10 gammas



10,724 part 1 of 2

KIDD CREEK MINES LIMITED

TOTAL FIELD MAGNETIC MAP

SQUAMISH

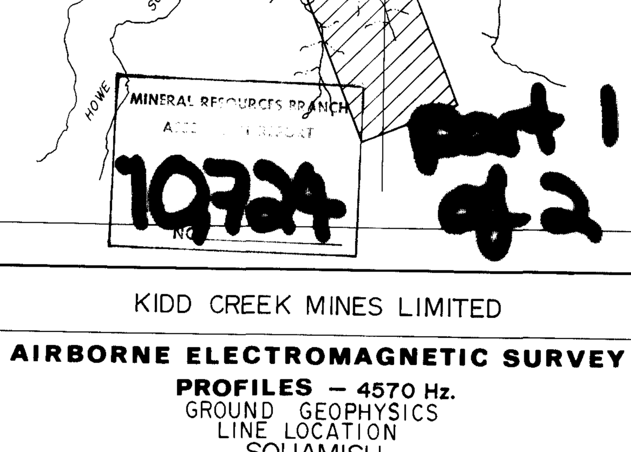
BRITISH COLUMBIA

SCALE 1/10,000

Fig. 7

DATE:	June, 1982
N.T.S. No:	92G
MAP No:	3

AERODAT



KIDD CREEK MINES LIMITED

AIRBORNE ELECTROMAGNETIC SURVEY

PROFILES — 4570 Hz.

GROUND GEOPHYSICS

LINE LOCATION

SQUAMISH

BRITISH COLUMBIA

Fig. 6

SCALE 1/10,000

0 330 660 1320 1/2 mile

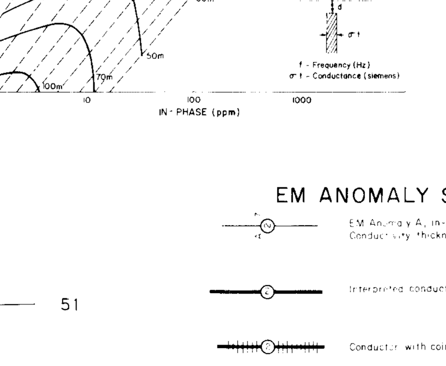
0 100 200 500 1 Kilometre

AERODAT

DATE:	June, 1982
N.T.S. No:	92G
MAP No:	2 — Additions: G.Hendrikson Sept.1982

Average bird height .... 30 metres

Line spacing .... 200 metres



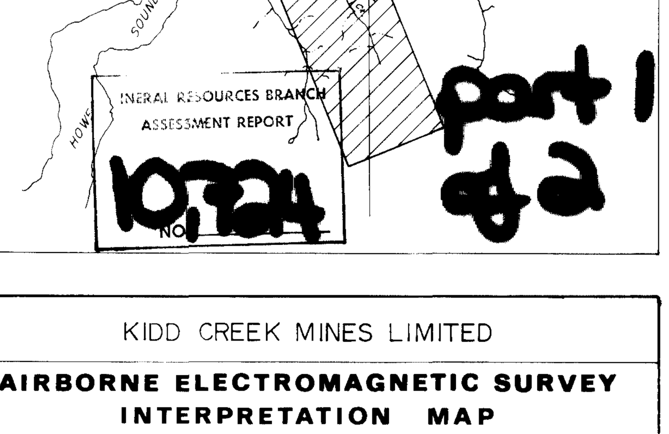
EM RESPONSE

Conductivity thickness in mhos

⑨	> 500
⑧	250 – 500
⑦	125 – 250
⑥	60 – 125
⑤	30 – 60
④	15 – 30
③	8 – 15
②	4 – 8
①	2 – 4
○	< 2
25	Inphase response

EM ANOMALY SYMBOLS

- EM Anomaly A, in-phase amplitude 7 ppm, Conductivity thickness range 2 (see code)
- Interpreted conductor axis
- Conductor with coincident magnetic anomaly
- Conductor axis doubtful



KIDD CREEK MINES LIMITED

AIRBORNE ELECTROMAGNETIC SURVEY INTERPRETATION MAP

SQUAMISH

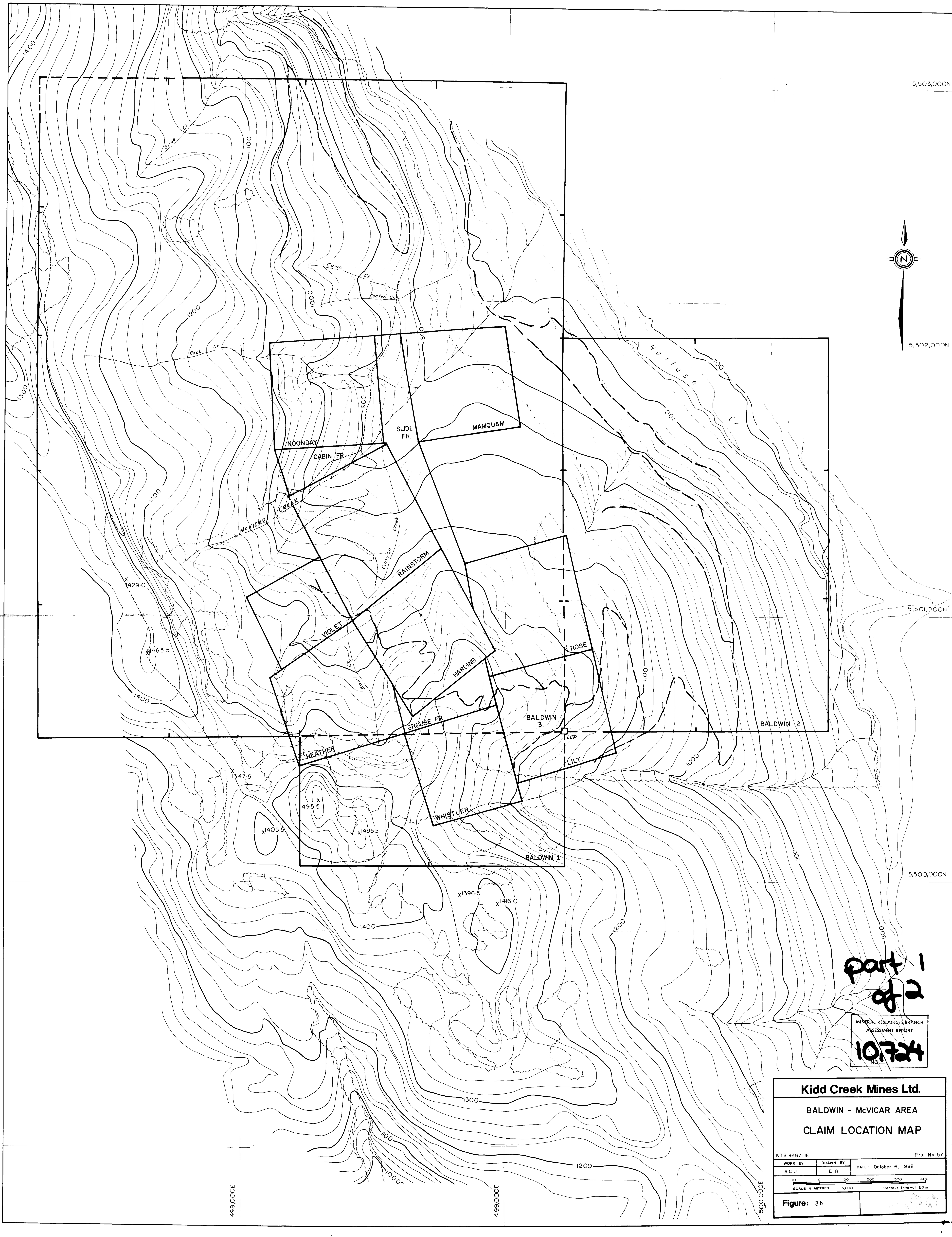
BRITISH COLUMBIA

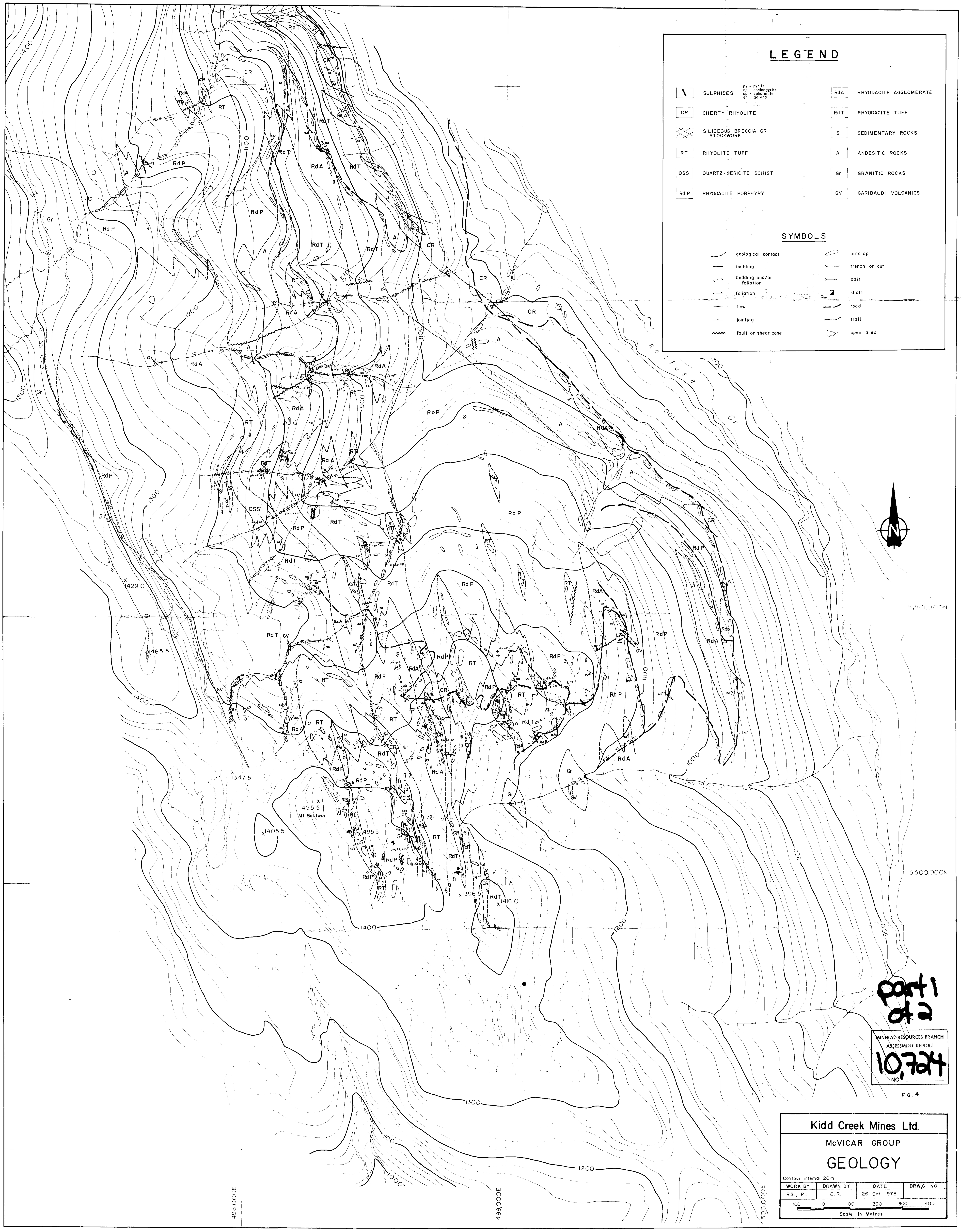
SCALE 1/10,000

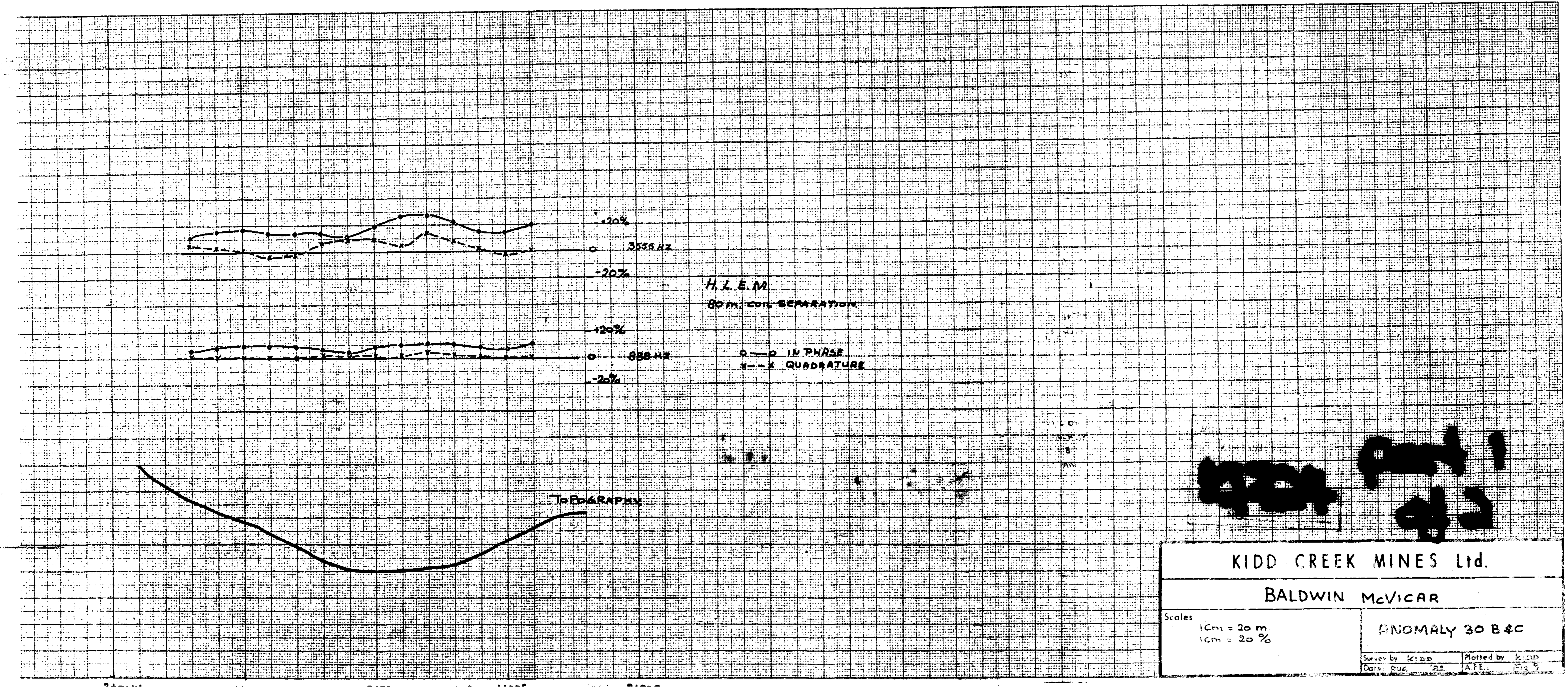
Fig. 5

AERODAT

DATE:	June, 1982
N.T.S. No:	92 G
MAP No:	1


Kidd Creek Mines Ltd.
BALDWIN - McVICAR AREA
CLAIM LOCATION MAP
NTS 92G/11E
Proj. No. 57
WORK BY S.C.J.
DRAWN BY E.R.
DATE: October 6, 1982
SCALE IN METRES 1 : 5,000
Contour Interval 20m
Figure: 3b
part 1 of 2
MINERAL RESOURCES BRANCH ASSESSMENT REPORT
10,724 NO.
5,503,000N
5,502,000N
5,501,000N
5,500,000N
498,000E
499,000E
500,000E
NOONDAY
CABIN FR.
SLIDE FR.
MAMQUAM
McVICAR CREEK
RAINSTORM
VIOLET
HARDING
ROSE
BALDWIN 3
BALDWIN 2
BALDWIN 1
GROUSE FR.
HEATHER
WHISTLER
LILY
LCP
Slide Ck
Camp Ck
Center Ck
Rock Ck
Canyon Creek
Basil Ck
1400
1100
1000
1200
1300
1500
900
800
700
1429.0
1465.5
1347.5
1405.5
1495.5
1396.5
1416.0


LEGEND
SULPHIDES
py - pyrite
cp - chalcopyrite
sp - sphalerite
gn - galena
CR CHERTY RHYOLITE
SILICEOUS BRECCIA OR STOCKWORK
RT RHYOLITE TUFF
QSS QUARTZ-SERICITE SCHIST
Rd P RHYODACITE PORPHYRY
RdA RHYODACITE AGGLOMERATE
RdT RHYODACITE TUFF
S SEDIMENTARY ROCKS
A ANDESITIC ROCKS
Gr GRANITIC ROCKS
GV GARIBALDI VOLCANICS
SYMBOLS
geological contact
bedding
bedding and/or foliation
foliation
flow
jointing
fault or shear zone
outcrop
trench or cut
adit
shaft
road
trail
open area
Mt Baldwin
5,500,000N
498,000E
499,000E
500,000E
part 1 of 2
MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 10,724
Kidd Creek Mines Ltd.
McVICAR GROUP
GEOLOGY
Contour interval 20m
WORK BY
R.S., P.D.
DRAWN BY
E.R.
DATE
26 Oct. 1978
DRW,G NO.
100 0 100 200 300 400
Scale in Metres
FIG. 4



KIDD CREEK MINES Ltd.

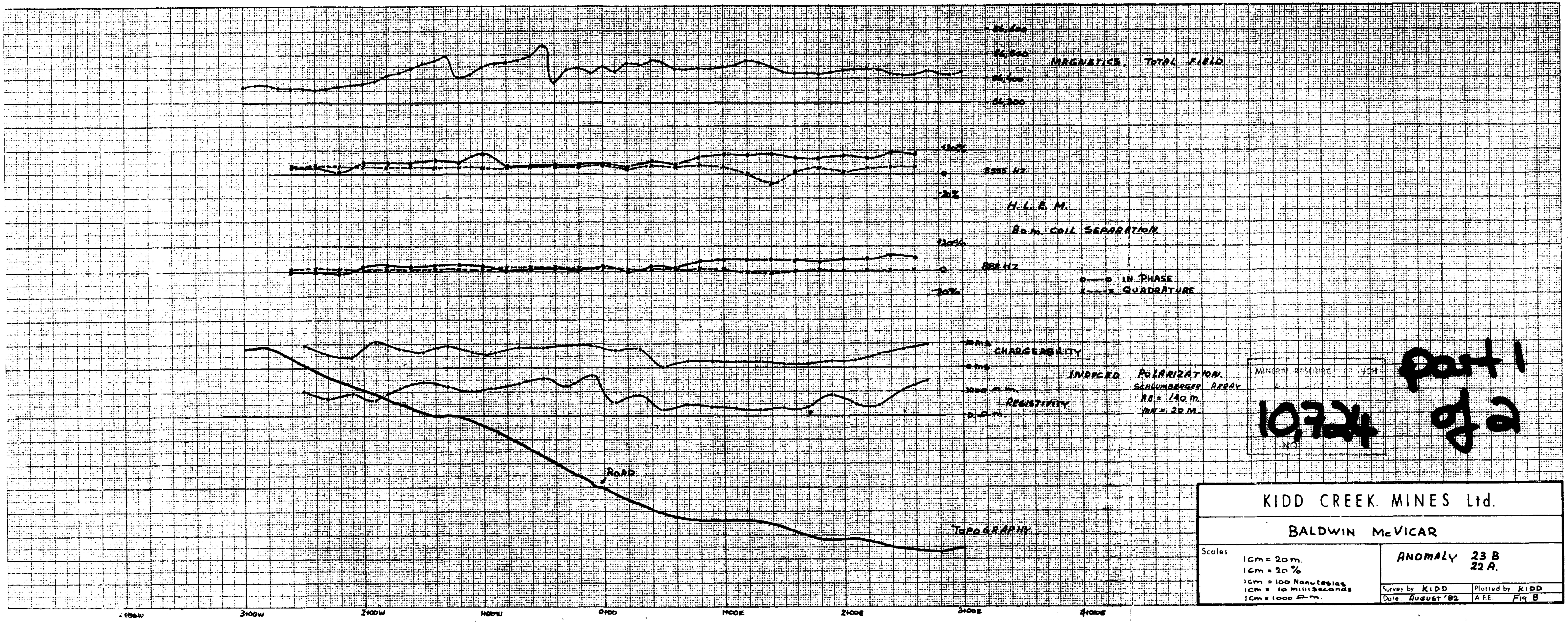
BALDWIN McVICAR

Scales:
1Cm = 20 m.
1cm = 20 %

ANOMALY 30 B & C

Survey by: KIDD	Plotted by: KIDD
Date: Aug. '82	AFE: Fig. 9


3555 Hz
H.L.E.M
80m coil Sep.
TOPOGRAPHY
IN-PHASE
QUADRATURE
10,724
part 1 of 2
17+00E
KIDD CREEK MINES Ltd.
BALDWIN McVICAR
Scales:
1cm = 20 m.
1cm = 20%
OLD GRID
LINE 11+00N. EXTENSION EAST TO TEST 33C & 34B
Survey by: KIDD
Plotted by: KIDD
Date AUG. '82
A.F.E.: Fig 10



KIDD CREEK MINES Ltd.

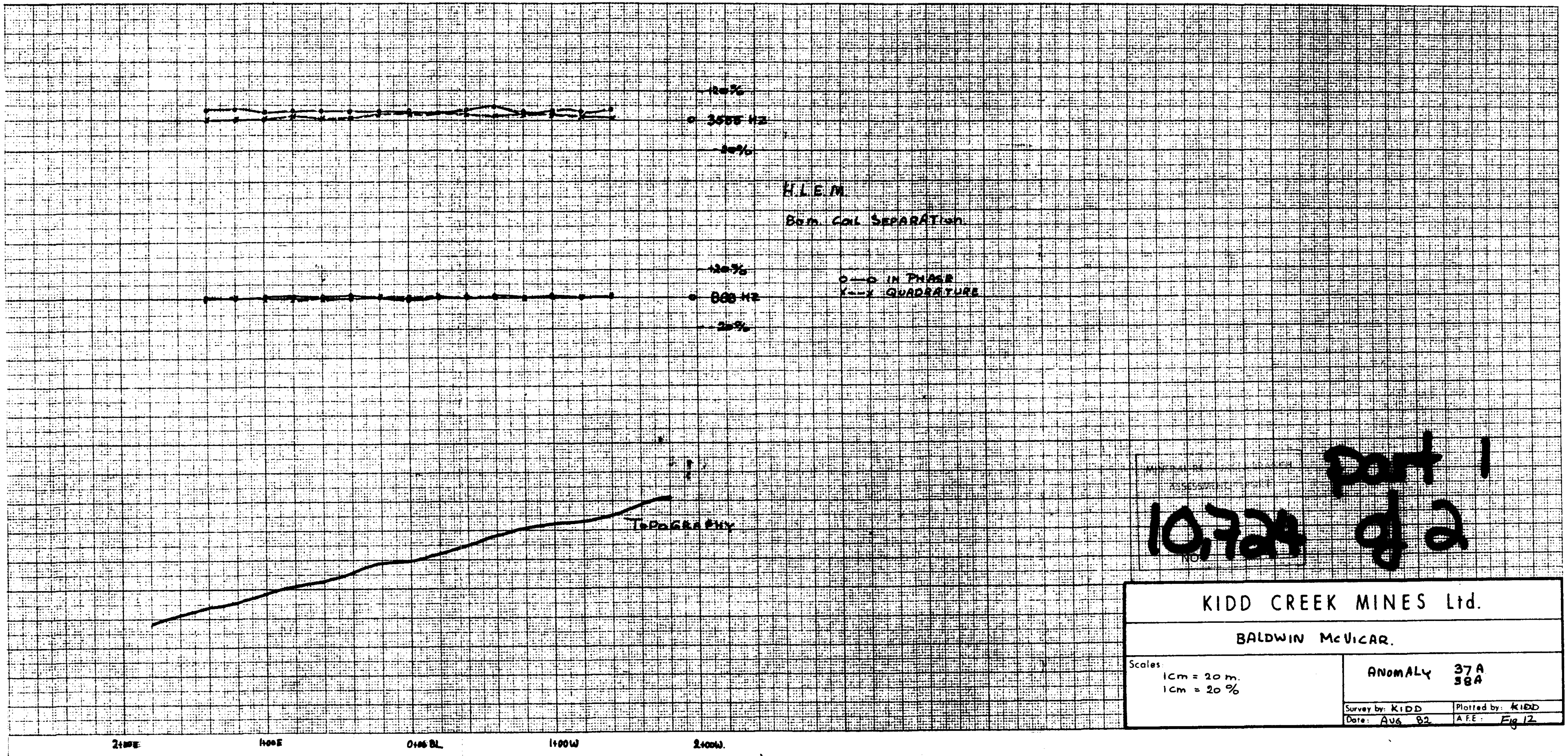
BALDWIN McVICAR

Scales
1cm = 20 m.
1cm = 20 %
1cm = 100 Nanoteslas
1cm = 10 MilliSeconds
1cm = 1000 Ω-m.

ANOMALY 23 B
22 A.

Survey by KIDD | Plotted by KIDD
Date AUGUST '82 | A.F.E. Fig 8

10 milliseconds
CHARGEABILITY
INDUCED POLARIZATION &
RESISTIVITY
SCHLUMBERGER ARRAY
AB= 200 m.
MN= 20 m.
4000 Ω.m
3000 Ω.m
RESISTIVITY
2000 Ω.m
1000 Ω.m
TOPOGRAPHY
10,724
Part 1
of 2
300m
10+00E
9+00E
8+00E
7+00E
6+00E
5+00E
4+00E
3+00E
2+00E
1+00E
0+00
1+00W
2+00W
KIDD CREEK MINES Ltd.
BALDWIN McVICAR
Scales:
1cm = 20 m.
1cm = 10 milliseconds
1cm = 1000 Ω m.
ANOMALY 38B and TO
TEST MAG ANOMALY
Survey by: KIDD
Plotted by: KIDD
Date: AUG '82
A.F.E.
Fig 11



+20%
3555 HZ
-20%
H.L.E.M.
80m. COIL SEPARATION
+20%
O—O IN PHASE
X—X QUADRATURE
888 HZ
-20%
TOPOGRAPHY
2+00E
1+00E
0+00 BL
1+00W
2+00W.
Part 1
10,724 of 2
KIDD CREEK MINES Ltd.
BALDWIN McVICAR.
Scales
1cm = 20 m.
1cm = 20 %
ANOMALY 37A 38A
Survey by: KIDD
Date: AUG 82
Plotted by: KIDD
A.F.E.:
Fig 12

KIDD CREEK MINES Ltd.

BALDWIN. McVICAR, INDUCED POLARIZATION PROFILES ON OLD GRID.

Scales
1cm = 20 m.
1cm = 10 milliseconds
1cm = 1000 Ω m.

LINE 9N (540N)
LINE 10N (600N)

Survey by: KIDD | Plotted by: KIDD
Date: AUG 82 | A.F.E.: Fig 13