82-#891 -#10928

ASSESSMENT REPORT

AIRBORNE INPUT ELECTROMAGNETIC AND MAGNETOMETER SURVEY

ANYOX JOINT VENTURE GROUP

Hrothgar 2966; Wotan 1 2865; Wotan 2 2867; Wotan 3 2866;
3 Bears 1-6 3245-3250; Imperial 3432; Metals 3433;
Deadwood 1-4 3423-3426; #5 3186; #4 (Fr.) 3185;
#4 3184; #3 3183; #2/#2 Fr. 2909; #1 3182;
Iron Cap/Phyllis Fr. 3180; Lost Chord Fr./Darwin Fr./
Lake 2903(4); Monkey Fr. 3181

SKEENA MINING DIVISION

103P/5W and 103P/12W

55° 27' 30" N 129° 47' 30" W

FOR

THE ANYOX JOINT VENTURE

(Imperial Metals Corporation)
(Procan Exploration (B.C.) Ltd.)
(Genesis Resources Corporation)
(Fatherlode Syndicate)

by

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Mining Geologist
Imperial Metals Corporation

and

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Questor Surveys Limited

November 1982

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I. Introduction

Imperial Metals Corporation, the operator of the Anyox Joint Venture, contracted Questor Surveys Limited to fly helicopter borne INPUT Electromagnetic and a total field magnetometer survey of the Joint Venture property.

In June of 1982 a total of 150 km of survey was flown over the property.

2. *The Property*

2.1. *The Claims*

The Anyox Joint Venture lands consist of 94 contiguous units, comprised of six modified grid blocks, ten two-post claims, and nine reverted crown grants. They were grouped as the "Anyox Joint Venture" in September 1982.

The claims are:

Name of Claim	No. of units	Record No.	Record Date
Hrothgar	12	2966	1 May
Wotan 1	6	2865	26 Feb.
Wotan 2	12	2867	26 Feb.
Wotan 3	18	2866	26 Feb.
3 Bears 1-6	6	3245-3250 (incl.)	24 Sept.
Imperial	15	3432	19 April
Metals	12	3433	19 April
Deadwood 1-4	4	3423-3426 (incl.)	19 April
#5	1	3186	11 Sept.
#4 (Fr.)	1	3185	11 Sept.
#4	1	3184	11 Sept.
#3	1	3183	11 Sept.
#2/#2 Fr.	1	2909	22 April
#1	1	3182	11 Sept.
Iron Cap/Phyllis Fr.	1	3180	11 Sept.
Lost Chord Fr. Darwin Fr. Monkey Fr.	1	3181	11 Sept.
Lake	1	2903	10 April

See Figure 1

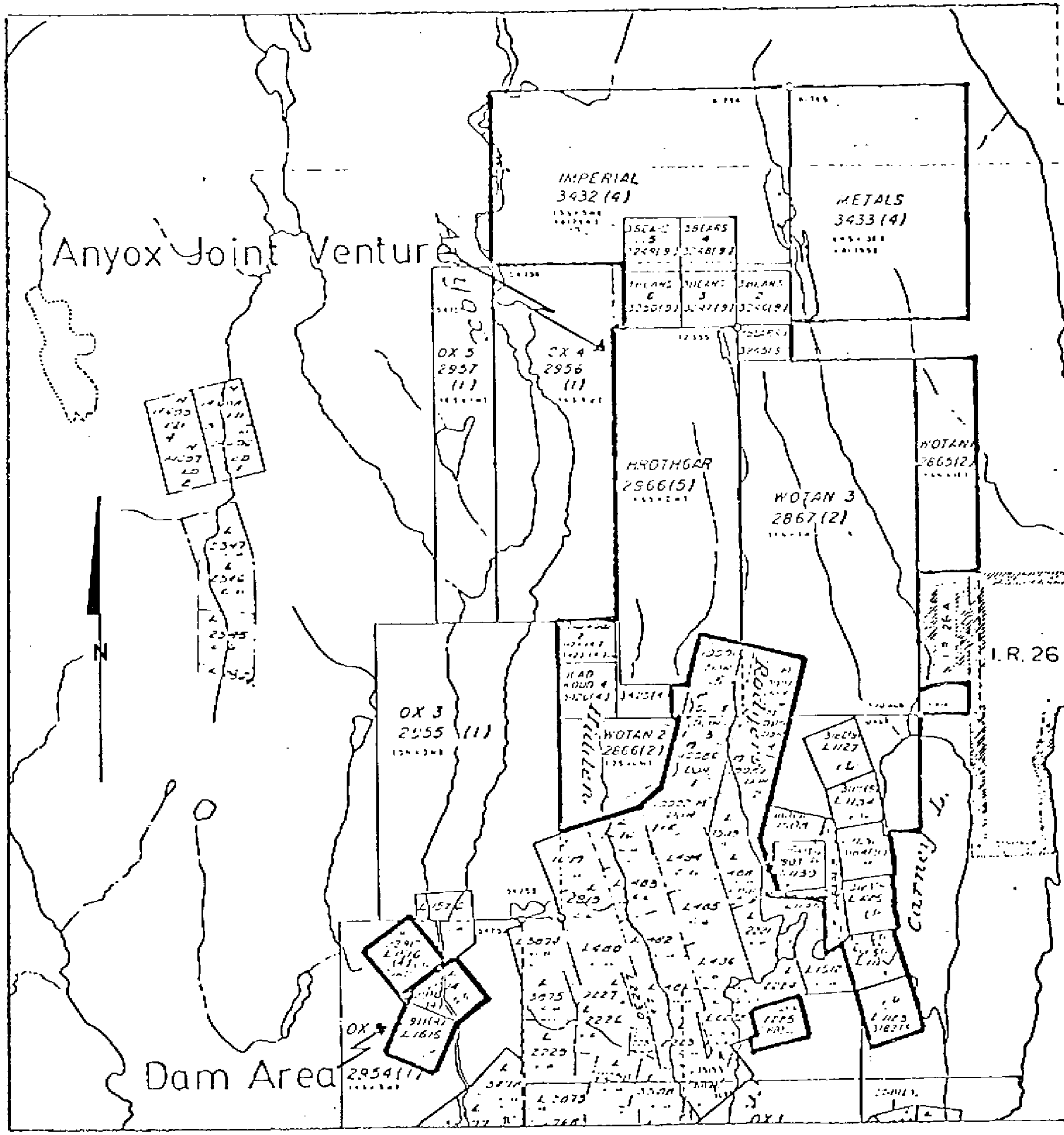


Figure 1: Claim Map
Anyox Joint Venture
Map 103P/5W & 103P/12W
Scale 1:50,000

2.2. Title to Claims

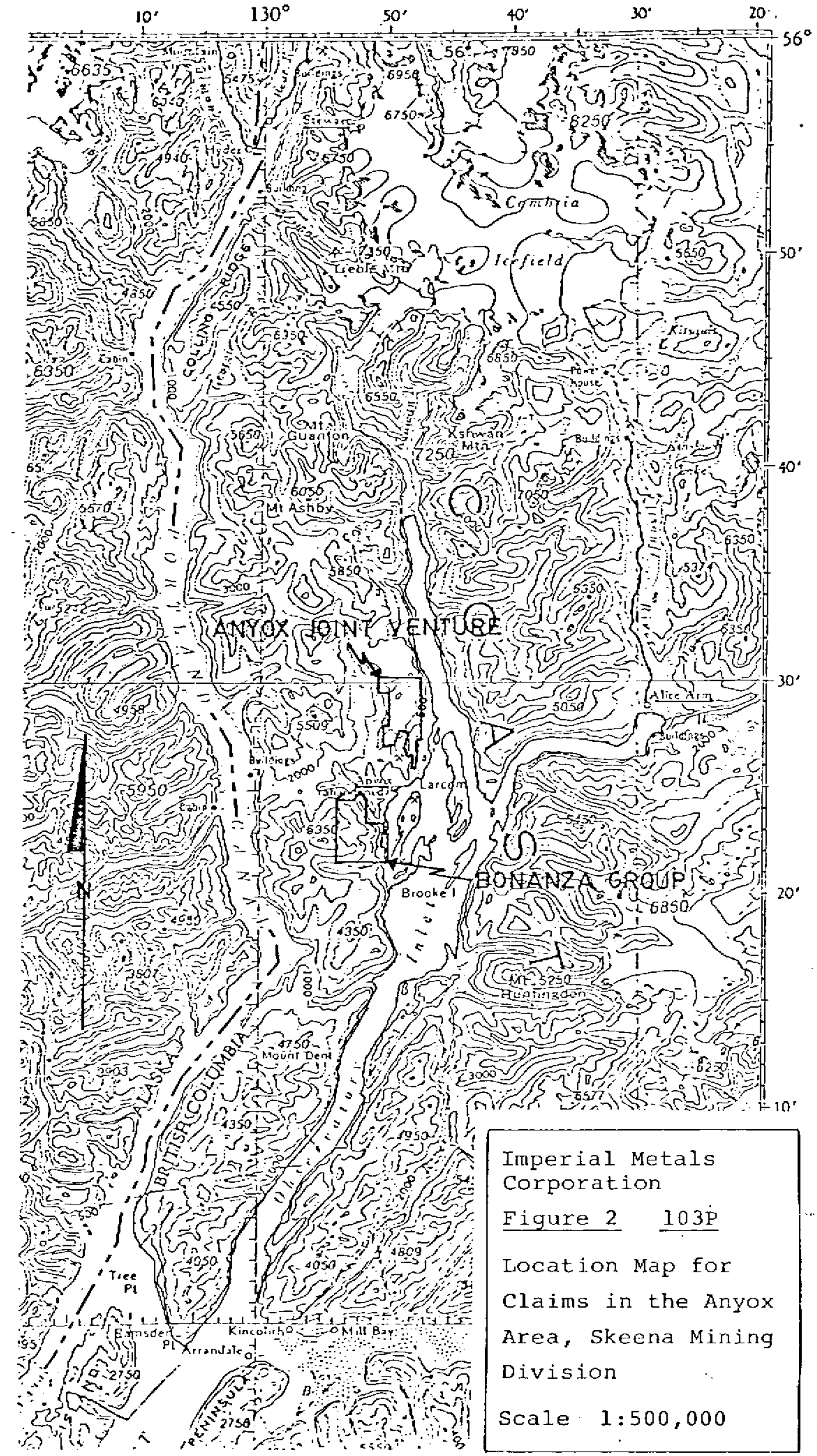
Title to all the above listed claims is in the name of Procan Exploration (B.C.) Limited, subject to the joint venture agreements. The various agreements give Procan Exploration (B.C.) Ltd. (henceforth "Procan") a 100% working interest in the property, subject to the below. Genesis Resources Corporation henceforth "Genesis") has a 10% net profit interest and the option to purchase a 15% working interest on or before April 30th 1985. The Fatherlode syndicate has a 5% net profits interest and a further 2-1/2% net profits interest if Genesis fails to purchase its working interest. Imperial Metals Corporation (henceforth "Imperial") has a 20% net profits interest and the option to purchase a 7-1/2% working interest if Genesis fails to purchase its 15% working interest. Imperial is the operator of the property.

2.3. Location of Claims

The Anyox Joint Venture lands are located on Hastings Arm approximately 130 km north of Prince Rupert and 25 km west of the Kitsault Mine. The centre of the claim block lies approximately at a latitude of 55° 27' 30" north and a longitude of 129° 47' 30" west (see Figure 2).

2.4. Access to the Claims

The claim area is reached by scheduled airline services to Kitsault, 25 km to the east, from Prince Rupert



Imperial Metals Corporation

Figure 2 103P

Location Map for Claims in the Anyox Area, Skeena Mining Division

Scale 1:500,000

and then by helicopter based in Kitsault. Alternatively there is road access to Kitsault from Terrace while heavy equipment is best barged from Prince Rupert to the abandoned Anyox townsite.

2.5. *Topography and Climate*

The claims are over an area that rises from sea level to 865 m above sea level. The majority of the area is a rounded hill that slopes gently to the south and the the east with numerous north-south ridges and valleys that make east-west movement very difficult. The lower elevations are covered by extremely dense underbrush that thins out at the higher elevations. There is no tree cover since smelter activity and several forest fires killed all the trees and poisoned the soil.

The climate is typical of the coast mountains with high rates of precipitation that results in heavy snowfall in winter. Heavy fog and mist is common in spring and fall.

3. *History (from Minister of Mines Reports 1898-1936)*

3.1. *Discovery*

In the last decade of the 19th century placer miners investigated the Anyox area making only minor discoveries. However, while prospecting Bonanza Creek, outcropping massive sulphides were discovered in the creek bed which were staked in 1901. Exploration of the area subsequently revealed outcropping massive sulphides on Hidden Creek in 1902 and disseminated sulphides just north of the mouth of Tauw Creek in 1904. Exploration undertaken by Hidden Creek Mining continued erratically until 1908 when Granby Mining and Smelting purchased Hidden Creek. Development commenced in 1909 and production commenced in 1915.

3.2. *The Production Years*

Ore was produced from the Hidden Creek mine from 1915-1935 and was supplemented by ore from the Bonanza Mine from 1928 until Hidden Creek closed down. Production rose from 462,000 tons in 1914, to a peak of 1,742,000 tons in 1935 with an output of 16 million lbs copper, 143,000 oz silver and 3,600 oz gold in 1914 rising to 37 million lbs of copper, 220,000 oz silver and 2,800 gold on close down.

Initially the ore was smelted directly, but during the second decade of production lower ore grades necessitated the use of a mill. During the 20 years of production some 25 million tons of rock were mined producing 740 million lbs *of copper, 7 million oz of silver and 124,000 oz of gold. Grades averaged 1.55% copper, 0.28 oz silver/ton and 0.01 oz/gold per ton from Hidden Creek and 2.18% copper, 0.39 oz/ton silver and little gold from the Bonanza Mine (Grove 1982).*

The mine finally shut down in August 1935, due to low copper prices that had been falling since 1930, lower ore grade and higher production costs. The mine was not worked out. Cominco purchased the mine in 1936.

3.3. Exploration Since Shut Down

There has been sporadic exploration by various parties since 1935 resulting in several new discoveries, namely the Double Ed in Bonanza Creek in 1950 (2 million tons of 1.3% copper and 0.6% zinc drilled out), the Redwing in Tauw Creek explored in 1965-1967 (265,000 tons of 1.8% copper) and numerous relatively unexplored showings widely scattered over the Anyox pendant. There has been no systematic exploration of the pendant as a whole, though Cominco has investigated the surface potential of most of its claim area.

In the spring of 1982 a joint venture agreement was signed between Mitsui Mining and Cominco that resulted in an intensive drilling programme in the Hidden Creek area. Prior to this Imperial Metals had secured all the remaining *potentially favourable land by staking and purchase agreements. Imperial then embarked on an intensive exploration programme of all its lands. Figure 4 shows the location of most of the known massive sulphide bodies and prospects.*

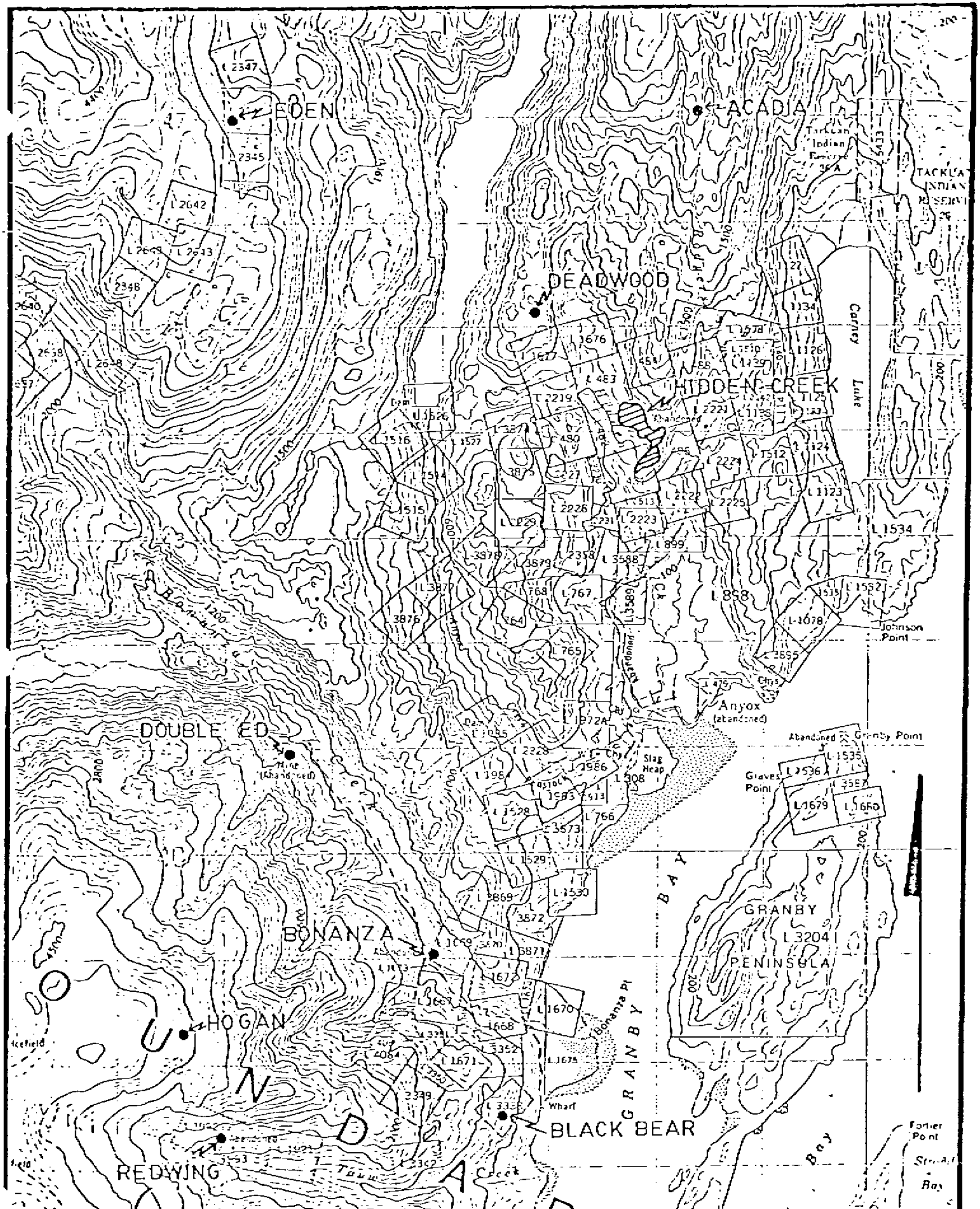


Figure 4 Scale 1:50,000

MASSIVE SULPHIDE BODIES & PROSPECTS IN THE ANYOX AREA

XI

HELICOPTER INPUT E.M. SURVEY

IMPERIAL METALS CORPORATION

ANYOX JOINT VENTURE AREA

BRITISH COLUMBIA

FILE NO: 24H35A NOVEMBER, 1982

Questor Surveys Limited, 6380 Viscount Road, Mississauga, Ontario L4V 1H3

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CONTENTS

INTRODUCTION

This report contains the results of a Helicopter MARK VI INPUT E.M. Survey flown in the Anyox Joint Venture area near Anyox, British Columbia, on June 23 and 25, 1982.

A brief description of the survey procedure is included.

The survey mileage was approximately 150 line kilometres and the survey was performed by QUESTOR SURVEYS LIMITED. The survey aircraft was a Bell 205 Helicopter C-GLMC and the operating base was Stewart, British Columbia.

The area outline is shown on a 1:250,000 map at the end of this report. This is part of the National Topographical Series, Sheet Number 103P.

The following were the personnel involved with the airborne survey:

Pilot - Dan Davis
Navigator - Bill Smith
Operator - Keith Higgenbottom
Engineer - Laughin Currie
Geophysicist - Robert deCarle

SURVEY PROCEDURE

Terrain clearance was maintained as close to 122 metres as possible, with the E.M. Bird at approximately 45 metres above the ground. Rough terrain could be a factor for the helicopter not being at 122 metres. A normal S-pattern flight path using approximately one half kilometre turns was used. Consecutive lines were flown in alternate directions for the sole purpose of interpreting dipping conductors. This phenomenon will be dealt with later.

A line spacing of 150 metres was used over the entire survey area with an approximate east-west flight direction.

The equipment operator logged the flight details and monitored the instruments. It was the responsibility of the Geophysicist to maintain and check the ground magnetic station, Geometrics G-806, which was recording the daily diurnal changes. The results of these recordings have been included in the final shipment.

MAP COMPILATION

The base map used for navigation and flight path recovery was a photographic transparency at an approximate scale of 1:10,000 which was supplied to the contractor by the client. The final map was reproduced at a scale of 1:10,000 on stable transparent film from which white prints can be made. A copy of the map layout is located on the map sheet using topographical reference numbers.

Flight path recovery was accomplished by comparison of the 35mm half frame film with the mosaic in order to locate the fiducial points. Most picked points are between 300 and 900 metres depending on the difficultv of the area, some picked points are much in excess of this fiqure.

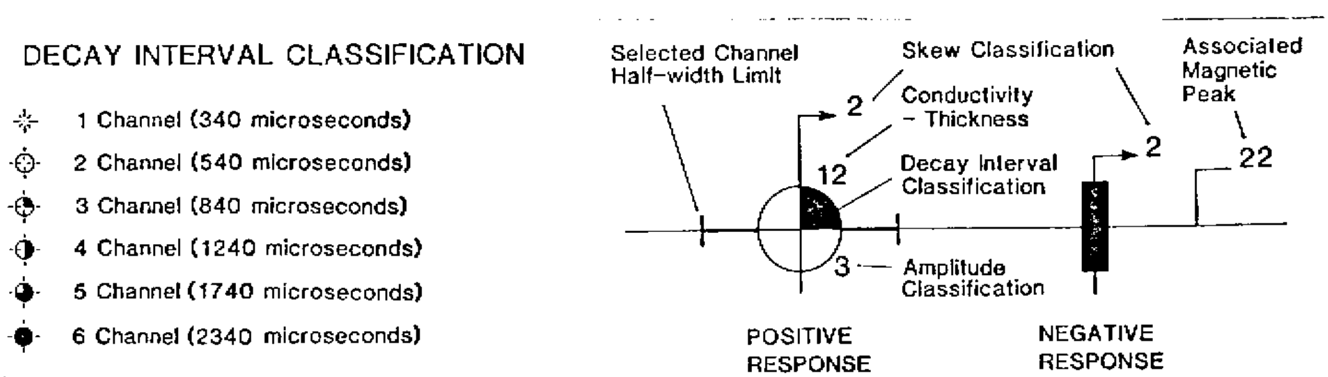
DATA PRESENTATION

The results of the INPUT survey are presented to the client in the following manner:

- a blank 5 minute photographic base at a scale of 1:10,000
- a photographic base showing combined INPUT anomalies, half peak width of channel 2, conductive overburden, selected targets, skew classification and flight lines
- a clear overlay showing the contoured form of the total magnetic field

See Appendix for a comprehensive description of the interpretation approach used in helicopter INPUT surveys.

QUESTOR's conventional form for presenting the helicopter INPUT data on a base map is as follows and is self-explanatory:



RESULTS

The survey area is located approximately 45 kilometres south of Stewart, British Columbia and roughly 5 kilometres north of Anyox. It is an area which is rugged with mountain peaks in the order of 760 metres high. Drainage is generally north-south with direction of flow to the south. There are some northeast-southwest trending fault zones which have offset some of the conductors and a close examination of this structural effect should see a number of other offsets which I have not mentioned or indicated in this report.

A limited amount of work has been undertaken within the survey block but because of the ruggedness of the terrain, the amount of exploration is not thought to be great.

The important horizon economically, is the volcanic-metasedimentary contact which seems to coincide with ZONES A3, A19 and possibly A2. A number of deposits have been found to correlate with this horizon, most notably the Hidden Creek, the Bonanza and Redwing deposits. There are others but these are the most important ones. It is in the areas of ZONES A1, A2, A3, A15, A16 A21, A22 and A25 where future prospects will be found. All of the conductors located to the east of this horizon are interpreted to be due to graphite within the metasediments. There is no question, of course, that if it is found that interbedding of volcanics occur within this metasedimentary environment, then any correlation between INPUT conductors and volcanics will up-grade the priorities tremendously.

Volcanic and metasedimentary rocks which underlie most of the Anyox area form a large inclusion in the granitic matrix of the Coast Range complex. The surrounding granitic rocks are generally coarse-grained granodiorites which grade variably between hornblende quartz diorite and leucocratic quartz monzonite. The volcanic rocks in the Granby Bay inclusion consist largely of altered, pillowed, and massive andesites, some crystal tuffs, and massive basic sills. The volcanics have been intruded by small gabbroic plugs and various dykes. The overlying metasediments include thinly striped argillites, colour-banded dark siltstones, dark sandstones, and minor limestone as lenses. The main contact is usually sharply defined, and is apparently conformable, although complicated by involved concentric folding.

It is obvious from the non-correlation between the electromagnetic responses and the magnetics that most conductors are related to the overlying metasediments rather than with the volcanics. This would suggest that graphite is the probable cause of most trends east of ZONE A3.

ZONE A3 and as far east as ZONE A11 appear to be dipping in an easterly direction while ZONES A12, A13 and A18 would appear to be dipping to the west. This would suggest synclinal formation.

Priority targets, in order of importance, for follow-up are ZONES A16, A15, A2, A3 and A25.

The following now is a brief discussion on each of the indicated trends on the INPUT map, labelled ZONES A1 to A25.

ZONE A1 The isolated anomaly displays a very weak electromagnetic response but is still considered to be due to a bedrock source. It is also a relatively broad response suggesting that the flight line has been flown at an oblique angle. Note the photo lineament closely parallelling the flight line. This may be a fault or shear zone.

Thus, it is possible that the cause of this intercept is due to mineralization contained within the fault zone. Pillow lavas have been described as being the rock types in this area.

A ground reconnaissance survey is recommended.

ZONE A2 This conductor may, in fact, extend well to the south. The intercept does appear to be isolated and not associated, whatsoever, with the conductors to the east.

Referring to the geology maps, it will be noted that this zone correlates with or is very close to the volcanic-metasedimentary contact. This is the favourable horizon for economic sulphides in which a number of zones have been located.

<u>ZONE A3</u>

This is a very long conductor which traverses most of the survey block in a north-south direction. It would appear to be parallelling the volcanic-meta-sedimentary contact if not correlating with it.

Dip is to the east with magnitudes between 40° to 60°.

Referring to one of the geology maps supplied by the client, it will be seen that a mineralized showing has been indicated to be in the vicinity of intercept 10050A. This particular anomaly displays quite a strong electromagnetic response. In fact, channel 1 has deflected completely off the analogue record paper and channel 2 is not far off doing the same.

There are a number of good anomalies or intercepts along this trend but probably the best is intercept 10250B. It displays excellent conductivity and also, has a subtle magnetic feature associated with it. The entire trend seems to be correlating with the flank of a magnetic trend located to the east, again suggesting the correlation with the geological contact.

An area which warrants further work in the field is in the vicinity of intercepts 10250B and 19020C.

ZONES
A4 and A5

Both of these short strike length conductors display fair to poor conductivity with only A4 having any magnetic association.

Metasediments are the rock types suggesting that graphite may be the mineral source.

ZONE A6

All of the anomalies along this trend, for the most part, display very strong electromagnetic responses. In some cases, channel 1 has completely disappeared off the analogue recorder paper. This not only suggests good conductivity but also an extremely wide zone. There is also every indication that a second weaker zone parallels A6 to the west which includes intercept 10050B. The extremely fast decay rate of the transient with no response on channels 4, 5 or 6 (intercept 10050B) suggests a zone with a limited depth extent, it bottoms out relatively shallow.

According to the geology maps, the entire area is underlain with metasediments. However, inter-bedding of volcanics with the metasediments is possible in this area, thus, a ground survey is recommended.

ZONE A7

A long conductor which displays fair to good conductivity. It does not have any magnetic association.

There would seem to be some confusion at the extreme north end of A7, the south end of A14 and all of A15. The writer speculates that the possibility exists for the A7 to join up with the northern portion of A14, and the southern portion of A14 joins up with A15. A ground survey would have to be implemented in order to sort this out.

Intercept 10070C may be an intercept where future preliminary work could be started.

ZONE A8

The indicated trend is a weaker conductor which may be due to graphite. Note the relationship with the metasediments.

One observation made is the lack of a response on the east lines, except, of course, for line 10010E. A possible masking effect from the larger amplitudes of ZONE A7 may be the reason.

In any event, a low priority should be given to this zone.

ZONE A9

This is a long linear conductor which displays, for the most part, good conductivity. It is roughly parallelling a fault zone which is indicated on one of the geology maps supplied by the client.

There are a number of minor offsets or what appear to be folding along the conductor. This phenomenon, in all probability, is due to cross-cut faulting which strike northeast-southwest. One such area is between lines 10250E and 10280W. There is a noticeable offset at this location and this could be related to a fault zone.

The conductance values are quite high towards the northern portion of the conductor while only minor values have been recorded to the south.

Direction of dip is to the east with magnitudes between 60° to 75°.

ZONE A10

This zone is a short strike length situation displaying only fair conductivity. Graphite within the metasediments is the probable cause.

A low priority.

ZONE A11

As is the case for a number of other zones, A11 is a long, linear conductor displaying good conductivity. There is no magnetic association suggesting pyrite and/or graphite as the probable cause.

The conductor is also dipping to the east.

It is interesting to note that parts of the conductor do, in fact, correlate with a fault zone while in other areas, it does not. This would seem to suggest that we are possibly dealing with two different trends from two different sources.

Also, note the offset between ZONES A11 and A17. This could have resulted from a fault zone.

ZONES A12 and A13

Both of these trends display good conductivity but do lack magnetic association. Again, they appear to be related to metasediments (argillite) which is not the important economic horizon in the search for base metals. If a ground programme realizes the interbedding of volcanics in this area, then further work is definitely warranted.

ZONE A12 may, in fact, continue well to the north and coincide with ZONE A18.

Direction of dip for both ZONES A12 and A13 is interpreted to be to the west with angles thought to be relatively steep.

Graphite is thought to be the source mineral for both trends which indicates low priority.

ZONE A14

This is a long, linear trend which displays good conductivity but has little or no magnetic association. The areas which do appear to have magnetic correlation are locations where the magnetic susceptibility is thought to be related to magnetite within the basement while the conductivity is more than likely due to graphite within the overlying argillite.

Note the dip to the east.

A low priority is suggested for this conductor.

ZONE A15

This zone would seem to be an isolated conductor having a short strike length. It is located between ZONES A2 and A14 and its proximity to the contact between volcanics and metasediments would tend to give the zone support for ground follow-up.

Dip is to the east at approximately 60°.

A ground reconnaissance survey is definitely recommended.

ZONE A16

The zone is probably the best target within the entire survey block. It displays excellent conductivity, has direct magnetic correlation, in the order of 50 gammas, and is isolated from the longer trends.

Its strike length is estimated to be 1000 feet and dip is thought to be to the west at a steep angle.

Referring to the geology maps, it will be seen that the target is completely within volcanics. A ground survey is highly recommended.

ZONES A17 and A18

Both of these trends are very similar in that they display fair to poor electromagnetic responses with essentially no magnetic association. The only disparity is that they dip in opposite directions, A17 to the east and A18 to the west.

As mentioned above, the conductors have little or no magnetic association and, in fact, the strike direction of the conductors does not coincide with the strike direction of the magnetics whatsoever. This would tend to suggest that the source which is the cause of these conductors is not related to the basement (volcanics) at all.

The offsets between A17 and All as well as A18 and A13 are, in all probability, due to fault zones.

Low priorities should be given to both zones.

ZONE A19

A very weak trend which may be a faulted portion of ZONE A3. Refer to the geology map by S.P. Quin, May 7, 1982.

A low priority target.

ZONE A20

The two intercepts involved here do not display very good electromagnetic responses, in fact, the anomalies are relatively broad, three channel anomalies. This would seem to indicate either of two things; first, the flight lines are intersecting the conductor at an oblique angle or second, the conductor is at depth.

One thing that is certain,and that is, that the anomalies are correlating with a fault-contact zone with argillite to the west and hornblende quartz diorite and leucocratic quartz monzonite to the east.

A low priority.

ZONES A21, A22 and A23 These are very weak electromagnetic responses which do not warrant further attention in the field.

ZONE A24 As was the case for ZONE A20, this trend has intercepts which display relatively broad electromagnetic responses. Flying at an oblique angle to the strike of the conductor is not thought to be the cause of this phenomenon.

Note the coincidence of this weak trend with a fault zone. A high flying altitude may be the cause of the broader responses and this is something that would have to be sorted out on the ground.

Intercept 10390A does look like a legitimate anomaly although the response on channels 5 and 6 may, in fact, be due to compensation (bird motion).

Geologically, the environment here is similar to the area in the vicinity of ZONE A20.

A lower priority target.

ZONE A25 It would seem that this trend is an isolated situation and not related to ZONE A3 whatsoever. The conductivity is considered fair while there is no magnetic association.

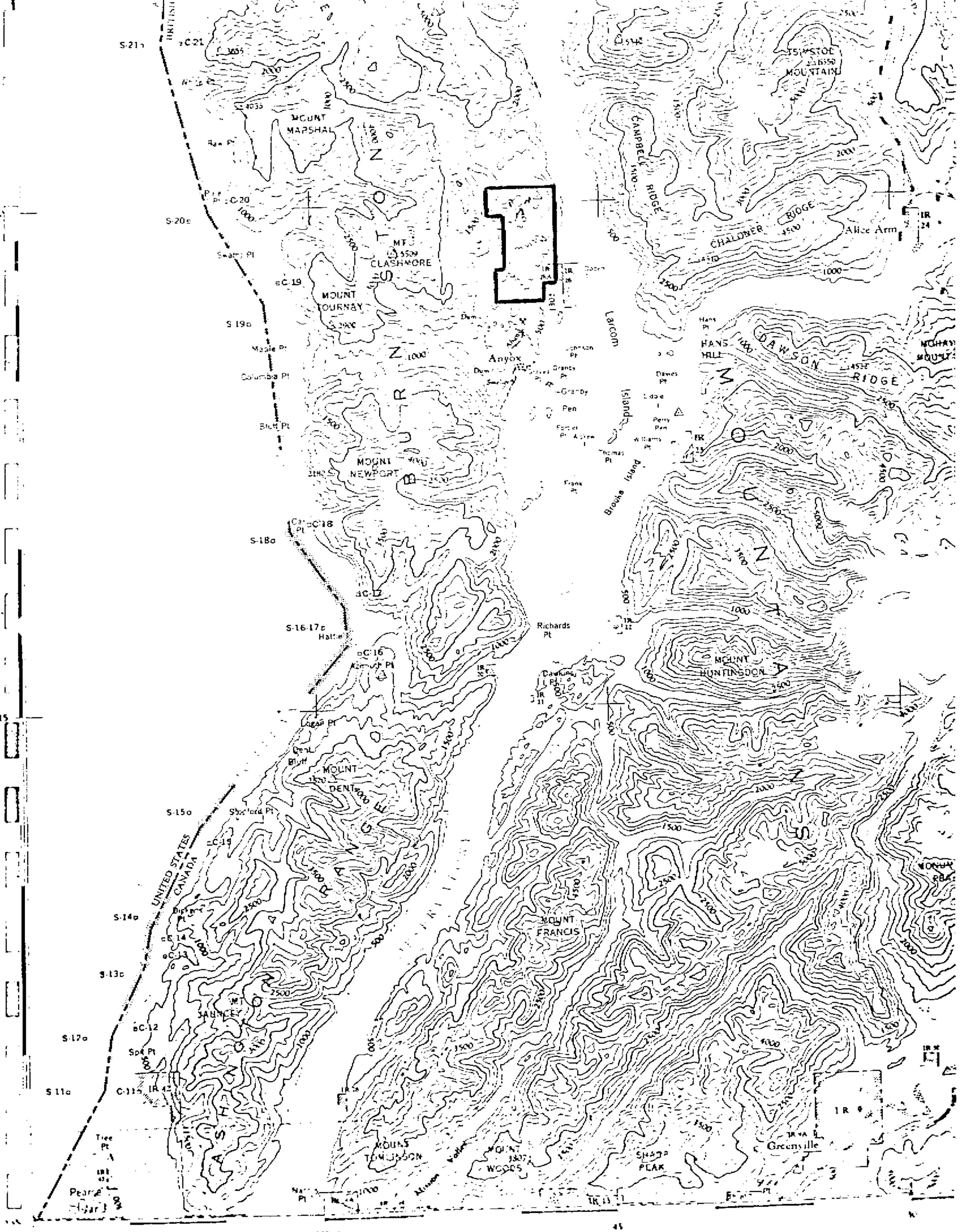
Because the trend correlates with the flank of a magnetic trend, this suggests the association with a geological contact. As a matter of fact, this relationship could very well be, as a close study of the geology maps would appear to indicate this.

A ground reconnaissance survey is recommended in this area.

QUESTOR SURVEYS LIMITED

R.J. de Carle

R. J. deCarle,
Chief Geophysicist.


MOUNT MARSHAL
MT CLASHMORE
MOUNT TOURNAY
TSIMSTOL MOUNTAIN
CAMPBELL RIDGE
CHALONER RIDGE
Alice Arm
Anyox
Larcom Island
Granby Pen
HANS HILL
DAWSON RIDGE
MOUNT NEWPORT
Brooke Island
Richards Pt
MOUNT HUNTINGDON
Logan Pt
Dent Bluff
MOUNT DENT
MOUNT FRANCIS
UNITED STATES
CANADA
MOUNT TOMLINSON
MOUNT WOODS
SHARP PEAK
Greenville
Maple Pt
Columbia Pt
Bluff Pt

Selected References:

Dolmage, V., 1922, Coast and Islands of British Columbia between Douglas Channel and the Alaskan Boundary, Summary Report, 1922, Part A, Geological Survey of Canada, pp. 9-34.

Minister of Mines and Petroleum Resources, Annual Report for the year ended December 31, 1965, pp. 57-59.

Sharp, R., Osatenko, M., 1978, Regional Geology of the Anyox Area, map supplied to Questor Surveys Limited by Imperial Metals Corporation.

APPENDIX

EQUIPMENT

The helicopter is equipped with a Mark VI INPUT (R) E.M. system and Sonotek P.M.H. 5010 Proton Magnetometer. Radar altimeters are used for vertical control. The outputs of these instruments together with fiducial timing marks are recorded by means of galvanometer type recorders using light sensitive paper. Thirty-five millimeter half frame cameras are used to record the actual flight path.

BARRINGER/QUESTOR MARK VI INPUT (R) SYSTEM

The Induced Pulse Transient (INPUT) system is particularly well suited to the problems of overburden penetration. Currents are induced into the ground by means of a pulsed primary electromagnetic field which is generated in a transmitting loop around the helicopter. By using half sine wave current pulses and a loop of large turns-area, the high output power needed for deep penetration is achieved.

The induced current in a conductor produces a secondary electromagnetic field which is detected and measured after the termination of each primary pulse. Detection is accomplished by means of a receiving coil towed behind the helicopter on two hundred and fifty feet of cable, and the received signal is processed and recorded by equipment in the helicopter. Since the measurements are in the time domain rather than the frequency domain common to continuous wave systems, interference effects of the primary transmitted field are eliminated. The secondary field is in the form of a decaying voltage transient originating in time at the termination of the transmitted pulse. The amplitude of the transient is, of course, proportional to the amount of current induced into the conductor and, in turn, this current is proportional to the dimensions, the conductivity and the depth beneath the helicopter.

The rate of decay of the transient is inversely proportional to conductivity. By sampling the decay curve at six different time intervals, and recording the amplitude of each sample, an estimate of the relative conductivity can be obtained. By this means, it is possible to discriminate between the effects due to conductive near-surface materials such as swamps and lake bottom silts, and those due to genuine bedrock sources. The transients due to strong conductors such as sulphides exhibit long decay curves and are therefore commonly recorded on all six channels. Sheet-like surface materials, on the other hand, have short decay curves and will normally only show a response in the first two or three channels.

The samples or gates are positioned at 340, 540, 840, 1240, 1740 and 2340 micro-seconds after the cessation of the pulse. The widths of the gates are 200, 200, 400, 400, 600 and 600 micro-seconds respectively.

For homogeneous conditions, the transient decay will be exponential and the time constant of decay is equal to the time difference at two successive sampling points divided by the log ratio of the amplitudes at these points.

SONOTEK P.M.H. 5010 PROTON MAGNETOMETER

The magnetometers which measure the total magnetic field have a sensitivity of 1 gamma and a range from 20,000 gammas to 100,000 gammas.

Because of the high intensity field produced by the INPUT transmitter, the magnetometer results are recorded on a time-sharing basis. The magnetometer head is energized while the transmitter is on, but the read-out is obtained during a short period when the transmitter is off. The precession frequency is being recorded and converted to gammas during the 0.2 second interval when there is no power in the transmitter loop.

For this survey, a lag factor has been applied to the data. Magnetic data recorded on the analogue records at fiducial 10.00 for example would be plotted at fiducial 9.95 on the mosaics.

DATA SYMBOLOGY

The symbols used to designate the anomalies are shown in the legend on each map sheet and the anomalies on each line are lettered in alphabetical order in the direction of flight. Their locations are plotted with reference to the fiducial numbers on the analog record.

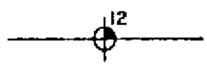
A sample record is included to indicate the method used for correcting the position of the E.M. Bird and to identify the parameters that are recorded.

All the anomaly locations, magnetic correlations, conductivity-thickness values and the amplitudes of channel number 2 are listed on the data sheets accompanying the final maps.

POSITIVE ANOMALY SYMBOL

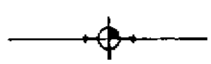
A symbol ascribed to spatially represent the position of peak response amplitude from a conventional secondary field direction. The convention is based on the response type most frequently detected with the geometrical configuration of the system.

CONDUCTIVITY-THICKNESS

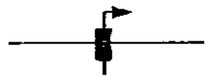


A numerical value based on a ratio between early and late channel amplitudes. It normalizes the DECAY INTERVAL CLASSIFICATION against the AMPLITUDE CLASSIFICATION to derive a value based on the temporal rate of decay of the secondary field.

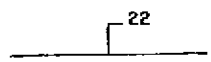
SELECTED CHANNEL HALF WIDTH LIMIT



A planimetric representation of the profile-derived half-width of a positive response. It may also be used to indicate the group half-width of multiple responses.

NEGATIVE ANOMALY SYMBOL 

A symbol ascribed to spatially represent the position of peak response amplitude from a reverse secondary field direction- (see POSITIVE ANOMALY SYMBOL)

ASSOCIATED MAGNETIC PEAK 

A symbol ascribed to spatially represent the position and magnitude of a magnetic susceptibility anomaly proximate to a recognized conductivity anomaly. For purposes of plotting simplifications, only positive monopoles and the positive component of dipolar responses are mapped in this manner.

GENERAL INTERPRETATION

The INPUT system will respond to conductive overburden and near-surface horizontal conducting layers in addition to bedrock conductors. Differentiation is based on the rate of transient decay, magnetic correlation and the anomaly shape together with the conductor pattern and topography.

Power lines sometimes produce spurious anomalies but these can be identified by reference to the monitor channel.

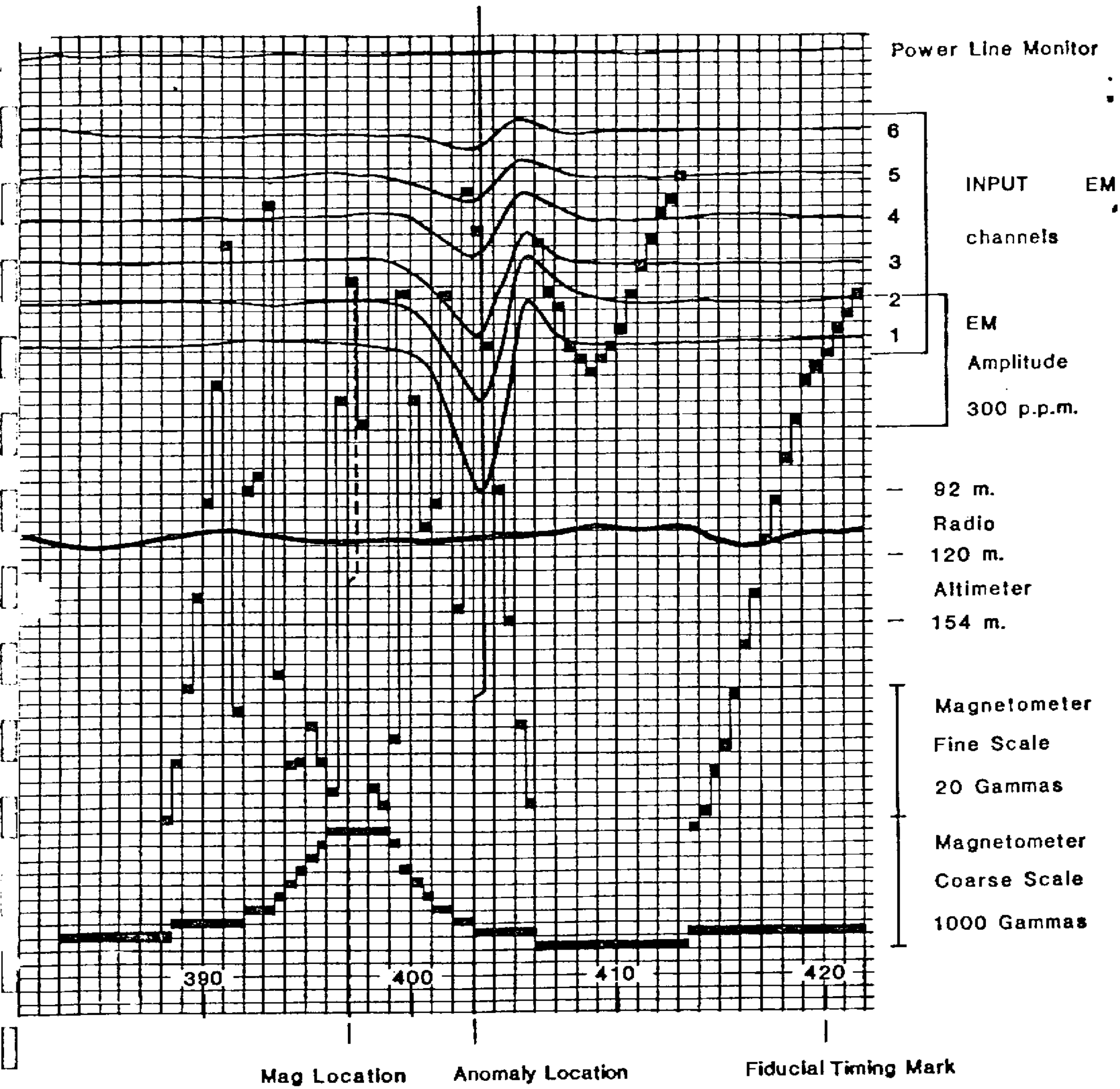
Railroad and pipeline responses are recognized by studying the film strips.

Graphite or carbonaceous material exhibits a wide range of conductivity. When long conductors without magnetic correlation are located on or parallel to known faults or photographic linears, graphite is most likely the cause.

Contact zones can often be predicted when anomaly trends coincide with the lines of maximum gradient along a flanking magnetic anomaly. It is unfortunate that graphite can also occur as relatively short conductors and produce attractive looking anomalies. With no other information than the airborne results, these must be examined on the ground.

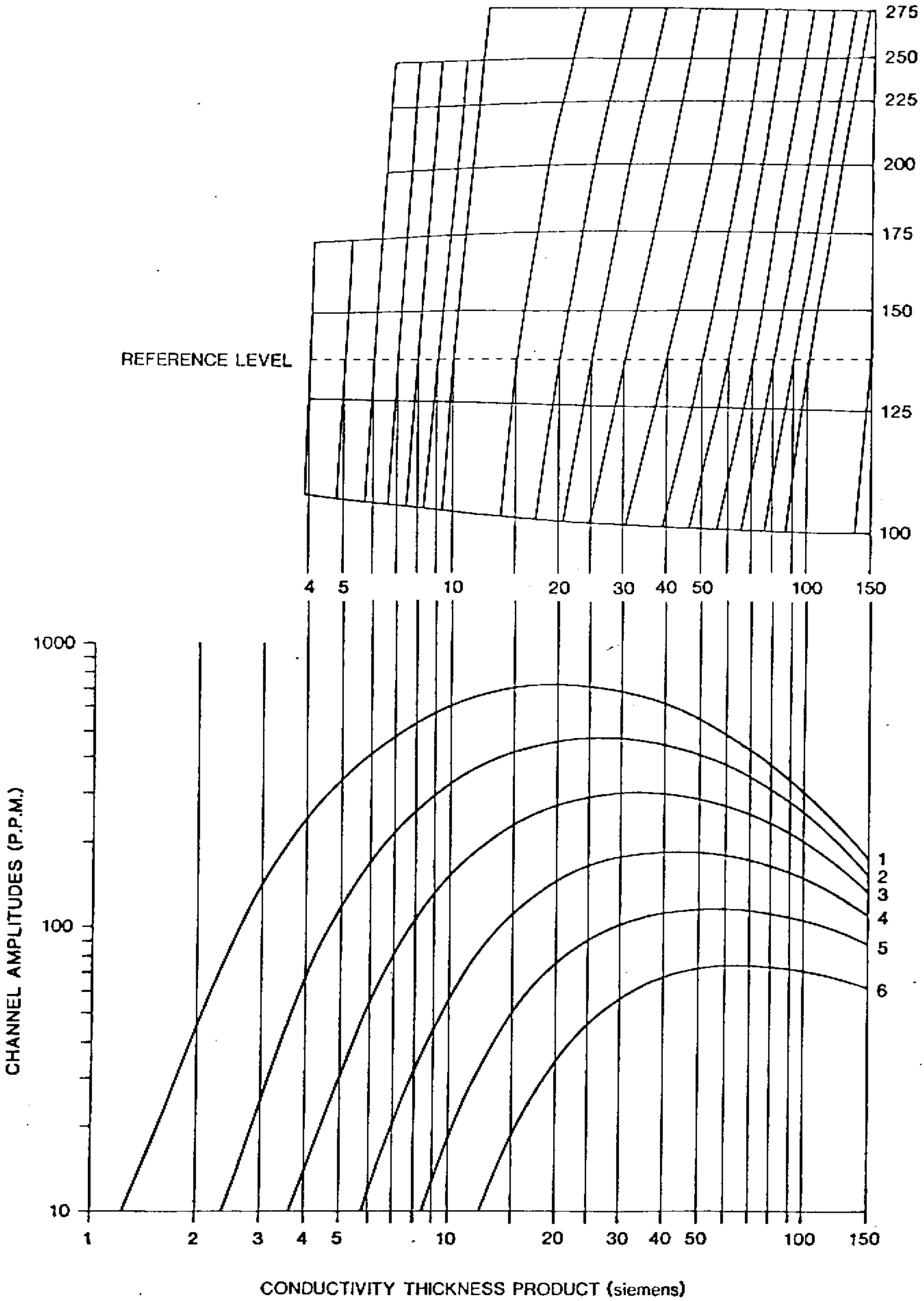
Serpentinized peridotites often produce anomalies with a character that is fairly easy to recognize. The conductivity which is probably caused in part by magnetite, is fairly low so that the anomalies often have fairly large response on channel # 1, they decay rapidly and they have strong magnetic correlation. INPUT E.M. anomalies over massive magnetites show a relationship to the total Fe content. Below 25-30%, very little or no response at all is obtained but as the percentage increases the anomalies become quite strong with a characteristic rate of decay which is usually greater than that produced by massive sulphides.

Commercial sulphide ore bodies are rare and those that respond to helicopter survey methods usually have medium to high conductivity. Limited lateral dimensions are to be expected and many have magnetic correlation caused by magnetite or pyrrhotite. Provided that the ore bodies do not occur within formational conductive zones as mentioned above, the anomalies caused by them will usually be recognized on an E.M. map as priority targets.



Representative INPUT Magnetometer and Altimeter Recording

HELICOPTER INPUT
VERTICAL HALF PLANE
CONDUCTIVITY / DEPTH NOMOGRAM



ANOMALY	FIDUCIAL	CHANNELS	HALF WIDTH LEFT	HALF WIDTH RIGHT	HW	AMPLITUDE CLASS	SKEW	SIG-T	ASSOCIATED MAG POSITION	MAGNETIC VALUE
10010 A	42.23	6	42.09	42.33	0.24	3	1W	8		
10010 B	42.72	5	42.54			3	1W	18	42.89	8
10010 C	43.33	3	43.16	43.42	0.25	2		9	43.08	4
10010 D	43.89	4	43.78	43.96	0.18	2	1W	5	43.80	3
-	44.03	4								
10010 E	44.36	4	44.25	44.47	0.22	4	1W	4		
-	44.57	3								
10010 F	44.73	4	44.65	44.80	0.15	1	2W	19		
-	45.01	3							45.21	28
10020 A	46.61	4	46.40			2	4E	5		
10020 B	46.91	4				2	1E	4	46.96	5
10020 C	47.09	3		47.15		2		4	47.21	2
10020 D	47.45	5	47.30	47.54	0.24	2	2E	11	47.58	2
-	47.65	3								
10020 E	47.89	4	47.74			1	2E	6	48.03	1
10020 F	48.13	3		48.22		1		7		
10020 G	48.36	3				1		2		
-	48.55	3								
10030 A	53.39	2				1				
10030 B	54.55	6	54.37			4	2W	10		
30 C	54.91	4		55.05		3	1W	10	54.98	36
10030 D	55.17	3				2		15		
10030 E	55.37	2		55.44		1				
10030 F	55.84	5	55.76	55.95	0.19	4		5	55.86	12
-	56.18	5								
10030 G	56.58	3	56.43	56.74	0.31	2		4		
10040 A	58.14	3	58.00			1		8		
10040 B	58.50	4				2	1W	7		
10040 C	58.75	5		58.85		3	1W	8	58.87	9
-	59.04	4					3E			
10040 D	59.77	6	59.45	59.83	0.39	5	4E	8	59.87	32
-	59.97	6					4E			
10040 E	60.41	4	60.20	60.68	0.49	3	4E	7	60.80	12
-	61.06	3								
10040 F	61.34	5	61.27	61.46	0.18	1		1		
10050 A	67.65	6	67.49	67.79	0.30	5	2E	6	67.74	11
-	68.20	3								
10050 B	68.61	4	68.54	68.67	0.13	2	1W	3	68.77	52
10050 C	68.79	4	68.74	68.85	0.11	3	1W	2		
-	68.97	3								
10050 D	69.35	3	69.26	69.44	0.18	1		1		
60 A	71.69	3				2		7		
60 B	72.72	5	72.52			4	2E	10		
10060 C	72.83	5		72.93		4	1E	9		
10060 D	73.27	4	73.17	73.34	0.17	4	2E	5	73.16	67
-	73.41	4								
10060 E	73.65	3	73.54			1		1		

ANOMALY	FIDUCIAL	CHANNELS	HALF WIDTH LEFT	HALF WIDTH RIGHT	HW	AMPLITUDE CLASS	SKEW	SIG-T	ASSOCIATED MAG POSITION	MAGNETIC VALUE
10060 F	73.86	3		73.93		2		5		
-	74.12	6					4E			
10070 A	80.24	6	80.15	80.36	0.21	5		10		
10070 B	80.83	6	80.72	80.93	0.22	3	1W	12		
10070 C	81.27	6				5		44	81.11	101
-	81.48	6								
-	84.35	2								
10080 A	84.83	4	84.67	84.98	0.31	1	2E	16		
10080 B	85.30	5	85.21	85.47	0.26	1	2W	4	85.33	105
10080 C	86.38	4	86.08			2		5		
10080 D	86.83	5				2		26		
10080 E	88.17	6				5		26	88.21	48
-	88.48	6								
10080 F	88.99	5	88.82	89.13	0.31	3	2E	6		
-	89.50	5					4E			
10090 A	96.35	6	96.20	96.49	0.29	5	4E	12	96.18	82
-	96.61	6					1W			
10090 B	97.14	3	97.07			1		1		
10090 C	97.53	5	97.40	97.65	0.25	4	1W	11	97.64	4
10090 D	98.99	3	98.84			3		5		
90 E	99.22	5		99.31		4		7		
-	99.59	3								
10090 F	100.01	6	99.89	100.18	0.30	2	4E	24		
10090 G	100.58	3				1		1	100.56	95
10100 A	101.49	3	101.39			1		1		
10100 B	101.76	5				2	2E	10		
10100 C	102.25	6	102.09			3	3E	40	102.05	115
10100 D	102.49	4		102.58		3	1E	11		
10100 E	102.85	5	102.78			1		1		
10100 F	103.02	6		103.15		2	2W	13		
-	103.26	6					2W			
10100 G	103.56	5	103.43			2		10		
10100 H	103.80	4				3		9		
10100 J	104.15	4				2	1E	5		
10100 K	104.30	6				3		14		
10100 L	104.46	3		104.54		2		11		
10100 M	104.65	6				1	1W	33		
10100 N	105.13	4	104.95			2		16		
10100 P	105.59	6	105.41			4	1W	27		
10100 R	105.87	6	105.72	105.94	0.22	5	2E	10	105.93	152
-	106.06	6								
10110 A	132.37	6	132.22	132.45	0.23	5	1W	9	132.37	81
-	132.55	6					1W			
10 B	133.42	5	133.32			2		7		
10110 C	133.90	5		134.04		3	1W	11		
10110 D	134.71	3	134.60			1		3		
10110 E	135.07	3		135.28		3		5		
10110 F	135.72	6	135.54	135.88	0.34	3	3E	28		

ANOMALY	FIDUCIAL	CHANNELS	HALF WIDTH LEFT	RIGHT	HW	AMPLITUDE CLASS	SKEW	SIG-T	ASSOCIATED MAG POSITION	MAGNETIC VALUE
10110 G	136.14	3				1		1		
10121 A	138.46	6	138.25	138.68	0.43	3	4W	23		
10121 B	139.04	5	138.84	139.21	0.37	2	1E	26	139.14	13
10121 C	139.54	5	139.39			2	1E	6		
10121 D	140.00	3	139.74			3		9		
10121 E	140.29	4		140.36		3		2	140.42	25
-	140.47	5								
10121 F	140.88	6				4	1E	12	140.96	7
10121 G	141.06	6		141.25		4		15		
10121 H	141.52	3				2		4		
10121 J	142.10	6	141.99	142.19	0.20	5	1E	11	141.95	10
-	142.28	6					1E			
10121 K	142.48	5	142.40			1	1E	6		
10121 L	142.70	5		142.78		4		5		
-	142.88	5								
10123 A	19.37	5	19.25	19.47	0.22	4	1W	7		
-	19.65	3								
10123 B	20.51	4				1	2E	32		
10123 C	21.24	4	21.06	21.31	0.25	1	4W	3		
10123 D	22.42	5	22.28	22.53	0.25	2	2W	18		
10123 E	22.96	5				1		1		
23 F	23.41	6	23.27	23.55	0.28	2	3E	66		
10123 G	23.90	4	23.81	23.99	0.19	1		1		
10123 H	24.67	3				1		1	24.44	86
10123 J	25.94	3	25.75			1		9		
10131 A	149.89	5	149.71			2	1E	8		
10131 B	150.28	6				2		31		
10131 C	150.56	4		150.70		2	1E	44	150.63	22
10131 D	150.96	6	150.79			2		14		
10131 E	151.22	5		151.30		2		7		
10131 F	151.42	5				1		7		
10131 G	151.80	4	151.73	151.87	0.14	1		5	151.81	16
10131 H	152.25	6	152.05			3		13	152.39	15
10131 J	152.71	6				4	2E	14		
10131 K	153.01	6				4	1E	14		
-	153.36	6					2E		153.23	168
10131 L	153.62	6	153.48			4	3E	4		
10131 M	153.86	5		153.92		4	1E	5		
-	154.04	5								
10133 A	27.31	4				1		1		
10133 B	27.61	5	27.43			1	1E	10	27.67	145
10133 C	28.04	6	27.88	28.17	0.29	2		20		
10133 D	28.38	4		28.48		1	1E	8		
10133 E	28.85	3	28.65	29.03	0.38	1		8		
-	29.19	5					1E			
10133 F	30.67	2	30.51			2				
10133 G	30.97	6		31.08		3	1E	14	30.96	10
10134 A	31.51	3	31.28			1		10		

ANOMALY	FIDUCIAL	CHANNELS	HALF WIDTH LEFT	HALF WIDTH RIGHT	HW	AMPLITUDE CLASS	SKEW	SIG-T	ASSOCIATED MAG POSITION	MAGNETIC VALUE
10134 B	32.05	6	31.93	32.13	0.19	3	1E	14	32.46	144
10134 C	32.51	6	32.43			1	4E	1		
10134 D	32.80	4	32.65	32.90	0.25	1		4		
-	33.04	4					1E			
10140 A	156.13	6	156.06	156.18	0.12	2	1W	17	156.23	33
-	156.26	4								
10140 B	157.54	3	157.37			4		7		
10140 C	157.67	6		157.79		4		8		
10140 D	158.08	6	157.99			4		12	158.26	27
10140 E	158.26	3				4		18		
10140 F	158.68	4	158.62			1	2W	1		
10140 G	159.03	6	158.90	159.17	0.27	3	1E	17	159.16	2
10140 H	159.45	4		159.61		2	1W	47		
10140 J	160.23	6	160.07			2	4E	50		
10140 K	160.60	4				2	1W	8		
10141 A	14.42	3				1		6		
10141 B	15.14	6	14.97	15.29	0.32	1		40	14.90	72
10141 C	15.50	4		15.61		1		6		
10141 D	15.95	5	15.77	16.10	0.32	1	2W	8	15.84	6
10141 E	16.49	3	16.36	16.81	0.44	1		1		
10141 F	18.06	6	17.82			4	2E	16		
41 G	18.21	6		18.29		4	2E	20	18.52	96
-	18.61	6					4E			
10141 H	19.22	4	19.01	19.33	0.32	2	2E	6		
-	19.49	5					3E			
10172 A	37.22	3				1		1	37.32	55
10172 B	38.41	5	38.24			2	1W	9		
10172 C	38.59	6		38.71		3	2E	15		
10172 D	39.04	6	38.95	39.14	0.18	2		35		
10172 E	39.31	3		39.38		2		45	39.32	21
10172 F	39.82	4				1	2W	1		
10172 G	40.51	5	40.38	40.66	0.28	1		83	40.57	31
10172 H	40.92	5	40.77	41.06	0.29	1		201		
10172 J	41.79	6	41.61	42.00	0.39	1	4E	40		
10172 K	42.37	3				1		1		
10172 L	42.75	2				1				
-	43.05	3								
10180 A	46.69	6	46.51			1	4W	54	46.22	44
10180 B	47.25	6				1	4E	26	47.38	20
10180 C	47.90	5	47.57			2		29		
10180 D	48.43	6	48.20	48.56	0.36	2	3E	9	48.47	12
-	48.72	6					2E			
10180 E	49.06	6	48.91			2	1E	16		
80 F	49.55	6	49.30	49.69	0.38	4	3W	16	49.35	9
-	49.91	6					4W			
10180 G	50.46	5	50.34	50.59	0.25	1		3		
-	50.87	3								
10190 A	56.21	4	56.06	56.40	0.33	2	3E	5		

ANOMALY	FIDUCIAL	CHANNELS	HALF WIDTH LEFT	HALF WIDTH RIGHT	HW	AMPLITUDE CLASS	SKEW	SIG-T	ASSOCIATED MAG POSITION	MAGNETIC VALUE
10190 B	57.00	5	56.87	57.25	0.38	2	2E	55	57.21	8
-	57.68	5					2W			
10190 C	58.11	6	57.97	58.29	0.32	1	4E	33		
10190 D	58.83	4				1	4W	12	58.48	5
10190 E	59.55	6	59.42			1	2E	80	59.72	5
10190 F	60.01	4	59.89			1		18		
10190 G	60.19	6		60.28		2		23	60.29	9
-	60.53	6					1E			
10200 A	63.71	6				1	2W	7	63.10	31
10200 B	64.21	6		64.36		1	2E	55	64.11	16
10200 C	64.73	6	64.55			1		17	65.00	5
10200 D	65.30	5		65.42		2	4E	12		
-	65.56	6					3E			
10200 E	65.92	6	65.75			2		14		
10200 F	66.23	6		66.27		1	1E	46		
-	66.44	6								
10200 G	66.90	5	66.76	67.04	0.29	1	1E	10		
-	67.30	3								
10210 A	72.58	3	72.38			1		10	72.50	66
10210 B	73.07	4	72.90	73.31	0.41	2	2E	8	73.08	3
-	73.54	5					1W			
210 C	73.81	6	73.70	73.96	0.26	2	2E	60		
-	74.24	3								
10210 D	75.42	6	75.16	75.62	0.46	2	3W	64	75.06	8
10210 E	76.12	3				1		8		
10210 F	77.26	3				1		1	77.87	55
10220 A	80.46	4	80.26			1	1W	25		
10220 B	81.14	6	80.79	81.27	0.48	2	4E	44		
-	81.36	6					1W			
10220 C	81.54	3	81.45			1		7		
10220 D	82.39	6	81.99	82.58	0.59	3	4E	24		
-	82.76	6					3E			
10220 E	83.04	6	82.92			1	1E	7		
10220 F	83.32	4		83.38		2	2E	7	83.52	10
-	83.57	4					3E			
10220 G	84.37	3				1		1	84.06	66
10230 A	89.42	3	89.23			1		6	89.76	47
10230 B	90.17	4		90.41		1	4W	10		
10230 C	90.75	6	90.64	90.87	0.23	2	2E	49	90.83	6
10230 D	91.97	6	91.79			1	4E	24	91.90	7
10230 E	92.47	6	92.28	92.57	0.29	1	4W	63		
10230 F	92.99	3				1		1		
10240 A	97.92	6	97.71			1	2W	26		
240 B	98.86	4	98.62			2	1W	26		
10240 C	99.19	6				3	1E	30		
10240 D	99.73	3		99.91		3		7		
10240 E	100.42	6	100.24			1		117		
10240 F	101.06	6	100.79	101.16	0.37	4	4E	22	101.21	29

ANOMALY	FIDUCIAL	CHANNELS	HALF WIDTH LEFT	RIGHT	HW	AMPLITUDE CLASS	SKEW	SIG-T	ASSOCIATED MAG POSITION	MAGNETIC VALUE
-	101.27	6					1E			
10240 G	102.32	3				1		1	102.21	38
-	102.45	3								
10240 H	102.90	3				1		1		
10250 A	108.22	4	108.10			1		5		
10250 B	108.50	6	108.34	108.67	0.34	2	1E	35	108.47	19
10250 C	109.07	6	108.98	109.15	0.18	4		10	109.06	28
-	109.28	6					2E			
10250 D	110.11	6	110.00	110.22	0.22	3		59	110.28	3
-	110.45	4					2E			
10250 E	111.10	3				1		1		
10250 F	111.55	6	111.41	111.68	0.27	1	4W	50	111.42	5
10250 G	112.20	3				1		5		
10260 A	117.98	3	117.53			1		30		
10260 B	118.76	6	118.39			2		49		
10260 C	119.03	6				3		45		
10260 D	119.22	6				3		34		
10260 E	119.49	4				2		5	119.65	9
10260 F	119.84	4		120.15		2		3		
10260 G	121.14	6	120.69	121.37	0.68	3	4E	27	121.47	15
-	121.53	6					1E			
10260 H	121.87	6	121.78			1	1E	1		
10260 J	122.28	6		122.36		1	4E	64	122.43	19
10260 K	122.68	3				1		1		
10260 L	122.97	3				1		1		
10260 M	123.22	3				1	2E	1		
10270 A	128.17	6	128.01	128.33	0.33	2	1E	21	128.66	86
10270 B	129.41	3	129.26	129.63	0.37	1		6		
10270 C	129.97	6	129.87	130.07	0.20	3	1E	75		
10270 D	130.89	6				1	4E	1	131.13	23
-	131.05	3								
10270 E	131.36	3				1		22		
10270 F	131.70	3				1		11		
10280 A	138.46	3	138.01			1		19		
10280 B	139.26	4		139.44		1	4E	14		
10280 C	139.96	2	139.87			1			139.86	29
10280 D	140.33	3	140.11			1		14		
10280 E	140.84	6	140.67	140.91	0.24	3	3E	22	140.99	13
-	141.01	6					2E			
10280 F	141.81	3				1		22	141.90	50
-	142.23	6					2E			
10290 A	146.61	5	146.46	146.81	0.35	1	1E	10		
10290 B	147.56	3	147.47	147.66	0.19	1		1	147.51	57
10290 C	148.26	6	148.17	148.37	0.20	1		9		
10290 D	148.91	6	148.79	149.05	0.25	1	4E	7	149.17	6
10290 E	149.46	5	149.33	149.60	0.27	1		23		
-	149.99	4					4W			
10300 A	154.77	3				1		1	154.79	19

ANOMALY	FIDUCIAL	CHANNELS	HALF WIDTH LEFT	HALF WIDTH RIGHT	HW	AMPLITUDE CLASS	SKEW	SIG-T	ASSOCIATED MAG POSITION	MAGNETIC VALUE
10300 B	156.23	5	156.01	156.38	0.37	2		5		
-	156.58	5					3E		156.70	21
10300 C	156.83	4	156.75	156.99	0.24	1	2E	9		
10300 D	157.37	3		157.47		1		1		
-	157.59	3								
10300 E	157.88	3				1		1	158.06	21
10300 F	158.90	3				1		1	159.06	5
10300 G	159.10	3				1		1		
10310 A	165.93	2				1				
10310 B	166.38	4	166.19	166.52	0.34	1		3		
10310 C	166.85	3				1		1		
-	167.16	3								
10311 A	23.75	5	23.65	23.85	0.20	1	1W	8	23.90	4
10320 A	172.65	3				1		1		
10320 B	174.01	4	173.79	174.21	0.42	1		4		
10320 C	174.57	4	174.49	174.71	0.22	1	1W	1	174.58	15
-	174.93	4					3E			
10320 D	175.19	2				1				
10320 E	175.65	3				1		1		
21 A	25.89	2				1			25.95	16
10330 A	183.70	5	183.49	183.83	0.34	3	1W	9		
-	184.09	4					2E		184.08	15
10340 A	190.64	2				1				
10340 B	191.26	4	191.13	191.35	0.22	1	4E	3	191.22	5
-	191.60	4					2E			
10351 A	201.86	2				1				
10351 B	204.25	3	204.09	204.35	0.26	1		8		
-	204.59	3							204.64	10
10351 C	204.90	2				1				
10360 A	212.12	2				1			211.77	64
10360 B	212.92	1				1				
10360 C	214.94	1				1				
10390 A	239.41	4				1	2E	1		
10400 A	241.94	1				1				
10400 B	243.21	2				1				
10410 A	258.04	3				1				
10410 B	259.00	2				1			258.88	14
19010 A	15.36	5				2	3S	7		
19010 B	15.67	2		15.79		1				
19010 C	17.12	4	17.00	17.27	0.27	2	2S	6	16.91	43
19010 D	17.71	6	17.59	17.82	0.24	5		11		

ANOMALY	FIDUCIAL	CHANNELS	HALF WIDTH LEFT	HALF WIDTH RIGHT	HW	AMPLITUDE CLASS	SKEW	SIG-T	ASSOCIATED MAG POSITION	MAGNETIC VALUE
	18.00	6					1N			
19010 E	18.33	6	18.20			2		16		
19010 F	18.50	6		18.67		3		63		
19010 G	18.76	4		18.87		2	1S	30		
19010 H	19.29	6	19.08	19.57	0.49	3	1S	16	19.53	46
19010 J	19.70	6		19.81		2		23		
19010 K	20.25	3	20.15	20.34	0.19	1		2		
19010 L	20.94	3				1		1		
19020 A	29.14	2	28.87			2				
19020 B	29.56	3				2		12		
19020 C	30.04	6		30.17		4	3N	28	30.01	54
-	30.40	6					4N			
19020 D	32.40	2				1				

5. Itemized Cost Statement

1. June 21 - 28, 4 days;

Helicopter Borne: INPUT Electromagnetic Survey,

Proton Precession total field Magnetometer Survey

	Contract Price	**$17,090**
2. Mobilization to and from Anyox		**$ 3,450**
	Total Cost	**$20,540**

6. Statement of Qualifications

I, Stephen Paul Quin, of 1504 - 1260 Nelson Street, Vancouver, B.C. state that

a) I am a permanent employee of Imperial Metals Corporation with offices at suite 708 -744 West Hastings Street, Vancouver, B.C.

b) I graduated from the Royal School of Mines, London, Great Britain, with a Bachelor's Honours degree in Mining Geology in 1980.

c) I have been employed by Imperial Metals Corporation and its predecessor, Invex Resources Limited, for a period of two years, since graduation.

2 August 1982

Stephen P. Quin B.Sc., ARSM
Mining Geologist

NAME	:	ROBERT J. deCARLE
OCCUPATION	:	Chief Geophysicist
EDUCATION	:	Graduated from Lakehead University in 1967 receiving a Mining Technology Diploma. Michigan Technological University - B.A.Sc. in Geophysics, 1970.
PROFESSIONAL AFFILIATIONS	:	Society of Exploration Geophysicists Canadian Institute of Mining & Metallurgy Canadian Exploration Geophysical Society (KEGS)
EXPERIENCE	:	1965 — Summer spent with Noranda Mines Ltd., as underground scram helper.
	:	1966 — Summer spent with Anaconda American Brass carrying out electromagnetic and magnetic surveys in Ontario.
	:	1967-69 — Summers spent with Hudson Bay Exploration and Development Co., as a geophysical technician and prospector.
	:	1970-Present — Joined Questor Surveys Limited as a Geophysicist. Responsible for reduction of airborne data both in the field and in-house. Also carried out interpretation and report writing. Became Chief Geophysicist in 1975, responsible for all data reduction personnel, geophysicistts and geologists associated with airborne surveys.
COUNTRIES WORKED IN	:	Canada, United States, South Africa.
LANGUAGES SPOKEN	:	English, French.
PASSPORT #	:	FB 334746 Expires June 16, 1986.


10420E
10390E
10410N
10400N
10370E
10380N
10360N
10330E
10351E
10300N
10280N
10270E
10240N
10100N
10070E
10060N
10050E
10010E
A-10
A-11
A-13

GEOLOGICAL BRANCH
ASSESSMENT REPORT

10,928

INPUT

DECAY INTERVAL CLASSIFICATION

1 Channel (340 microseconds)
2 Channel (540 microseconds)
3 Channel (840 microseconds)
4 Channel (1240 microseconds)
5 Channel (1740 microseconds)
6 Channel (2340 microseconds)

Selected Channel Half-width Limit — Skew Classification — Conductivity - Thickness — Decay Interval Classification — Amplitude Classification — Associated Magnetic Peak

POSITIVE RESPONSE — NEGATIVE RESPONSE

AMPLITUDE CLASSIFICATION
(UNCORRECTED FOR ALTITUDE)

Class 1 (<100 ppm)
Class 2 (100-199 ppm)
Class 3 (200-399 ppm)
Class 4 (400-1000 ppm)
Class 5 (>1000 ppm)

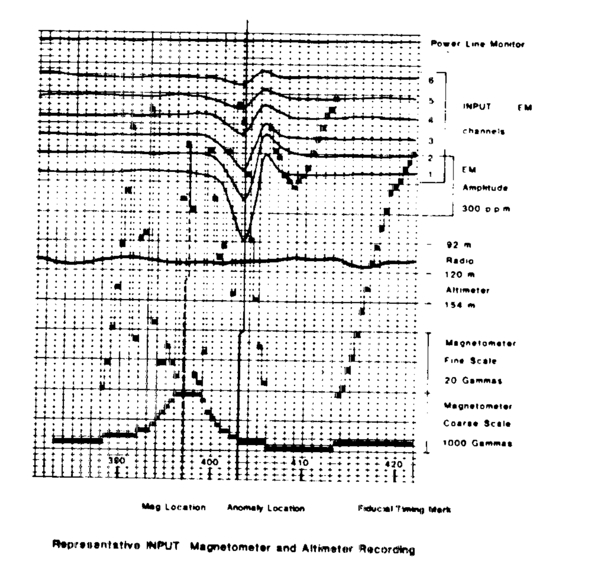
SKEW CLASSIFICATION
(DIP INDICATION)

Class 1 <.25 subfiducial
Class 2 .25 - .49 subfiducial
Class 3 .50 - .74 subfiducial
Class 4 >.74 subfiducial
(Arrow indicates skew direction)

10 GAMMA CONTOUR LINE
50 GAMMA CONTOUR LINE
500 GAMMA CONTOUR LINE
(1 GAMMA = 1 NANOTESLA IN SI UNITS)
MAGNETIC DEPRESSION

INTERPRETATION

20 Conductor Axis, with reference number (good definition)
20 Conductor Axis, with reference number (poor definition)
Vertical Conductor
Conductor Dip
20 Selected Zone, with reference number
Surficial Conductivity
Fault Zone



Representative INPUT Magnetometer and Altimeter Recording

DESCRIPTIVE NOTES

The aircraft is equipped with the Barringer/Questor Mark VI INPUT* airborne E.M. System and the Sonotek PMH 5010 Proton Precession Magnetometer and Sonotek SDS-1200 Series Data Acquisition System. The INPUT* system will respond to conductive overburden and near-surface horizontal conducting layers in addition to bedrock conductors. Discrimination of conductors is based on the rate of transient decay, magnetic correlation and the anomaly shape, together with the conductor pattern and topography.

* Registered Trade Mark of Barringer Research Limited

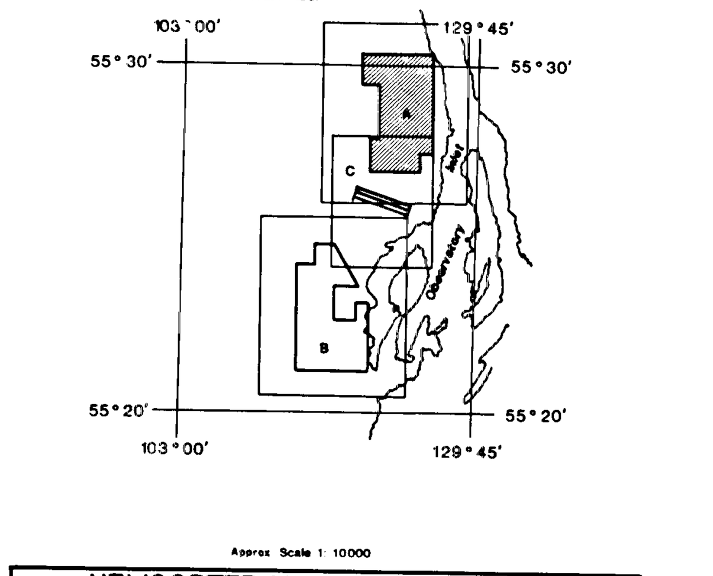
INTERPRETATION REFERENCES

Becker, A., Gauvreau, C., and Collett, L.S.
1972: Scale Model Study of Time Domain Electromagnetic Response of Tabular Conductors; Canadian Mining and Metallurgical Bulletin, Volume 65, No. 725, p. 90-96.

Dyck, A.V., Becker, A., and Collett, L.S.
1974: Surficial Conductivity Mapping with the Airborne INPUT* System; Canadian Mining and Metallurgical Bulletin, Volume 67, No. 744, p. 104-109.

Lazenby, P.G.
1973: New Developments in the INPUT* Airborne E.M. System; Canadian Mining and Metallurgical Bulletin, Volume 66, No. 732, p. 96-104.

NASS RIVER 103P



Approx. Scale 1: 10000

HELICOPTER MK VI INPUT SURVEY
(Horizontal Coil)
TOTAL MAGNETIC INTENSITY SURVEY

IMPERIAL METALS CORPORATION

ANYOX JOINT VENTURE

Province of BRITISH COLUMBIA

FILE NO.	SHEET NO.	DATE	DRAWN BY
24H35A	1 of 1	June, 1982	Dataplotting Services Inc

Questor Surveys Limited
Mississauga, Ontario Canada