ASSESSMENT REPORT

ON THE

ESKAY CREEK PROJECT

AIRBORNE GEOPHYSICAL PROGRAM

TOK 1-22 and KAY 11-18 CLAIMS

Skeena Mining Division
NTS 104B/9W
Latitude 56°38'N
Longitude 130°28'W
British Columbia

August 8, 1989

by

D.W. Mallo
Prime Explorations Ltd.
and
Z. Dvorak
Aerodat Limited

Owner (50%):

CONSOLIDATED STIKINE SILVER LTD.
800-900 West Hastings Street
Vancouver, British Columbia
V6C 1E5

Owner and Operator (50%):

CALPINE RESOURCES INCORPORATED
PRIME CAPITAL PLACE
11th Floor, Box 10
808 West Hastings Street
Vancouver, British Columbia
V6C 2X4

ESKAY CREEK PROJECT

TABLE OF CONTENTS

SUMMARY

This report describes an airborne geophysical survey - Magnetic, Electromagnetic and VLF-EM, flown on the Eskay Creek Project (Tok 1-22 and Kay 11-18 Claims) on behalf of Calpine Resources Incorporated, March 20 to April 16, 1989. The geophysical report also covers four surrounding properties - which are being filed in separate assessment reports. The survey covered 151.37 line kilometers (of an areal total of 1,467 line-kms) over the claims. This work is submitted for assessment credit.

The claims are registered in the name of Consolidated Stikine Silver Ltd. who is a 50% partner in a Joint Venture with Calpine Resources Incorporated. The Eskay Creek Project lies on the northwest side of the Unuk River, approximately 83 kilometers northwest of Stewart, British Columbia and 37 kilometers southeast of the Cominco Limited/Prime Resources Corp. SNIP Deposit.

The Eskay Creek gold and silver prospects have been known and explored since 1932. At least 12 different companies have optioned and explored the ground prior to Calpine, with drilling and underground development. The airborne geophysical survey is part of the current exploration program, to further delineate the mineralized extent of the 21 Zone and other zones of mineralization.

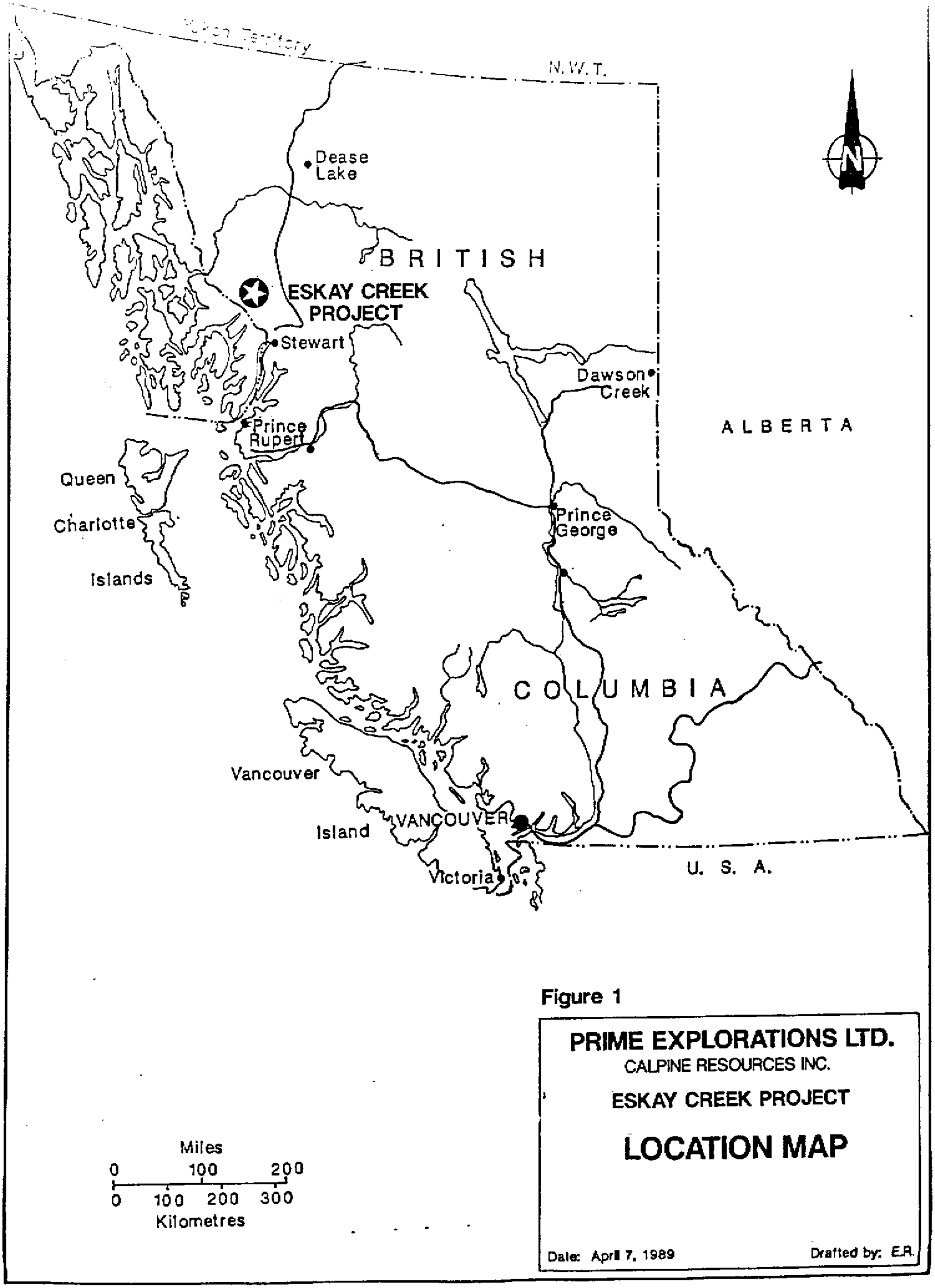

Figure 1

PRIME EXPLORATIONS LTD.
CALPINE RESOURCES INC.

ESKAY CREEK PROJECT

LOCATION MAP

Date: April 7, 1989 — Drafted by: E.R.

INTRODUCTION

Objective

The objective of the 1989 airborne geophysical survey was to define areas of possible precious metal anomalies reflected by magnetic, electromagnetic and VLF-EM surveys. These anomalies will hopefully provide further drilling targets for the current exploration program on the property. The geophysical report and maps are included as a Appendix I in this report.

Location and Access

The Eskay Creek Project is located west of the upper reaches of the Unuk River and east of Tom Mackay Lake. The property is north of the Sulphurets property and 37 kilometres southeast of the Cominco/Prime Resources SNIP deposit, in northwestern British Columbia. The property is approximately 83 kilometers northwest of Stewart, British Columbia and lies at Latitude 56°33'N and Longitude 130°28'W, NTS Reference Maps 104B/9W. (Figure 1)

Access is by helicopter either from Stewart, Bronson Creek (SNIP deposit) airstrip, and Bell II on the Stewart-Cassiar highway 25 kilometers to the east. Tom Mackay Lake, 5 kilometres to the east is suitable for float plane landings.

Property Description

The Eskay Creek property consists of 30 2-post mineral claims (30 units), situated within the Skeena Mining Division. (Figure 2) The recorded owner is Consolidated Stikine Silver Ltd. Pertinent claim information is as follows:

Table 1
LIST OF CLAIMS

Claim Name	Record No.	Record Date	Expiry Date *
TOK 1- 6	37248-37253	May 31,1972	May 31, 1999
TOK 7-14	37254-37261	May 31,1972	May 31, 1999
TOK 15-22	37421-37428	Sep. 6,1972	Sep. 6, 1999
KAY 11-18	21077-21084	Oct.11,1962	Oct.11, 1999

* Based on this assessment report (and an accompanying drilling assessment report) - 7 and 8 years work is to be applied to the claims.

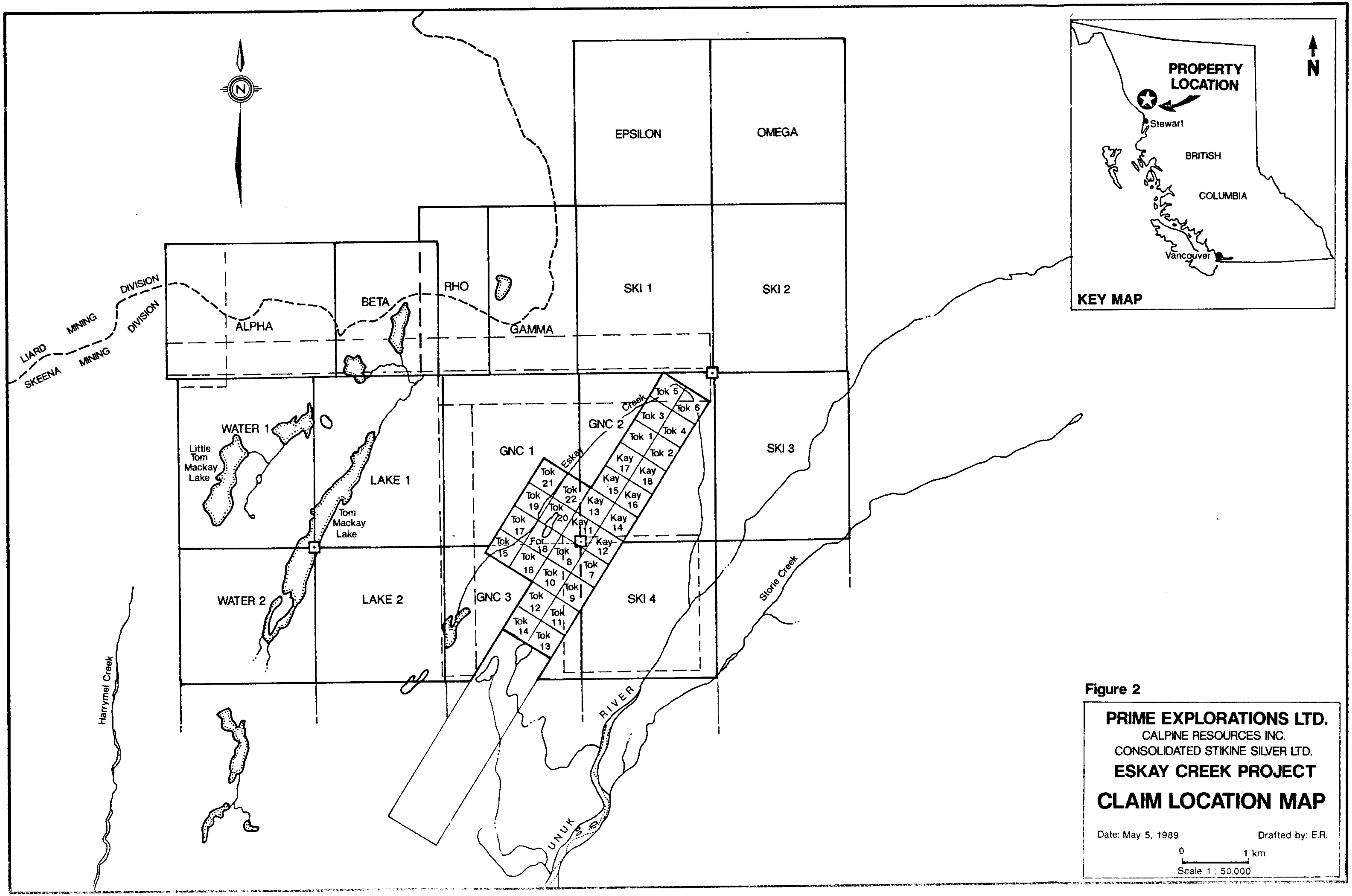

Figure 2

PRIME EXPLORATIONS LTD.
CALPINE RESOURCES INC.
CONSOLIDATED STIKINE SILVER LTD.
ESKAY CREEK PROJECT
CLAIM LOCATION MAP

Date: May 5, 1989 Drafted by: E.R.

0 1 km
Scale 1 : 50,000

Physiography, Vegetation and Climate

The Eskay Creek Project is located on the Prout Plateau within the eastern flank of the Coast Mountains. Elevations in the area of the property vary from approximately 850 to 1300 metres and relief on the property is about 200 metres and is locally sharp. The claims straddle a ridge, with Argillite Creek on the west and Eskay Creek on the east. Both creeks drain north and join Mackay Creek, a tributary of the south-flowing Unuk River, 2.5 kilometres to the east.

The area is characterized by severely glaciated, rocky terrain and sub-alpine vegetation. Most of the property is at or just below treeline and vegetation consists mostly mature conifers.

Annual precipitation is heavy, much of which falls as snow in January and February. Snow accumulations can exceed 10 metres. Summer conditions last from late June until October, and are characteristically coast insular or temperate and wet. The camp has been winterized and sustains year round operations.

Property History

Most of the activity to date in this area has centred around Bronson Creek on the Iskut River where the SNIP Deposit and the Johnny Mountain Mine are located. Increased activity on these deposits created a staking rush in the mid-1980's that spread south to the Unuk River, resulting in the current exploration program on the Eskay Creek property.

The Eskay Creek area has undergone numerous exploration campaigns since the discovery of gold in 1932. Extensive surface work continued through the 1930's with over 1,500 metres in diamond drilling, as well as trenching and adit construction. After the war, from the late 1940's through to the present there were only several years when the property was idle. In 1964, the property was registered under Stikine Silver Ltd. who have worked or optioned the claims, continuously to this date. Thousands of feet of drilling, extension of underground workings, trench and pit development, and constant field surveys were carried out. Results from these surveys produced data on the high grade gold of the 21 Zone and comparable results for other defined zones on the property. Over 20,000 metres of diamond drilling has been carried out on the most recent exploration program, since early 1988, in order to further delineate a deposit on the Eskay Creek property. The airborne survey, reported here, will assist in that program.

Property Geology and Mineralization

The Eskay Creek property is underlain by Lower to Middle Jurassic volcanic and sedimentary rocks of the Hazelton Group. Rock units are west facing, striking 060°N/15-70°W. Dips are steepest in the central and southern portion of the property, and become more shallow to the north. The stratigraphic section from oldest to youngest includes andesite flows with interbedded siltstone and wacke; tuffaceous wacke, mudstone and conglomerate; dacite lapilli and other tuffs; rhyolite lapilli tuff and breccia; pillowed andesite flows and breccias with interbedded carbonaceous mudstone; and, medium to thin-bedded conglomerate, wacke and mudstone. The major structure on the property appears to be a shallow northeast-plunging asymmetric anticline with a steep eastern limb.

The mineralization on the Eskay Creek property comprises strata-controlled and statabound gold and silver, plus antimony, arsenic and mercury associated with intense hydrothermal alteration at the contact of rhyolite breccia and overlying pillowed andesite flows. Disseminated and fissure-vein type gold and silver plus lead and zinc, and disseminated to massive sulphide type mineralization with low grade gold and silver seem to be associated with dacite tuff. A porphyry showing with low grade gold and silver plus minor base metals is in shears at the contact of an intrusive feldspar porphyry and wacke.

Regional Geology

The Unuk River area is underlain by thick, weakly metamorphosed Upper Triassic to Lower Jurassic volcanic and sedimentary arc-related units overlain by Middle Jurassic successor basin sedimentary units. Large scale northeast plunging vertical folds are thought to be principally related to late Jurassic to early Cretaceous plutonism and orogenesis.

The oldest units in the area are Upper Triassic volcanic and sedimentary rocks, occurring between Harrymel Creek and the Unuk River, tentatively correlated with the Stuhini Group. The Hazelton Group, represented by the lower Jurassic Unuk River Formation is also present in that area, and is dominated by a monotonous sequence of green andesite tuffs, flows and subordinate pyroclastic rocks, intercalated with wacke, siltstone, and minor conglomerate. Betty Creek Formation red and green volcaniclastic agglomerates unconformably overlie the Unuk River Formation, and the Mount Dilworth Formation of dacite to rhyolite pyroclastic breccias, bedded tuff and subordinate flows and flow breccias overlie the Betty Creek Formation. The Mount Dilworth Formation outcrops on the Prout Plateau. Late lower Jurassic Salmon River Formation outcrops north and west of the

Prout Plateau with a sequence of grey siltstone, fine-grained arenite, chert and limestone. Middle Jurassic sedimentary units of the Bowser Group occur on the Prout Plateau and in the vicinity of Tom Mackay Lake.

Geological mapping in the immediate property area has not located any intrusive rocks though Triassic and Jurassic granodiorite, diorite, and gabbro stocks are documented. The eastern contact of the Tertiary Coast Plutonic Complex is approximately 25 kilometres southwest of Eskay Creek. The regional metamorphic rank is lower greenschist, locally increasing to lower amphibolite within one kilometre of the COast Plutonic Complex. Outcrop to regional scale, upright to slightly overturned vertical folds are documented both in the Eskay Creek area and the surrounding region. Fold axes trend 020 - 035 North, plunging 0-15 N. Topographic lineaments are abundant in the area, and many likely reflect faults or joints. Documented structures are rare. A major vertical fault under Coulter and Argillite Creeks on the prout Plateau is possibly a north bifurcation of a major schistose shear zone in the lower Unuk River valley.

Conclusions and Recommendations

The results of this survey will be used for delineating anomalous areas on the property where further diamond drilling definition of the mineralized zones can be carried out.

More detailed conclusions of the survey are presented in the Aerodat report, Appendix I, page 6-1.

References

BLACKWELL, J., DOWNING, B. et al
1989: Report on the Eskay Creek Gold Project, Fall 1988 and Winter 1988-89, Exploration Programmes, on behalf of Calpine Resources Incorporated and Consolidated Stikine Silver Ltd.

HARRIS, C.R.
1987: Report on Tok and Kay Claims, Eskay Creek, Unuk River, B.C. for Consolidated Stikine Silver Ltd.

AERODAT LIMITED

Invoice No: 20-8901-0146
Date: April 28, 1989

Calpine Resources Inc.
c/o Prime Capital Place
10th floor, 808 West Hastings St.
Vancouver, B.C.

Attn: Mr. J. Foster

In Account With:

Aerodat Limited
3883 Nashua Drive
Mississauga, Ontario
L4V 1R3

Re: Airborne Geophysical Survey - Iskut River Area, B.C.
Eskay Creek Project

Total cost of survey	$76,049.60
Less payment	$13,850.00
Amount Due	**$62,199.60**

Eskay Creek Project share = $ 22,367

AERODAT LIMITED
[illegible] Nashua Drive • Mississauga • Ontario • Canada • [illegible]
Telephone (416) 671-2446 Telex 06-968872 Fax (416) 671-[illegible]

May 1, 1989

Calpine Resources Inc.
11th floor - Box 10
808 West Hastings Street
Vancouver, B.C.
V6C 2X6

Dear Sirs:

We would like to confirm that the following claims were surveyed by Aerodat during the time period listed below.

Claim Name	Record No.	Survey Dates	
GNC 1	4802	Mar. 20-Apr. 16/89	
GNC 2	4803	Mar. 20-Apr. 16/89	
GNC 3	4804	Mar. 20-Apr. 16/89	
Ski 4	6692	Mar. 20-Apr. 16/89	
Tok1-22	37248-61 37421-28	Mar. 20-Apr. 16/89	ESKAY CREEK
Kay 11-18	21077-84	Mar. 20-Apr. 16/89	

Preliminary estimated cost of the survey is calculated to be $62,000.00. Survey data is currently being compiled and interpreted and Aerodat anticipates the delivery of a finished report, meeting claim assessment requirements, within one month.

Thank you for choosing Aerodat and should you require further information in regard to the survey, please do not hesitate to contact us.

Sincerely yours,

AERODAT LIMITED

Douglas H. Pitcher

Douglas H. Pitcher
Vice President

8901

APPENDIX I

Airborne Geophysical Survey

REPORT ON A
COMBINED HELICOPTER-BORNE
MAGNETIC, ELECTROMAGNETIC AND VLF
SURVEY
UNUK RIVER - AREA 3
BRITISH COLUMBIA

FOR
ADRIAN RESOURCES LTD.
CALPINE RESOURCES INCORPORATED
CALVADA RESOURCES INC.
AND
CHERYL RESOURCES INC.
BY
AERODAT LIMITED
June 26, 1989

J8901-1

Zbynek Dvorak
Consulting Geophysicist

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LIST of MAPS
(Scale 1:10,000)
(Calpine Block 1:5,000 and 1:10,000)

Basic Maps : (As described under Appendix "B" of Contract)

1. **PHOTOMOSAIC BASE MAP;**
Showing registration crosses corresponding to NTS coordinates on survey maps, on stable Cronaflex film.

2. **FLIGHT LINES;**
Photocombination of flight lines, anomalies and fiducials with base map.

3. **AIRBORNE ELECTROMAGNETIC SURVEY INTERPRETATION MAP;**
showing conductor axes and anomaly peaks along with conductivity thickness values; on a Cronaflex base; Interpretation Report.

4. **TOTAL FIELD MAGNETIC CONTOURS;**
showing magnetic values contoured at 2 nanoTesla intervals; on a Cronaflex base map.

5. **COMPUTED VERTICAL MAGNETIC GRADIENT CONTOURS;**
showing vertical gradient values contoured at 0.2 nanoTesla per metre intervals showing flight lines and fiducials; on a Cronaflex base map.

6. **RESISTIVITIES CALCULATED FROM 4175 Hz COPLANAR COILS;**
contoured data at logarithmic spaced resistivity intervals (in ohm.m.), on a base map.

7. **VLF-EM TOTAL FIELD CONTOURS;**
of the VLF Total field from the Jim Creek, Washington transmitter; as a Cronaflex base map.

8. **ELECTROMAGNETIC ANOMALIES;**
showing anomaly peaks along with conductivity thickness values on clear acetate film.

1. INTRODUCTION

This report describes an airborne geophysical survey carried out on behalf of Prime Explorations Limited by Aerodat Limited. Equipment operated during the survey included a four frequency electromagnetic system, a high sensitivity cesium vapour magnetometer, a video tracking camera, a radar altimeter, and an electronic positioning system. Electromagnetic, magnetic, and altimeter data were recorded both in digital and analog forms. Positioning data was stored in digital form, encoded on VHS format video tape and recorded at regular intervals in UTM coordinates, as well as being marked on the flight path mosaic by the operator while in flight.

The survey area, comprising five claim group blocks in the Iskut-Unuk Rivers area, and situated approximately 80 kilometres northwest of Stewart, British Columbia, was flown during the period of March 20 to April 16, 1989. Data from 23 flights were used to compile the survey results. The flight line orientation was northwest-southeast, the nominal flight line spacing was 100 metres. Coverage and data quality were considered to be well within the specifications described in the service contract.

The purpose of the survey was to record airborne geophysical data over and around ground that is of interest to Prime Explorations Limited.

A total of 1,467 line kilometres of the recorded data were compiled in map form. The maps are presented as part of this report according to specifications laid out by Prime Explorations Limited.

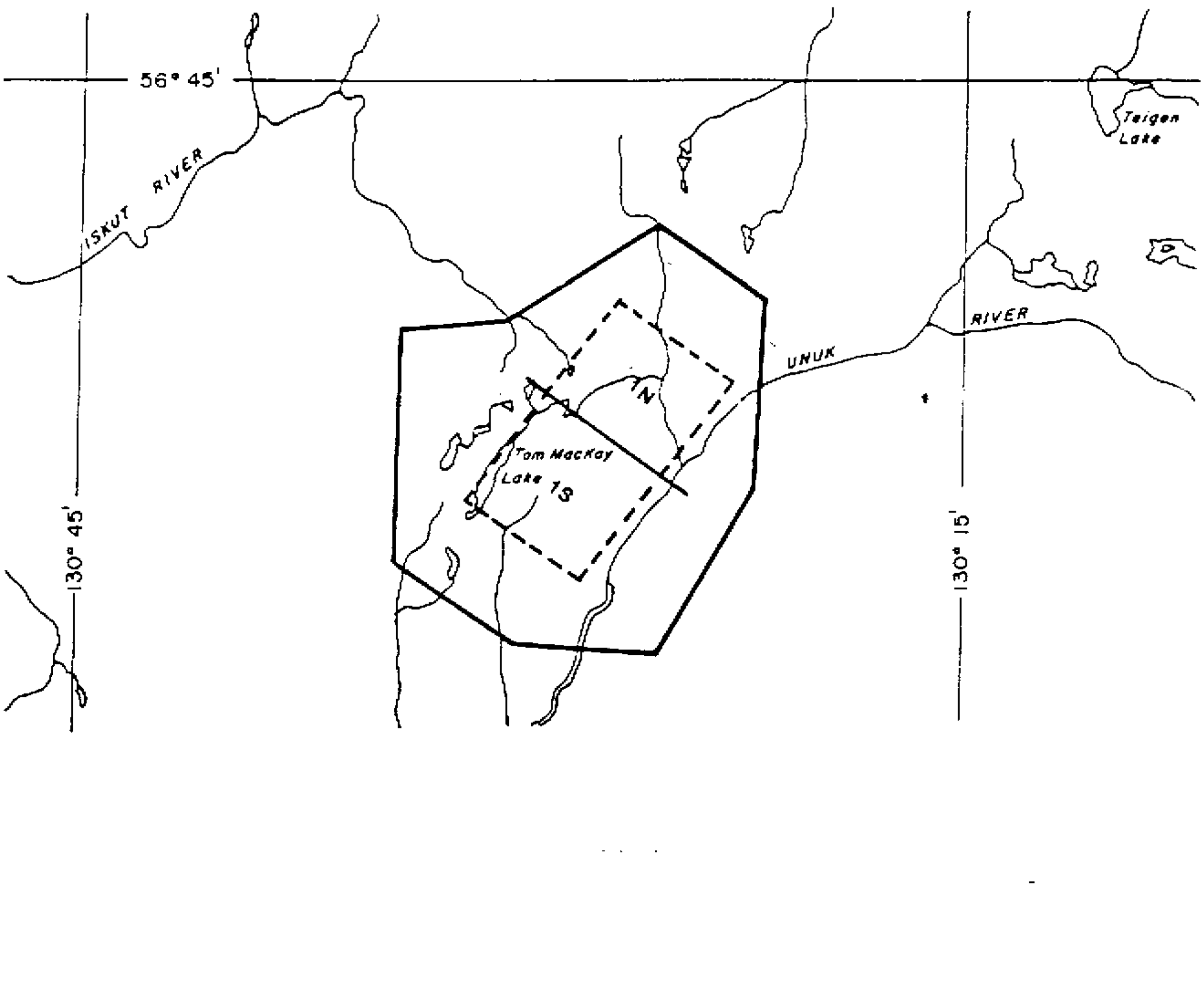
2. SURVEY AREA LOCATION AND CLAIMS COVERED

The survey area is depicted on the index map shown. It is centred at approximate geographic latitude 56 degrees 38 minutes north, longitude 130 degrees 30 minutes west, approximately 80 kilometres northwest of the town of Stewart, British Columbia, and 35 kilometres east of the Bronson Creek (Snip) airstrip (NTS Reference Maps Nos. 104B and 104C). The area is accessed by helicopter from Bronson, Stewart, or Bell II on the Cassiar-Stewart Highway. In summer, the Calpine area is also accessed by a float plane via McKay Lake.

The Calpine group block consists of the following claim groups:

Ski	Adrian
Eskay Creek	Calpine
GNC	Calpine
Albino Lake	Calvada
Lakewater	Cheryl.

The terrain in the survey block is generally very rugged, varying from approximately 275 m a.s.l. to 1317 m a.s.l.



56° 45'
ISKUT RIVER
Teigen Lake
RIVER
UNUK
N
Tom MacKay
Lake
1S
130° 45'
130° 15'

3. AIRCRAFT AND EQUIPMENT

3.1 Aircraft

An Aerospatiale SA 315B Lama helicopter, (C-GXYM), piloted by R. Hage and J. Kamphaus, owned and operated by Peace Helicopters Limited, was used for the survey. The Aerodat equipment operatosr and navigators were J. Huisman, K. McCart and V. Cole. Installation of the geophysical and ancillary equipment was carried out by Aerodat. The survey helicopter was flown at a mean terrain clearance of 60 metres, while the EM sensors have a ground clearance of 30 metres.

3.2 Equipment

3.2.1 Electromagnetic System

The electromagnetic system was an Aerodat 4 frequency system. Two vertical coaxial coil pairs are operated at 935 Hz and 4600 Hz and two horizontal coplanar coil pairs at 4175 Hz and 32 kHz. The transmitter-receiver separation was 7 metres. In phase 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 2 A. This instrument measures the total field and quadrature component of the selected frequency. The sensor was towed in a bird 12 metres below the helicopter. The transmitting station used was NLK, Jim Creek, Washington broadcasting at 24.8 kHz. This station is maximum coupled with E-W striking conductors and provides usable results for strikes +/- 30 degrees.

3.2.3 Magnetometer

The magnetometer employed a Scintrex Model VIW 2321 H8 cesium, optically pumped magnetometer sensor. The sensitivity of this instrument was 0.1 nanoTeslas at a 0.2 second sampling rate. The sensor was towed in a bird 12 metres below the helicopter.

3.2.4 Magnetic Base Station

An IFG (GEM 8) 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 KRA 10 radar altimeter was used to record terrain clearance for the Calpine Block. The output from the instrument is a linear function of altitude for maximum accuracy.

3.2.6 Tracking Camera

A Panasonic video flight path recording system was used to record the flight path on standard VHS format video tapes. The system was operated in continuous mode and the flight number, real time and manual fiducials were registered on the picture frame for cross-reference to the analog and digital data.

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 was recorded:

Channel	Input	Scale
CXI1	Low Frequency Inphase Coaxial	25 ppm/cm
CXQ1	Low Frequency Quadrature Coaxial	25
CXI2	High Frequency Inphase Coaxial	25
CXQ2	High Frequency Quadrature Coaxial	25
CPI1	Mid Frequency Inphase Coplanar	100ppm/cm
CPQ1	Mid Frequency Quadrature Coplanar	100

Channel	Input	Scale
CPI2	High Frequency Inphase Coplanar	200
CPQ2	High Frequency Quadrature Coplanar	200
VLT	VLF-EM Total Field, Line NLK	25 %/cm
VLQ	VLF-EM Quadrature, Line NLK	25 %/cm
VOT	VLF-EM Total Field,Ortho NSS	25 %/cm
VOQ	VLF-EM Quadrature, Ortho NSS	25 %/cm
RALT	Radar Altimeter, (150 m. at top of chart)	100ft/cm
MAGF	Magnetometer, fine	25nT/cm
MAGC	Magnetometer, coarse	250nT/cm

3.2.8 Digital Recorder

A DGR 33:16 data system recorded the survey on magnetic tape. Information recorded was as follows:

Equipment	Recording Interval
EM System	0.1 seconds
VLF - EM	0.2 seconds
Magnetometer	0.1 seconds
Altimeter	0.5 seconds
Nav System	0.2 seconds
Power Line Monitor	0.2 seconds

3.2.9 Radar Positioning System

A Motorola Mini Ranger IV, UHF radar navigation system was used for both navigation and flight path recovery. Transponders sited at fixed locations were interrogated several times per second and the ranges from these points to the helicopter are measured to a high degree of accuracy. A navigational computer triangulates the position of the helicopter and provides the pilot with navigation information. The UTM data was recorded on magnetic tape and on the analog records for subsequent flight path determination.

4. DATA PRESENTATION

4.1 Base Map

An orthophoto mosaic base at a scale of 1:10,000 was prepared as a base map for the project data. The Calpine block was also presented at a scale of 1:5,000. The final data is presented on an unscreened Cronaflex base. Recovery of a number of points ensures that the electronic navigation coordinates are accurately registered to the base topography.

4.2 Electromagnetic Anomaly Map

4.2.1 Flight Path

The flight path for the survey area was recovered from the VHS Video Tracing Tapes by transferring the time at which the helicopter passed over a recognizable feature onto the photomosaic. These coordinates were then digitized into the database and formed the basis of the flight path data.

The flight path was derived from the Mini Ranger UHF radar positioning system (Calpine block only). The distance from the helicopter to two established reference locations was measured several times per second and the position of the helicopter calculated by triangulation. It is estimated that the flight path is generally accurate to about 10 metres with respect to the topographic detail on the base map.

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.

4.2.2 Electromagnetic Data Compilation

The electromagnetic data was 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 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 phenomenon. 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 amplitude of the various inphase and quadrature components is zero when no conductive or permeable source is present. The filtered and levelled data was used in the interpretation of the EM data.

4.2.3 Airborne EM Interpretation

An interpretation of the electromagnetic data was prepared showing peak locations of anomalies and conductivity thickness ranges along with the inphase amplitudes (computed from the 4600 Hz coaxial response). The peak response symbols may be referenced by a sequential letter, progressing in the original flight direction. The EM response profiles are presented on a separate map with an expanded horizontal scale across the geological strike.

4.3 Total Field Magnetic Contours

The aeromagnetic data was corrected for diurnal variations by adjustment with the digitally recorded base station magnetic values. No correction for regional variation (IGRF) was applied. The corrected profile data was interpolated onto a regular grid at a 25 metre true scale interval using a cubic spline technique. The grid provided the basis for threading the presented contours at a 2 nanoTesla interval. The aeromagnetic data have been presented with flight path and electromagnetic information on a Cronaflex copy of the photomosaic base map.

4.4 VLF-EM Total Field

The VLF-EM signals from NLK, Jim Creek, Washington, broadcasting at 24.8 kHz, were compiled as contours in map form and presented on a Cronaflex overlay of the photomosaic base map along with flight lines and anomaly information. The orthogonal VLF data was also recorded on the analog records and on digital tape.

4.5 EM Resistivity Contours

The apparent resistivity was calculated from the 4175 Hz coplanar coil pair and the resultant contours are presented on a base map. The calculations are based on a half space model. This is equivalent to a geological unit with more than 200 metres width and strike length. In practice, conductors, conductive lithologies and surficial conductors often have lesser dimensions, at least in one of the three dimensions. Apparent resistivities are usually underestimated for these sources.

5. INTERPRETATION

5.1 Geology

Geological information was provided by the Prime Explorations Limited and Keewatin Engineering Inc. personnel. Comments made in this paragraph are paraphrased from an internal geologic report prepared by J. Blackwell and liberally extrapolated to the general area geology. Comments regarding the broader area are necessarily general, the information is incomplete and should be used only as a guide.

The survey area is located within the Intermontane Tectonic Belt which contains Stikine terrane rock assemblages. The Unuk River area is underlain by Upper Triassic to Lower Jurassic volcanic and sedimentary arc-related units. These thick, weakly metamorphosed units are overlain by Middle Jurassic successor basin sedimentary units. Large scale northeast plunging vertical folds and major north trending cataclystic and fault zones are believed to be related to late Jurassic to early Cretaceous plutons and orogenesis. There is also some evidence of late Triassic deformation.

Regional geologic mapping by the GSC, the British Columbia Ministry of Energy, Mines and Petroleum Resources, and Newmont Mining has produced selective areal map coverage. Government geologic reconnaissance mapping is continuing, and revisions and improvements to the current geologic understanding are expected.

Stihini Group rocks (Upper Triassic volcanics and sedimentary rocks) occur east of Unuk River and west of Harrymel Creek. They include deformed and metamorphosed siltstone, wackes, conglomerate, and limestone, overlain by basalt and andesite flows and breccias. Dacite pyroclastic tuffs and breccias are also present on a local scale.

Hazleton Group comprises Unuk River Formation, Betty Creek Formation, Mount Dilworth Formation, and Salmon River Formation.

The Lower Jurassic Unuk River Formation occurs at moderate elevations east of Unuk River and west of Harrymel Creek. Green andesite, tuffs, flows and pyroclastic rocks intercalated with wackes, siltstone and minor conglomerate are dominant.

The Lower Jurassic Betty Creek Formation, outcropping throughout the Unuk River valley, overlies the Unuk River Formation. It comprises volcaniclastic conglomerate, andesite and dacite pyroclastic tuff and breccias with intercalated grit and arenaceous wackes.

Overlying the Betty Creek Formation is the Mount Dilworth Formation. It outcrops on the Prout Plateau, west of Harrymel Creek, at higher elevations, and east of

Unuk River. It comprises dacite to rhyolite pyroclastic breccias, bedded tuff and flow breccias.

The late Lower Jurassic Salmon River Formation comprises a sequence of grey siltstone, chert, and limestone. It outcrops north and west of the Prout Plateau.

Bowser Group - Ashman Formation Middle Jurassic units occur on the Prout Plateau in the vicinity of Tom McKay Lake. These rocks include chert pebble conglomerate, grey to black mudstone and wackes, and limestone and volcanic flows.

Cenozoic to Recent subareal olivine basalt flows occur frequently. Deposits are widespread in the major river valleys and in the Cone Glacier area. Numerous felsic and mafic dykes occur locally.

No intrusive rocks were located on the Prout Plateau. Elsewhere in the general area, a variety of intrusives were reported. Regional metamorphic grade is lower greenschist. The grade increases locally to lower amphibolite. Upright to slightly overturned vertical folds are documented with fold axes at 20 to 35 degrees north, plunging 0 to 15 degrees north. Documented faults and other structures are rare. A major 150 degree north trending shear zone cuts through the lower Unuk River valley. Further to the north, it bifurcates or joins a major north trending mylonite band in the Harrymel Creek valley and a major vertical fault in the Clouter and Argillite Creek valleys.

5.2 Magnetics

The magnetic data from the high sensitivity cesium magnetometer provided virtually continuous magnetic reading when recording at two-tenth second intervals. The system is also noise free for all practical purposes. The sensitivity of 0.1 nT allows for the mapping of very small inflections in the magnetic field, resulting in a contour map that is comparable in quality to ground data.

The total magnetic field varies over a moderate range of values, from approximately 57,215 nT to more than 58,600 nT. High values occur along the west survey boundary, in the southeast part of the area, and along a tongue-like trend extending from the south-central portion of the block toward its east-central part (the 57,500 nT contour line may delineate the extent of this last zone). All three regions correlate closely with volcanics on the government release map. While the west and southeast zones are characterized by strong and frequent variations of the field, the central tongue-like region displays lower amplitude, less variable field.

Away from the high zones, the field is generally smooth and slowly varying, as might be expected over sediments. The calculated vertical magnetic gradient map shows that even these low field areas contain weak magnetic anomalies which strike in directions paralleling the trend of the high field zones. These weak secondary anomalies extend through the central portion of the area becoming very weak-to-extinct in the northern part of the grid. (The gradient data suggests that these anomalies possibly terminate along an east-west oriented trend extending from the west end of lines 3371 to 3441 toward the east end of lines 4350 to 4370.) Results of past and current exploration and drilling in the central part of the grid, specifically over the Calpine claim group, indicate that it is these weak secondary magnetic anomalies which may be related to (or indirectly used as a guide for locating) the gold mineralization. Consequently, attention was paid to these weak anomalies and their relation to structural features. In the Calpine claim block, gold mineralization appears to follow the eastern flank of a moderately strong magnetic trend extending in a discontinuous manner from the time mark 11:07:20 on line 4320 toward the time mark 16:36:44 on line 4100. Attractive mineralization appears to be confined to areas of intersection of this magnetic trend with several lineaments (breaks). It is proposed that these intersections reflect zones of weakness which served as conduits for hydrothermal fluids. It is recommended to concentrate the ground follow-up to the eastern flanks of this magnetic trend, and, if warranted, to extend the search further southwest, along this trend as indicated by the vertical gradient data.

Comparison of the magnetic data (calculated gradient in particular) with the preliminary geology interpretation from the Calpine claim block suggests that some of the weak secondary magnetic anomalies reflect faults (they may be caused by localized concentrations of magnetite along faults, e.g., the Argillite Creek Fault), so that care has to be taken in examining and selecting similar weak magnetic anomalies. Re-evaluation of present geologic interpretation should be undertaken with the aim of repositioning, and later locating in the field of the inferred structures. An example of possible readjustment is the southern extent of the Argillite Creek Fault within the Calpine Claim Block. In this respect, the data should be evaluated in terms of a feasible mineralization/geologic model. One of the possibilities is that the central tongue-like magnetic zone reflects a graben, the west edge of which is formed by the Argillite Creek Fault. If this model is adopted, an attempt must be made to locate the eastern graben limit.

Numerous breaks, terminations, and offsets of the contour patterns exist which are interpreted to indicate structural features (see the interpretation map). Preferential orientation of these features is in the east-west direction with a secondary set oriented in the northwest-southeast direction. These structural features are generally well defined in areas of high and moderate magnetic activity but become indistinct in low activity regions.

5.3 Apparent Resistivity

Flying in rugged terrain results in frequent and pronounced changes of the flying altitude, which, in turn, results in extreme variations of the electromagnetic responses which influence the resistivity calculation. The reader should, therefore, remember that the apparent resistivity map may provide an incomplete picture.

The apparent resistivity was calculated from the coplanar 4,175 Hz electromagnetic data. The apparent resistivities vary over a broad range of values, from less than 6 ohm-m in the south-central part of the area, to more than 8,000 ohm-m. Most of the area, however, displays high resistivities, in excess of 1,000 ohm-m. Low and intermediate values are mainly associated with valleys and lakes where they may reflect conductive sediments. In some cases they reflect conductive rock units, and/or bedrock conductors. Low resistivity values were calculated over the Coulter Creek valley, over and in the vicinity of Unuk River, in conjunction with Melville Glacier, along the east edge of the western volcanic unit, in the north part of the survey block, and in an approximately north-south oriented zone that occurs at the eastern margin of the central volcanic tongue-like region.

Tom MacKay Lake is an exception as it is not distinguished as a resistivity low. It occurs in an area which displays a vaguely discernible circular resistivity low (2,500 to 3,500 ohm-m) of approximately 1,000 m diameter, reminiscent of a meteorite crater. However, magnetic data does not show any such feature. Another circularly shaped resistivity low is situated in the west corner of the area where it may occur along the inner border of a magnetic zone. In the south half of the survey block, low resistivities show some correlation with magnetically inactive areas. The narrow, less than 50 ohm-m low situated at the west end of lines 3120 to 3311 has been produced by a suite of well defined bedrock conductors. Similarly, the north end of the central resistivity low (i.e., the central part of lines 3311 to 3390) is associated with a suite of bedrock conductors, as is the extensive resistivity low near the east end of lines 3120 to 3351. In general, however, there are no ready explanations for most of these resistivity features.

Resistivity contours are much sparser than the magnetic and calculated magnetic vertical gradient contours. Consequently, it is much more difficult to postulate any definitive and well defined breaks, terminations, and offsets which may reflect structural features.

5.4 Electromagnetics

The electromagnetic data was first checked by a line-to-line examination of the analog records. Record quality was generally very good with some noise on the 32,000 Hz coplanar traces which occurred due to flying in rugged terrain. This noise was substantially reduced by a smoothing filter. Geologic noise, in the form of surficial conductors, is present at places as discussed in the resistivity section, mainly on the higher frequency responses. It is easily recognized and does not constitute any interpretation problems.

The electromagnetic anomalies were selected by the writer from the analog and digital profiles and the anomaly axes were assigned based on the similarity of the EM response taking also into account the general magnetic trend.

Comments made in the Apparent Resistivity section regarding severe changes of the flying altitude and their effects on the electromagnetic response apply also for the electromagnetic anomalies. It should be noted that in areas of excessive flying height there could be no electromagnetic anomaly presented on the map.

The majority of the electromagnetic anomalies occur within the volcanic units or at their boundaries. Some EM anomalies occur in the valleys which would suggest that they reflect conductive channels. Alternatively, they may reflect placer type mineralization. Many of these conductors are multiple parallel conductors and their dip cannot be readily assessed. Additional difficulty arises due to the poor definition of the individual EM anomalies on adjacent lines. This is believed to be caused by varying flying altitude in rough terrain and subsequent loss of the electromagnetic signal. Line to line correlation and the assignment of the conductor axes is thus reduced, and in many cases the axes were assigned on a tentative basis only.

The known Calpine gold deposit does not respond to the electromagnetic techniques. No EM or resistivity anomaly is associated with the deposit. There are several weak, poorly defined anomalies in the general area which, however, do not appear to display any diagnostic characteristics which could be used elsewhere as a guide in locating similar targets.

The following paragraphs provide a summary of only those bedrock EM responses which are interpreted to reflect vertical thin sheet type conductors. Other conductors, such as broad conductive units, are not mentioned here. The reader is referred to the resistivity map for further information.

Group I. - These mostly moderate to high conductance anomalies reflect a suite of bedrock conductors which have produced a narrow winding resistivity low associated with a moderately strong magnetic anomaly. Ground follow-up is recommended.

Group II. - This is an extensive group of bedrock and possible bedrock conductors which follow the Coulter Creek valley and are associated with a narrow wedge of sediments situated between the western and the central volcanic units. The conductors display some correlation with magnetics although the general trend of the associated resistivity low is discordant with the magnetic trends. The quality of the conductors appears to change widely within the group. Ground follow-up should be considered on a selective basis after the overall assessment of all available information (geophysics, geology, geochemistry) has been completed.

Group III. - This group consists of two weak conductors. These relatively attractive conductors may constitute an extension of group II conductors. Also, they are situated on the west flank of a magnetic anomaly belonging to the Calpine magnetic trend. From the north they appear to be terminated by an east-west oriented lineament (fault?). Ground follow-up should be considered.

Groups IVa and IVb. - Conductors within these groupings are mostly poorly defined. They occur within an extensive resistivity low confined to the western part of the Unuk River valley. As such, these EM anomalies may merely reflect variation of the valley resistivity along "channels" of conductive sediments. Alternatively, they may show mineralization. No magnetic correlation is apparent. Their follow-up would depend on results of exploratory follow-up.

Group V. - Parallel to the group IV, these conductors are better defined and may be of bedrock or possible bedrock origin. No magnetic correlation is apparent. Ground follow-up decision should be based on the same criteria as in the case of group IV conductors.

Group VI. - Generally well defined bedrock conductors of this grouping may constitute an extension of group V conductors. They are associated with an attractive low resistivity zone and appear to terminate at one of the east-west oriented lineaments (fault?). Ground follow-up is recommended.

Group VII. - These conductors occur on the west slopes of a creek valley feeding into the Unuk River. Consequently, they are not believed to reflect conductive valley sediments. Their follow-up may be considered.

The area west and northwest of group VII contains several weak, poorly defined, single line EM anomalies. They occur within the Calpine claim block and do not appear to reflect any known mineralization. Instead, they may be indicative of conductive parts of structural features.

Groups VIII and IX. - These two groups are situated along the eastern flank of the western volcanic unit. Although poorly defined or not recognized due to high altitude, they appear to reflect possible bedrock conductors. Their follow-up is recommended.

A number of EM anomalies were caused by localized concentrations of magnetite. These EM anomalies are recognized by their negative in-phase responses. In cases where these negative in-phase responses are accompanied by positive quadrature response with vertical thin sheet characteristics, an EM anomaly was selected.

6. CONCLUSIONS AND RECOMMENDATIONS

Results of the present airborne geophysical survey indicate that the survey area is underlain by complex geology. Magnetic data, in particular, correlates well with the known and assumed geology: low, uneventful magnetic field in the north portion of the grid reflects sediments whereas the volcanics in the east, west and central parts are indicated by higher and frequently varying magnetic values. There are some suggestions that the central tongue-like magnetic high may reflect relatively thin volcanic flows.

The magnetic data provides new and valuable structural information which suggests that some structural features, or their major portions, may occur at different locations than thought previously (e.g., Argillite Creek Fault in its south part). Although, the magnetic data could accommodate some intriguing geologic models and hypotheses. One such hypothesis concerns the occurrence of a graben in the central portion of the survey block. While the western limit of such graben may be postulated from the present data, its eastern limit has not been defined. The central magnetic high, however, remains the most attractive geophysical target area. It contains an intermittent magnetic anomaly which appears to be related to a known gold mineralized horizon. The magnetic data suggests that this anomaly may extend further southwest which would open new exploration possibilities.

At the present time, it would appear that the resistivity data does not provide much useful information. This is partly (or mostly?) due to the fact that the geologic environment is highly resistive. Lower values are commonly associated with lakes, valleys, and lower flat ground. Only exceptionally, there is a vague suggestion of a correlation between the resistivity patterns and geologic units. Similarly, very little structural information can be extracted from the resistivity data.

The known gold mineralization in the Calpine claim block has not produced any recognizable resistivity or electromagnetic response. Although there are several weak EM anomalies in the general area of the Calpine deposit, none of them is associated with known mineralization.

Nine conductor groups were identified in the survey area. They are interpreted to reflect bedrock and possible bedrock conductors of thin sheet type. However, because they are not considered as primary exploration indicators, their ground follow-up would depend on correlation with other geophysical parameters. Their exploration attractiveness increases when these conductors occur in the vicinity of inferred structural features.

The survey results should be compiled on a common base containing all types of other information, including geology, geochemistry, and other geophysics, and target areas selected based on the mutual correlation of all the data.

Respectfully submitted

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June 26, 1989

APPENDIX I

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 chance 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 II

ANOMALY LIST

J8901 CALPINE AREA, ISKUT-UNUK RIVERS, B.C. - EM ANOMALIES

FLIGHT	LINE	ANOMALY	CATEGORY	AMPLITUDE (PPM) INPHASE	QUAD.	CONDUCTOR CTP MHOS	DEPTH MTRS	BIRD HEIGHT MTRS
1	3011	A	2	17.4	9.1	2.9	0	54
1	3011	B	2	17.8	9.8	2.7	0	56
1	3011	C	0	6.6	7.3	0.7	3	55
1	3012	A	0	3.6	11.6	0.1	0	47
1	3012	B	0	6.7	14.5	0.2	1	38
1	3012	C	0	4.6	15.2	0.1	0	41
1	3012	D	0	6.7	9.0	0.5	0	56
1	3012	E	0	10.4	12.4	0.8	5	43
1	3012	F	0	23.4	30.2	0.9	14	20
1	3021	A	2	7.9	4.3	2.1	2	67
1	3031	A	1	7.1	4.1	1.8	0	76
1	3031	B	4	11.8	2.5	8.9	0	80
1	3040	A	2	18.9	9.9	3.0	0	75
1	3040	B	2	19.3	12.3	2.3	0	63
1	3040	C	1	16.9	11.9	1.9	0	57
1	3040	D	1	31.3	28.5	1.7	0	46
1	3040	E	1	13.1	12.0	1.2	0	60
1	3040	F	1	8.9	6.7	1.4	0	72
1	3040	G	0	-4.6	11.3	0.0	0	28
1	3050	A	1	8.7	6.4	1.4	0	63
1	3060	A	1	12.5	9.0	1.7	0	62
1	3060	B	1	9.1	6.0	1.7	0	83
1	3060	C	1	11.6	10.1	1.2	1	51
1	3070	A	0	6.2	7.3	0.6	0	77
1	3070	B	0	7.4	8.0	0.8	0	76
1	3070	C	0	9.1	9.4	0.9	0	58
1	3070	D	1	4.1	2.3	1.6	0	103
2	3090	A	0	0.5	6.0	0.0	0	48
2	3090	B	2	7.1	3.5	2.3	0	91
2	3100	A	3	11.6	3.7	5.0	0	78
2	3100	B	2	8.5	4.5	2.2	1	67
2	3100	C	2	4.7	2.3	2.0	22	62
2	3100	D	1	6.1	3.6	1.7	0	89
2	3110	A	0	12.9	14.9	0.9	0	45

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.

J8901 CALPINE AREA, ISKUT-UNUK RIVERS, B.C. - EM ANOMALIES

FLIGHT	LINE	ANOMALY	CATEGORY	AMPLITUDE (PPM) INPHASE	QUAD.	CONDUCTOR CTP MHOS	DEPTH MTRS	BIRD HEIGHT MTRS
2	3110	B	1	16.0	15.1	1.3	0	57
2	3110	C	2	10.3	6.2	2.0	0	80
2	3110	D	2	6.8	2.5	3.5	0	86
2	3120	A	3	12.2	3.0	7.3	0	90
2	3120	B	4	22.7	5.5	9.0	4	49
2	3120	C	4	21.9	5.7	8.1	0	60
2	3120	D	4	31.3	8.0	9.2	0	50
2	3120	E	3	29.6	10.1	6.2	7	40
2	3120	F	3	26.2	8.5	6.4	0	49
2	3120	G	3	15.4	4.2	6.8	0	71
2	3120	H	2	8.6	4.6	2.2	0	100
2	3120	J	1	10.7	8.2	1.4	7	50
2	3120	K	1	6.2	3.9	1.5	0	95
2	3120	M	1	8.3	5.9	1.5	0	81
2	3120	N	1	8.0	6.9	1.1	0	73
2	3120	O	0	5.9	6.8	0.6	0	62
2	3120	P	0	2.6	11.2	0.0	0	35
2	3130	A	0	7.2	10.2	0.5	0	57
2	3130	B	0	5.7	12.2	0.2	0	46
2	3130	C	0	6.6	8.9	0.5	0	62
2	3130	D	1	7.8	5.3	1.5	0	70
2	3130	E	2	10.4	4.8	2.9	0	92
2	3130	F	2	8.2	3.4	3.1	0	90
2	3130	G	3	8.7	2.8	4.5	0	106
2	3141	A	3	23.9	7.2	6.8	0	53
2	3141	B	3	17.7	5.4	6.1	5	51
2	3141	C	3	12.1	3.2	6.6	0	84
2	3141	D	3	10.2	2.3	7.8	0	70
2	3141	E	2	5.9	2.3	3.0	6	75
2	3141	F	1	8.0	6.0	1.3	9	55
2	3141	G	1	6.4	3.6	1.8	13	61
2	3141	H	1	5.8	3.2	1.8	21	56
2	3141	J	1	7.1	5.7	1.1	0	67
2	3141	K	1	5.3	3.0	1.7	0	86
2	3150	A	0	5.5	5.7	0.7	2	61
2	3150	B	0	12.1	16.6	0.7	1	40
2	3151	A	0	2.2	1.8	0.7	0	115
2	3160	A	2	7.7	4.0	2.2	4	67
2	3160	B	2	7.3	3.6	2.3	0	114

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.

J8901 CALPINE AREA, ISKUT-UNUK RIVERS, B.C. - EM ANOMALIES

FLIGHT	LINE	ANOMALY	CATEGORY	AMPLITUDE (PPM) INPHASE	QUAD.	CONDUCTOR CTP MHOS	DEPTH MTRS	BIRD HEIGHT MTRS
2	3160	C	2	9.8	4.4	3.0	0	78
2	3160	D	2	10.6	4.3	3.5	0	72
2	3160	E	1	6.0	4.7	1.1	0	87
2	3160	F	1	6.3	4.8	1.2	0	77
3	3170	A	1	5.2	2.9	1.7	0	86
3	3170	B	2	3.8	1.2	3.5	0	120
3	3170	C	4	19.2	4.1	10.2	7	49
3	3170	D	4	15.4	3.7	8.1	8	53
3	3170	E	1	12.7	9.4	1.6	0	64
3	3170	F	0	8.7	9.0	0.9	2	52
3	3170	G	0	13.5	15.8	0.9	0	53
3	3170	H	0	3.1	8.3	0.1	0	77
3	3180	A	0	8.6	18.7	0.3	4	32
3	3180	B	0	8.3	17.4	0.3	0	53
3	3180	C	0	4.8	9.7	0.2	0	46
3	3180	D	0	6.0	13.6	0.2	10	30
3	3180	E	0	4.4	14.3	0.1	15	20
3	3180	F	0	10.3	22.4	0.3	6	27
3	3180	G	0	6.3	14.4	0.2	12	27
3	3180	H	0	5.2	7.3	0.4	0	57
3	3180	J	1	9.4	8.8	1.0	0	66
3	3180	K	2	12.4	5.2	3.5	5	57
3	3180	M	3	18.9	5.5	6.7	0	67
3	3180	N	3	11.9	3.0	7.0	0	76
3	3180	O	3	8.4	2.8	4.3	0	74
3	3180	P	2	12.9	5.1	3.9	14	47
3	3180	Q	2	9.9	6.0	2.0	9	54
3	3190	A	0	5.3	4.6	0.9	0	71
3	3190	B	3	14.8	5.4	4.5	0	81
3	3190	C	2	13.5	5.7	3.6	14	46
3	3190	D	2	12.6	5.2	3.6	0	67
3	3190	E	0	4.6	4.9	0.6	0	77
3	3190	F	0	3.8	6.3	0.3	13	44
3	3190	G	0	3.3	7.0	0.2	0	73
3	3190	H	0	4.9	7.5	0.4	13	41
3	3190	J	0	4.7	5.2	0.6	9	56
3	3190	K	0	4.8	4.0	0.9	0	74
3	3200	A	2	76.7	61.1	2.7	8	19
3	3200	B	1	115.1	136.5	1.9	0	21
3	3200	C	0	6.0	17.8	0.1	3	30
3	3200	D	0	7.4	23.3	0.1	0	30

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J8901 CALPINE AREA, ISKUT-UNUK RIVERS, B.C. - EM ANOMALIES

FLIGHT	LINE	ANOMALY	CATEGORY	AMPLITUDE (PPM) INPHASE	QUAD.	CONDUCTOR CTP MHOS	DEPTH MTRS	BIRD HEIGHT MTRS
3	3200	E	0	4.5	12.8	0.1	0	45
3	3200	F	0	6.5	14.4	0.2	0	40
3	3200	G	0	6.3	13.7	0.2	0	41
3	3200	H	0	6.6	12.6	0.3	2	40
3	3200	J	0	7.9	15.1	0.3	0	41
3	3200	K	0	5.3	11.1	0.2	5	39
3	3200	M	0	6.5	8.4	0.5	0	58
3	3200	N	0	8.0	8.4	0.8	0	73
3	3200	O	1	5.8	3.6	1.5	17	57
3	3200	P	2	9.1	4.7	2.4	0	73
3	3200	Q	1	5.7	3.0	1.9	0	83
3	3200	R	2	8.6	4.3	2.4	12	56
3	3200	S	0	3.1	2.6	0.7	0	99
3	3210	A	0	4.7	4.5	0.7	0	87
3	3210	B	1	8.6	7.1	1.2	0	61
3	3210	C	1	7.8	5.7	1.4	0	96
3	3210	D	1	10.1	7.0	1.6	0	61
3	3210	E	1	9.2	7.0	1.4	8	52
3	3210	F	0	4.2	6.3	0.3	0	75
3	3210	G	0	7.3	7.5	0.8	0	60
3	3210	H	0	5.9	5.3	0.9	0	80
3	3210	J	0	4.1	4.0	0.7	9	63
3	3210	K	0	4.8	6.4	0.4	8	51
3	3210	M	0	3.8	4.9	0.4	0	70
3	3210	N	0	2.0	11.7	0.0	2	29
3	3210	O	1	19.1	17.3	1.4	0	43
3	3210	P	2	33.1	27.0	2.0	9	29
3	3210	Q	2	37.0	30.4	2.1	6	29
3	3210	R	2	21.3	13.2	2.5	7	40
4	3220	A	3	8.3	2.6	4.6	17	57
4	3220	B	2	10.9	4.9	3.1	21	43
4	3220	C	2	5.9	2.1	3.4	19	62
4	3220	D	2	6.6	2.4	3.5	0	78
4	3220	E	1	7.2	5.7	1.2	0	69
4	3220	F	0	8.0	10.5	0.6	16	33
4	3220	G	1	6.6	5.7	1.0	8	56
4	3220	H	0	6.5	8.7	0.5	9	44
4	3220	J	0	6.9	9.6	0.5	15	36
4	3220	K	0	4.7	8.3	0.3	18	33
4	3221	A	0	6.6	12.9	0.3	0	53
4	3221	B	1	7.8	5.9	1.3	23	41
4	3221	C	1	16.7	13.6	1.6	4	43

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J8901 CALPINE AREA, ISKUT-UNUK RIVERS, B.C. - EM ANOMALIES

FLIGHT	LINE	ANOMALY	CATEGORY	AMPLITUDE (PPM) INPHASE	QUAD.	CONDUCTOR CTP MHOS	DEPTH MTRS	BIRD HEIGHT MTRS
4	3221	D	2	29.6	21.0	2.3	0	43
4	3221	E	2	25.7	19.4	2.0	4	38
4	3221	F	1	19.7	17.1	1.5	13	30
4	3221	G	0	4.6	7.1	0.3	23	32
4	3230	A	1	12.4	8.5	1.8	4	52
4	3230	B	1	12.1	10.4	1.3	0	57
4	3230	C	1	12.5	8.9	1.7	0	69
4	3230	D	0	5.4	13.7	0.2	0	44
4	3230	E	0	-4.8	22.3	0.0	0	12
4	3231	A	0	3.7	23.0	0.0	1	23
4	3231	B	0	2.5	10.3	0.0	0	45
4	3231	C	1	4.1	2.1	1.8	0	114
4	3231	D	1	9.9	6.9	1.6	7	53
4	3231	E	2	5.2	2.4	2.3	0	106
4	3231	F	2	12.8	7.2	2.4	20	37
4	3231	G	2	12.4	5.0	3.7	8	54
4	3240	A	2	11.8	5.8	2.8	3	59
4	3240	B	2	26.5	12.4	3.9	3	44
4	3240	C	2	13.9	9.0	2.0	15	39
4	3240	D	2	8.0	4.2	2.2	0	89
4	3240	E	1	13.4	9.8	1.7	0	57
4	3240	F	2	11.2	5.7	2.6	0	78
4	3240	G	2	11.0	6.3	2.2	0	75
4	3240	H	0	5.6	17.1	0.1	5	29
4	3240	J	0	4.4	10.1	0.2	0	47
4	3240	K	0	6.8	6.7	0.8	0	68
4	3240	M	1	11.9	9.6	1.4	1	53
4	3240	N	1	18.7	13.7	1.9	11	37
4	3240	O	1	13.6	9.8	1.7	15	38
4	3240	P	0	-14.0	13.5	0.0	0	5
4	3250	A	0	15.9	20.2	0.8	23	17
4	3250	B	1	32.0	31.1	1.6	20	15
4	3250	C	1	33.7	29.1	1.9	7	29
4	3250	D	1	11.3	8.1	1.6	10	47
4	3250	E	0	5.4	12.4	0.2	4	37
4	3250	F	0	6.1	20.5	0.1	0	31
4	3251	A	0	3.0	10.5	0.0	1	37
4	3251	B	0	6.2	18.3	0.1	2	31
4	3251	C	0	7.5	10.8	0.5	0	54
4	3251	D	2	3.3	1.0	3.5	13	89

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J8901 CALPINE AREA, ISKUT-UNUK RIVERS, B.C. - EM ANOMALIES

FLIGHT	LINE	ANOMALY	CATEGORY	AMPLITUDE (PPM) INPHASE	QUAD.	CONDUCTOR CTP MHOS	DEPTH MTRS	BIRD HEIGHT MTRS
4	3260	A	2	10.2	6.2	2.0	0	63
4	3260	B	0	6.9	8.8	0.6	0	74
4	3260	C	0	6.3	8.2	0.5	0	73
4	3260	D	1	9.5	7.9	1.2	0	58
4	3260	E	1	9.8	7.6	1.4	0	62
4	3260	F	1	8.5	6.4	1.4	0	92
4	3260	G	0	7.4	7.7	0.8	0	77
4	3260	H	0	4.4	5.7	0.4	4	57
4	3260	J	0	10.9	11.5	0.9	6	44
4	3260	K	1	6.5	5.5	1.0	3	62
4	3260	M	1	10.4	6.6	1.9	26	34
4	3260	N	2	15.6	9.9	2.2	18	34
4	3260	O	2	15.4	9.8	2.1	21	32
4	3260	P	2	15.1	6.8	3.4	24	33
4	3260	Q	1	7.7	4.4	1.9	40	29
4	3270	A	0	5.8	7.7	0.5	11	44
4	3270	B	0	7.9	8.0	0.9	19	37
4	3270	C	1	17.1	19.7	1.0	11	30
4	3270	D	0	6.2	9.1	0.4	19	32
4	3270	E	0	2.9	6.6	0.1	13	38
4	3270	F	0	5.9	12.3	0.2	0	43
4	3270	G	0	3.8	10.8	0.1	19	21
4	3270	H	0	4.4	12.4	0.1	0	38
4	3270	J	0	6.2	8.6	0.5	0	59
4	3270	K	0	6.4	6.4	0.8	0	71
4	3270	M	1	6.5	3.7	1.8	0	82
4	3270	N	1	9.3	6.1	1.7	12	51
4	3280	A	2	9.5	4.2	3.0	0	68
4	3280	B	1	14.6	13.4	1.3	0	54
4	3280	C	1	14.4	12.5	1.4	0	59
4	3280	D	0	7.5	17.1	0.2	8	29
4	3280	E	0	6.5	18.3	0.1	8	25
4	3280	F	0	-8.5	102.5	0.0	0	3
4	3280	G	0	3.2	17.6	0.0	1	27
4	3280	H	0	4.1	15.7	0.0	0	35
4	3280	J	0	6.3	20.7	0.1	3	27
4	3280	K	0	4.4	16.0	0.1	5	28
4	3280	M	0	5.2	5.6	0.6	35	29
4	3280	N	1	11.2	9.5	1.3	13	41
4	3280	O	0	7.8	9.0	0.7	19	34
5	3290	A	1	5.6	4.2	1.2	0	87

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J8901 CALPINE AREA, ISKUT-UNUK RIVERS, B.C. - EM ANOMALIES

FLIGHT	LINE	ANOMALY	CATEGORY	AMPLITUDE (PPM) INPHASE	QUAD.	CONDUCTOR CTP MHOS	DEPTH MTRS	BIRD HEIGHT MTRS
5	3290	B	2	20.5	9.6	3.6	0	56
5	3290	C	2	7.2	3.9	2.0	0	81
5	3290	D	0	12.9	16.2	0.8	5	37
5	3290	E	0	14.8	18.2	0.8	0	45
5	3290	F	0	13.8	45.3	0.2	1	23
5	3290	G	0	7.9	21.1	0.2	0	33
5	3290	H	0	5.5	17.1	0.1	2	31
5	3290	J	0	5.0	8.6	0.3	0	57
5	3290	K	0	10.1	11.8	0.8	12	36
5	3290	M	1	10.5	8.4	1.3	21	36
5	3290	N	1	9.4	6.9	1.5	34	27
5	3311	A	3	23.6	9.7	4.5	1	48
5	3311	B	2	16.0	7.9	3.1	0	68
5	3311	C	3	19.6	8.0	4.3	7	46
5	3311	D	0	15.0	38.4	0.3	0	32
5	3311	E	0	9.8	13.5	0.6	0	46
5	3311	F	0	8.6	16.4	0.3	3	36
5	3311	G	0	10.3	49.9	0.1	3	17
5	3311	H	0	6.2	46.9	0.0	4	13
5	3311	J	0	5.1	21.7	0.0	8	20
5	3311	K	1	10.9	9.7	1.2	4	49
5	3321	A	0	4.9	13.5	0.1	0	37
5	3321	B	0	8.9	16.8	0.4	0	50
5	3321	C	0	7.1	11.3	0.4	0	55
5	3321	D	2	9.8	5.6	2.1	0	90
5	3321	E	1	5.9	4.1	1.3	0	101
5	3330	A	1	10.0	6.2	1.9	0	86
5	3330	B	2	22.5	12.7	2.9	9	39
5	3330	C	2	13.4	8.5	2.0	12	43
5	3330	D	1	9.4	5.9	1.8	0	73
5	3330	E	1	6.5	5.7	1.0	0	71
5	3330	F	0	6.6	6.0	0.9	12	51
5	3330	G	0	9.5	15.2	0.5	13	29
5	3330	H	0	9.9	26.6	0.2	13	17
5	3330	J	0	9.9	15.9	0.5	13	28
5	3330	K	0	8.3	32.7	0.1	11	13
5	3331	A	0	3.0	8.0	0.1	3	43
5	3331	B	0	2.6	6.6	0.1	5	44
5	3331	C	0	4.8	4.0	0.9	33	40
5	3340	A	0	3.2	6.7	0.2	11	41

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J8901 CALPINE AREA, ISKUT-UNUK RIVERS, B.C. - EM ANOMALIES

FLIGHT	LINE	ANOMALY	CATEGORY	AMPLITUDE (PPM) INPHASE	QUAD.	CONDUCTOR CTP MHOS	DEPTH MTRS	BIRD HEIGHT MTRS
5	3340	B	0	3.0	8.6	0.1	6	37
5	3340	C	0	3.7	20.4	0.0	7	19
5	3340	D	0	4.5	19.6	0.0	3	25
5	3340	E	0	4.3	12.0	0.1	10	30
5	3340	F	0	5.9	16.9	0.1	14	21
5	3340	G	0	3.2	4.2	0.4	0	126
5	3351	A	1	6.4	3.6	1.8	0	82
5	3351	B	2	14.6	6.6	3.4	13	44
5	3351	C	2	10.7	4.2	3.7	0	88
5	3351	D	0	12.3	22.4	0.4	0	39
5	3351	E	0	9.7	75.7	0.0	2	12
5	3351	F	0	0.7	9.8	0.0	8	16
6	3360	A	0	7.3	10.2	0.5	0	60
6	3381	A	2	10.6	5.7	2.4	0	80
6	3390	A	0	4.5	11.4	0.1	15	26
6	3390	B	0	2.3	3.3	0.3	21	52
6	3401	A	0	5.2	5.5	0.7	0	66
6	3401	B	1	7.7	5.3	1.5	0	78
6	3401	C	0	3.9	4.2	0.6	12	58
7	3410	A	1	12.9	9.4	1.7	1	52
7	3420	A	0	12.8	17.0	0.7	0	57
7	3420	B	0	12.3	22.3	0.4	0	41
7	3420	C	0	6.6	13.7	0.3	12	29
7	3420	D	1	3.6	2.4	1.1	28	58
7	3420	E	2	5.1	2.5	2.1	15	67
7	3430	A	0	4.1	9.1	0.2	4	42
7	3430	B	1	5.0	3.1	1.5	4	75
7	3430	C	1	6.0	5.1	1.0	23	44
7	3441	A	0	5.2	7.6	0.4	0	78
7	3441	B	1	7.8	5.5	1.4	3	62
7	3441	C	0	6.7	20.9	0.1	14	17
7	3441	D	0	16.1	46.4	0.2	6	18
9	3442	A	0	4.9	8.7	0.3	8	42
7	3450	A	0	3.9	10.7	0.1	11	30

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J8901 CALPINE AREA, ISKUT-UNUK RIVERS, B.C. - EM ANOMALIES

FLIGHT	LINE	ANOMALY	CATEGORY	AMPLITUDE (PPM) INPHASE	QUAD.	CONDUCTOR CTP MHOS	DEPTH MTRS	BIRD HEIGHT MTRS
7	3450	B	2	13.0	8.2	2.0	1	55
7	3460	A	0	6.1	8.8	0.4	4	48
7	3460	B	1	12.7	9.4	1.6	12	42
8	3490	A	0	1.0	15.0	0.0	11	10
8	3490	B	0	1.3	9.1	0.0	8	24
8	3490	C	0	2.7	6.7	0.1	21	29
9	3510	A	2	7.1	3.5	2.3	5	68
9	3510	B	2	10.3	5.1	2.6	0	69
9	3510	C	2	9.1	4.8	2.3	2	64
9	3510	D	1	5.9	3.5	1.7	7	68
9	3520	A	0	-10.1	25.8	0.0	0	8
9	3520	B	1	9.2	5.7	1.8	1	63
10	3530	A	2	9.9	5.8	2.0	15	48
10	3530	B	1	8.8	5.5	1.8	16	49
10	3540	A	1	6.6	4.3	1.5	0	73
12	3590	A	0	-21.4	6.6	0.0	0	29
12	3600	A	0	5.5	12.7	0.2	3	37
12	3600	B	0	6.3	17.6	0.1	0	39
12	3620	A	0	3.6	10.1	0.1	12	29
12	3620	B	0	8.6	19.3	0.3	0	36
12	3620	C	0	8.6	19.4	0.3	0	37
13	4011	A	0	1.6	6.0	0.0	14	31
13	4020	A	0	6.5	18.2	0.1	0	43
13	4020	B	0	3.1	7.5	0.1	0	1237
14	4050	A	0	5.7	9.7	0.3	0	52
14	4050	B	0	6.5	16.4	0.2	0	36
14	4050	C	0	4.3	5.2	0.5	27	37
14	4050	D	0	5.4	6.3	0.6	29	31
14	4060	A	0	3.9	5.2	0.4	8	55
14	4070	A	0	6.6	20.4	0.1	0	34
14	4070	B	2	6.3	3.2	2.1	0	104

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J8901 CALPINE AREA, ISKUT-UNUK RIVERS, B.C. - EM ANOMALIES

FLIGHT	LINE	ANOMALY	CATEGORY	AMPLITUDE (PPM) INPHASE	QUAD.	CONDUCTOR CTP MHOS	DEPTH MTRS	BIRD HEIGHT MTRS
14	4070	C	2	7.6	2.8	3.6	30	45
14	4070	D	0	-16.6	6.8	0.0	0	15
14	4080	A	1	5.7	3.4	1.6	16	60
14	4080	B	2	10.5	4.6	3.1	7	58
14	4090	A	0	3.1	9.3	0.1	9	33
14	4090	B	2	4.7	1.7	3.1	15	74
14	4090	C	2	7.9	3.2	3.2	30	43
15	4100	A	0	2.3	2.7	0.4	35	46
15	4100	B	2	9.9	5.9	2.0	0	62
15	4100	C	0	-14.4	3.6	0.0	0	22
15	4110	A	0	3.9	9.5	0.1	10	34
15	4110	B	2	7.1	3.5	2.3	26	47
15	4120	A	0	2.8	6.7	0.1	29	22
15	4120	B	0	-25.9	7.5	0.0	0	11
15	4130	A	0	3.5	8.9	0.1	4	41
15	4130	B	2	11.2	6.4	2.2	11	49
15	4130	C	2	6.9	2.9	2.9	1	75
16	4150	A	0	0.0	0.0	0.0	0	0
16	4170	A	0	1.9	4.3	0.1	4	56
16	4180	A	1	4.3	2.1	1.9	36	51
16	4190	A	0	-7.3	5.4	0.0	0	33
16	4190	B	3	4.1	1.0	5.2	4	92
17	4200	A	1	7.5	6.5	1.1	14	47
17	4200	B	1	5.8	4.0	1.3	30	43
17	4200	C	0	6.7	12.0	0.3	27	17
17	4200	D	0	9.3	17.2	0.4	21	17
17	4220	A	1	5.0	3.4	1.3	18	59
17	4220	B	0	3.0	2.8	0.6	10	72
17	4220	C	0	5.1	8.9	0.3	7	42
17	4230	A	0	1.7	8.6	0.0	15	22
17	4230	B	0	4.5	7.9	0.3	7	45
17	4240	A	1	12.5	8.3	1.9	9	47

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.

J8901 CALPINE AREA, ISKUT-UNUK RIVERS, B.C. - EM ANOMALIES

FLIGHT	LINE	ANOMALY	CATEGORY	AMPLITUDE (PPM) INPHASE	QUAD.	CONDUCTOR CTP MHOS	DEPTH MTRS	BIRD HEIGHT MTRS
17	4250	A	1	5.8	3.9	1.4	0	75
18	4260	A	2	14.8	8.8	2.3	3	51
18	4260	B	1	6.4	3.8	1.7	0	76
18	4270	A	2	10.3	6.1	2.0	3	59
18	4280	A	1	8.9	5.6	1.8	0	73
19	4300	A	1	7.4	6.5	1.0	0	1232
19	4300	B	0	5.8	8.4	0.4	0	1234
19	4350	A	1	6.0	4.9	1.0	0	68
19	4350	B	1	6.4	4.3	1.4	18	53
20	4430	A	0	3.9	8.8	0.2	18	29
21	4560	A	0	5.1	11.0	0.2	2	41
22	4590	A	0	9.1	12.5	0.6	0	1240
22	4610	A	0	7.7	35.7	0.1	8	15
22	4630	A	0	3.5	11.1	0.1	16	22
22	4660	A	0	2.3	31.4	0.0	0	17
23	4820	A	0	2.2	13.9	0.0	18	11

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 III

CERTIFICATE OF QUALIFICATIONS

1. I hold a PhD in Geophysics from Charles University, Czechoslovakia having graduated in 1967.

2. I reside at 146 Three Valleys Drive, in the town of Don Mills, Ontario.

3. I have been continuously engaged in both professional and managerial roles in the minerals industry in Canada and abroad for the past 19 years.

4. I have been an active member of the Society of Exploration Geophysicists since 1978 and a member of KEGS since 1978.

5. The accompanying report was prepared from information published by government agencies, materials supplied by Prime Explorations Limited and from a review of the proprietary airborne geophysical survey flown by Aerodat Limited for Prime Explorations Limited.

6. I have no interest, direct or indirect, in the property described nor do I hold securities in Prime Explorations Limited.

Signed

Zbynek Dvorak
Consulting Geophysicist

June 26, 1989

APPENDIX IV

PERSONNEL

FIELD

Flown	February - April, 1989
Pilot	R. Hage J. Kamphaus
Operator	J. Huisman K. McCart V. Cole

OFFICE

Processing	A. E. Valentini G. MacDonald
Report	Z. Dvorak

APPENDIX II

Certificate of Qualifications

Certificate of Qualifications

I, David W. Mallo of 4475 Hermitage Drive, Vancouver, British Columbia hereby certify:

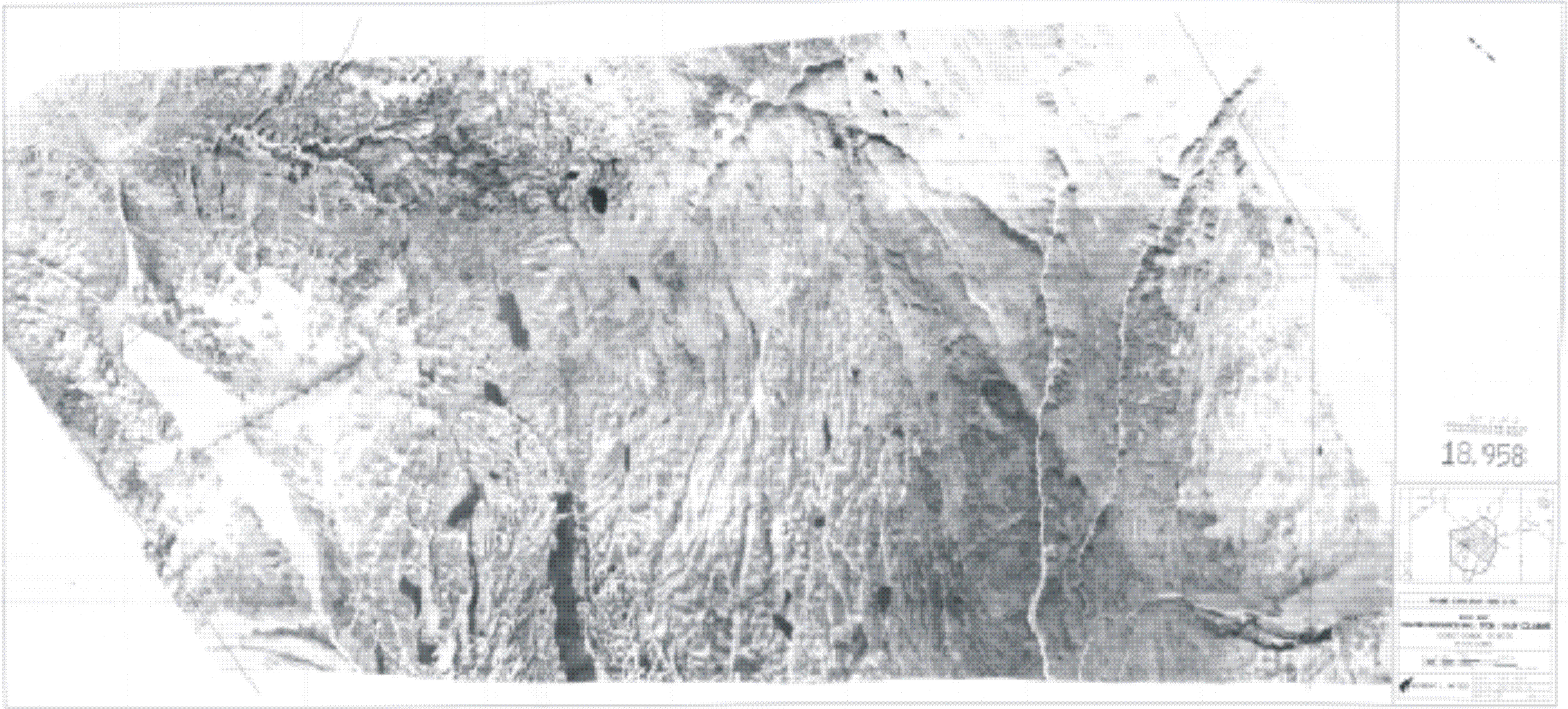
1. I am a graduate of Brandon University (1981) and hold a BSc (Spec) degree in geology.

2. I have been employed in my profession by various mining companies since graduation.

3. I am presently employed as a senior geologis with Prime Explorations Ltd., of 1000-808 West Hastings Street, Vancouver, British Columbia.

David W. Mallo
Senior Geologist

DATED at Vancouver, British Columbia, this 14th day of July, 1989.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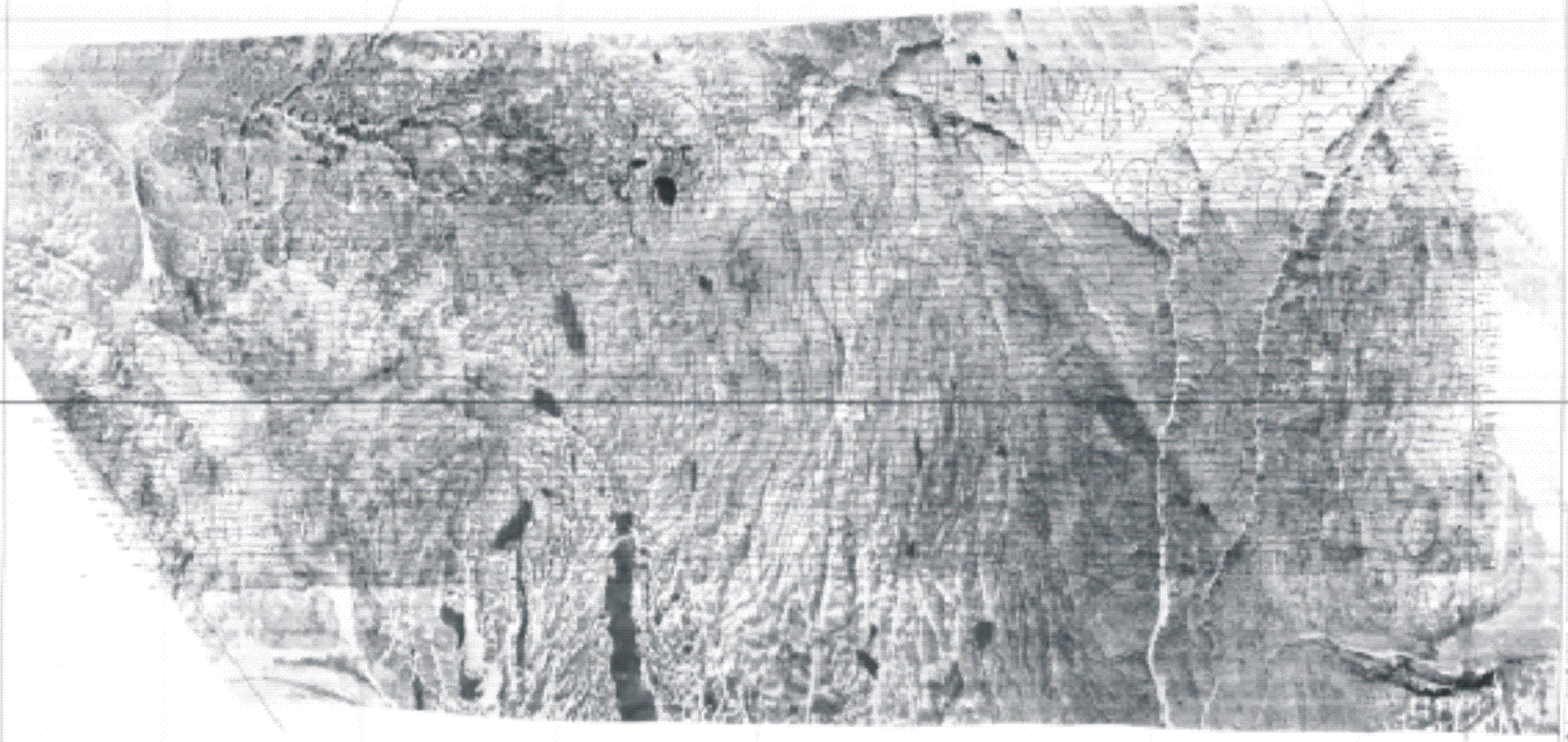

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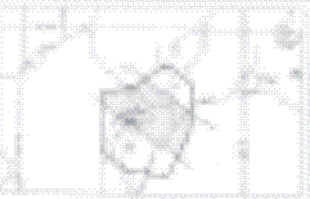

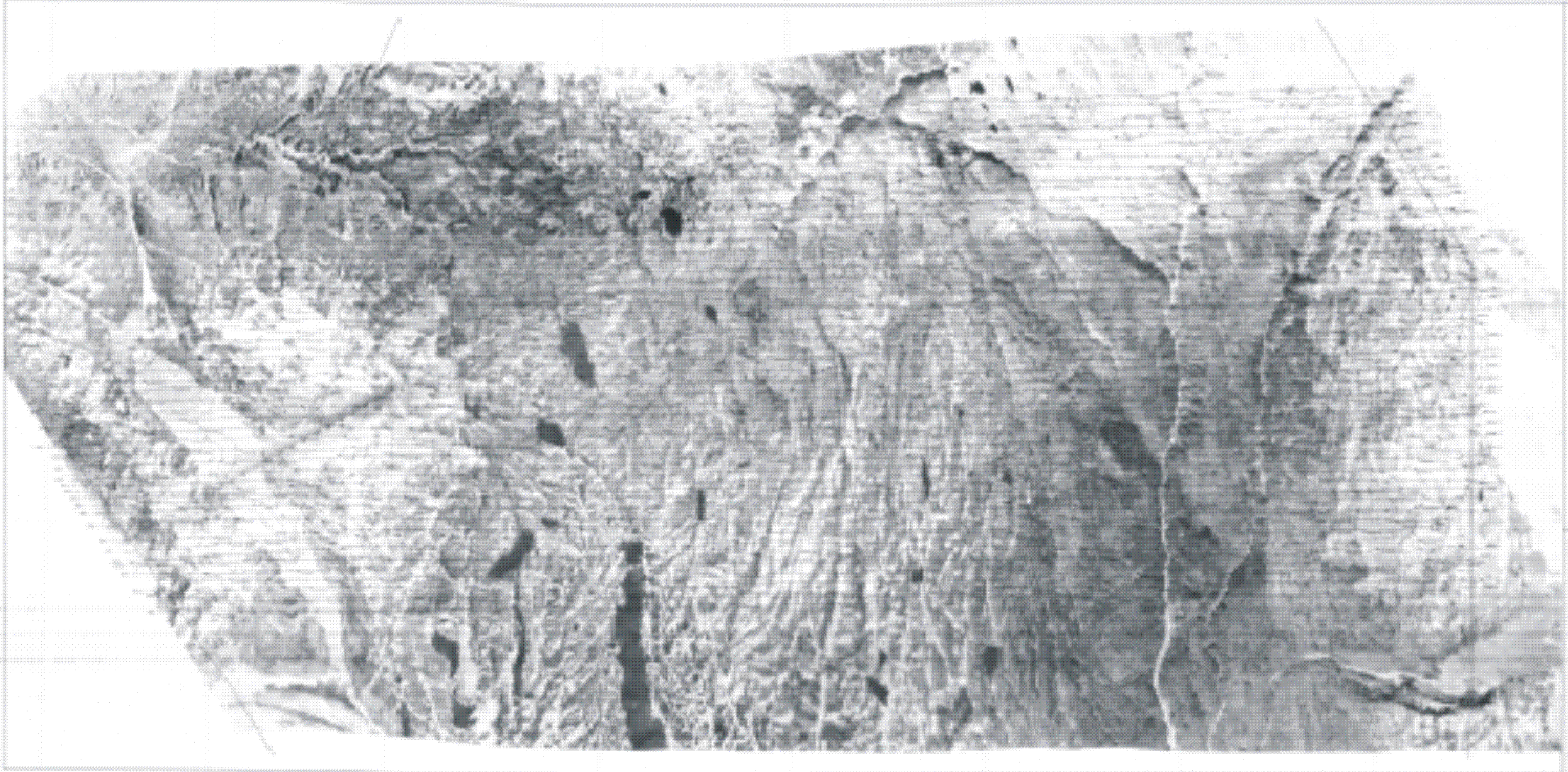

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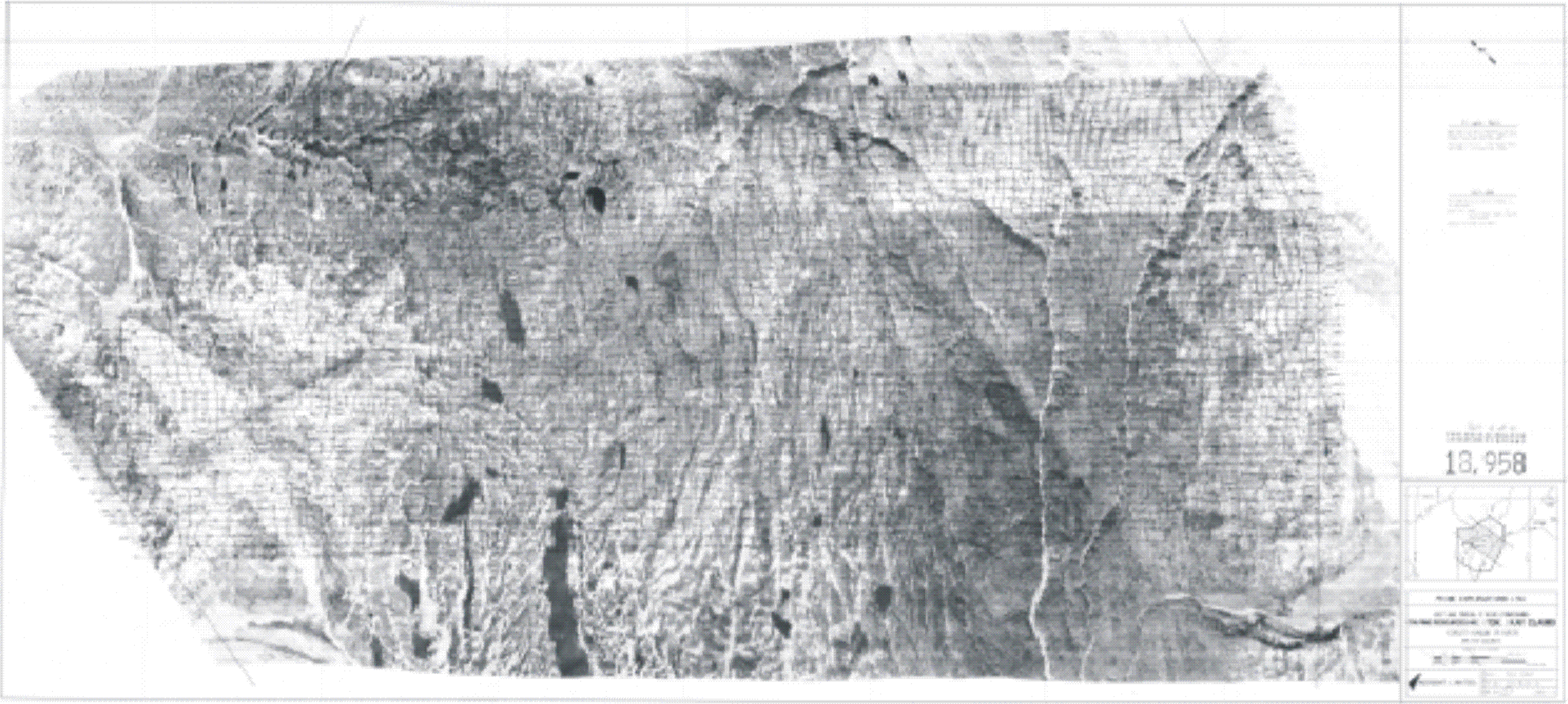
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