0803 RD.
ACTION:
FILE NO.

DINO M. CREMONESE
GEOPHYSICAL REPORT ON AN
AIRBORNE MAGNETIC AND VLF-EM SURVEY
PARADIGM 1-2 CLAIMS
SKEENA MINING DIVISION
LATITUDE: 56° 36'N LONGITUDE: 130° 34'W
NTS: 104B/10E

AUTHORS: Richard G. Hermary, B.Sc., Geophysicist
Dennis V. Woods, Ph.D., P.Eng. Consulting Geophysicist

DATE OF WORK: 21 April 1988
DATE OF REPORT: 18 July 1988

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JUL 27 1988
M.R. # .... $........
VANCOUVER, B.C.

GEOLOGICAL BRANCH
ASSESSMENT REPORT
17,625

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ILLUSTRATIONS

INTRODUCTION

On April 21, 1988 an airborne magnetic and VLF-EM survey was conducted over the **Paradigm** 1-2 claims for **Dino M. Cremonese.** The claims are situated 80 kilometers northwest of Stewart, B.C. in the Unuk River area.

The intention of this survey is to direct further exploration to any favorable anomalous zones for ground targets and assist in the geological mapping of the area. Approximately 27 line kilometres of magnetic and VLF-EM data was gathered over the claims. The airborne magnetic and VLF-EM data has been examined in detail to evaluate the subject property.

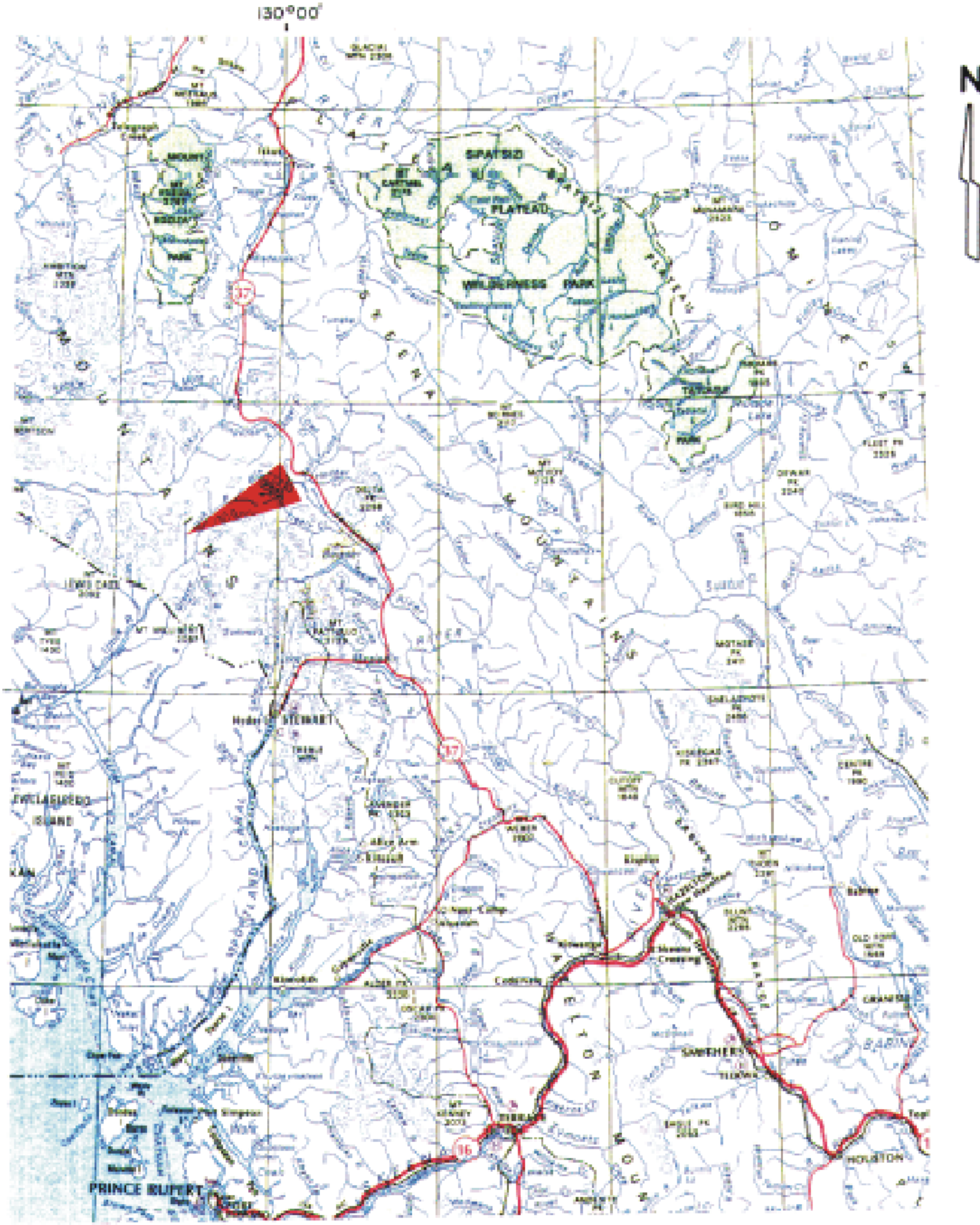
PROPERTY

The **Paradigm 1-2** claims are owned by **Chris Pepperdine** and operated by **Dino M. Cremonese.** The claims are described in the table below and illustrated in Figure 2.

Claim Name	Units	Record No.	Expiry Date
Paradigm 1	18	6100	April 28, 1989
Paradigm 2	12	6101	April 28, 1989

LOCATION AND ACCESS

The **Paradigm** 1-2 claims are located in the Unuk River area some 80 kilometers northwest of Stewart, B.C. and approximately 950 kilometers north-northwest of Vancouver, B.C. The claims lie 45 kilometers north-northwest of the Granduc Mine and 30 kilometers east of Skyline Exploration's Johnny Mountain Mine. The claims are situated along the headwaters of Harrymel Creek, with the terminus of Copper King Glacier touching the western claim boundary, and 3 kilometers southwest of the most southern tip of Tom MacKay Lake. The claims are located within the Skeena Mining



DINO M. CREMONESE

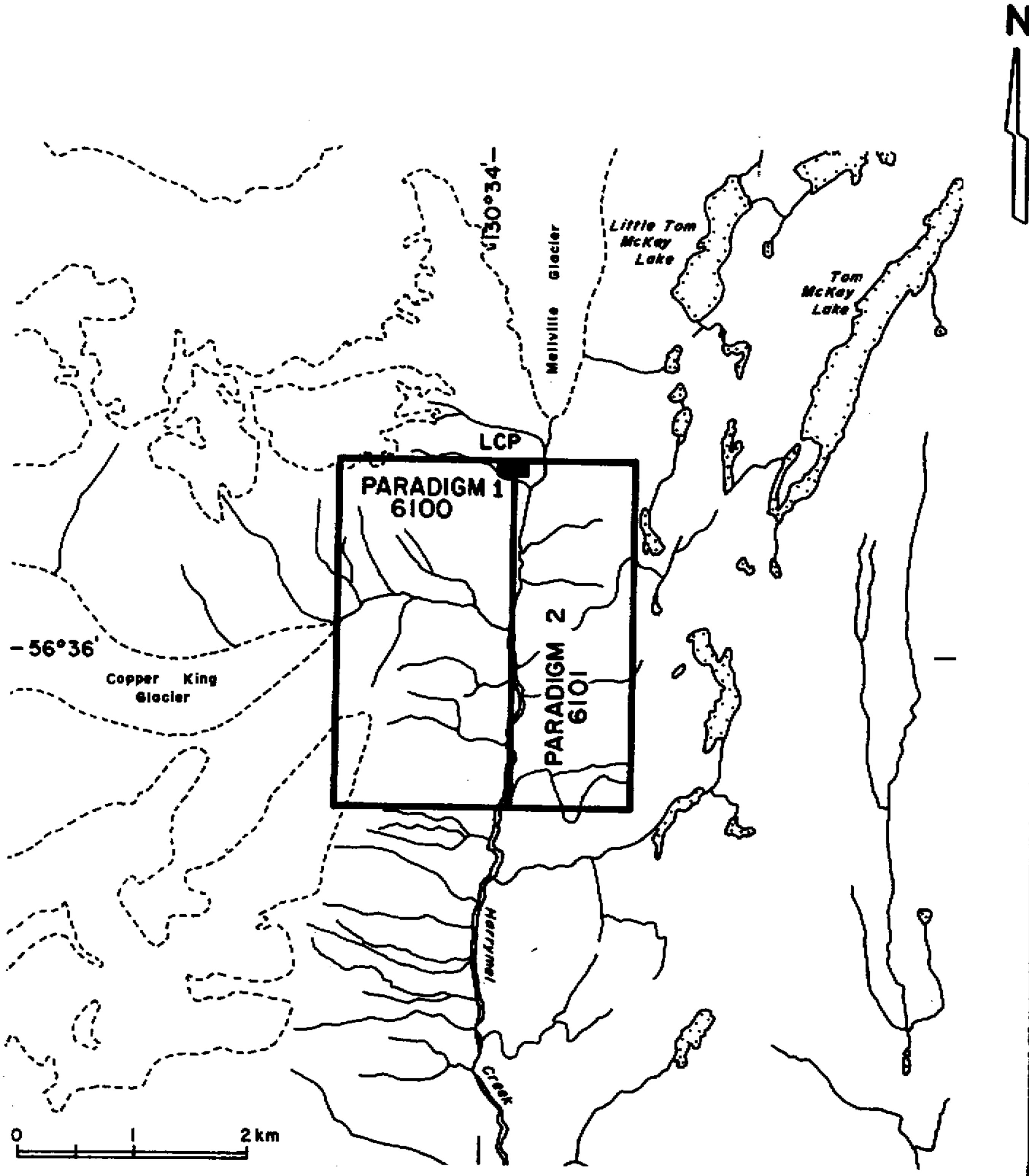
PARADIGM 1 & 2 CLAIMS

LOCATION MAP

Scale = 1:2000000

N.T.S. 104B/10E

FIG. 1



DINO M. CREMONESE
PARADIGM 1 & 2 CLAIMS
CLAIM MAP
N.T.S. 104B/10E

FIG. 2

Division of B.C. The NTS map co-ordinates of the **Paradigm 1-2** claims is 104B/10E. The approximate geographical coordinates are a latitude of 56° 36'N and a longitude of 130° 34'W.

Access to the area is usually achieved by fixed wing aircraft from Terrace or Stewart, B.C. to various airstrips in the area and then via helicopter to the claim area. One such airstrip, with a helicopter base during the mineral exploration field season, is the Bronson Creek airstrip. Alternately, the claims may be accessed directly by helicopter from Stewart on the Stewart-Meziadin Lake highway or from Bob Quinn Lake on the Stewart-Cassiar-Terrace Highway 37.

HISTORY AND PREVIOUS WORK

Mineral exploration in the Stewart-Unuk River area began in the early 1890's when placer miners on their way out of the Cariboo prospected the Unuk River and its tributaries. In 1898, an expedition of placer miners landed at the head of Portland Canal and proceeded to explore the Bear River and Salmon River valleys. The discovery of mineralized float and vein material led to an influx of "hard-rock" prospectors. The townsite of Stewart was established (named after the prospecting family of "Pop", John and Bob Stewart), and by 1910 most of known mineral occurrences in the Stewart-Unuk River area, including the future Silbak Premier mine, had been discovered.

Mine development over the next three decades resulted in slow but steady growth of the area. In particular, the discovery of high-grade silver and gold ore at Premier in 1918 led to the development of one of the richest mineral deposits in British Columbia and the incentive for intensive exploration and development in the Salmon River basin.

Most of the small mines in the Stewart region were worked out by the 1940's except for the Silbak Premier mine which continued through to the 1970's. Total production of the Premier group consisted of 4 million ounces of gold, 41 million ounces of silver, 4 million pounds of copper, 52 million pounds of lead and 19 million pounds of zinc, making it the second largest silver producer (after Sullivan) and the third largest gold producer (after Bralorne-Pioneer and Rossland) in B.C. The development of the Granduc massive sulphide orebody in the Unuk River area northeast of Stewart and construction of the Cassiar-Stewart-Terrace highway maintained the growth and exploration activity of the Stewart area during the 1960's and 1970's. Significant discoveries in the Iskut River - Stikine River areas north of Stewart have led to an increased intensity of mineral exploration activity in recent years.

Almost all of the early mineral discoveries in the Stewart-Unuk River area have been found by prospecting gossans sighted from accessible stream or river valleys in areas of negligible vegetation. Recent discoveries have results from prospecting mineralized showings revealed by ablating glaciers (i.e. Granduc Mine). Exploration is hampered by a dense vegetation at low elevations and snow cover at high elevations. Soil geochemistry is impractical in most areas due to a lack of suitable soil cover. Hence, the best approach to mineral exploration in the Stewart-Unuk River area is a combination of geological and geophysical surveying to discover unknown hidden deposits, and detailed reappraisal of known showings using geophysical and geochemical techniques together with modern geologic concepts of ore genesis.

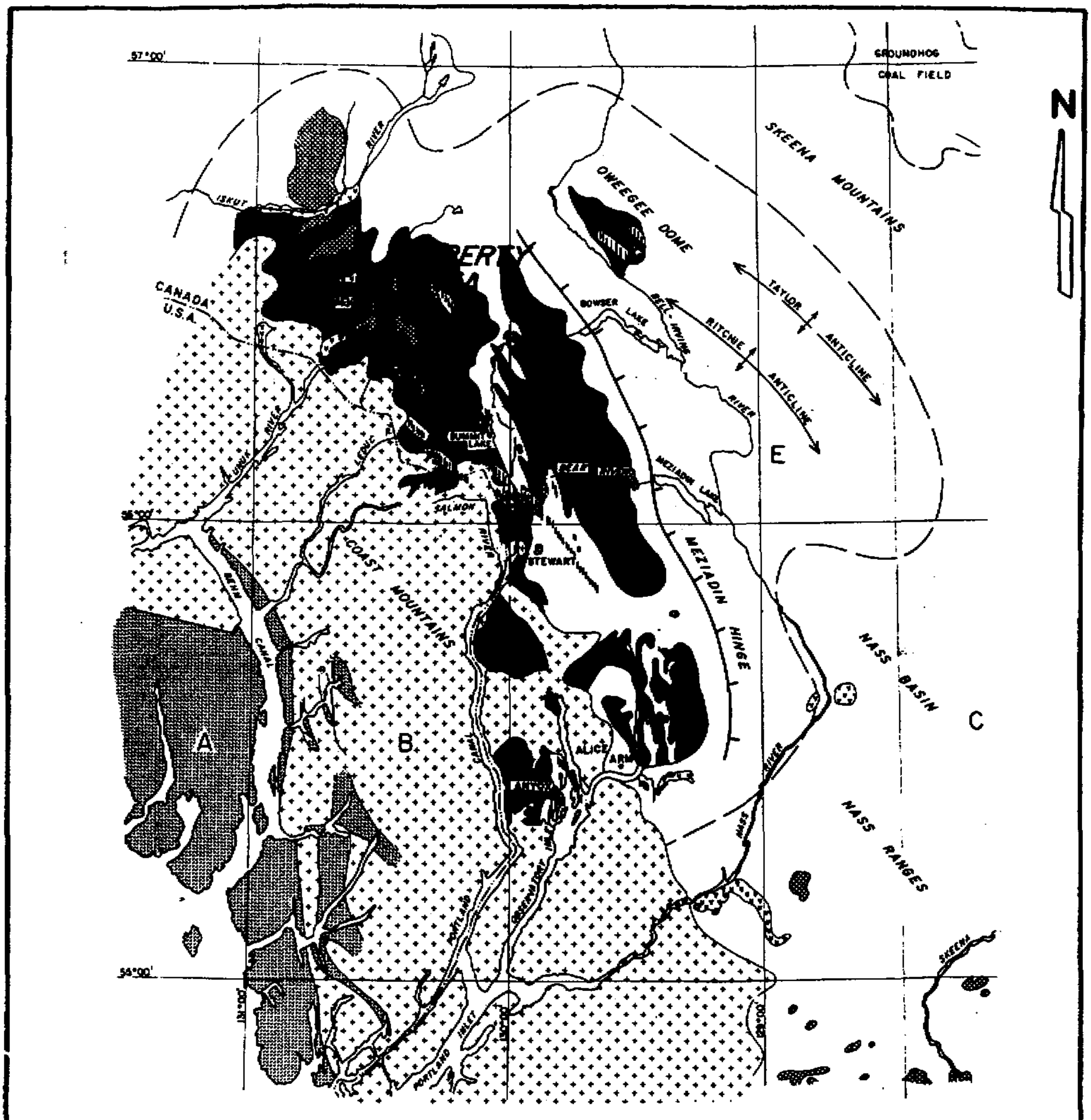
Grove (1971, 1986) has located a prospect on the northeast corner of the **Paradigm 1** claim. The prospect is the Copper King showing located a few hundred meters from the terminus of the Copper King Glacier. The prospect contains iron and copper. No other previous work or mineral showings are known on the **Paradigm 1-2** claims.

REGIONAL GEOLOGY

The Stewart-Unuk River area is composed of three distinct tectonic zones of Mesozoic to Cenozoic age along the western margin of the Cordilleran (Figure 3). From west to east they are: the Coast Plutonic Complex or Crystalline Belt, the Stewart Complex and the Bowser Basin. The Stewart Complex is a deformed belt of volcanic, volcaniclastic and sedimentary rocks of Upper Triassic to Middle Jurassic age which extend from Alice Arm in the south to the Iskut River in the north. These rocks are in intruded contact with Middle Jurassic to Eocene felsic plutonic rocks of the Coast Plutonic Complex to the west, and unconformably underlay the Upper Jurassic to Cretaceous marine clastic sedimentary rocks of the Bowser Basin to the east. The Stewart Complex is one of the most important metallogenic regions in British Columbia.

Stratigraphic nomenclature of the Stewart Complex and Bowser Basin has been adopted from Grove (1986) following modifications from Grove (1971). The oldest rocks of the Stewart-Unuk River area are the Upper Triassic volcanic conglomerates, sandstones and siltstones comprising the Takla Group near Unuk River. In the absence of correlatable fossil evidence, the distinction between these Takla Group volcaniclastics and the overlying Hazelton Group volcaniclastics in not conclusive.

The lowest member of the Jurassic Hazelton Group is the Lower Jurassic Unuk River Formation consisting of green, red and purple volcanic breccia, conglomerate, sandstone and siltstone, pillowed lava and volcanic flows, and minor crystal tuff, limestone and chert. The Unuk River Formation is unconformably overlain by the Middle Jurassic Betty Creek Formation of predominantly volcanic breccia, conglomerate, sandstone and siltstone, which, in turn, is unconformably overlain by siltstone, greywacke, sandstone and argillite of the Salmon River Formation. Grove (1971) referred



SEDIMENTS - VOLCANICS

- Stewart Complex - Triassic and Jurassic (undivided)
- Palaeozoic
- Tertiary and Recent Volcanics
- Bowser Assemblage - Middle Jurassic to Upper Jurassic (undivided)

INTRUSIVES

- Coast - undivided
- Skeena - undivided
- Dyke swarms - undivided

MAJOR FEATURES

- A Wrangell - Revillagigedo Belt
- B Coast Crystalline Belt
- C Bowser Basin
- E Bear River Uplift
- Wrangell - Revillagigedo Metamorphics

SCALE 0 8 16 24 32 MILES

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FIG. 3

to the Unuk River Formation as the Hazelton assemblage, and the Betty Creek and Salmon River Formations as the Bowser assemblage.

The Upper Jurassic Nass Formation overlies the Salmon River Formation to form the uppermost constituent of the Bowser Basin. The Nass Formation consists of a thick sequence of marine clastic sedimentary rocks (siltstones, greywackes, sandstones).

In addition to the volcanic epiclastic and sedimentary rocks of the Unuk River, Betty Creek and Salmon River Formations, the Stewart Complex is also partially composed of their cataclastic and metamorphic equivalents. Cataclasite and mylonite are found near the intruded contact of the Late Jurassic Texas Creek granodiorite. Phyllites, schists and gneisses are confined to the intruded contact areas with the Tertiary Hyder quartz monzonite and Boundary granodiorite.

The Coast Plutonic Complex is composed of multiple phases of intrusion from Upper Triassic quartz diorite in the Unuk River area to Middle Jurassic granodiorites and Tertiary quartz monzonites in the Stewart area. Plutonic satellites of quartz monzonite, quartz diorite and granodiorite are also found toward the centre of the Stewart Complex. Dykes and sills of similar composition are found throughout the Stewart Complex but particularly in well defined zones cutting across the regional geologic trends.

Mineralization in the Stewart-Unuk River area is confined primarily to the Lower and Middle Jurassic Stewart Complex: Unuk River, Betty Creek and Salmon River Formations. Grove (1986) recognizes four classes of mineral deposits in the Stewart Complex: fissure and replacement vein deposits such as the Silbak Premier Mines, stratiform massive sulphide deposits such as the Hidden Creek Mine in the Anyox area, discordant massive sulphide deposits such as the Granduc Mine, and Tertiary porphyry copper-molybdenum deposits such as the Mitchell-Sulphurets property. The most important of these, in terms of number of deposits and quantity of ore, are the fissure and replacement vein deposits. However, in terms of exploration potential, all types of deposits have equal importance.

LOCAL GEOLOGY

The **Paradigm 1-2** claims are underlain by three distinct north-south trending geological units. From east to west they are: 1.) Unuk River Formation , green, red and purple volcanic breccias, conglomerates, sandstones and siltstones east of Harrymel Creek, 2.) Upper Triassic Takla Group (?) sedimentary siltstone, sandstone, conglomerate and limestone west of Harrymel Creek, and 3.) Upper Triassic and Younger (?) plutonic rocks of hornblende quartz diorite forming the high ridges on the west side of the property. Pleistocene and Recent basalt flows from the Cinder Mountain volcanic centre to the southwest of the property are also found in a limited area on the valley floor of the ablating Copper King Glacier. The structure of the property is dominated by northeast trending synclinal formations to the northeast and north-south trending faults on the west side of Harrymel Creek.

AIRBORNE VLF-ELECTROMAGNETIC AND MAGNETIC SURVEY

This survey simultaneously monitors and records the output signal from a Delvco tri-axis ringcore magnetometer and a Herz Totem 2A dual frequency VLF-EM receiver. The sensors are installed in an aerodynamically stable bird which is towed thirty metres below a helicopter. A shock and gimbal mounted TV camera, fixed to the helicopter skid, provides an input signal to a video cassette recorder allowing for accurate flight path recovery by correlation between the flight path video cassette and air

LEGEND

SEDIMENTARY AND VOLCANIC ROCKS

CENOZOIC

QUATERNARY

PLEISTOCENE AND RECENT

18 BASALT FLOWS

MESOZOIC

JURASSIC

HAZELTON GROUP

LOWER JURASSIC

UNUK RIVER FORMATION

12 GREEN, RED, AND PURPLE VOLCANIC BRECCIA, CONGLOMERATE, SANDSTONE, AND SILTSTONE (a); CRYSTAL AND LITHIC TUFF (b); SANDSTONE (c); CONGLOMERATE (d); LIMESTONE (e); CHERT (f); MINOR COAL (g)

TRIASSIC

UPPER TRIASSIC

TAKLA GROUP (?)

10 SILTSTONE, SANDSTONE, CONGLOMERATE (a); VOLCANIC SILTSTONE, SANDSTONE, CONLOMGERATE (b); AND SOME BRECCIA (c); CRYSTAL AND LITHIC TUFF (d); LIMESTONE (e)

MESOZOIC

TRIASSIC

UPPER TRIASSIC AND YOUNGER ?

4 DIORITE (a); QUARTZ DIORITE (b); GRANODIORITE (c)

SYMBOLS

- ADIT
- ANTICLINE (NORMAL, OVERTURNED)
- BEDDING (HORIZONTAL, INCLINED, VERTICAL, CONTORTED)
- BOUNDARY MONUMENT
- CONTOURS (INTERVAL 1,000 FEET) — 5000
- FAULT (DEFINED, APPROXIMATE)
- FAULT (THRUST)
- FAULT MOVEMENT (APPARENT)
- FOLD AXES, MINERAL LINEATION (HORIZONTAL, INCLINED)
- FOSSIL LOCALITY — Ⓕ
- GEOLOGICAL CONTACT (DEFINED, APPROXIMATE)
- GLACIAL STRIAE
- GRAVEL, SAND, OR MUD
- HEIGHT IN FEET ABOVE MEAN SEA LEVEL — •6234′
- INTERNATIONAL BOUNDARY
- JOINT SYSTEM (INCLINED, VERTICAL)
- MARSH
- MINING PROPERTY
- RIDGE TOP
- SCHISTOSITY (INCLINED, VERTICAL)
- SYNCLINE (NORMAL, OVERTURNED)
- TUNNEL
- VOLCANIC CONE

Compilation and geology by E. W. Grove, 1964 to 1970, with assistance by N. H. Hamila and R. V. Kirkam, 1966 and James T. Fyles, 1967. Geology of the Alice Arm area by N. C. Carter, 1964 to 1968.

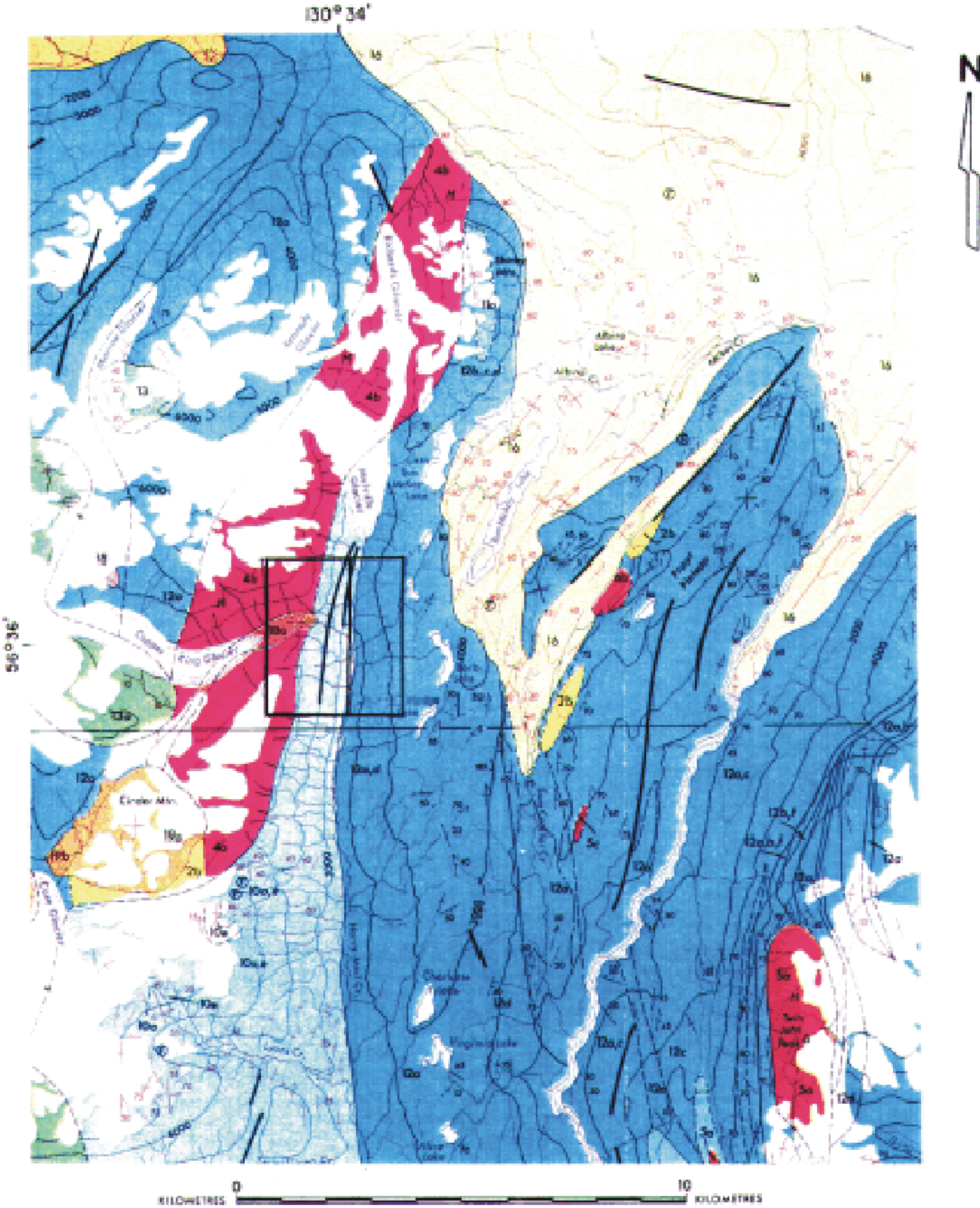

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FIG. 4

photographs of the survey area. A KING KRA-10A radar altimeter allows the pilot to continually monitor and control terrain clearance along any flight path.

Continuous measurements are made of the earth's magnetic field and of two VLF-EM fields of two different frequencies. These measurements provide the magnitude of the earth's total magnetic field, the magnitude of the two VLF-EM fields, and the quadrature component of the two VLF-EM fields. This data and other pertinent survey information are recorded in three independent modes: as printed text or profiles, on three and a half inch magnetic diskettes in ASCII format, and superimposed on the video image and recorded on video cassettes.

Control of data quality is maintained by the operator scanning a printed output of direct and unfiltered recordings of all the geophysical instrumentation output signals. A portable Compaq computer acts as a system controller for a Hewllet-Packard 3852A data acquisition unit. The computer also processes all the incoming data and survey information and records it on three and a half inch diskettes. Furthermore, the magnetic and very low frequency electromagnetic data is superimposed along with the flight line number, fiducial number, date, time and terrain clearance upon the actual flight path video recording to allow exact correlation between geophysical data and ground location. The input signals are continuously updated on the video display twice a second.

Correlation between the printed output, the ASCII data diskettes and the video flight path recovery tape is controlled via fiducial marks common to all systems. Line identification, flight direction and pertinent survey information are also recorded on the audio track of the video recording tape and in the operator's field notes.

DATA PROCESSING

Field data is digitally recorded, with the line number, fiducial number, date, time and the data, on magnetic diskettes in a format compatible with the Compaq Portable II computer. The recovered flight path locations are digitized and the field data is processed to produce plan maps of each of the parameters. A variety of formats are available in which to display the data.
All the survey data is routinely edited for spurious noise spikes. The total field intensity magnetic information is also corrected for any diurnal variations recorded on a base magnetometer located in the survey area.

Both the total field and quadrature components of the VLF-EM signal are sensitive to topographic changes and sensor oscillation. Oscillation effects are reduced by filters tuned to the dominant period. Long period effects attributable to topography can be removed by high pass filtering of the planimetric data.

All pertinent geophysical data is processed and plotted by computers. The processing and plotting is done in such a manner as to maximize the amount of information and detail allowed by the original data.

DISCUSSION OF RESULTS

The **Paradigm 1-2** claims were surveyed on April 21, 1988. Approximately 27 line kilometers of airborne magnetic and VLF-EM survey data has been recovered and examined in detail to evaluate the **Paradigm 1-2** claims.

Survey lines were flown east-west on 300 meter centres with data being digitally recorded at half second intervals, providing an average sample spacing of 15 metres. The sensors were towed beneath the helicopter and maintained a terrain clearance of approximately 60 meters. The magnetic data is presented in contour form on a photomosaic base map of the area as Figure 5. The total field VLF-EM data is presented in contour form along with the quadrature VLF-EM data in profile form as Figures 6 and 7 representing the Cutler and Hawaii frequency information respectively.

The magnetic data is a useful tool for mapping both regional and local geological structures. Many localized magnetic variations are observed which are attributed to lithological changes.

The VLF-EM data is useful for mapping conductive zones. These conductive zones usually consist of argillaceous graphitic horizons, conductive clays, water saturated fault and shear zones, or massive conductive mineralized bodies.

There are three distinctive magnetic features observed across the survey area. Firstly, the geologically mapped quartz diorite plutonic rocks appear as magnetic highs; typically with a relative intensity of greater than 100 to 500 nT than the surrounding magnetic data. Secondly, major faults, fractures and shear zones appear as steep magnetic gradients. Finally, hydrothermal alteration along the faults appear as low magnetic responses. The combination of these three signatures are observed on the **Paradigm** 1-2 claims. The magnetic response is interpreted as reflecting only the general geological environment of the area and does not map any mineralization directly.

The magnetic data indicates plutonic intrusives, some major faults and possible hydrothermal alteration. Two large magnetic highs are found in the western portion of the survey area. The high amplitude magnetic response reflects the presence of Upper Triassic and Younger(?) plutonic intrusives rocks of quartz diorite composition with hornblende as the predominant mafic mineral. The distribution of these plutonic rocks may not be as widespread as that indicated on the geologic map.

Three subtle magnetic highs found in the central and lower eastern half of the claims may reflect geologically unmapped extensions of the quartz diorite plutonic rocks beneath the Unuk River volcaniclastics.

Several faults are interpreted from the magnetic data, the known geology and the aerial photographs as illustrated on Figure 5. A major fault trending north-south is magnetically mapped just west of and paralleling Harrymel Creek. The inferred fault coincides with the geologically mapped fault. Two east-west trending faults are inferred and appear to be cross cutting faults across the normal fault paralleling the Harrymel Creek.

Several low magnetic responses are found in the survey area. One magnetic low, found in the Copper King Glacier valley, appears to correlate to the Pleistocene and Recent basaltic flows. Other magnetic lows, found mostly in the eastern half of the survey area and adjacent to faults, may be reflecting a hydrothermal alteration. Hydrothermal alteration causes a magnetic low because of the alteration and leaching of magnetite associated with faulting. The presence of faulting and plutonic intrusive rocks provides the necessary geological setting for hydrothermal alteration and mineralization.

The VLF-EM data is presented on Figures 6 and 7 representing the Cutler and Hawaii frequency information respectively. Anomalous conductive responses have been marked on the appropriate maps.

Long wavelength VLF-EM anomalies have been indicated on the maps as being caused by topographic features like ridges and hill tops. The VLF-EM conductive zones trend north and northwest and parallels the geology. All of the VLF-EM conductive zones are found east of the north-south trending fault and adjacent to magnetic highs. One VLF-EM conductive zone, found in the northeast corner of the claims located along the flank of a magnetic high produces an anomalous VLF-EM response from both transmitting VLF-EM frequencies and directions, indicating the presence of a strong conductive medium. The conductive medium may consist of pyrite mineralization which is fairly common in Unuk River Formation through out the Unuk River area.

SUMMARY AND CONCLUSIONS

On April 21, 1988 an airborne magnetic and VLF-EM survey was conducted over the **Paradigm 1-2** claims. Approximately 27 line kilometres of geophysical data was gathered and processed to evaluate the **Paradigm 1-2** claims.

Two large magnetic highs are found in the western portion of the survey area. The high amplitude magnetic response reflect the presence of Upper Triassic and Younger(?) plutonic intrusives rocks of quartz diorite composition with hornblende as the predominant mafic mineral as indicated by the geology. Three subtle magnetic highs found in the central and lower eastern half of the claims may reflect geologically unmapped extensions of the quartz diorite plutonic rocks underlying the Unuk River volcaniclastics. A major north-south trending fault is magnetically mapped just west of and paralleling Harrymel Creek. The inferred fault coincides with the geologically mapped faults. Two east-west trending faults are inferred and appear to be cross-cutting the normal fault paralleling the Harrymel Creek.

Several low magnetic responses are found in the survey area. One magnetic low, found in the Copper King Glacier valley, is probably due to a thick section of non-magnetic basaltic flow. Other magnetic lows, found mostly in the eastern half of the survey area and adjacent to faults may reflect the hydrothermal alteration. The presence of faulting and plutonic intrusive rocks provides the necessary geological setting for hydrothermal alteration and mineralization.

Several conductive lineations are mapped in the survey area from the VLF-EM data. They trend in a north and northwest direction. One strong VLF-EM conductive zone found in the northeast corner of the survey area is located along the flank of a magnetic high and produces an anomalous response from both VLF-EM stations. This conductor may be caused by pyrite mineralization which is fairly common throughout the Unuk River area.

The interpretation of the magnetic data and VLF-EM data confirms the geological mapping by E. W. Grove, (1986). However, the airborne geophysical survey has indicated further faulting, hydrothermal alteration and potential sulphide mineralization. In this geological setting, and with the presence of VLF-EM conductors, faulting and possible hydrothermal alteration, this property has an excellent potential for fracture or fissure filling silver-gold vein mineralization.

RECOMMENDATIONS

Based upon this report and with known mineralization of iron and copper on the **Paradigm 1** claim the properties warrant further exploration. The airborne survey has delineated areas where mineralization may occur on the **Paradigm 1-2** claims. Specifically along the VLF-EM conductors associated with magnetic highs or in areas of likely hydrothermal alteration along faults.

The initial follow-up work should be a detailed ground magnetic and VLF-EM survey to precisely locate the ground targets. Following the ground magnetics and VLF-EM, an extensive and detailed geological mapping, rock and soil sampling program along with geochemical analysis for silver, gold, precious and base metals should be carried out. Contingent upon encouraging results from the geochemistry and preliminary ground geophysics, advanced geophysical programs utilizing induced polarization, resistivity, and conventional EM techniques would assist in delineating anomalous zones. Eventually trenching and drilling may be justified.

Respectfully submitted,

R Hermary

Richard G. Hermary, B.Sc.,
Geophysicist

PROFESSIONAL PROVINCE OF D. V. WOODS BRITISH COLUMBIA ENGINEER

Dennis V. Woods, Ph.D., P.Eng.
Consulting Geophysicist

REFERENCES

Grove, Edward W.,1971 — Geology and Mineral Deposits of the Stewart Area Northwestern B.C., Bull. 58, BCMEMPR

Grove, Edward W.,1986 — Geology and Mineral Deposits of the Unuk River-Salmon River-Anyox Area B.C., Bull. 63, BCMEMPR

INSTRUMENT SPECIFICATIONS

DELVCO RINGCORE MAGNETOMETER

Model:	1210
Sensor:	3-axis ringcore fluxgate
Orthogonality:	±1° degree with respect to other axes and reference surface
Sensitivity:	0.0025 Milligauss (0.25 gamma)
Range:	±1000, ±300, ±100, ±30, ±10, ±3 mG
Analog Output:	±5V dc for above ranges
Output Impedance:	600 ohms
Zero Field Offset:	< ±7 mG absolute
Linearity:	±0.5%
Noise:	0.1 to 1 Hz, 0.0025 mG peak-to-peak 1.0 to 10 Hz, 0.0025 mG peak-to-peak 1.0 to 100 Hz, 0.01 mG peak-to-peak
Gain Stability:	±3%, 0 to +60° C
Field Nulling:	±0.04 mG to full scale
Low-Pass Filtering:	Switch selectable 1, 10, 100 and 500 Hz (-3 dB with -18 dB/octave roll-off, Butterworth response)
High-Pass Filtering:	Dc, 0.1, and 1Hz (-3 dB with -18 dB/octave roll-off, Butterworth response)
Notch Filter:	40-dB notch at 60 Hz, switch selectable, in or out
Battery Life:	25-hour minimum, rechargeable
AC Power:	115-230V; 1/4 A
Size:	Sensor: 3.2 cm x 3.5 cm x 10.16 cm Control Unit: 43 cm x 13 cm x 41 cm
Weight:	Sensor Probe: 0.62 kg Control Unit: 13.6 kg

INSTRUMENT SPECIFICATIONS

CONTROLLER AND RECORDING SYSTEM

Type:	Compaq Portable II
	An 80286 microprocessor
	640 Kbytes of RAM
	2 three and a half inch 720 Kbyte drives
	one 20-Megabyte fixed disk drive
	Monochrome, dual-mode, 9-inch internal monitor
	Asynchronous communications interface
	Parallel interface
	Composite-video monitor interface
	RGB monitor interface
	RF modulator interface
	Two expansion slots
	Real-time clock
	An 80287 coprocessor
	A HPIB Interface Card
Data Storage:	3 1/2 inch diskettes in ASCII
	Roland 1012 printer for printed output
	Beta I video cassettes
Power Requirements:	115 Volt AC at 60 Hz
Weight:	11 kg
Dimensions:	45 cm x 25 cm x 30 cm

INSTRUMENT SPECIFICATIONS

DATA ACQUIISITION UNIT

Model:	HP-3852A
Mainframe Supports:	Eight function module slots Data acquisition operating system System timer Measurement pacer Full alphanumeric keyboard, command and result displays
Number of Channels:	20 channel relay multiplexer HP44708A/H
Voltmeter:	5 1/2 to 3 1/2 digit intergrating voltmeter HP44701A measures: DC voltage resistance AC voltage Range ±30V, ±0.008%, +300uV Intergration Time 16.7 msec Number of converted digits 6 1/2

Reading rate (readings/ sec)	57
Min-Noise rejection (dB) Normal Mode Rejection at 60 Hz ±0.09%	60
DC Common Mode Rejection with 1 KΩ in low lead	120
Effective Common Mode Rejection at 60 Hz ±0.09% with 1 KΩ in low lead	150

Communication:	HPIB interface with Compaq
Power Requirements:	110/220 Volts AC at 60/50 Hz
Dimensions:	45.7 cm x 25.4 cm x 61.0 cm
Weight:	9.5 kg.

STATEMENT OF QUALIFICATIONS

NAME:	HERMARY, Richard G.
PROFESSION:	Geophysicist
EDUCATION:	University of British Columbia - B.Sc. - Major Geophysics
PROFESSIONAL	B.C. Geophysical Society
EXPERIENCE:	Six months as field geophysicist, A & M Exploration Ltd.
	Two years with Western Geophysical Aero Data.

STATEMENT OF QUALIFICATIONS

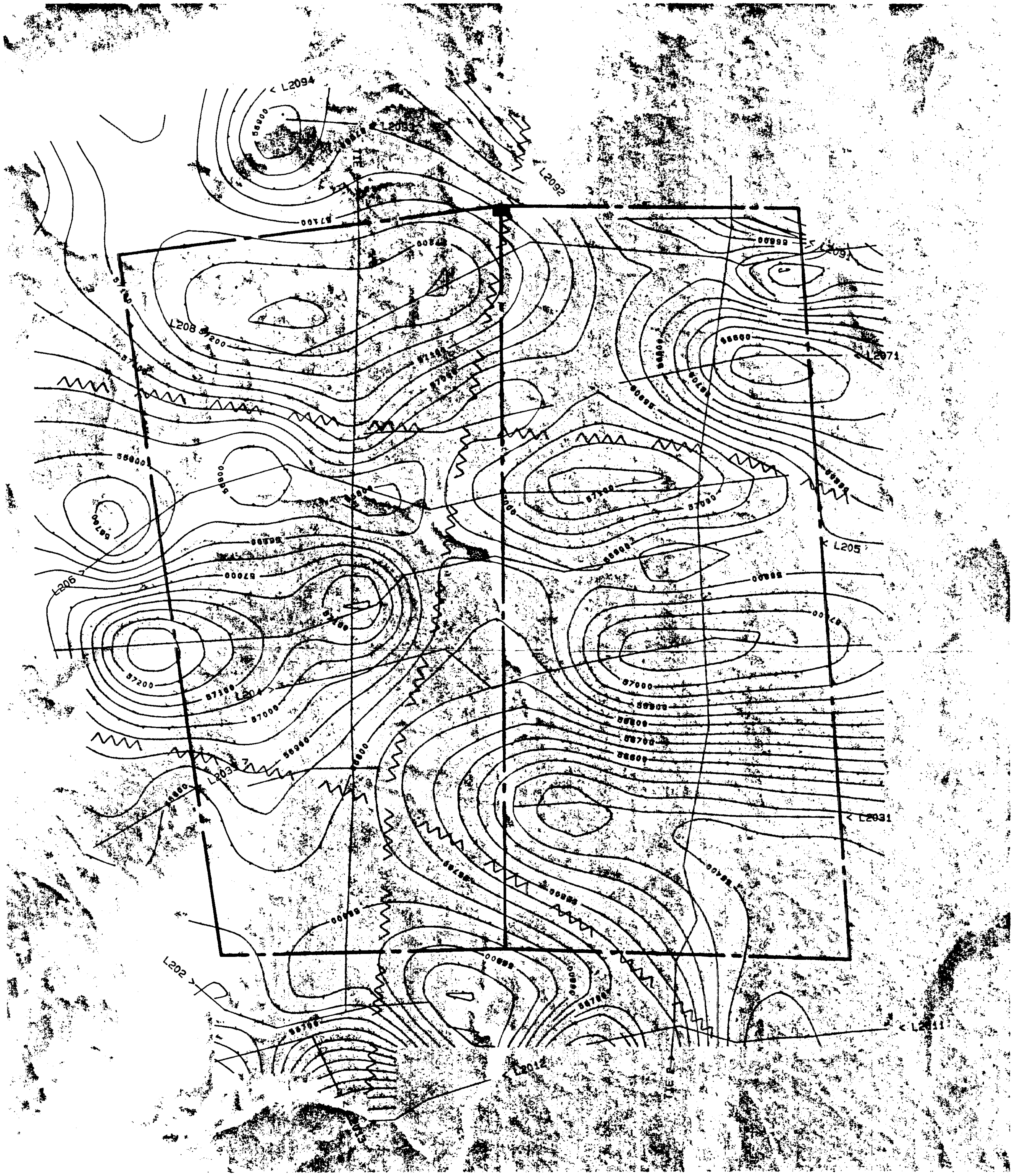
NAME:	WOODS, Dennis V.
PROFESSION:	Geophysicist
EDUCATION:	B.Sc. Applied Geology Queen's University M.Sc. Applied Geophysics Queen's University Ph.D. Geophysics Australian National University
PROFESSIONAL ASSOCIATIONS:	Registered Professional Engineer Province of British Columbia Society of Exploration Geophysicists Canadian Society of Exploration Geophysicists Australian Society of Exploration Geophysicists President, B.C. Geophysical Society
EXPERIENCE:	1971-79 - Field Geologist with St. Joe Mineral Corp. and Selco Mining Corp. (summers). - Teaching assistant at Queen's University and the Australian National University. 1979-86 - Professor of Applied Geophysics at Queen's University. - Geophysical consultant with Paterson Grant & Watson Ltd., M.P.H. Consulting Ltd., James Neilson and Assoc. Ltd., Foundex Geophysics Ltd. - Visiting research scientist at Geological Survey of Canada and the University of Washington. 1986-88 - Project Geophysicist with Inverse Theory and Applications Inc. - Chief Geophysicist with White Geophysical Inc.

COST BREAKDOWN

The geophysical data was analyzed, geological information researched and compiled, and this report prepared for an all inclusive fee of $2,769.00. This total is based on a cost of $47/km for total field magnetic data and two stations of VLF-EM data. The survey was carried out by Ian Braidek and Bob Acheson.

Mob/Demob - truck rental,helicopter ferry	$ 500.00
Survey - 27 km of magnetics and 2 stations of VLF-EM data at $47/km	$1,269.00
Report/Interpretation	$1,000.00
TOTAL	**$2,769.00**

TOTAL ASSESSMENT VALUE OF THIS REPORT **$2,769.00**



N

LEGEND:

Inferred fault

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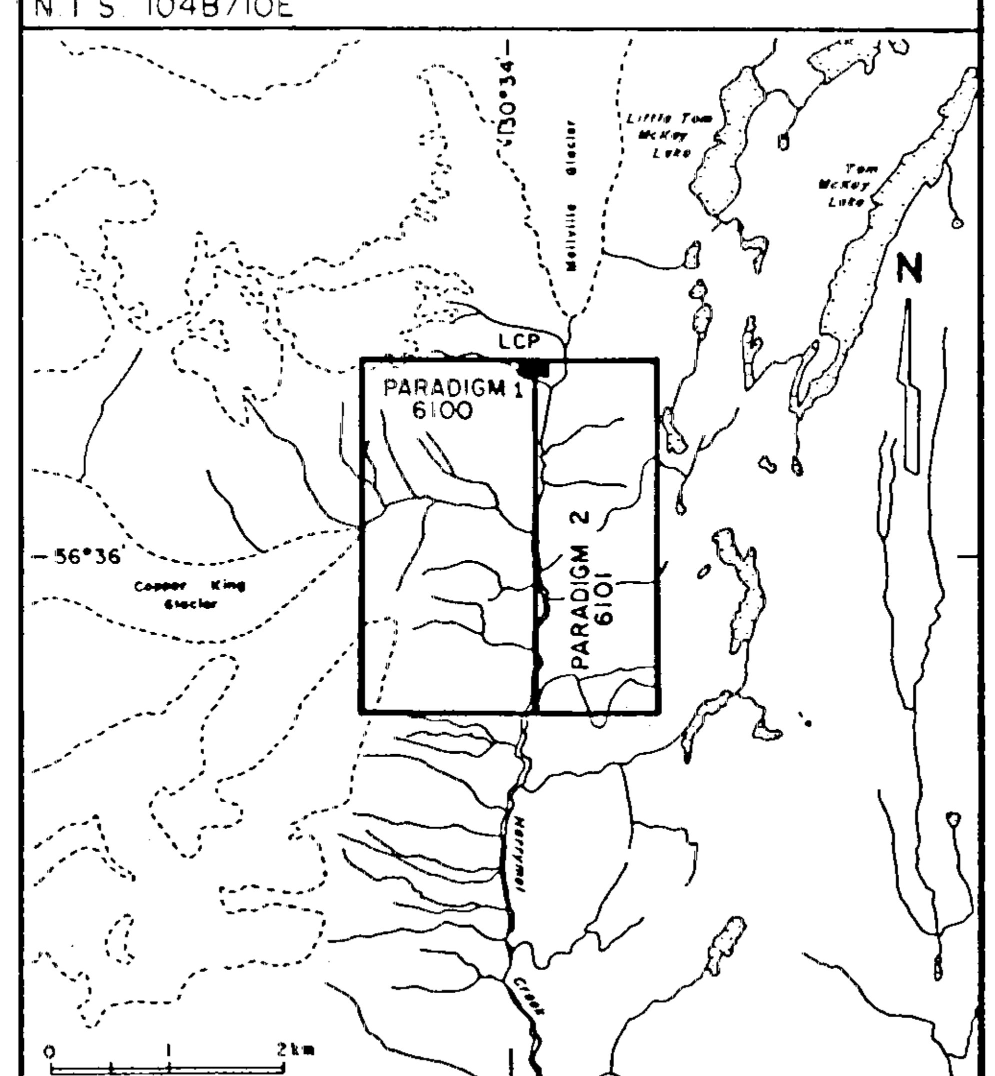
17,625

NTS 104B/10E



DINO M. CREMONESE

PARADIGM

AIRBORNE MAGNETIC AND VLF-EM SURVEY

CONTOURED TOTAL FIELD MAGNETICS (nT)

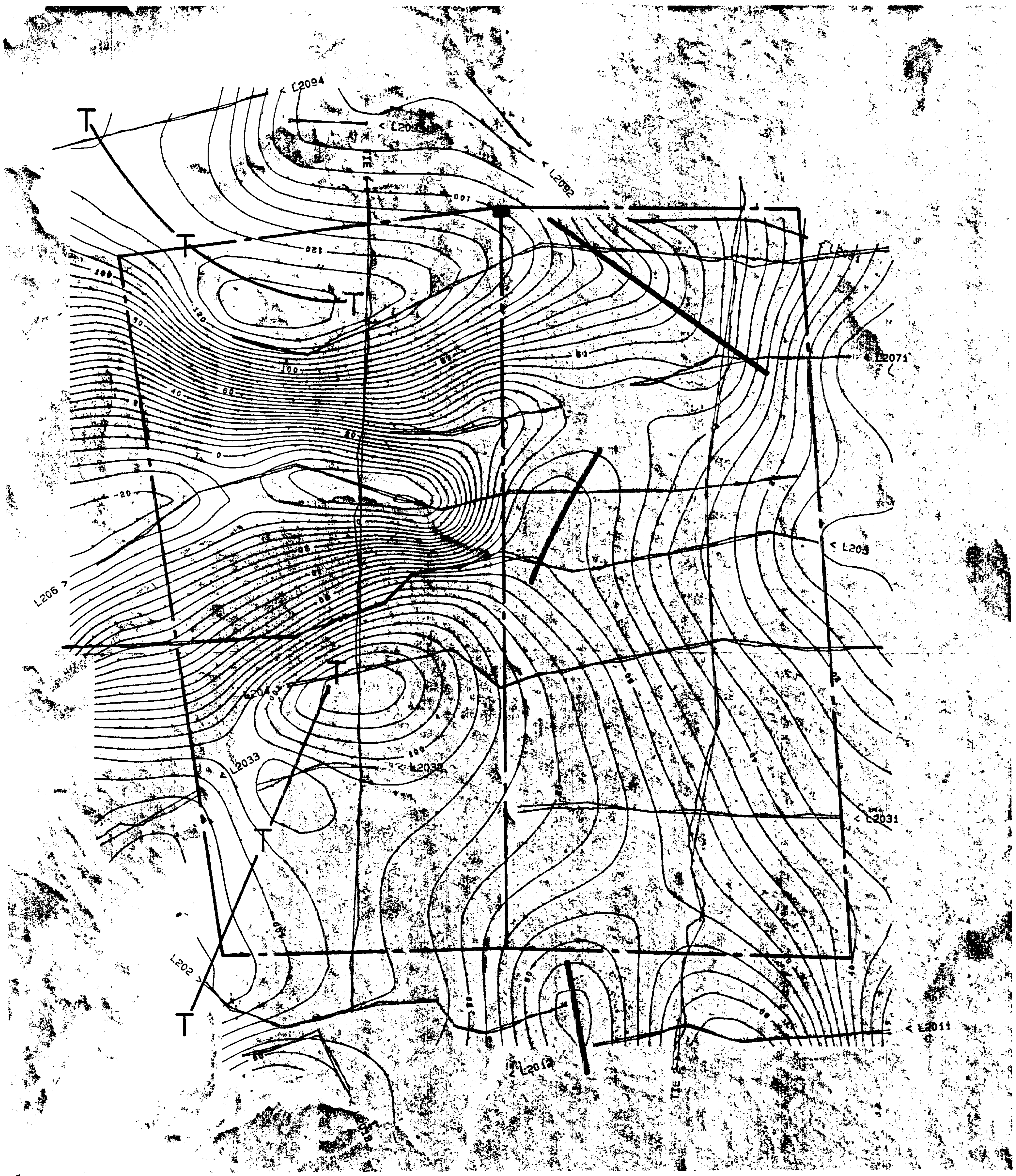
Scale 1: 10000.0

0 200 400 600 800 1000 M

Date: APRIL 1988

FIG. 5

WESTERN GEOPHYSICAL AERO DATA LTD.



N

LEGEND :

VLF - EM conductor caused by topographic features —T—

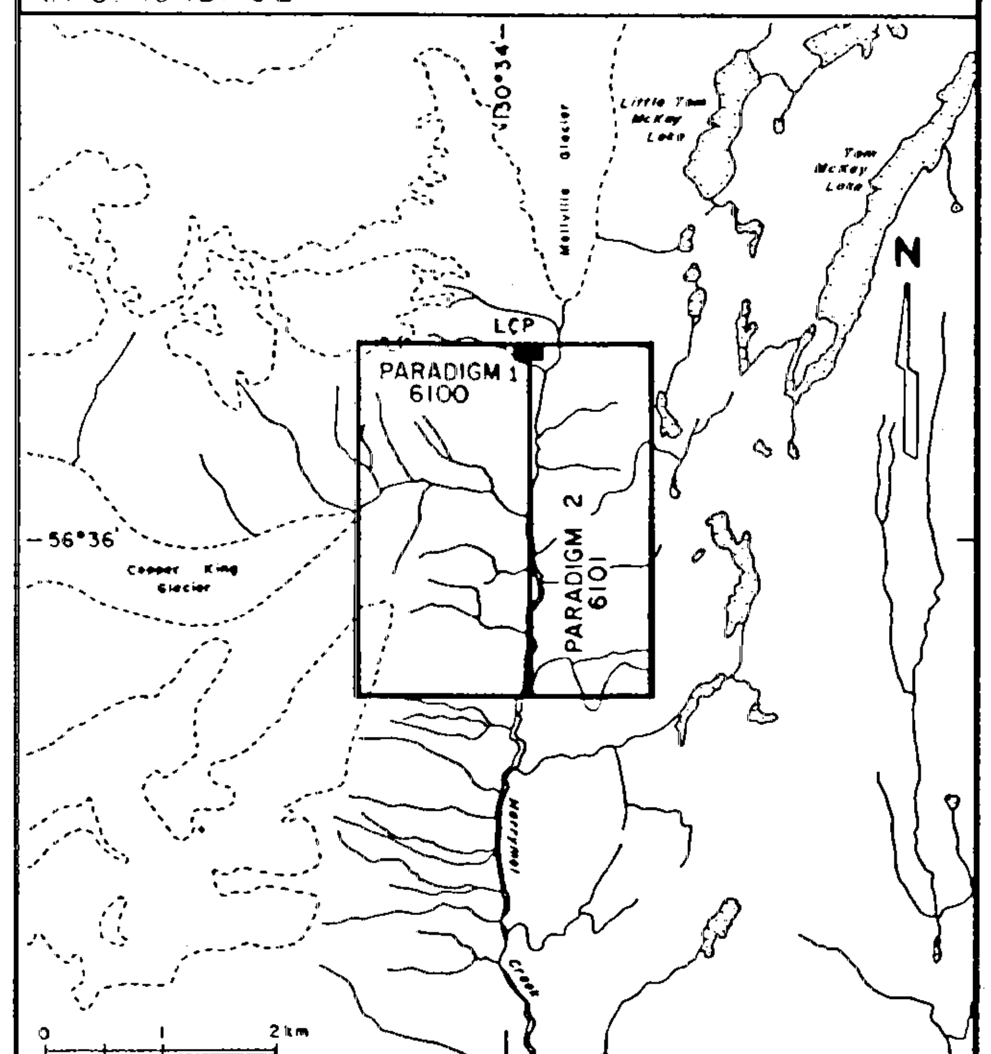
VLF - EM conductor

VLF - EM quadrature profile
Scale = 50%/cm

GEOLOGICAL BRANCH
ASSESSMENT REPORT

17,625

N.T.S. 104B/10E



DINO M. CREMONESE

PARADIGM

AIRBORNE MAGNETIC AND VLF-EM SURVEY

CONTOURED TOTAL FIELD VLF-EM (CUTLER 24.0 kHz)

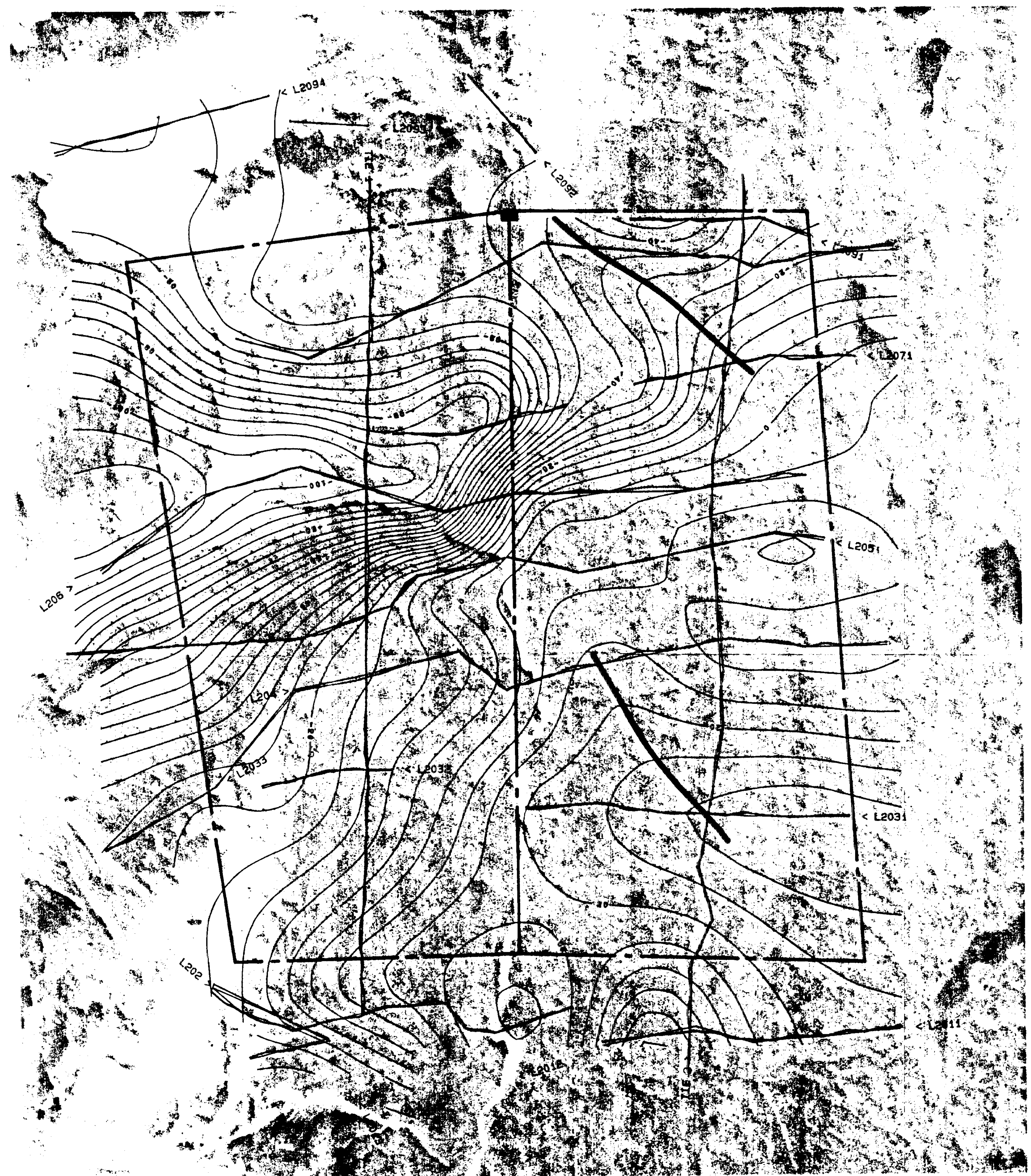
Scale 1: 10000.0

0 200 400 600 800 1000 M

Date: July 1988	Survey: April 1988	Figure 6

WESTERN GEOPHYSICAL AERO DATA LTD.

WESTERN GEOPHYSICAL AERO DATA LTD.



LEGEND :

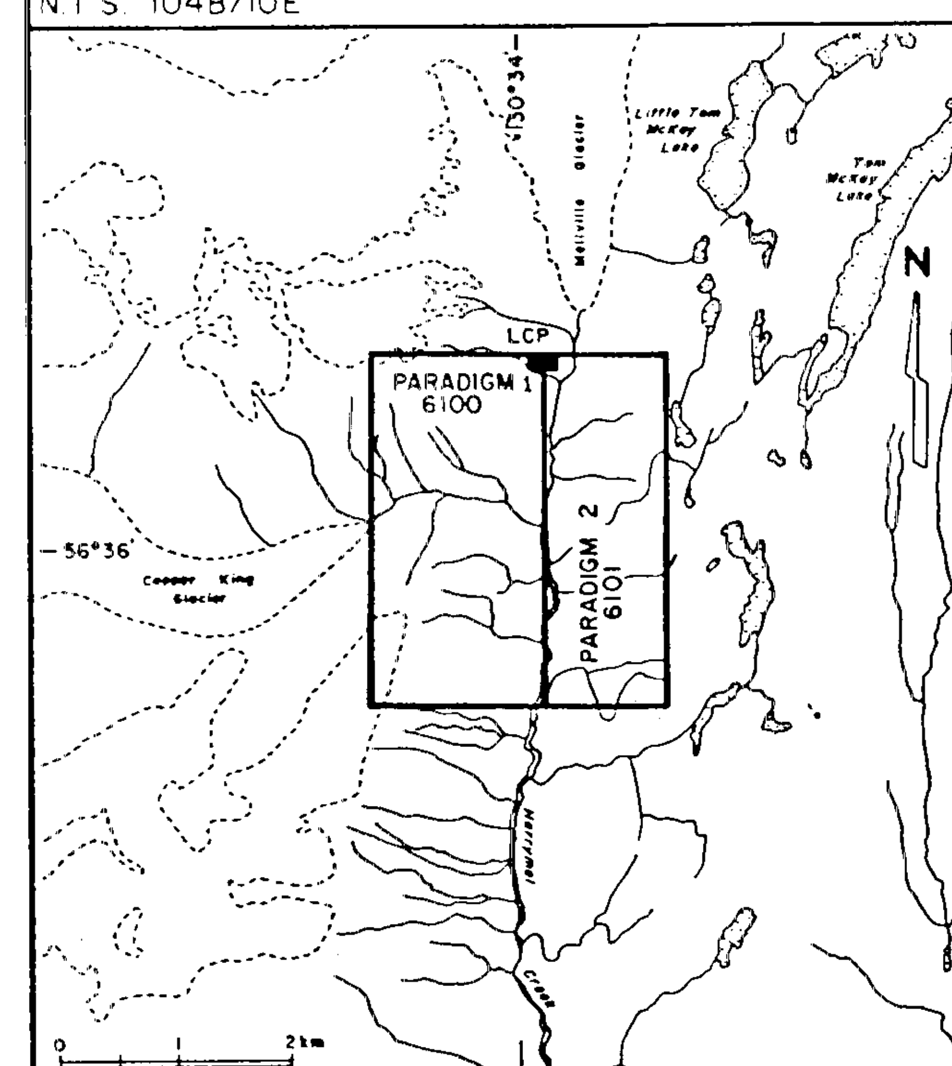
VLF - EM conductor

VLF - EM quadrature profile
Scale = 50% / cm

GEOLOGICAL BRANCH
ASSESSMENT REPORT

17,625

NTS 104B/10E



DINO M. CREMONESE

PARADIGM

AIRBORNE MAGNETIC AND VLF-EM SURVEY

CONTOURED TOTAL FIELD VLF-EM (HAWAII 22.3 kHz)

Scale 1: 10000.0

0 200 400 600 800 1000 M

Date: July 1988	Survey: April 1988	Figure 7

WESTERN GEOPHYSICAL AERO DATA LTD.

(3)

WESTERN GEOPHYSICAL AERO DATA LTD.