ARIS SUMMARY SHEET

District Geologist, Smithers Off Confidential: 90.06.15

ASSESSMENT REPORT 19241 MINING DIVISION: Liard

PROPERTY: Pelican
LOCATION: LAT 56 33 00 LONG 130 51 00
UTM 09 6268614 386267
NTS 104B10W

CAMP: 050 Stewart Camp

CLAIM(S): Gossan 1-7,Gossan 9,Gossan 22,Gossan 25
OPERATOR(S): Cathedral Gold
AUTHOR(S): Burton, G.B.
REPORT YEAR: 1989, 38 Pages
COMMODITIES
SEARCHED FOR: Gold
KEYWORDS: Coast Plutonic Complex,Triassic,Jurassic,Argillites,Tuffs
Granodiorites
WORK
DONE: Geophysical
EMAB 386.0 km;VLF
Map(s) - 3; Scale(s) - 1:10 000
MAGA 386.0 km
Map(s) - 4; Scale(s) - 1:10 000
RELATED
REPORTS: 16892,19002

REPORT ON
COMBINED HELICOPTER-BORNE
MAGNETIC, ELECTROMAGNETIC AND VLF
SURVEY
ISKUT-UNUK RIVER AREA
BRITISH COLUMBIA

FOR
CATHEDRAL GOLD CORPORATION
BY
AERODAT LIMITED
July 31, 1989

J8921

G.B. Burton
Geophysical Consultant

Province of British Columbia

Ministry of Energy, Mines and Petroleum Resources

ASSESSMENT REPORT TITLE PAGE AND SUMMARY

TYPE OF REPORT/SURVEY(s)	TOTAL COST
AIRBORNE GEOPHYSICAL SURVEY	$38,000.00

AUTHOR(s) G. B. Burton (Aerodat Ltd.) (Geophysical Consultant) Signature(s)

DATE STATEMENT OF EXPLORATION AND DEVELOPMENT FILED: June 15, 1989 Year of Work 1989

PROPERTY NAME(s) PELICAN

COMMODITIES PRESENT Au

B.C. MINERAL INVENTORY NUMBER(s), IF KNOWN

MINING DIVISION Liard NTS 104B/10W

LATITUDE 56°33'N LONGITUDE 130°51'W

NAMES and NUMBERS of all mineral tenures in good standing (when work was done) that form the property [Examples: TAX 1-4, FIRE 2 (12 units); PHOENIX (Lot 1706); Mineral Lease M 123; Mining or Certified Mining Lease ML 12 (claims involved)]:

GOSSAN 1-9, 22, 25 (Pelican SW Group: 88 units and
Pelican NE Group: 100 units)

OWNER(s)
(1) WESTERN CANADIAN MINING CORPORATION (2)

MAILING ADDRESS
1170 - 1055 West Hastings Street
Vancouver, B.C. V6B 5A6

OPERATOR(s) (that is, Company paying for the work)
CATHEDRAL GOLD CORPORATION

MAILING ADDRESS
800 - 601 West Hastings Street
Vancouver, B.C. V6B 5A6

SUMMARY GEOLOGY (lithology, age, structure, alteration, mineralization, size and attitude):

The property lies near the eastern edge of the Coast Plutonic Complex and is underlain by Triassic-Jurassic sedimentary and volcanic rocks and intruded by Mesozoic and Cenozoic intrusives. Base metal mineralization along shear and gold bearing quartz veins have been located on the property.

REFERENCES TO PREVIOUS WORK Bending (1984) Lonestar Resources
Butterworth, Peterson (1987) Western Canadian Mining Corporation

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (in metric units)	ON WHICH CLAIMS	COST APPORTIONED
GEOLOGICAL (scale, area)			
Ground			
Photo			
GEOPHYSICAL (line-Kilometres)			
Ground			
Magnetic			
Electromagnetic			
Induced Polarization			
Radiometric			
Seismic			
Other			
Airborne	386 km	GOSSAN 1-9, 22, 25	38,000
GEOCHEMICAL (number of samples analysed for ...)			
Soil			
Silt			
Rock			
Other			
DRILLING (total metres; number of holes, size)			
Core			
Non-core			
RELATED TECHNICAL			
Sampling/assaying			
Petrographic			
Mineralogic			
Metallurgic			
PROSPECTING (scale, area)			
PREPARATORY/PHYSICAL			
Legal surveys (scale, area)			
Topographic (scale, area)			
Photogrammetric (scale, area)			
Line/grid (kilometres)			
Road, local access (kilometres)			
Trench (metres)			
Underground (metres)			
		TOTAL COST	$38,000

FOR MINISTRY USE ONLY	NAME OF PAC ACCOUNT	DEBIT	CREDIT	REMARKS
Value work done (from report)				
Value of work approved				
Value claimed (from statement)				
Value credited to PAC account				
Value debited to PAC account				
Accepted ____ Date____	Rept. No.			Information Class

TABLE OF CONTENTS

LIST OF MAPS
(Scale 1:10,000)

Maps: (As listed under Appendix "B" of the Agreement)

1. **PHOTOMOSAIC BASE MAP;**
   prepared from an uncontrolled photo laydown, showing registration crosses corresponding to UTM co-ordinates on the survey map.

2. **FLIGHT LINES;**
   showing all flight lines, EM anomalies and fiducials with the base map.

3. **AIRBORNE ELECTROMAGNETIC ANOMALY MAP;**
   showing flight lines, fiducials, conductor axes and anomaly peaks along with inphase amplitudes and conductivity thickness ranges for the 4600 Hz coaxial coil system with the base map.

4. **TOTAL FIELD MAGNETIC CONTOURS;**
   showing magnetic values contoured at 2 gamma intervals, flight lines and fiducials with the base map.

5. **VERTICAL MAGNETIC GRADIENT CONTOURS;**
   showing magnetic gradient values contoured at 0.5 nanoTeslas per meter with the base map.

6. **APPARENT RESISTIVITY CONTOURS;**
   showing contoured resistivity values, flight lines and fiducials with the base map.

7. **VLF-EM TOTAL FIELD CONTOURS;**
   showing VLF-EM values contoured at 1% intervals, flight lines and fiducials with the base map.

8. **ELECTROMAGNETIC PROFILES;**
   showing flight lines, low and high frequency coaxial inphase and quadrature and mid frequency coplanar inphase and quadrature traces.

1. INTRODUCTION

Aerodat Limited was contracted to carry out an airborne geophysical survey in the Iskut River Area of Northern British Columbia on behalf of Cathedral Gold Corporation of Vancouver, B.C. The survey was performed during the first part of June, 1989. Geophysical equipment used for the survey included a four (4) frequency electromagnetic system, a high sensitivity magnetometer and a VLF-EM system. Auxiliary instruments used in support of the major geophysical systems consisted of a video tracking camera, a radar altimeter and an analog and digital recorder. A base station magnetometer was used to monitor the magnetic diurnal variations for applying corrections to the magnetic data. These instruments are described in more detail under section 3, "AIRCRAFT AND EQUIPMENT".

The Iskut River area is located in the Cassiar District of British Columbia, approximately 90 kilometres northwest of Stewart and over 920 kilometres northwest of Vancouver. Two separate blocks were flown. On the Wolverine Property, the most northerly block of the two, the flight line direction was N30°E, while on the Pelican Property, the line direction was northeast-southwest. Line spacing was nominally at 100 metres. Reflights were scheduled if flight lines deviated more than 200 kilometres along any one flight line for a distance of more than 1.5 kilometres. Flying height of the helicopter was maintained as close to 60 metres mean terrain clearance as was possible within the limits of safety of aircraft and crew. The EM sensor height was 30 metres below the aircraft while the magnetometer and VLF-EM sensors were at 12 metres. Coil separations for the EM system was approximately 7 metres. Inphase and quadrature components of the electromagnetic field were measured for two vertical coaxial coil pairs operating at frequencies of 935 and 4600 Hz, and two horizontal coplanar coil pairs operating at frequencies of 4175 Hz and 33 kHz.

A total number of 550 kilometres of data were recorded during the survey. One hundred and sixty-four (164) kilometres of data were collected on the Wolverine Property while three hundred and eighty-six (386) kilometres were obtained on the Pelican Property. All the information was compiled in contoured and profile form as illustrated in the list of maps. Magnetics, resistivity and VLF data were also provided in colour coded processed maps as part of this presentation. A discussion of the survey and the results forms the basis of this report.

2. SURVEY AREA LOCATION

The areas surveyed are situated in the Iskut River Area of Northern British Columbia, approximately 920 kilometres northwest of Vancouver. The outline of the properties of Cathedral Gold Corporation can be found of the Mineral Titles Reference Maps 104 B/10W and 104 B/11E of the B.C. Department of Mines and Petroleum. The properties surveyed are designated on these maps as Pelican 14 to 17 inclusive and Pelican 23 for the Wolverine Group and Pelican 1-9 inclusive, Pelican 22, and Pelican 25 for the Pelican Group.

The Wolverine survey area is an irregularly shaped block 3 1/2 kilometres by 4 1/2 kilometres concentrated around 56° 38°N latitude along longitude 131°W. The survey area is roughly oriented in a northwest-southeast direction centred on the Bronson Glacier located in Bronson Creek between Snippaker Mountain to the north and Mount Johnny to the south. Flight line direction is N30°E.

The east area covering the Pelican Property is 5 1/2 kilometres at its southeast end narrowing to 3 kilometres at its northwest part. The block is approximately 8 1/2 kilometres long oriented in a northwest-southeast direction. Flight lines are N45°E. The survey area is bounded by latitudes 56° 36' N and 56° 30' 15" N and longitudes 130° 54' W and 130° 45' W. NTS maps numbered 104 B/10 and 104 B/11 cover the ground surveyed.

The properties under examination are located is mountainous terrain identified as the Boundary Ranges of the Coast Mountains. Access to the area is via aircraft from Stewart some 90 kilometres to the southeast. Stewart is reached by aircraft from Vancouver via Prince Rupert. Travel in the area is by helicopter from the base camp at the Snippaker Airstrip which is located about 2 to 3 kilometres from the Pelican Property and 15 kilometres from the Wolverine Property. The topography is very rugged in the area. Permanent glaciers are present in both survey areas.

3. AIRCRAFT AND EQUIPMENT

3.1 Aircraft

An Aerospatiale A-Star 350D helicopter, (C-GDUF), owned and operated by Canadian Helicopters, was used for the survey. Installation of the geophysical and ancillary equipment was carried out by Aerodat. The survey aircraft was flown at a mean terrain clearance of 60 metres.

3.2 Equipment

3.2.1 Electromagnetic System

The electromagnetic system was an Aerodat 4-frequency system. Two vertical coaxial coil pairs were operated at 935 Hz and 4600 Hz and two horizontal coplanar coil pairs at 4175 Hz and 33 kHz. The transmitter-receiver separation was 7 metres. Inphase and quadrature signals were measured simultaneously for the 4 frequencies with a time constant of 0.1 seconds. The electromagnetic bird was towed 30 metres below the helicopter.

3.2.2 VLF-EM System

The VLF-EM System was a Herz Totem 2A. This instrument measures the total field and quadrature components of two selected transmitters, preferably oriented at right angles to one another. The sensor was towed in a bird 15 metres below the helicopter. The transmitters monitored were NSS, Annapolis, Maryland broadcasting at 21.4 kHz for the Line Station and NLK, Jim Creek, Washington and NAA, Cutler, Maine broadcasting at 24.8 kHz and 24.0 kHz respectively for the Orthogonal Station.

3.2.3 Magnetometer

The magnetometer employed was a Scintrex Model VIW-2321 H8 cesium, optically pumped magnetometer sensor. The sensitivity of this instrument was 0.1 nanoTeslas at a 0.1 second sampling rate. The sensor was towed in a bird 15 metres below the helicopter.

3.2.4 Magnetic Base Station

An IFG-2 proton precession magnetometer was operated at the base of operations to record diurnal variations of the earth's 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 King Air KRA-10 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 Panasonic video tracking camera was used to record flight path on VHS video tape. The camera was operated in continuous mode and the fiducial numbers and time marks for cross reference to the analog and digital data were encoded on the video tape.

3.2.7 Analog Recorder

An RMS dot-matrix recorder was used to display the data during the survey. In addition to manual and time fiducials, the following data were recorded:

Channel	**Input**	**Scale**
CXI1	Low Frequency Coaxial Inphase	2.5 ppm/mm
CXQ1	Low Frequency Coaxial Quadrature	2.5 ppm/mm
CXI2	High Frequency Coaxial Inphase	2.5 ppm/mm
CXQ2	High Frequency Coaxial Quadrature	2.5 ppm/mm
CPI1	Low Frequency Coplanar Inphase	10 ppm/mm
CPQ1	Low Frequency Coplanar Quadrature	10 ppm/mm

Channel	Input	Scale
CPI2	High Frequency Coplanar Inphase	20 ppm/mm
CPQ2	High Frequency Coplanar Quadrature	20 ppm/mm
PWRL	Power Line	60 Hz
VLT	VLF-EM Total Field, Line	2.5%/mm
VLQ	VLF-EM Quadrature, Line	2.5%/mm
VOT	VLF-EM Total Field, Ortho	2.5%/mm
VOQ	VLF-EM Quadrature, Ortho	2.5%/mm
RALT	Radar Altimeter	10 ft/mm
MAGF	Magnetometer, fine	2.5 nT/mm
MAGC	Magnetometer, coarse	25 nT/mm

3.2.8 Digital Recorder

A DGR 33 data system recorded the survey on magnetic tape. Information recorded was as follows:

Equipment	Recording Interval
EM System	0.1 seconds
VLF-EM	0.5 seconds
Magnetometer	0.1 seconds
Altimeter	0.5 seconds

4. DATA PRESENTATION

4.1 Base Map

A photomosaic base map at a scale of 1:10,000 was prepared for the Pelican Property and 1:5,000 for the Wolverine Property from orthophotomosaic map at a scale of 1:10,000 provided by the client.

4.2 Flight Path Map

The flight path for the survey area was recovered from the VHS video tracking tapes by transferring the time at which the helicopter passed of a recognizable feature onto the photomosaic. These coordinates were then digitied into the database and formed the basis of the flight path data.

The flight lines have the flight number as an additional reference and the camera frame, time, and the navigator's manual fiducials for cross reference to both analog and digital data.

4.3 Airborne Electromagnetic Survey Interpretation Map

The electromagnetic data were recorded digitally at a sample rate of 10 per second with a time constant of 0.1 seconds. A two stage digital filtering process was carried out to reject major sferic events and to reduce system noise.

Local sferic activity can produce sharp, large amplitude events that cannot be removed by conventional filtering procedures. Smoothing or stacking will reduce their amplitude but leave a broader residual response that can be confused with geological phenomena. To avoid this possibility, a computer algorithm searches out and rejects the major sferic events.

The signal to noise ratio was further enhanced by the application of a low pass digital filter. It has zero phase shift which prevents any lag or peak displacement from occurring, and it suppresses only variations with a wavelength less than about 0.25 seconds. This low effective time constant permits maximum profile shape resolution.

Following the filtering process, a base level correction was made. The correction applied is a linear function of time that ensures the corrected amplitude of the various inphase and quadrature components is zero when no conductive or permeable source is present. The filtered and levelled data were used in the interpretation of the electromagnetics. An interpretation map was prepared showing peak locations of anomalies and conductivity thickness ranges along with the Inphase amplitudes (computed from the 4600 Hz coaxial responses). The data are presented on a screened copy of the Cronaflex photomosaic base map.

4.4 Total Field Magnetic Contours

The aeromagnetic data were corrected for diurnal variations by adjustment with the digitally recorded base station magnetic values. The corrected profile data were interpolated onto a regular grid at a 10 metre true scale interval for the Wolverine area and a 25 metre true scale interval for the Pelican area using an Akima spline technique. The grid provided the basis for threading the presented contours at a 2 nanoTesla gamma on the Wolverine Property map and 5 nT gamma on the Pelican Property map.

The contoured aeromagnetic data have been presented on a Cronaflex copy of the photomosaic base map.

4.5 Vertical Magnetic Gradient Contours

The vertical magnetic gradient was calculated from the gridded total field magnetic data. Contoured at a 0.1 nT/m interval, the gradient data were presented on a Cronaflex copy of the photomosaic base map.

4.6 Apparent Resistivity Contours

The electromagnetic information was processed to yield a map of the apparent resistivity of the ground.

The approach taken in computing apparent resistivity was to assume a model of a 200 metre thick conductive layer (i.e., effectively a half space) over a resistive bedrock. The computer then generated, from nomograms for this model, the resistivity that would be consistent with the bird elevation and recorded amplitude for the coaxial frequency pair used. The apparent resistivity profile data were interpolated onto a regular grid at a 10 metres true scale interval for the Wolverine area and a 25 metre true scale for the Pelican area using an Akima spline technique.

The contoured apparent resistivity data were presented on a Cronaflex copy of the photomosaic base map with the flight path.

4.7 VLF-EM Total Field Contours

VLF-EM signals from NLK, Jim Creek, Seattle, Washington broadcasting at 24.8 kHz, and NPM, Lualualei, Hawaii, broadcasting at 23.4 kHz for the Line Station were compiled in contour form and presented on a Cronaflex copy of the photomosaic base map.

5. INTERPRETATION

5.1 Geology

The geology of the area has been gleaned from geology maps furnished by Cathedral Gold Corporation. Although no visit was made to the properties to gain first hand knowledge of the geology, the writer is familiar with this type of geological environment having worked in a number of different properties in the Yukon which contain similar geology.

The properties are underlain by a sequence of volcanic and sedimentary rocks that have been invaded by plutonic intrusions of hypabyssal origin. Low grade metamorphism has taken place on a regional scale with more advanced metamorphism in some incidences associated with intense structural deformation. Various directions of faulting are prominent in the area.

The stratigraphic sequence contains volcanic rocks of intermediate to mafic composition some as massive flow units but more predominantly of banded, tuffaceous composition. The sedimentary sequences consists of fine grained banded siltstones and black argillites to tuffaceous accumulations and conglomeratic sediments. Some schists and phyllites are present. Intrusive rocks, ranging from granodiorite to syenite in composition occur as stocks and batholities of varying sizes. Alkali basalt and felsic dykes also intrude the volcano-sedimentary sequences. Small stocks of quartz and/or feldspar porphyries are found in some localities.

Pervasive alteration in the form of sericitization and silicification is prominent throughout the two properties. Abundant mineralization of both massive and disseminated sulphides types are found scattered over the area.

The Pelican Lake property is dominated by Granodioritic intrusions invading banded siltstone and green volcanic sequences. The general trend of the stratigraphic units appears to be northwest-southeast although deviations from this is not uncommon. In this property the base metal mineralization is closely associated with the granodiorites. Sericitic and silicic alterations are scattered throughout the area. A large sericite zone occurs at the northwest section of the survey area. Lead, zinc, copper, gold and silver mineralizations are associated with this strong alteration zone. The Lake zone which apparently contains copper, lead and gold associated with arsenopyrite occurs mostly within the granodiorite which has intruded the banded siltstones. The Pelican showing containing polymetallic minerals appears to be closely associated with the granodiorite in the vicinity of both banded siltstones and green volcanics. The Snow Zone consists of copper mineralization in banded siltstones. Silicification is prominant in all these mineralized areas. These types of mineral showings in the Pelican area would be very difficult to detect by airborne electromagnetics.

5.2 Discussion of Results

Apart from the EM responses associated with stratigraphic conductors, there are very few EM anomalies identified on the Pelican Property. Conductivity in the region is very low. There is evidence of weakly conducting zones that may be associated with areas of alteration particularly sericitization. None of the mineralized areas show any response to the electromagnetic method, but there are several areas that display EM responses that may be related to clay alteration.

The magnetic characteristics reflect the geology of the area. There are many magnetic responses which are attributed to mafic volcanic formations and magnetite concentrations caused by metamorphism associated with intrusions. Mafic dykes are also evident. Three directions of faulting can be predicted on the basis of the magnetics. These are: east-west; northerly; and northeast-southwest.

The VLF-EM results appear very active in both survey blocks. Most of the activity can be attributed to topographic effects. Some of the VLF-EM responses can be correlated with the EM conductors. Others that are less evident can be associated with interpreted fault zones. Spheric activity can cause VLF-EM anomalies.

The apparent resistivity results can be useful in signifying zones of low conductivity that may be associated with clay alteration. The strong EM conductors are also identified on the resistivity maps.

The aspects of the Pelican property are discussed in the following paragraphs. EM anomaly systems have been identified by an alphabetic symbol. Three EM conductors have been recognized on the Pelican property.

5.2.1 The Pelican Property

Substantial surface conductivity is present on this airborne geophysical map sheet. A number of broad, lengthy low conductive zones are distinguishable notable the intensive response that occurs over the Sericite zone at the west end of the survey area. This zone is approximately 500 metres wide and strikes northwest-southeast. Lead, zinc, gold and silver mineralization appears to occur on the west flank of this alteration zone. Anomaly A occurs in the midst of this conductive environment. It will discussed separately.

Another distinguishing surface conductor trends north-south across the central portion of the survey area. The anomaly is 300 to 800 metres wide and traverses the general geological trend. The southern portion of this long conductive horizon occurs on the west flank of the moraine deposited by the glacier to the south. It seems rather large to reflect an alteration zone.

Consequently, it may have something to do with fine grained glacial deposits.

Other weak surface conductive zones that may be related to alteration areas are: The resistive lows extending over lines 570 to 650 inclusive adjacent to the Pelican zone; the resistivity lows south of the Lake zone; and the weak resistive lows in the vicinity of the Snow Zone. Both the Pelican and Lake Zones appear to be associated with negative inphase responses in the absence of any magnetic anomaly signifying a high magnetic susceptibility which is the usual cause of such reactions. Perhaps this is an important criteria identifying areas of mineralization and should be followed up. Apart from the Pelican and Lake Zones, nine such responses can be identified throughout the survey area.

Anomalies C through J are a group of strong to moderate conductors that represent a conductive stratigraphic horizon protruding and exiting into the very northern corner of the survey area. The anomaly system represents a multiple banded, folded stratigraphic unit that is further complicated by northwest faulting.

Three anomaly systems have been identified on the Pelican Property that warrant discussion separately.

Anomaly System A

These are three moderately conducting EM responses that occur within a wide, weakly conductive zone that represents on alteration area. The strike of the anomalies is shown to be north-south. However, the strike direction could just as easily be in another direction even at 90° to that proposed. The responses may indicate an increase in conductivity within the alteration zone and should be checked out individually.

Anomaly System B

This a weird EM response occurring on one line. There is a very sharp inphase response amongst a strong negative inphase reaction. The anomaly is suspiciously similar to a strong cultural response. It resembles an artificial surface anomaly rather than a bona fide bedrock conductor. Nonetheless, it has to be checked out on the ground for verification. The anomaly is located in an area of small granodiorite outcroppings amongst banded siltstone sediments.

Anomaly System K

Two moderately conducting responses occur at the south ends of lines 50 and 60 which appear to represent the western extremity of an east-west striking conductive zone. Not enough coverage is provided to assess the anomaly adequately. However, at this stage it does appear to be the edge of a conductive stratigraphic horizon. This should be verified by ground checking.

6. CONCLUSIONS

The geophysical surveys carried out on the Wolverine and Pelican Properties of Cathedral Gold Corporation have been able to identify geological stratigraphy and structures. The magnetics can be used effectively to map the geology and structure. The electromagnetics have been able to identify clay alteration zones and structure as well as conductive stratigraphic horizons such as siltstones and/or shales. The two areas flown show distinctly different electromagnetic anomaly patterns.

Although surface EM conduction is wide spread on the Pelican Property, very few bona fide EM conductors can be identified. However, a number of weakly conducting areas can be identified that appear to represent clay alteration zones. Among these are alteration zones associated with the Pelican, Lake and Snow mineral zones. Four such similar areas can be identified. An intense, weakly conducting, broad EM horizon can be identified with the Sericite Zone. Less intense and lower conductivity surrounds the main core of the sericite Zone. The broad surface conductor transversing the central portion of the survey area is likely associated with glacial clays. Negative inphase responses with no magnetic expression is associated with the mineralization in the Pelican and Lake Zones. Nine similar responses can be identified throughout the Pelican Property. These may be worthy of ground follow-up. Three other EM anomalies (A, B and K) have been singled out as worthy of further ground investigations.

7. RECOMMENDATIONS

It is strongly recommended that further enhanced processing of the magnetics be carried out and a more thorough interpretation of the products take place. This would greatly enhance understanding of the geology and structure.

Anomalies A, B and K on the Pelican property should be field checked to verify their source if possible. If warranted, grids should then be established to conduct ground geophysics. All resistivity low areas not associated with designated EM conductors should be checked for alteration products. In addition all negative inphase anomalies that are not coincident with magnetic anomalies should be prospected closely for polymetallic minerals. These may be the most productive EM indications.

Respectfully submitted

G. Burton

G. B. Burton,
Geophysical Consultant
for
AERODAT LIMITED
July 31, 1989

J8921

APPENDIX I

PERSONNEL

FIELD

Flown	June, 1989
Pilot	J. Kampuis
Operator	S. Arstad

OFFICE

Processing	D. Oneschuk
Report	G. B. Burton

APPENDIX II

CERTIFICATE OF QUALIFICATIONS

I, GARTH BURTON, certify that: -

1. I graduated with a Second Class Honours Bachelor of Science in Geology at Carelton University, Ottawa in 1970.

2. I reside at Unit #1, 2234 Upper Middle Road in Burlington, Ontario, and am a Geophysical Consultant and have been practicing as an independent consultant since 1978.

3. I have been employed in the mining industry since 1956 primarily engaged in Geophysical Surveying and have been a Professional Geophysicist since 1970.

4. I am a member of the Society of Exploration Geophysicists, a fellow of the Geological Association of Canada (GAC), a member of the Toronto Branch of the Canadian Institute of Mining and Metallurgy (CIM), the Toronto Geological Discussion Group (TGDG), and the Canadian Exploration Geophysical Society (KEGS).

5. The accompanying report was prepared from information supplied by Cathedral Gold Corporation Inc. and from a review of the proprietary airborne geophysical survey flown by Aerodat Limited for Cathedral Gold Corporation. I have not personally visited the property.

6. I have no interest, direct or indirect, in the property described nor do I hold securities in Cathedral Gold Corporation.

Signed,

G. Burton

Garth Burton
Geophysical Consultant

June, 1989

APPENDIX III

GENERAL INTERPRETIVE CONSIDERATIONS

Electromagnetic

The Aerodat four frequency system utilizes two different transmitter-receiver coil geometries. The traditional coaxial coil configuration is operated at two widely separated frequencies and the horizontal coplanar coil pair is operated at a frequency approximately aligned with one of the coaxial frequencies.

The electromagnetic response measured by the helicopter system is a function of the "electrical" and "geometrical" properties of the conductor. The "electrical" property of a conductor is determined largely by its electrical conductivity, magnetic susceptibility and its size and shape; the "geometrical" property of the response is largely a function of the conductor's shape and orientation with respect to the measuring transmitter and receiver.

Electrical Considerations

For a given conductive body the measure of its conductivity or conductance is closely related to the measured phase shift between the received and transmitted electromagnetic field. A small phase shift indicates a relatively high conductance, a large phase shift lower conductance. A small phase shift results in a large inphase to quadrature ratio and a large phase shift a low ratio. This relationship is shown quantitatively for a non-magnetic vertical half-plane model on the accompanying phasor diagram. Other physical models will show the same trend but different quantitative relationships.

The phasor diagram for the vertical half-plane model, as presented, is for the coaxial coil configuration with the amplitudes in parts per million (ppm) of the primary field as measured at the response peak over the conductor. To assist the interpretation of the survey results the computer is used to identify the apparent conductance and depth at selected anomalies. The results of this calculation are presented in table form in Appendix II and the conductance and inphase amplitude are presented in symbolized form on the map presentation.

The conductance and depth values as presented are correct only as far as the model approximates the real geological situation. The actual geological source may be of limited length, have significant dip, may be strongly magnetic, its conductivity and thickness may vary with depth and/or strike and adjacent bodies and overburden may have modified the response. In general the conductance estimate is less affected by these limitations than is the depth estimate, but both should be considered as relative rather than absolute guides to the anomaly's properties.

Conductance in mhos is the reciprocal of resistance in ohms and in the case of narrow slab-like bodies is the product of electrical conductivity and thickness.

Most overburden will have an indicated conductance of less than 2 mhos; however, more conductive clays may have an apparent conductance of say 2 to 4 mhos. Also in the low conductance range will be electrolytic conductors in faults and shears.

The higher ranges of conductance, greater than 4 mhos, indicate that a significant fraction of the electrical conduction is electronic rather than electrolytic in nature. Materials that conduct electronically are limited to certain metallic sulphides and to graphite. High conductance anomalies, roughly 10 mhos or greater, are generally limited to sulphide or graphite bearing rocks.

Sulphide minerals, with the exception of such ore minerals as sphalerite, cinnabar and stibnite, are good conductors; sulphides may occur in a disseminated manner that inhibits electrical conduction through the rock mass. In this case the apparent conductance can seriously underrate the quality of the conductor in geological terms. In a similar sense the relatively non-conducting sulphide minerals noted above may be present in significant consideration in association with minor conductive sulphides, and the electromagnetic response only relate to the minor associated mineralization. Indicated conductance is also of little direct significance for the identification of gold mineralization. Although gold is highly conductive, it would not be expected to exist in sufficient quantity to create a recognizable anomaly, but minor accessory sulphide mineralization could provide a useful indirect indication.

In summary, the estimated conductance of a conductor can provide a relatively positive identification of significant sulphide or graphite mineralization; however, a moderate to low conductance value does not rule out the possibility of significant economic mineralization.

Geometrical Considerations

Geometrical information about the geologic conductor can often be interpreted from the profile shape of the anomaly. The change in shape is primarily related to the change in inductive coupling among the transmitter, the target, and the receiver.

In the case of a thin, steeply dipping, sheet-like conductor, the coaxial coil pair will yield a near symmetric peak over the conductor. On the other hand, the coplanar coil pair will pass through a null couple relationship and yield a minimum over the conductor, flanked by positive side lobes. As the dip of the conductor decreased from vertical, the coaxial anomaly shape changes only 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.

As the thickness of the conductor increases, induced current flow across the thickness of the conductor becomes relatively significant and complete null coupling with the coplanar coils is no longer possible. As a result, the apparent minimum of the coplanar response over the conductor diminishes with increasing thickness, and in the limiting case of a fully 3 dimensional body or a horizontal layer or half-space, the minimum disappears completely.

A horizontal conducting layer such as overburden will produce a response in the coaxial and coplanar coils that is a function of altitude (and conductivity if not uniform). The profile shape will be similar in both coil configurations with an amplitude ratio (coplanar:coaxial) of about 4:1*.

In the case of a spherical conductor, the induced currents are confined to the volume of the sphere, but not relatively restricted to any arbitrary plane as in the case of a sheet-like form. The response of the coplanar coil pair directly over the sphere may be up to 8* times greater than that of the coaxial pair.

In summary, a steeply dipping, sheet-like conductor will display a decrease in the coplanar response coincident with the peak of the coaxial response. The relative strength of this coplanar null is related inversely to the thickness of the conductor; a pronounced null indicates a relatively thin conductor. The dip of such a conductor can be inferred from the relative amplitudes of the side-lobes.

Massive conductors that could be approximated by a conducting sphere will display a simple single peak profile form on both coaxial and coplanar coils, with a ratio between the coplanar to coaxial response amplitudes as high as 8*.

Overburden anomalies often produce broad poorly defined anomaly profiles. In most cases, the response of the coplanar coils closely follows that of the coaxial coils with a relative amplitude ration of 4*.

Occasionally, if the edge of an overburden zone is sharply defined with some significant depth extent, an edge effect will occur in the coaxial coils. In the case of a horizontal conductive ring or ribbon, the coaxial response will consist of two peaks, one over each edge; whereas the coplanar coil will yield a single peak.

* It should be noted at this point that Aerodat's definition of the measured ppm unit is related to the primary field sensed in the receiving coil without normalization to the maximum coupled (coaxial configuration). If such normalization were applied to the Aerodat units, the amplitude of the coplanar coil pair would be halved.

Magnetics

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

VLF Electromagnetics

The VLF-EM method employs the radiation from powerful military radio transmitters as the primary signals. The magnetic field associated with the primary field is elliptically polarized in the vicinity of electrical conductors. The Herz Totem uses three coils in the X, Y, Z configuration to measure the total field and vertical quadrature component of the polarization ellipse.

The relatively high frequency of VLF (15-25) kHz provides high response factors for bodies of low conductance. Relatively "disconnected" sulphide ores have been found to produce measurable VLF signals. For the same reason, poor conductors such as sheared contacts, breccia zones, narrow faults, alteration zones and porous flow tops normally produce VLF anomalies. The method can therefore be used effectively for geological mapping. The only relative disadvantage of the method lies in its sensitivity to conductive overburden. In conductive ground to depth of exploration is severely limited.

The effect of strike direction is important in the sense of the relation of the conductor axis relative to the energizing electromagnetic field. A conductor aligned along a radius drawn from a transmitting station will be in a maximum coupled orientation and thereby produce a stronger response than a similar conductor at a different strike angle. Theoretically, it would be possible for a conductor, oriented tangentially to the transmitter to produce no signal. The most obvious effect of the strike angle consideration is that conductors favourably oriented with respect to the transmitter location and also near perpendicular to the flight direction are most clearly rendered and usually dominate the map presentation.

The total field response is an indicator of the existence and position of a conductivity anomaly. The response will be a maximum over the conductor, without any special filtering, and strongly favour the upper edge of the conductor even in the case of a relatively shallow dip.

The vertical quadrature component over steeply dipping sheet-like conductor will be a cross-over type response with the cross-over closely associated with the upper edge of the conductor.

The response is a cross-over type due to the fact that it is the vertical rather than total field quadrature component that is measured. The response shape is due largely to geometrical rather than conductivity considerations and the distance between the maximum and minimum on either side of the cross-over is related to target depth. For a given target geometry, the larger this distance the greater the depth.

The amplitude of the quadrature response, as opposed to shape is function of target conductance and depth as well as the conductivity of the overburden and host rock. As the primary field travels down to the conductor through conductive material it is both attenuated and phase shifted in a negative sense. The secondary field produced by this altered field at the target also has an associated phase shift. This phase shift is positive and is larger for relatively poor conductors. This secondary field is attenuated and phase shifted in a negative sense during return travel to the surface. The net effect of these 3 phase shifts determine the phase of the secondary field sensed at the receiver.

A relatively poor conductor in resistive ground will yield a net positive phase shift. A relatively good conductor in more conductive ground will yield a net negative phase shift. A combination is possible whereby the net phase shift is zero and the response is purely in-phase with no quadrature component.

A net positive phase shift combined with the geometrical cross-over shape will lead to a positive quadrature response on the side of approach and a negative on the side of departure. A net negative phase shift would produce the reverse. A further sign reversal occurs with a 180 degree change in instrument orientation as occurs on reciprocal line headings. During digital processing of the quadrature data for map presentation this is corrected for by normalizing the sign to one of the flight line headings.

APPENDIX IV

ANOMALY LIST

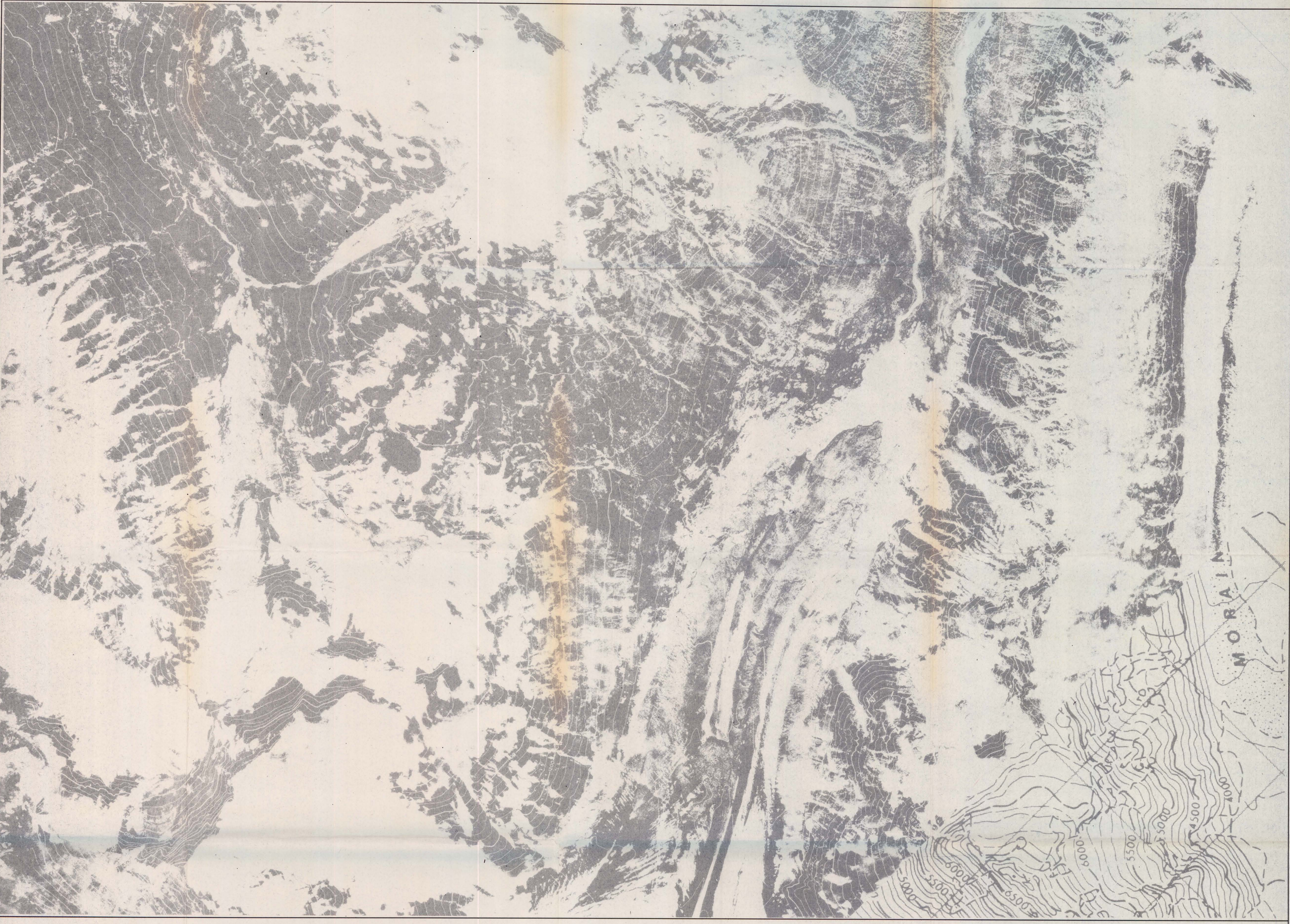
FLIGHT	LINE	ANOMALY	CATEGORY	AMPLITUDE (PPM) INPHASE	QUAD.	CONDUCTOR CTP MHOS	DEPTH MTRS	BIRD HEIGHT MTRS
1	10	A	1	4.3	3.0	1.1	37	43
1	10	B	1	4.8	3.6	1.1	32	43
1	10	C	2	8.8	4.6	2.3	29	38
1	10	D	0	4.1	3.2	0.9	39	40
1	20	A	3	13.0	4.9	4.1	0	68
1	20	B	3	36.5	13.4	6.0	2	41
1	20	C	1	4.0	2.9	1.1	11	70
1	30	A	0	5.6	5.3	0.8	17	48
1	30	B	2	45.0	26.5	3.4	0	81
1	30	C	3	74.5	34.0	5.6	0	42
1	30	D	3	95.8	39.7	6.8	0	36
1	30	E	4	92.4	31.3	8.7	0	37
1	30	F	3	33.9	14.2	4.9	0	55
1	40	A	3	127.3	53.7	7.2	0	32
1	40	B	3	211.4	122.1	5.6	0	33
1	50	A	0	8.3	12.8	0.5	0	48
1	50	B	1	13.8	12.4	1.3	0	53
1	50	C	0	13.9	18.5	0.7	0	44
1	50	D	2	19.1	13.1	2.1	0	59
1	50	E	2	149.4	132.9	2.9	0	33
1	60	A	0	5.3	9.9	0.3	0	1239
1	60	B	0	7.4	7.0	0.9	0	1239
1	60	C	0	11.0	11.6	0.9	0	1234
1	60	D	2	23.5	13.5	2.8	0	1238
1	60	E	1	19.9	15.0	1.9	0	1237
1	60	F	2	40.7	22.2	3.7	0	1237
1	60	G	3	95.8	49.0	5.2	0	1237
1	60	H	1	13.3	10.2	1.6	0	1236
1	60	J	0	6.9	15.5	0.2	0	40
7	71	A	0	4.3	7.8	0.3	0	56
7	71	B	0	6.8	10.3	0.4	0	52
7	71	C	0	4.6	9.0	0.2	2	46
7	71	D	1	12.7	10.2	1.4	6	47
7	71	E	1	15.6	10.9	1.9	11	40
7	71	F	1	18.0	13.1	1.9	7	41
7	81	A	2	9.9	5.0	2.5	16	49
7	81	B	1	5.5	3.1	1.7	8	69

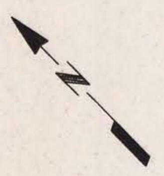
Estimated depth may be unreliable because the stronger part of the conductor may be deeper or to one side of the flight line, or because of a shallow dip or overburden effects.

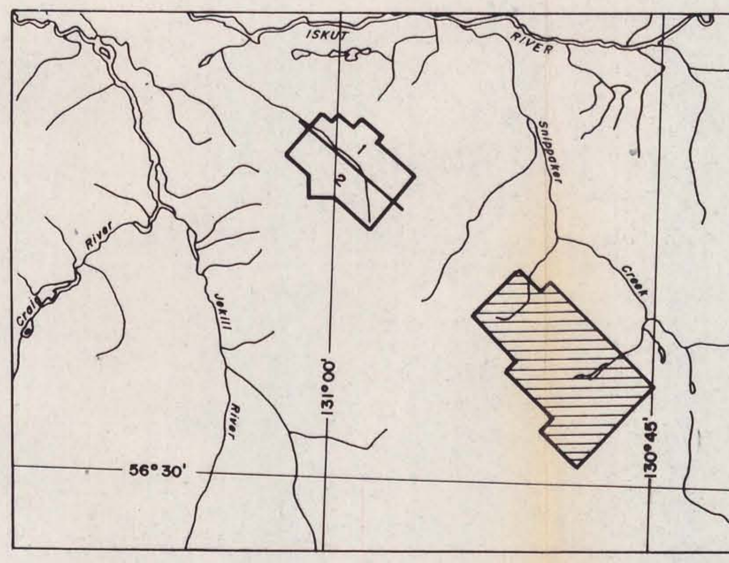
PELICAN PROPERTY

FLIGHT	LINE	ANOMALY	CATEGORY	AMPLITUDE (PPM) INPHASE	QUAD.	CONDUCTOR CTP MHOS	DEPTH MTRS	BIRD HEIGHT MTRS
1	90	C	0	6.1	9.9	0.4	0	1244
1	100	A	0	4.4	12.8	0.1	0	102
1	100	B	0	6.7	12.3	0.3	0	467
1	110	A	0	22.7	35.0	0.7	0	1237
1	110	B	1	18.4	21.7	1.0	0	1237
1	110	C	0	7.0	11.6	0.4	0	51
1	120	A	1	50.5	59.0	1.4	0	1189
1	120	B	1	70.4	98.9	1.3	0	1236
1	120	C	1	60.0	65.8	1.7	0	1241
1	120	D	1	33.3	28.5	1.9	6	30
1	120	E	1	12.7	9.8	1.5	16	37
1	120	F	1	10.5	7.7	1.5	24	34
1	130	A	2	17.8	12.2	2.0	0	1243
1	130	B	2	18.7	13.4	2.0	0	1242
1	140	A	2	18.4	9.9	2.9	0	54
1	150	B	3	49.1	25.0	4.3	0	43
1	150	C	0	7.4	9.9	0.5	0	67
2	160	A	1	10.4	9.5	1.1	26	27
2	160	B	5	27.6	4.5	16.3	0	61
6	520	A	6	57.8	6.2	35.1	32	7
7	800	A	0	3.6	8.5	0.1	0	635
7	800	B	0	5.0	16.2	0.1	3	30
7	820	C	0	8.5	17.0	0.3	0	1235

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.



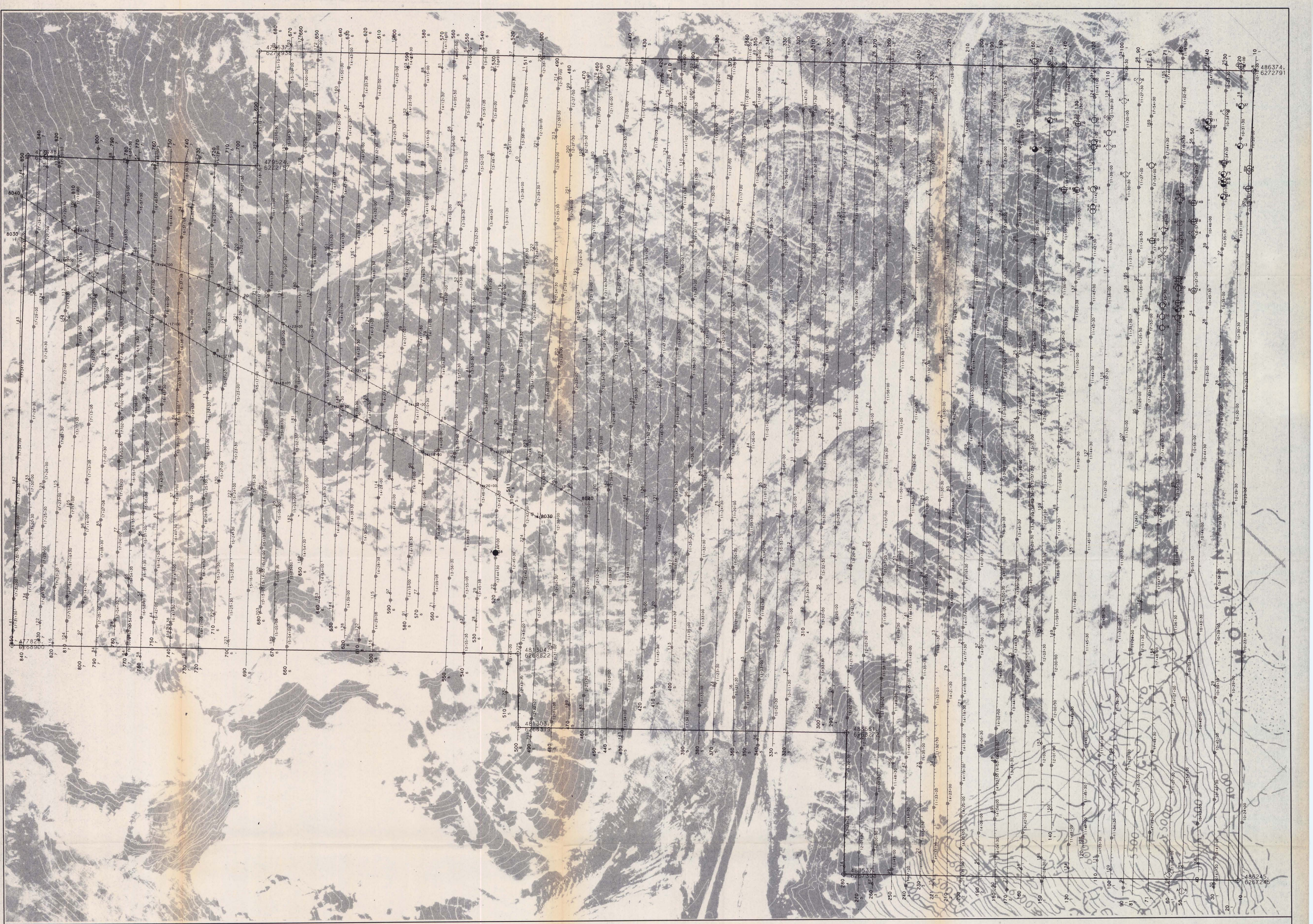


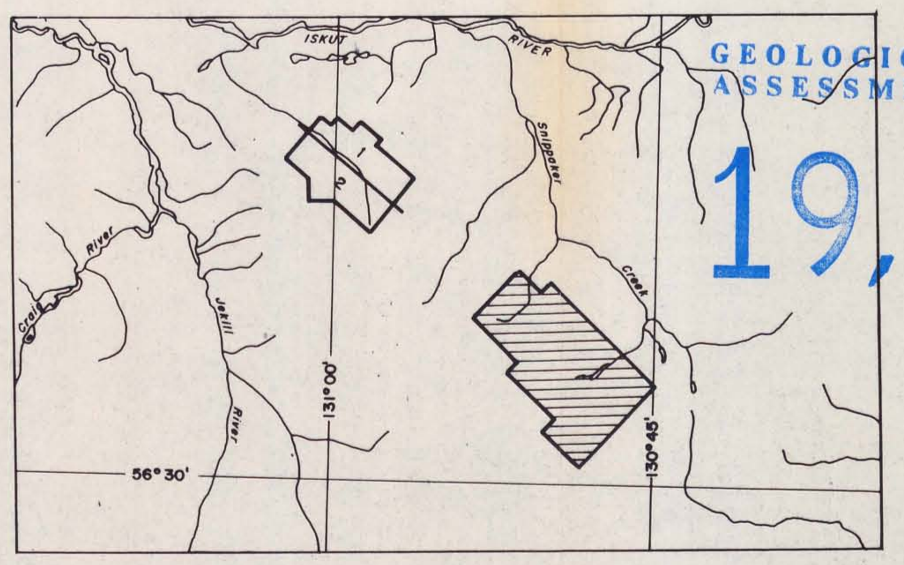


GEOLOGICAL BRANCH
ASSESSMENT REPORT

19,241

CATHEDRAL GOLD CORPORATION	
BASE MAP	
GOSSAN PROPERTY	
Iskut River Area, British Columbia	
SCALE 1:10,000	
0 330 660 1320 2640 Feet	
0 100 200 500 1000 Metres	
AERODAT LIMITED	DATE: JUNE 1989
	NTS No: 104B/10,11
	MAP No: 1 J8921





Flight Path

Average terrain clearance 60m
Average line spacing 100m

EM Anomalies

Conductivity Thickness (mhos)

- 0 - 1
- 1 - 2
- 2 - 4
- 4 - 8
- 8 - 15
- 15 - 30
- > 30

EM Anomaly A, 4600 Hz inphase amplitude 7 ppm. Conductivity thickness 1-2 mhos (see code).

GEOLOGICAL BRANCH
ASSESSMENT REPORT

19,241

CATHEDRAL GOLD CORPORATION

FLIGHT PATH

GOSSAN PROPERTY

Iskut River Area, British Columbia

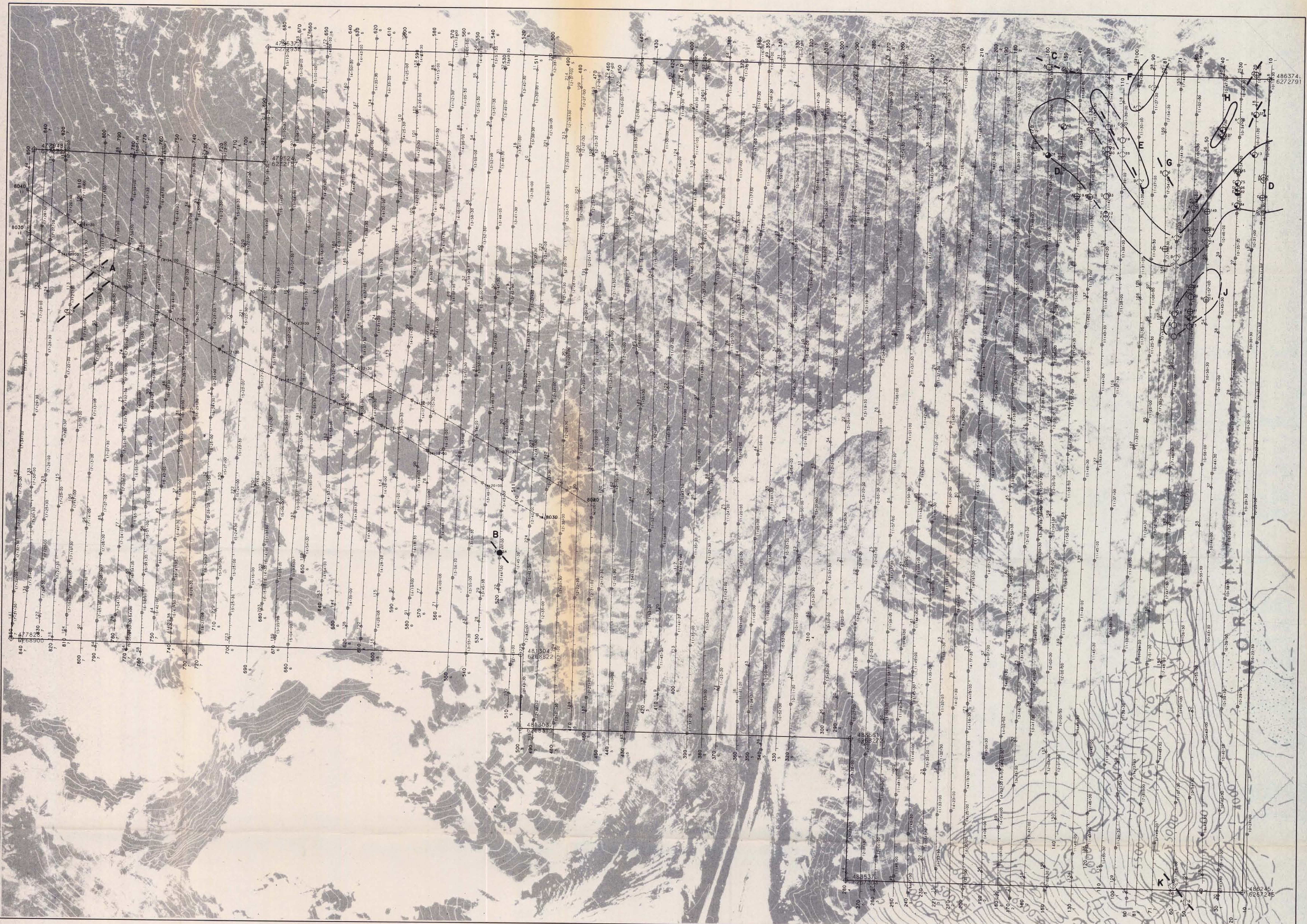
SCALE 1:10,000

0 330 660 1320 2640 Feet

0 100 200 500 1000 Metres

AERODAT LIMITED

DATE:	JUNE 1989
NTS No:	104B/10,11
MAP No:	2 J8921



Flight Path

Average terrain clearance 60m
Average line spacing 100m

INTERPRETATION LEGEND

Conductor Axis

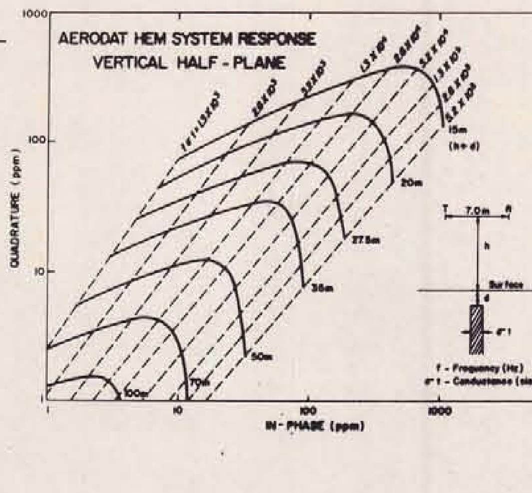
Anomaly System

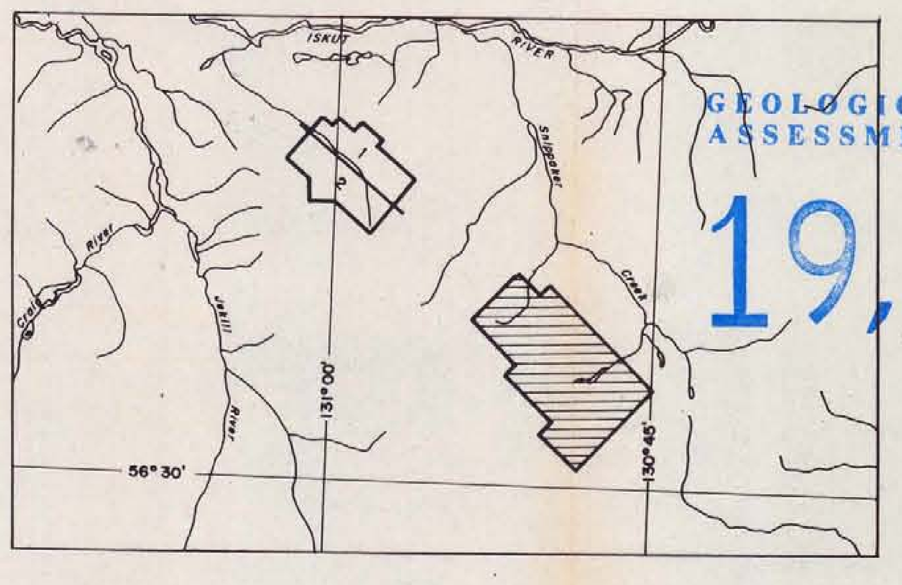
EM Anomalies

Conductivity Thickness (mhos)

- 0 - 1
- 1 - 2
- 2 - 4
- 4 - 8
- 8 - 15
- 15 - 30
- > 30

EM Anomaly A, 4600 Hz inphase amplitude 7 ppm. Conductivity thickness 1-2 mhos (see code).





CATHEDRAL GOLD CORPORATION

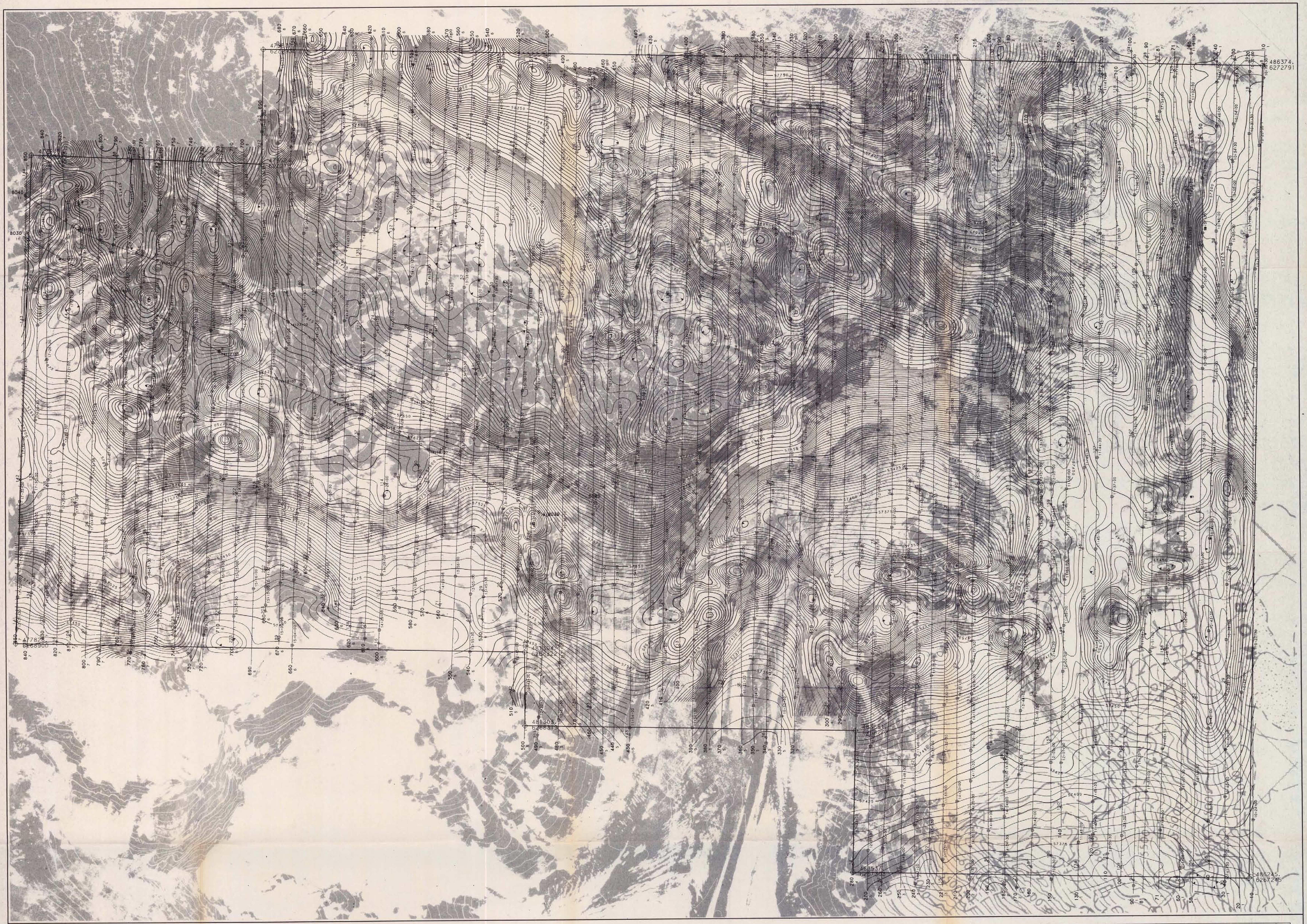
INTERPRETATION

GOSSAN PROPERTY
Iskut River Area, British Columbia

SCALE 1:10,000
0 330 660 1320 2640 Feet
0 100 200 500 1000 Metres.

AERODAT LIMITED

DATE: JUNE 1989
NTS No: 104B/10,11
MAP No: 3 J8921



Flight Path

Average terrain clearance 60m
Average line spacing 100m

Magnetics

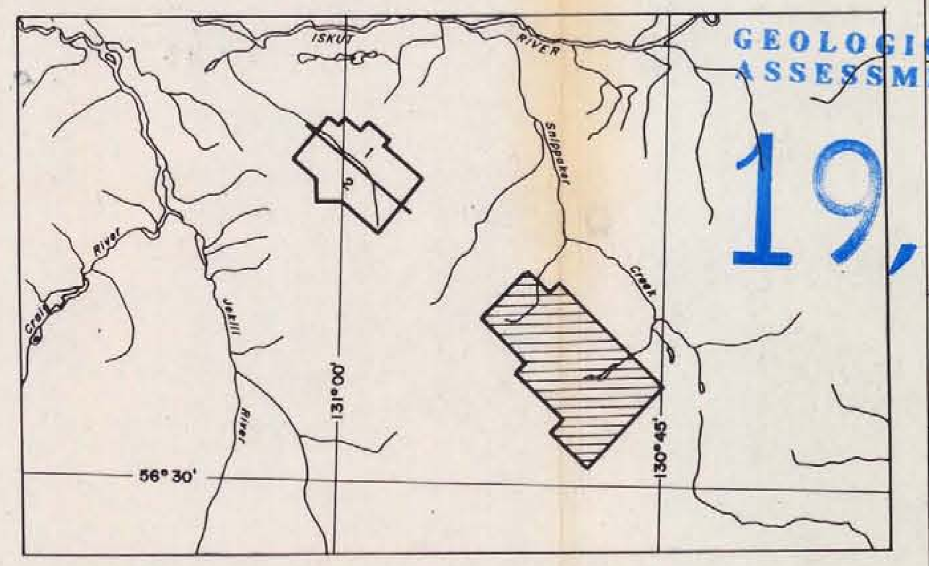
Total Field Magnetic Intensity Contours in nT.

High sensitivity cesium magnetometer.

Sensor elevation 45m

Map contours are multiples of those listed below

- 5 nT
- 25 nT
- 100 nT
- 500 nT
- 1000 nT



GEOLOGICAL BRANCH
ASSESSMENT REPORT

19,241

CATHEDRAL GOLD CORPORATION

TOTAL FIELD MAGNETIC CONTOURS

GOSSAN PROPERTY

Iskut River Area, British Columbia

SCALE 1:10,000

0 330 660 1320 2640 Feet

0 100 200 500 1000 Metres

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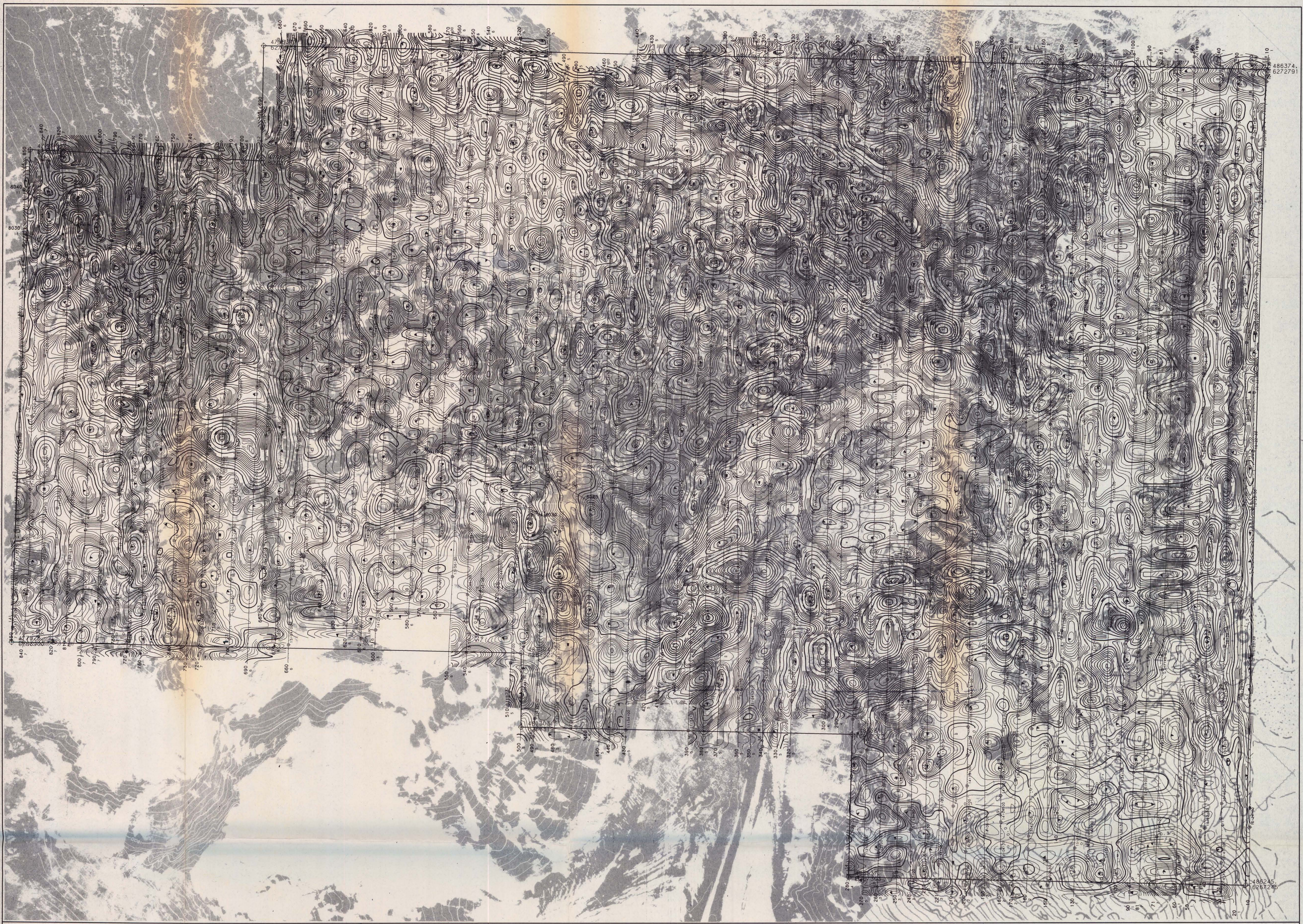
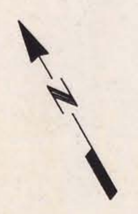
DATE:	JUNE 1989
NTS No:	104B/10,11
MAP No:	4 J8921





Flight Path

Average terrain clearance 60m
Average line spacing 100m

Vertical Gradient

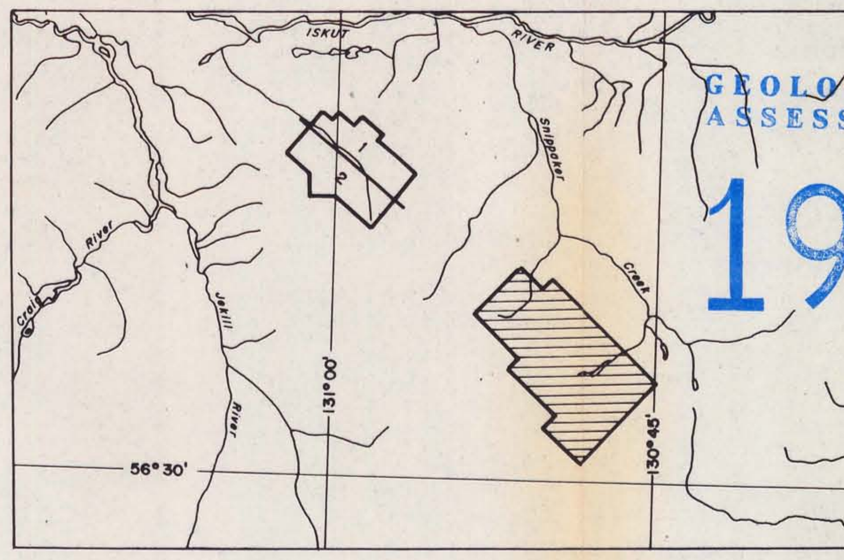
Vertical Magnetic Gradient calculated from the total field magnetic intensity in nT/m.

Cesium high sensitivity magnetometer.

Sensor elevation 45m

Map contours are multiples of those listed below

- 0.1 nT/m
- 0.5 nT/m
- 2.5 nT/m
- 10 nT/m
- 50 nT/m



CATHEDRAL GOLD CORPORATION

CALCULATED VERTICAL MAGNETIC GRADIENT

GOSSAN PROPERTY

Iskut River Area, British Columbia

SCALE 1:10,000

0 330 660 1320 2640 Feet

0 100 200 500 1000 Metres

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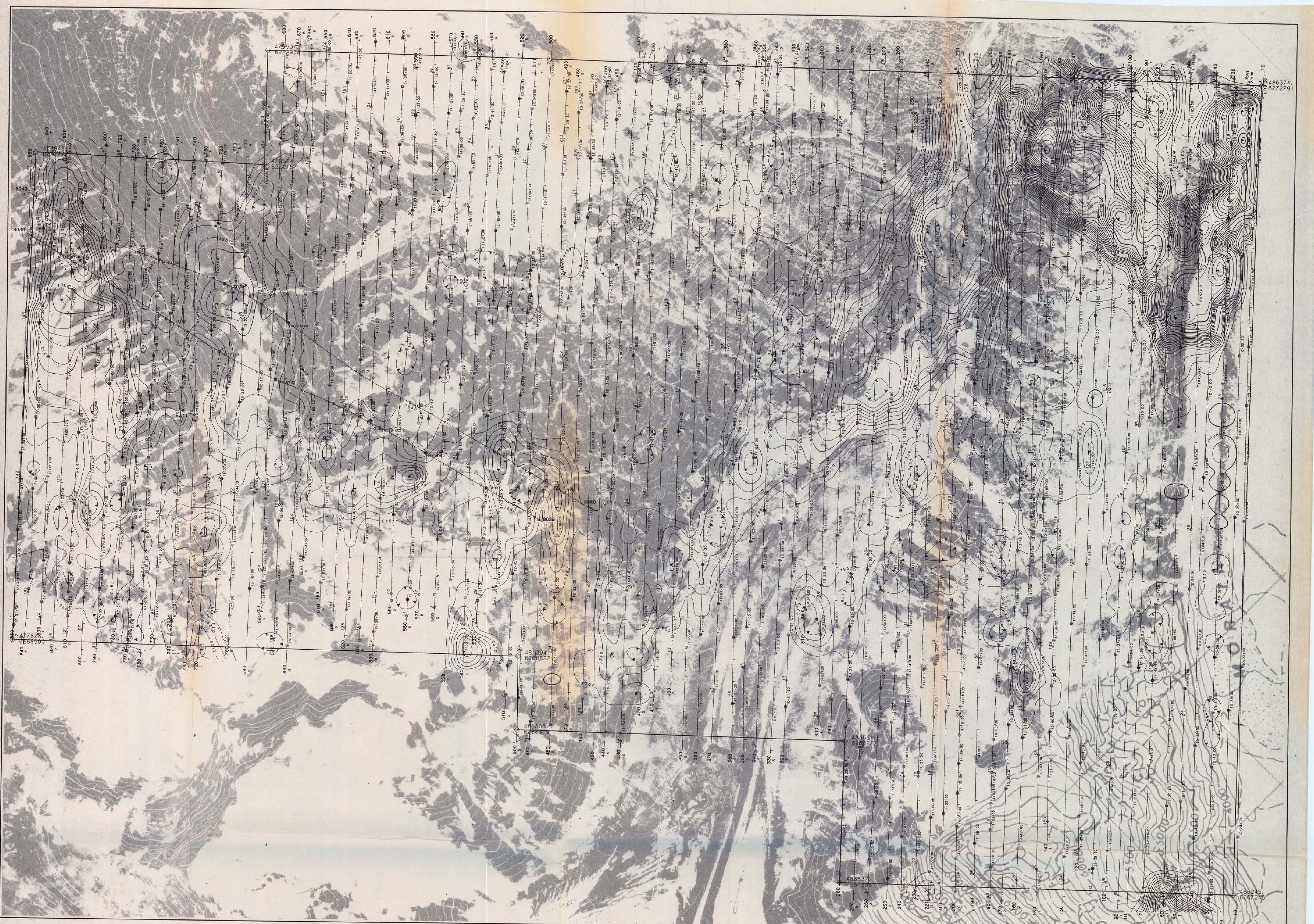
DATE: JUNE 1989

NTS No: 104B/10,11

MAP No: 5 J8921



Flight Path

Average terrain clearance 60m
Average line spacing 100m

Apparent Resistivity

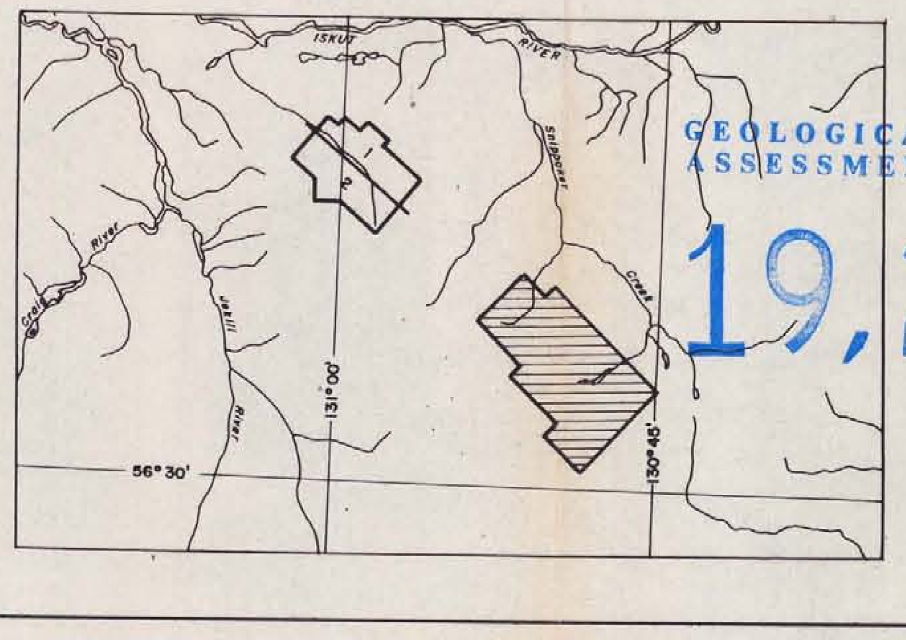
Calculated from 4175 Hz coaxial EM response assuming a 200 m conductive layer.

Contouring in ohm*m at logarithmic intervals.

Sensor elevation 30m

Map contours are multiples of those listed below

- 0.1 log(ohm*m)
- 0.5 log(ohm*m)
- 2.0 log(ohm*m)



CATHEDRAL GOLD CORPORATION

APPARENT RESISTIVITY CONTOURS

GOSSAN PROPERTY

Iskut River Area, British Columbia

SCALE 1:10,000

0 330 660 1320 2640 Feet

0 100 200 500 1000 Metres

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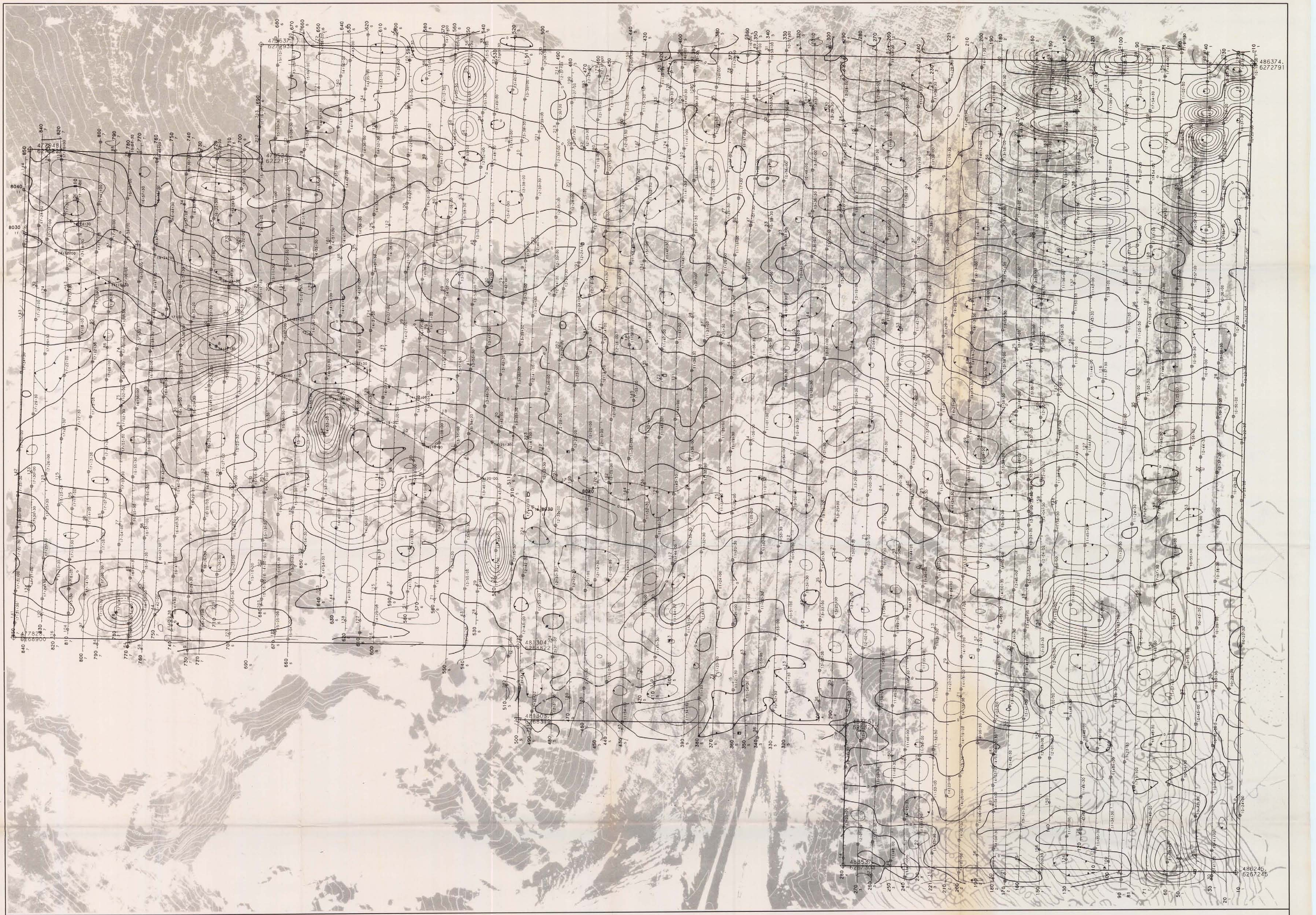
DATE:	JUNE 1989
NTS No:	104B/10,11
MAP No:	6 J8921



Flight Path

Average terrain clearance 60m
Average line spacing 100m

VLF-EM

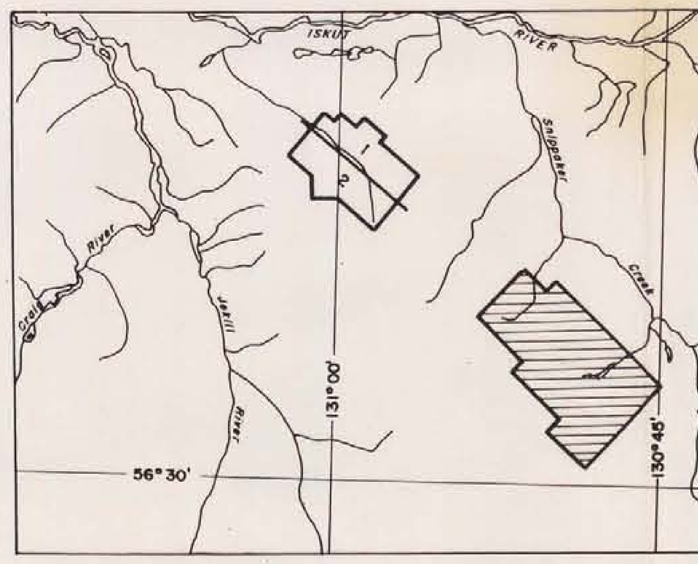
VLF-EM Total Field Intensity in percent.

Station: NLK
Jim Creek, Washington
24.8 kHz

Sensor elevation 45m

Map contours are multiples of those listed below

1 %
5 %
20 %



CATHEDRAL GOLD CORPORATION

VLF-EM TOTAL FIELD CONTOURS

GOSSAN PROPERTY

Iskut River Area, British Columbia

SCALE 1:10,000

0 330 660 1320 2640 Feet

0 100 200 500 1000 Metres

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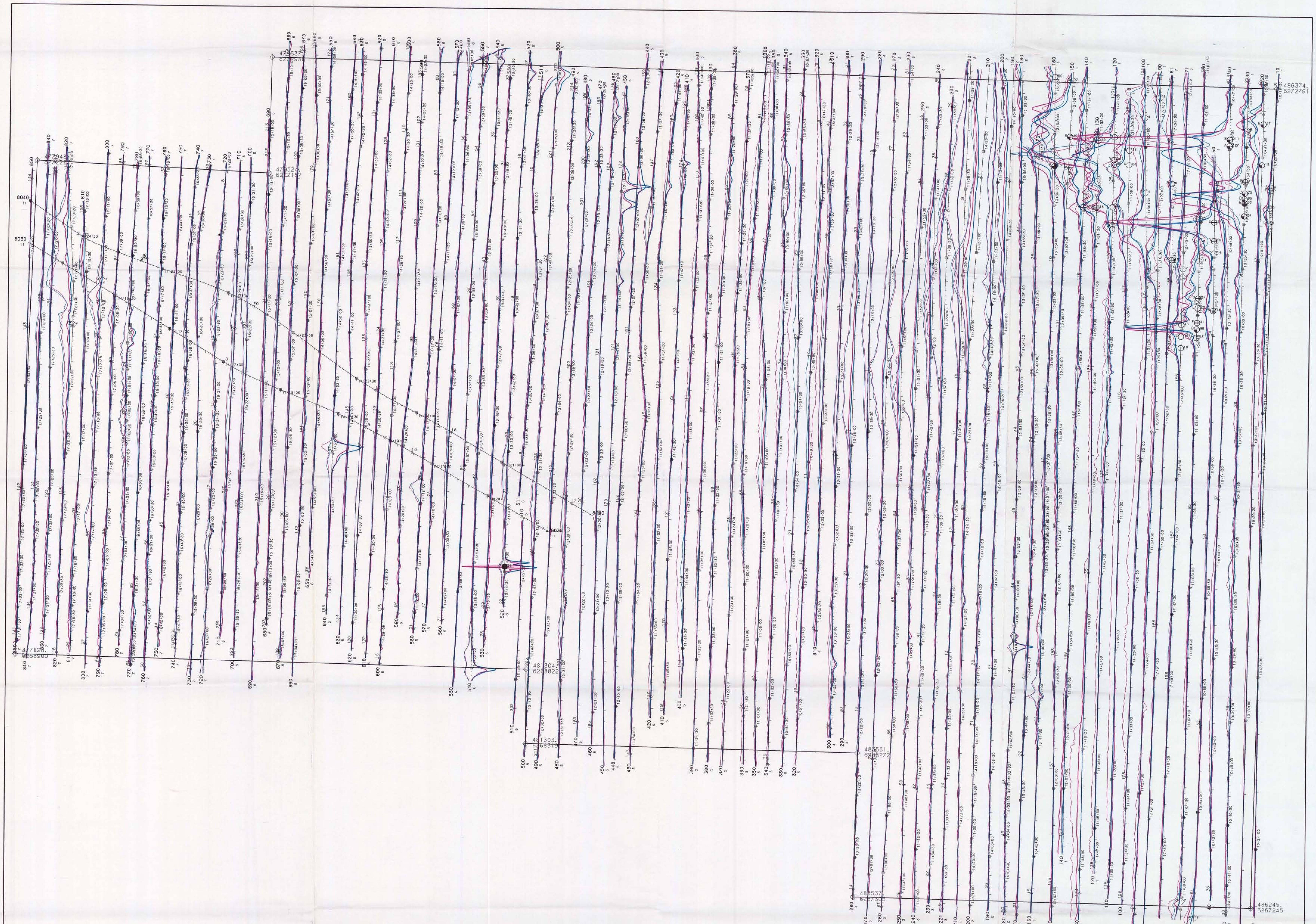
DATE:	JUNE 1989
NTS No:	104B/10,11
MAP No:	7 J8921



Flight Path

Average terrain clearance 60m
Average line spacing 100m

EM Profiles

Coaxial 2 ppm/mm
4600 Hz inphase
4600 Hz quadrature

Coplanar 8 ppm/mm
4175 Hz inphase
4175 Hz quadrature

Sensor elevation..........30m
Coil separation............7m

EM Anomalies

Conductivity Thickness (mhos)

- 0 - 1
- 1 - 2
- 2 - 4
- 4 - 8
- 8 - 15
- 15 - 30
- > 30

EM Anomaly A, 4600 Hz inphase amplitude 7 ppm. Conductivity thickness 1-2 mhos (see code).

CATHEDRAL GOLD CORPORATION

GEOLOGICAL BRANCH
ASSESSMENT REPORT

19,241

ELECTROMAGNETIC PROFILES

GOSSAN PROPERTY

Iskut River Area, British Columbia

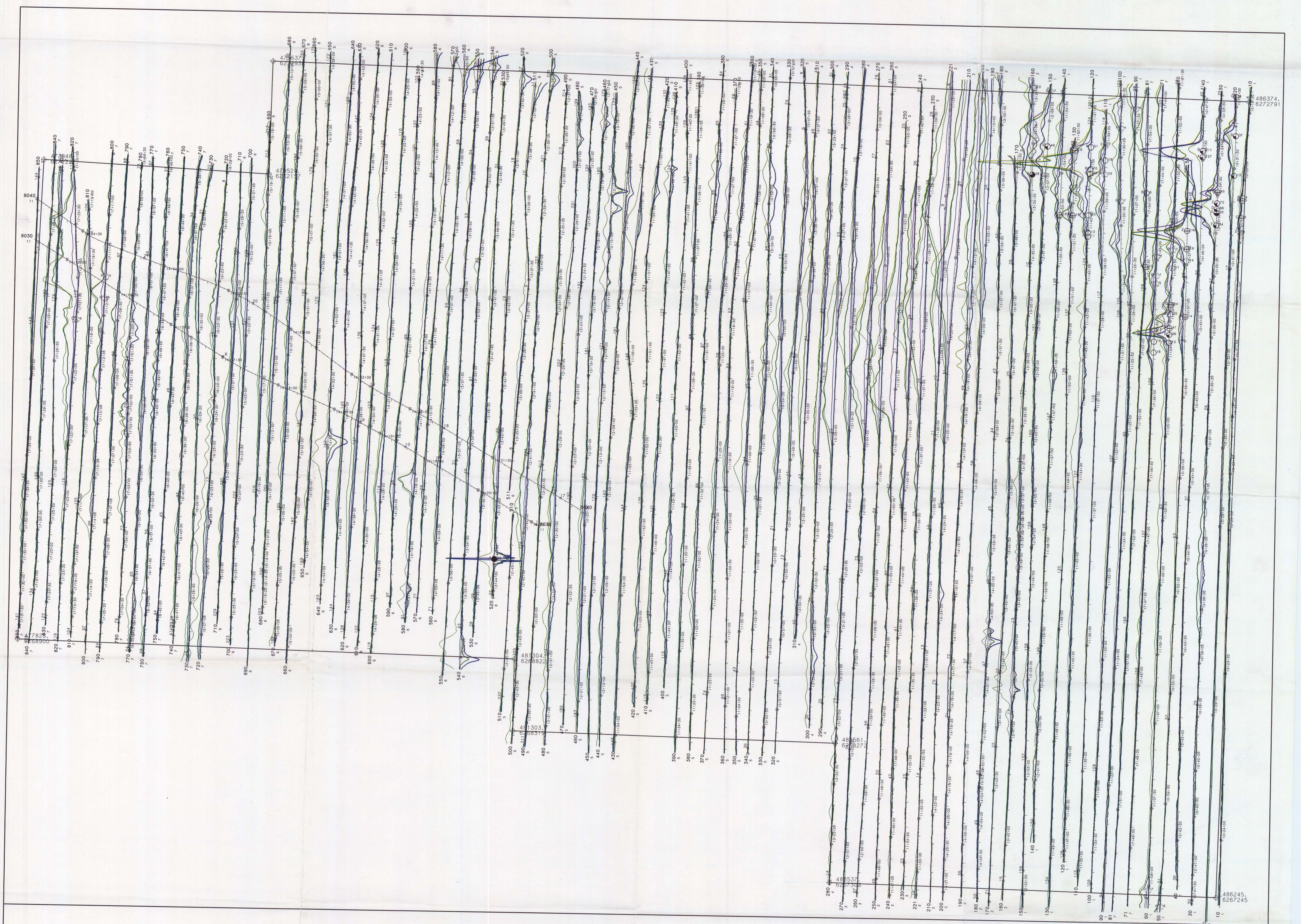
SCALE 1:10,000

0 330 660 1320 2640 Feet

0 100 200 500 1000 Metres

AERODAT LIMITED

DATE:	JUNE 1989
NTS No:	104B/10,11
MAP No:	8-A J8921



Flight Path

Average terrain clearance 60m
Average line spacing 100m

EM Profiles

Coaxial 2 ppm/mm
935 Hz inphase
935 Hz quadrature
Coplanar 16 ppm/mm
34 kHz inphase
34 kHz quadrature
Sensor elevation..........30m
Coil separation............7m

EM Anomalies

Conductivity Thickness (mhos)

0 - 1
1 - 2
2 - 4
4 - 8
8 - 15
15 - 30
> 30

EM Anomaly A, 4600 Hz inphase amplitude 7 ppm. Conductivity thickness 1-2 mhos (see code).

CATHEDRAL GOLD CORPORATION

GEOLOGICAL BRANCH ASSESSMENT REPORT

19,241

ELECTROMAGNETIC PROFILES

GOSSAN PROPERTY

Iskut River Area, British Columbia

SCALE 1:10,000

0 330 660 1320 2640 Feet

0 100 200 500 1000 Metres

AERODAT LIMITED

DATE: JUNE 1989
NTS No: 104B/10,11
MAP No: 8-B J8921