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VOLUME 1 OF 5

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REPORT NO. 365

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- 8 SEP 1983
INFORMATION CENTRE

DIGHEM^{III} SURVEY

OF THE

EAST CHESTER, NORTH PIEMAN AND ARTHUR RIVER AREAS, TASMANIA

FOR

COMSTAFF PTY.

BY

DIGHEM LIMITED

TORONTO, CANADA
AUGUST 17, 1983

Z. DVORAK
VICE-PRESIDENT

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SUMMARY AND RECOMMENDATIONS

A total of 1,374 line-km of DIGHEM^{III} electromagnetic/resistivity/magnetic surveys was flown in March and April, 1983, over three survey blocks held by Comstaff Pty. near Rosebery and Waratah, Tasmania.

The East Chester area was highly resistive with a few zones of intermediate resistivity. The magnetic field was moderately active. Only three x-type responses of possible bedrock origin were located.

The North Pieman area, which was flown in a grid fashion, displayed resistivities ranging from 0.1 to in excess of 1,000 ohm-m. A number of conductive zones were detected reflecting conductive material in the bedrock. The magnetic field was active, showing well distinguished trends paralleling approximately the conductive features. Many EM anomalies were outlined reflecting discrete bedrock conductors.

The ground resistivities in the Arthur River area ranged from less than 1 ohm-m to in excess of 1,000 ohm-m. Conductive zones of large lateral extent are present which are due to wide conductive rock units buried under resistive cover, or due to near-surface conductive rock units. Conductive

zones of small-to-intermediate lateral extent exist containing numerous bedrock conductors. The magnetic field is active; possible correlation with the resistivity patterns may exist. A prominent magnetic anomaly of dipolar character was detected north of the town of Waratah which may reflect a pipe-like intrusive body. This anomaly is closely related to a less than 1 ohm-m resistivity low and a number of EM anomalies with grades up to 5. Other discrete bedrock conductors were outlined throughout the survey area.

Most of the EM anomalies of definite or possible bedrock origin appear to warrant further investigation using appropriate surface techniques. Areas of interest may be assigned priorities for follow-up work based on supporting geological, geochemical and/or other geophysical information.

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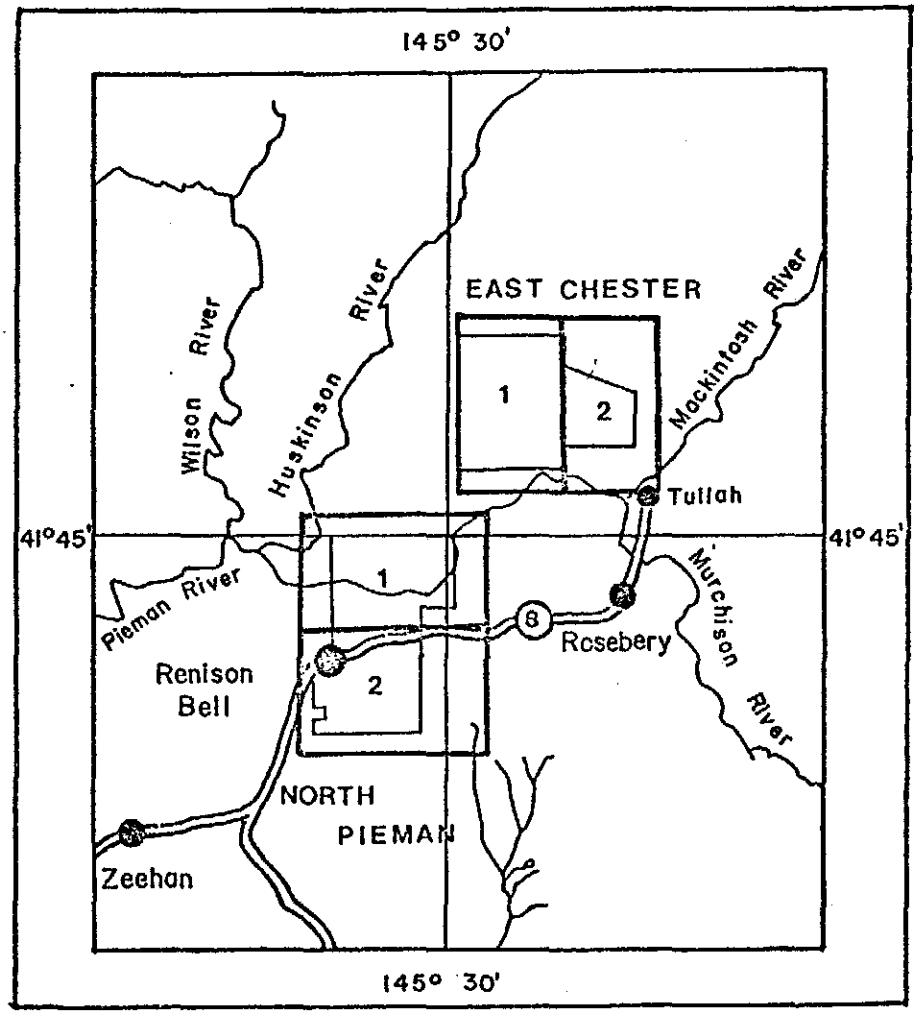
LOCATION MAP



Scale 1: 500,000

Figure 1 The East Chester and North Pieman Areas

5 cm

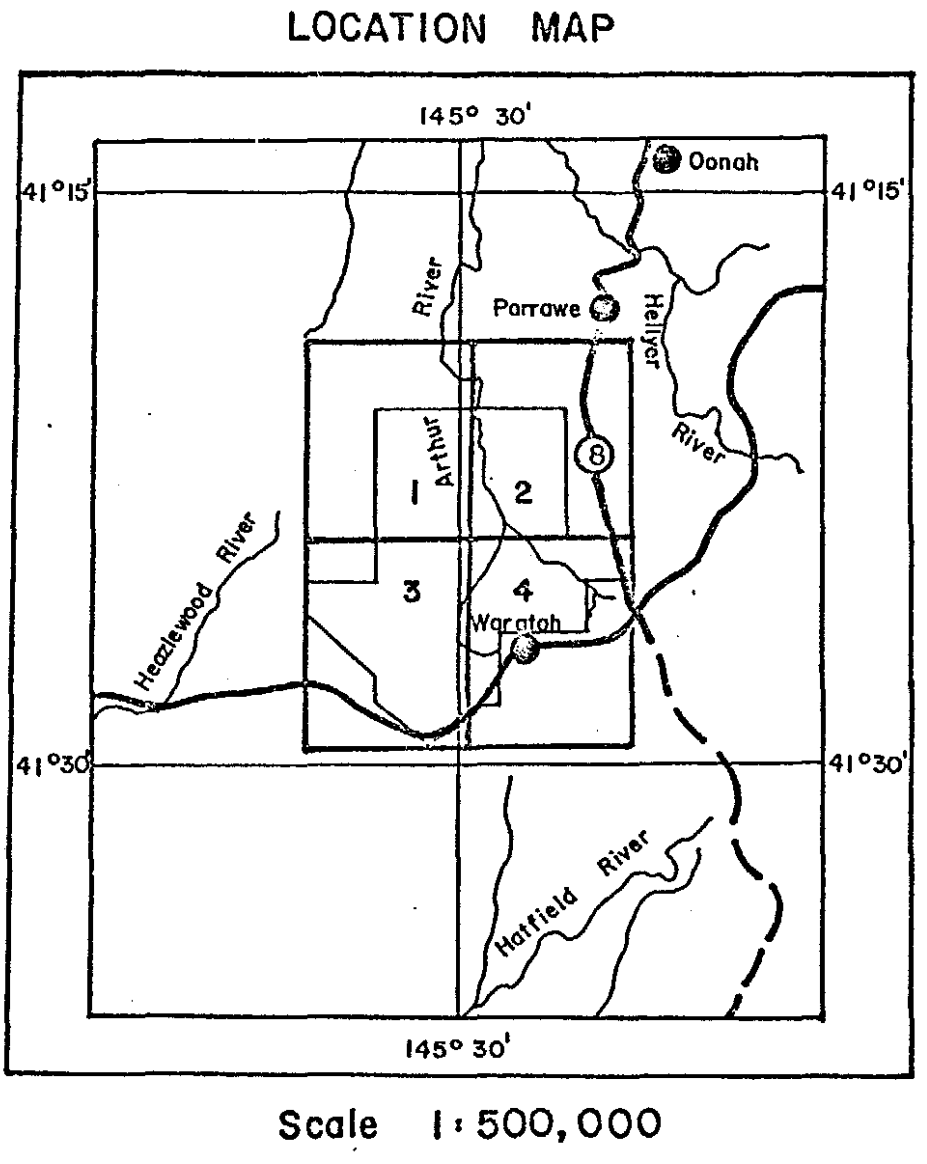


Figure 2 The Arthur River Area

5 cm

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INTRODUCTION

A DIGHEM^{III} survey totalling 1,374 line-km was flown with a 200 m line-spacing for Comstaff Pty., from March 8 to April 22, 1983, over two blocks in the Rosebery area and one block near Waratah, of Tasmania (Figures 1 and 2).

The Lama VH-BQT turbine helicopter flew at an average airspeed of 113 km/h with an EM bird height of approximately 34 m. Ancillary equipment consisted of a Geometrics G803 magnetometer with its bird at an average height of 49 m, a Sperry radio altimeter, a Geocam sequence camera, an RMS GR 33 recorder, a Geometrics 714 digital data acquisition system and a Kennedy 9700 9-track 800-bpi magnetic tape recorder. The analog equipment recorded four channels of EM data at approximately 900 Hz, two channels of EM data at approximately 385 Hz, two ambient EM noise channels (for the coaxial and coplanar receivers), two channels of magnetics (coarse and fine count), and a channel of radio altitude. The digital equipment recorded the EM data with a sensitivity of 0.25 ppm and the magnetic field to one nT (i.e., one gamma).

Appendix A provides details on the data channels, their respective sensitivities, and the flight path recovery procedure. Noise levels of less than 2 ppm are generally maintained for wind speeds up to 35 km/h. Higher winds

may cause the system to be grounded because excessive bird swinging produces difficulties in flying the helicopter. The swinging results from the 5 m^2 of area which is presented by the bird to broadside gusts. The DIGHEM system nevertheless can be flown under wind conditions that seriously degrade other AEM systems.

It should be noted that the anomalies shown on the Electromagnetic Anomaly map are based on a near-vertical, half plane model, which best reflects "discrete" bedrock conductors. Wide or deep bedrock conductors, or flat-lying conductive units, whether from surficial or bedrock sources, give rise to broad anomalous responses on the EM profiles, but may not appear on the Electromagnetic Anomaly map, as they do not meet the criteria for "discrete" conductors. These broad conductors, which more closely approximate a half space model, will be maximum coupled to the horizontal (coplanar) coil pair and should be evident on the resistivity map. The Resistivity map, therefore, may be more valuable than the Electromagnetic Anomaly map, in areas where broad, deep, or flat-lying conductors are considered to be of importance.

In areas where magnetite causes the inphase components to become negative, the apparent conductance and depth of EM anomalies may be unreliable.

In areas where EM responses are evident only on the quadrature components, zones of poor conductivity are indicated. Where these responses are coincident with strong magnetic anomalies, it is possible that the inphase component amplitudes have been suppressed by the effects of magnetite. These poorly-conductive magnetic features usually give rise to resistivity anomalies which may be poorly defined. These weak features are evident on the Resistivity map but may not be shown on the Electromagnetic Anomaly map. If it is expected that poorly-conductive sulphides may be associated with magnetite-rich units, some of these weakly anomalous features may be of interest.

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SECTION I: SURVEY RESULTS

The survey covered three grids with 1,374 km of flying, the results of which are shown on eight separate map sheets. Tables I-1 to I-3 summarize the EM responses on the eight sheets with respect to conductance grade and interpretation. The amounts flown over individual grids are shown below, together with the flight line direction information.

Area	Line number	Line direction	Amount flown (km)
East Chester	10- 300	N60°W	200
	400 (tie line)	N15°E	6
North Pieman	10- 500	E-W	279
	1,010-1,160	N5°E	136
Arthur River	2,010-2,810	N45°W	737
	3,000 (tie line)	N45°E	16
Total			1,374

CONDUCTORS IN THE SURVEY AREA

The Electromagnetic Anomalies maps show the anomaly locations with the interpreted conductor shape, dip, conductance and depth being indicated by symbols. Direct magnetic correlation is also shown if it exists. The strike

TABLE I-1

365 CHS EAST CHESTER

CONDUCTOR GRADE	CONDUCTANCE RANGE	RESPONSES
6	> 99 MHOS	4
5	50-99 MHOS	0
4	20-49 MHOS	1
3	10-19 MHOS	3
2	5- 9 MHOS	0
1	< 5 MHOS	0
X	INDETERMINATE	7
TOTAL		15

CONDUCTOR MODEL	MOST LIKELY SOURCE	RESPONSES
D	DISCRETE BEDROCK	0
T	DISCRETE BEDROCK	0
P	DISCRETE BEDROCK	0
B	DISCRETE BEDROCK	2
E	BEDROCK OR EDGE EFFECT	0
G	ROCK OR COVER	0
H	ROCK OR COVER	0
S	COVER	2
R	CULTURE	0
C	CULTURE	0
L	CULTURE	10
?	QUESTIONABLE	0
(BLANK)		1
TOTAL		15

(SEE EM MAP LEGEND FOR EXPLANATIONS)

TABLE I-2

365 NPI NORTH PIEMAN

CONDUCTOR GRADE	CONDUCTANCE RANGE	RESPONSES
6	> 99 MHOS	14
5	50-99 MHOS	18
4	20-49 MHOS	42
3	10-19 MHOS	49
2	5- 9 MHOS	57
1	< 5 MHOS	64
X	INDETERMINATE	90
TOTAL		334

CONDUCTOR MODEL	MOST LIKELY SOURCE	RESPONSES
D	DISCRETE BEDROCK	76
T	DISCRETE BEDROCK	13
P	DISCRETE BEDROCK	16
B	DISCRETE BEDROCK	136
E	BEDROCK OR EDGE EFFECT	9
G	ROCK OR COVER	7
H	ROCK OR COVER	2
S	COVER	25
R	CULTURE	0
C	CULTURE	1
L	CULTURE	32
?	QUESTIONABLE	3
(BLANK)		14
TOTAL		334

(SEE EM MAP LEGEND FOR EXPLANATIONS)

TABLE I-3

365 ARTHUR RIVER

CONDUCTOR GRADE	CONDUCTANCE RANGE	NUMBER OF RESPONSES
6	> 99 MHOS	2
5	50-99 MHOS	2
4	20-49 MHOS	9
3	10-19 MHOS	18
2	5- 9 MHOS	63
1	< 5 MHOS	218
X	INDETERMINATE	164
TOTAL		476

CONDUCTOR MODEL	MOST LIKELY SOURCE	NUMBER OF RESPONSES
D	DISCRETE BEDROCK	8
T	DISCRETE BEDROCK	3
P	DISCRETE BEDROCK	17
B	DISCRETE BEDROCK	109
E	BEDROCK OR EDGE EFFECT	32
G	ROCK OR COVER	123
H	ROCK OR COVER	49
S	COVER	84
R	CULTURE	0
C	CULTURE	0
L	CULTURE	50
?	QUESTIONABLE	1
(BLANK)		0
TOTAL		476

(SEE EM MAP LEGEND FOR EXPLANATIONS)

direction and length of the conductors are indicated when anomalies can be correlated from line to line. When studying the map sheets for follow-up planning, consult the anomaly listings appended to this report to ensure that none of the conductors are overlooked.

Numerous cultural sources, such as powerlines, metal fences, buildings, and the like, occur within the survey areas. These cultural sources influence the resistivity and electromagnetic anomaly patterns but they can usually be identified on the profiles due to their characteristic signatures. A separate map has been produced for all three survey areas entitled 'Probable Bedrock Conductors'. This map displays only those anomalies which were interpreted as D, T, B and P (see EM map legend). All other anomalies attributed to horizontal layers (interpreted as S, H, and G) and cultural features (L and C) have intentionally been deleted from this presentation to provide an uncluttered view of the more interesting anomalies.

East Chester Area

Ground in this survey area is highly resistive. Typical resistivity values were in excess of 1,000 ohm-m, except for a few zones in the northwest and north-central parts of the grid where values as low as 250 ohm-m were

observed. The lowest resistivities (about 60 ohm-m) of geologic origin occur at the east end of line 240, in the vicinity of EM response 240xA*.

A narrow low resistivity zone, extending from anomaly 10B towards anomaly 170A and further southwest through the east ends of lines 250 to 280, was caused by an electric power line.

The magnetic field in the East Chester area is moderately active. A system of northwesterly features of variable strike length occurs in the east half of the area. The magnetic activity in the central portion of the grid appears to terminate between lines 240 and 260. This may be an indication of deep seated structural features.

The Probable Bedrock Conductors map shows only three x-type responses which may reflect bedrock conductors. The most attractive among the three is 240xA. The EM data suggests that it may reflect a high quality bedrock conductor at depth. Note that this response occurs to the southeast of a localized magnetic high whose source occurs at depth, probably in excess of 120 m. These two features,

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* This denotes an x-type response A on line 240.

i.e., the EM and magnetic anomalies, may be related to a common target. It should be kept in mind, however, that aerodynamic noise may cause EM responses similar to those at 240xA.

The other two EM responses, 120xA and 131xA, are associated with broad low resistivity zones mentioned earlier. They reflect conductors, possibly of bedrock origin, which occur within a nearly homogeneous ground. Rock units of some depth extent, or a thick section of near-surface material such as overburden, would suit the situation. Of some interest are the two depth channels (for 385 Hz and 900 Hz) which display generally similar behaviour over these resistivity zones. Discrepancies in absolute values between the two depth channels are interpreted as being due to low signal levels. In the present case, the inphase responses are low, mostly below 3 ppm, and the signal is mainly due to the quadrature component. Such a low EM signal level analysis results in unreliable depths.

The low resistivity zone extending from fiducial 2899, line 100 to fiducial 2541, line 110, should be investigated on the ground. This anomaly, which occurs on a creek bank, may reflect a bedrock conductor at depth. The present data,

however, does not allow a satisfactory explanation of this anomaly.

In general, the survey results in the East Chester area may be disappointing because the survey failed to locate a well defined conductor of bedrock origin. The high resistivity of the ground in this area and the use of the 385 Hz frequency assumes that any large, high quality conductor occurring within the upper 150 to 200 m would be detected by the DIGHEM system. Results from the Night Hawk Lake Test Range near Timmins, Ontario, Canada, can serve to illustrate the detection capability of the system. A graphitic conductor buried under resistive glaciofluvial outwash sands was detected at 183 m below the EM bird using 900 Hz frequency. The 385 Hz frequency may, under favourable conditions, increase the detection depth up to 200 m.

North Pieman Area

The North Pieman survey area was flown along east-west oriented lines. The central portion of the block was also covered by roughly north-south oriented flight lines to improve the sampling characteristics of several features which display variable strikes between northeast and northwest.

The ground resistivities in the survey area range from 0.1 ohm-m to in excess of 1,000 ohm-m. There are a number of narrow conductive trends in the central part of the area and a sequence of broad conductive zones along the western border, all of which reflect conductive material in the bedrock. A close correlation appears to exist between the conductive zones and magnetic activity, i.e., the conductive zones appear to be confined to the flanks of magnetic activity.

The magnetic field in the area is active, showing trends generally paralleling conductive zones. There are, however, a number of magnetic highs which do not correlate with low resistivity, or exhibit only a limited degree of correlation. They can be found throughout the entire area; they appear to predominate in the southwestern quadrant of the area.

Anomalies 30A-201I, 70F, 110F-190I, 111xB, 210J, 230J-300G	These grade 2 to 6 anomalies and associated x-type responses reflect a suite of parallel bedrock conductors which have produced the eastern zone of north-south strike. They are confined to the eastern flanks of a prominent magnetic trend. Both the EM and

the magnetic data suggest that the character of these anomalies changes between lines 210 and 230, with conductor 230J-300G being magnetic. These conductors should be investigated on the ground. The resistivity map suggests that 260G-270G constitutes the most attractive target in this group.

Anomalies	10A-20A, 80xA, 90xC, 111xA-1160xC, 1160J, 220F, 220xB, 1160F-300F, 280C-290K	These grade 1 to 5 anomalies and x-type responses reflect bedrock conductors of relatively short strike length that are confined to the west flanks of the previously mentioned low resistivity zone. Anomalies between lines 80 and 160 occur at, or near, the peaks of magnetic activity. The most attractive among these conductors appears to be 280C-290K, which is confined to the same low resistivity zone as 260G-270G discussed earlier.

Anomalies 90xB, 111A-200C, 140B, 140xB, 1140D, 1150A, 230H, 210H-250G, 1160G

These grade 1 to 6 anomalies indicate a series of bedrock conductors which are confined to the western flanks of the north-south magnetic trend discussed earlier. Some of the anomalies were detected while flying parallel to the strike of the conductors, e.g., 1140D, 1160G. Other anomalies appear to constitute extensions of longer conductors, e.g., 230H. Care must be taken while evaluating anomaly 230H because of a possible contribution from, or masking by, a cultural source. Similarly, care must be taken in the follow-up of 90xB and 180C because these anomalies occur in the immediate vicinity of high concentrations of magnetite which resulted in their inphase responses being negative. However, both anomalies were recognized on the difference channels. The most attractive conductors in this group

appear to be 140C-1150C and 210H-250G.

Anomaly 150I-180G

A very poorly defined conductor is indicated by these grade 1 and 2 anomalies. Low EM signals at 150I, 160E and 170E prevented positive identification and classification of these anomalies. Only 180G is well defined and of bedrock origin. The other anomalies may constitute an extension of 180G. Alternatively, they may have been caused by aerodynamic noise. The x-type response 200xD may be an extension of 180G to the south.

Anomalies 170F-180H, 190K

The grade 4 and 5 anomalies 170F and 180H indicate a well defined bedrock conductor. Although there are some similarities in the EM responses between this conductor and 190K, the latter one is not a continuation of 170F-180H. It reflects a separate bedrock conductor. Both should be followed up on the ground.

Anomalies 70C-110B, 90B-110C, 110A, 110C	Among these conductors, 90A-100A is of definite bedrock origin while the other anomalies in this conductive trend (70C-110B) could reflect conductive pockets in the overburden(?). Anomaly 90B-100C is also of bedrock origin, while 110A and 110C are difficult to explain. They may be merely results of an edge effect. Note that these anomalies occur along a northwesterly conductive trend extending further southeast.
Anomalies 130C-140A, 150A, 150xA, 150C-160A	These grade 1 to 3 anomalies and x-type responses reflect bedrock and possible bedrock conductors which occur along the same conductive trend as 70C-110B, etc. Note that the proposed conductor axis of 130C-140A cuts across a well defined magnetic trend suggesting that these anomalies may reflect a series of short in

echelon conductors. They should be investigated on the ground.

Group 1

The grade 1 to 5 anomalies of this grouping reflect a series of predominantly bedrock conductors which are related to the same northwest-southeast conductive trend as 70C-110B, etc. This group of conductors occurs near the intersection of two major magnetic and conductive trends, one north-south, the other northwesterly, which makes it quite attractive. Evaluation of these conductors may be, however, difficult due to excessive culture in the area.

Anomalies 110xA, 120xA-140xA

All these responses are poorly defined but broad which tends to suggest their possible deep bedrock origin.

Anomalies 340xB-360B, 1100xF, 350xC, 1140xA, 1150xA, 390xA, 1100xE

These grade 2 anomalies and x-type responses reflect a set of bedrock conductors which appear to

constitute the southern extension of the group 1 conductors.

Anomaly 1160C — This grade 3 anomaly reflects a conductor which may occur at depth and be an extension of 1160F-300F.

Anomalies 420xB-440xA, 1150xA, 430A-500B, 1100A-470xC — These grade 2 to 4 anomalies and x-type responses are confined within, or associated with, a well defined low resistivity zone of 3 to about 100 ohm-m. They should be investigated on the ground with special attention being paid to anomaly 1100A-470xC, which appears poorly confirmed on the perpendicular lines, and to the south end of 430A-500B, south of line 470. The last segment appears to be most attractive. Note that the anomaly may continue beyond the survey boundary.

Anomalies 490xC, 500C, 500D — These grade 2 and 4 anomalies and an x-type response reflect a deep seated bedrock conductor (or

conductors) which is adjacent to the low resistivity zone described immediately above. It may constitute an extension of the same zone.

Anomaly 200A-220A

A well defined bedrock conductor is indicated by these grade 4 and 5 anomalies. The anomalies reflect a very attractive target and should be investigated on the ground. It is speculated that the conductor may be flat lying or flat dipping and extend further west beyond the survey boundary. The 100 nT magnetic correlation at 200A may be coincidental.

Anomaly 240xA-250A Group 2

These grade 1 to 6 anomalies and x-type responses are confined within, or associated with, a well defined extensive low resistivity zone containing portions with lower than 0.1 ohm-m resistivities. The area of group 2 anomalies correlates with a topographic high which

may be significant in the follow-up planning. Also, there are a number of mines in this area which tend to increase the attractiveness of these anomalies.

It is possible that anomalies 200A-220A, 400B, 410A-420A, 450A, 450B, 460B, 450C-460C, and others in the area adjacent to group 2, may reflect similar conductive material as the group 2 anomalies. The ground follow-up may be complicated by the presence of numerous cultural features.

Anomalies 400A, 400B, 410A-420A, 410B, 450A, 450B, 460B, 450C-460C, 480B, 490xA, 500xA

These grade 1 to 6 anomalies and x-type responses reflect bedrock and possible bedrock conductors which have produced low resistivity zones similar in character to the group 2 resistivity low. They may reflect similar conductive material. Ground follow-up work appears to be warranted.

There are a number of weak EM anomalies and x-type responses confined in an approximately north-south trending belt between group 1 and group 2 which appear to reflect weak or possible bedrock conductors, many of which may be masked by the presence of magnetite. Particularly, those in this last group should be investigated on the ground with caution. They include 240xB, 320xB, 330F, 1053xB, 340E, 340G, 350J, 390A, 390B, 400D and 400xA.

Among others, 190A, 210xA are worth mentioning because they may reflect bedrock conductors (or conductor) at depth. However, they are not confirmed on the perpendicular lines 1010 and 1021. Note that 300xA-1021xA may constitute an extension of group 2 conductive material. Finally, 400xC, 410C, and 420xA, which are confined to a north-south ridge, are difficult to evaluate properly, also because of the lack of corresponding responses of line 1070 which lies about 80 to 100 m east.

Arthur River Area

The ground resistivity in the Arthur River area varies over a broad range of values, from less than 1 ohm-m to in excess of 1,000 ohm-m. Extensive conductive zones characterized by resistivities lower than 150 ohm-m occur along the eastern boundary of the survey area. These

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conductive zones, which display partial correlation with topography, appear to correlate with high magnetic activity. This correlation would suggest a distinct rock type as compared to other parts of the survey area. Numerous EM anomalies are associated with these conductive zones, most of which reflect wide conductive rock units or thick conductive cover (interpretation symbols H, S, and G). Note, also, that the depth channels generally support this interpretation, suggesting the presence of buried homogeneous half-space-like units. Departures between the 900 Hz and 385 Hz depth data occur mostly where the ground is not very conductive; such discrepancies may result because of low 385 Hz signal levels.

A number of conductive zones of small-to-intermediate lateral extent occur in the central, south-central, and northwest parts of the area. They contain EM anomalies which reflect discrete bedrock conductors that may be of direct exploration interest.

The magnetic field in the survey area is active in the northeast quadrant (sheet 2 and part of sheet 1), along the south boundary (south part of sheet 3 and southeast portion of sheet 4), and along well defined northeast and east-northeast trends easily recognizable on sheets 1 and 3.

The most interesting magnetic feature is a well defined anomaly of a dipolar character, on lines 2410 and 2420 of sheet 4. It may be due to a pipe-like intrusive body of a northerly-to-northeasterly dip. The magnetic anomaly is associated with a well developed resistivity low and with grade 2 to 5 EM anomalies.

The Probable Bedrock Conductor map contains a number of EM anomalies which are described on the following pages.

Sheet 1

Anomalies 2260A, 2280D-2300E, 2300B, 2300C, 2320xA	These grade 1 and 2 anomalies and x-type responses are associated with a localized conductive zone which may reflect conductive bedrock material. Anomaly 2260A and x-type response 2320xA may be extentions of the main conductor. Note that anomaly 2311B which was interpreted as a buried conductive unit, interpretation symbol G, may reflect the same conductor as 2280D-2300E.

Anomalies 2280B, 2300A, 2320A-2330xA, 2343A-2350A, 2343C	These grade 1 and 2 anomalies and x-type response are associated with a northeasterly conductive trend. They reflect anomalies bordering between "discrete" and "broad" conductors. If they prove of interest, then 2320B, 2330B, and 2343B should be also investigated.
Response 2280xA'	This x-type response may reflect weak bedrock conductor which could be similar to 2280D-2300E.
Response 2320xB	This is a poorly defined response which may be due to a very weak conductor of, possibly, bedrock origin.
Anomalies 2360xA,2360xB, 2380A, 2400B-2420A, 2390A-2400A, 2430B	These grade 1 anomalies and x-type responses reflect a series of conductors, of possible bedrock origin, which are associated with a narrow conductive zone paralleling negative magnetic anomaly. Anomaly 2430B could be the result of an edge effect.

Anomalies 2410B,2450xA, 2450xB

This grade 1 anomaly and x-type responses occur along the northwest boundary of an extensive low resistivity zone. They may reflect conductive material along the contact of this zone with surrounding resistive rocks, or they may be caused by edge effects. Should they prove to be of exploration interest, other anomalies along the boundary of this conductive zone may be given a consideration, e.g., 2370B, 2440A, and 2460D.

Anomaly 2460A

This grade 1 anomaly reflects a weak conductor which may occur in the bedrock. It is noted, however, that the low ground clearance of the EM bird resulted in high EM responses which may merely reflect a near-surface conductor. This is not a priority target.

Anomaly 2460B

This grade 2 anomaly is due to the high concentration of magnetite, which may be associated with minor

amounts of sulphides, likely of subeconomic mass. This anomaly is a low priority target.

Response 2460xB — This x-type response may reflect a weak bedrock conductor.

Anomaly 2450A-2470A — A weak bedrock conductor is indicated by these grade 1 anomalies. The EM data suggest that this is a continuous conductive feature over lines 2450 to 2470. Anomaly 2460E, however, has a character of a buried rock unit rather than of a discrete conductor.

Anomaly 2470B — This single-line, grade 1 anomaly appears to reflect a weak bedrock conductor.

Sheet 2

An extensive low resistivity zone along the eastern boundary of this sheet shows some correlation with high ground. It appears to be caused by a buried conductive rock unit, or, alternatively by a buried layer of conductive

material which was erroded away in the valleys (e.g., Wandle River valley). The magnetic map suggests complex structures to be present here, with northeast dominating trends.

Anomalies 2070A, 2080B, 2100A	These grade 1 anomalies occur along the edge of the low resistivity zone mentioned earlier. They may reflect weak bedrock conductors.
Response 2170xA	This is a poorly defined response which may have been caused by combined effects of surface conduction and possible bedrock conductor.
Anomaly 2190A	This single-line, grade 1 anomaly appears to reflect a weak bedrock conductor located along the edge of the main low resistivity zone.
Anomaly 2190B-3000C	These grade 1 and 2 anomalies reflect a conductor bordering on the "discrete"-"buried conductive rock unit" case. They are confined to a semi-circular extension of the main conductive zone, which

also appears to be distinguished magnetically.

Anomalies 2200B,2210E, 3000B — These grade 1 and 2 anomalies occur close to the edge of the conductive zone extension described just above. If they are proven to be of bedrock origin, anomaly 2210B should be also considered for follow-up work.

Response 2210xD — A bedrock conductor is indicated by this x-type response.

Anomalies 2270A,2270B, 2290B — These grade 1 anomalies are poorly defined. They may be indicative of bedrock conductors along the edges of a semi-circular conductive zone extending south into the area of sheet 4. Alternatively, they may have been caused by edge effects.

Sheet 3

The north-central and western parts of the sheet contain low resistivity zones which roughly correlate with

low magnetic activity. The north-central zone, which extends over mostly high ground, contains several anomalies of bedrock origin. In contrast, the western zone occurs in a valley and the EM responses suggest a buried conductive unit rather than bedrock (i.e., discrete) conductors to be present.

The south half of the sheet displays very active magnetics. A broadly semi-circular pattern can be recognized, suggesting the presence of an intrusive unit. In general, the data suggest correlation between low magnetic zones and low ground resistivity.

Anomaly 2501A	This single-line grade 1 anomaly appears to reflect weak bedrock conductor within a 60 to 80 ohm-m zone. It occurs on strike with other grade 1 anomalies, which, however, appear to be due to a buried conductive unit (e.g., 2491A, 2511A, 2520A, 2530xA).
Anomalies 2501xB-2511C, 2530A-2540xB, 2550C-2560xB, 2570A-2600xA, 2610A	These grade 1 anomalies and x-type responses may all reflect weak bedrock conductors associated with the south end of an extensive low

resistivity zone. Most of the conductors occur on the flanks of weak-to-intermediate magnetic activity.

Anomaly 2550D — This anomaly occurs in an area of high magnetite concentration. It may reflect a weak bedrock conductor masked by the presence of magnetite.

Anomalies 2600A,2610E — These grade 1 anomalies occur at the border of a localized low resistivity zone. They may reflect weak bedrock conductors, but appear to be a low priority targets.

Anomaly 2630A — This poorly defined grade 1 anomaly may reflect weak bedrock conductor to the side of a magnetite concentration.

Anomalies 2640A,2660A, 2690B — These grade 1 and 2 anomalies occur along the edge of an extensive low resistivity zone. They may reflect bedrock conductors or be due to edge effects.

Anomaly 2690C-2700F	A short conductor of possible bedrock origin, masked by the presence of magnetite, is indicated by these grade 1 anomalies.
Anomalies 2700D-2720D, 2710C,2710xC, 2730E-2740F, 2740G-2750C	These grade 1 to 3 anomalies reflect bedrock conductors which are associated with a series of localized low resistivity zones in the south-central part of the sheet. The magnetic map suggests that these anomalies may occur south of possible contact paralleling line 2700. The presence of such contact may then account for the short strike length of 2690C-2700F, and for the "parallel" character of 2710C.
	The most attractive of these anomalies are 2710C and 2740G, the latter one showing "thick" characteristics.
Anomalies 2630E,2720G, 2740L	These anomalies occur within the southern low resistivity zone.

They may reflect bedrock conductors. However, careful ground testing of these anomalies is required.

2630E is associated with about 30-50 nT magnetic anomaly which caused low coplanar inphase responses. However, the presence of a positive difference channel anomaly suggests the bedrock origin of the anomaly.

Anomalies 2720G and 2740L occur close to cultural features. Ground check is required to evaluate these anomalies properly.

Anomalies 2730C,2770xD, 3000xB

These are single-line EM responses which may be of some interest. 2730C occurs at the edge of a localized conductive zone which appears to reflect a near-surface conductive rock unit. The character of this anomaly may be merely indicative of the presence of this conductive unit further southwest.

The x-type response 2770xD could be indicative of minor sulphide mineralization associated with magnetite.

The x-type response 3000xB, which is located at the tip of a curved conductive zone, may reflect very weak bedrock conductor.

Sheet 4

The area of sheet 4 is bordered on the east and south by extensive low resistivity zones which appear to correlate with high magnetic activity. These zones are continuations and/or extensions of similar zones observed on sheets 2 and 3. There are several EM anomalies within these zones which reflect conductors of bedrock origin. The majority of the EM anomalies are, however, compatible with the buried conductive rock unit, thick conductive cover, or near-surface wide conductive rock unit (interpretation symbols G and H).

The west-central part of the sheet contains an oval-shaped low resistivity zone which roughly correlates with a broad magnetic anomaly with an amplitude of about

250 nT. Prominent, localized coincident magnetic and resistivity anomalies are superimposed on the main anomalous feature in the vicinity of 2420B. This is the most attractive anomaly of the whole survey.

Anomalies 2180A,2200B, 2210B,2230B	These grade 1 and 2 anomalies occur in the northeast part of the sheet, well within the main conductive zone which, generally, displays characteristics of a buried conductive rock unit. They may reflect conductors of bedrock origin.
Anomalies 2200xA-2210A, 2220A,2240xC, 2250xB,2260xC, 2350B	These grade 1 anomalies and x-type responses are located along the edges of the main conductive zone. They could reflect bedrock conductors associated with the contact of the rock units, or be the result of edge effects.
Anomalies 2311D-2330G, 2343B-2350C	Being located close to a 40 to 80 ohm-m resistivity low and along localized magnetic trends, these grade 1 and 2 anomalies reflect short bedrock conductors which

	should be investigated on the ground.
Response 2250xA	This poorly defined response may reflect a weak bedrock conductor.
Anomalies 2270A-2311xC, 2290A-2300A, 2300xA,2311xA, 2311A,2311B	All these grade 1 anomalies and x-type responses are associated with an oval-shaped low resistivity zone. They occur close to its boundary, roughly along magnetic trends. The magnetic data suggests that 2290A-2300A may be separated from 2311A, and 2300xA from 2311xA, by a fault (?) parallel to line 2300. Note also that 2311B most likely reflects a short conductor striking at a low angle to the flight line.
Anomalies 2343A-2370A, 2380xB-2390A, 2380B-2390xB, 2390xA-2420B, 2400F, 2410xA-2420A, 2410E-2420C, 2430B,2430C	These grade 1 to 5 anomalies and associated x-type responses are associated with the west-central low resistivity zone. They reflect bedrock conductors, some of which are the most attractive targets

within the survey area. By far, the best anomalies are 2390xA-2420B and 2410E-2420C. They are the priority targets.

Care must be taken while evaluating some other anomalies, namely, those which occur close to cultural features, such as roads. They include 2380xB, 2390xB, 2400F, 2430B, and 2430C.

Anomalies 2440D,2450xD — These anomalies occur in conjunction with concentrations of magnetite. They may reflect minor mineralization masked by the negative inphase responses due to magnetite.

Response 2460xB — This x-type response is observable on the quadrature channels only, but it may reflect very weak bedrock conductor.

Anomaly 2491D — This grade 4 anomaly occurs in an area bordered by two power lines,

	which may have contributed to its responses. The anomaly, however, appears to be of geologic origin and may reflect a bedrock source.
Anomalies 2520A,2560B	These grade 1 anomalies appear to reflect weak bedrock conductors masked by the presence of magnetite.
Responses 2590xA,2610xA	These x-type responses, which occur near the peaks of magnetic activity, appear to reflect bedrock conductors.
Anomaly 3000A	This grade 1 anomaly could reflect a weak bedrock conductor.

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SECTION II: BACKGROUND INFORMATION

ELECTROMAGNETICS

DIGHEM electromagnetic responses fall into two general classes, discrete and broad. The discrete class consists of sharp, well-defined anomalies from discrete conductors such as sulfide lenses and steeply dipping sheets of graphite and sulfides. The broad class consists of wide anomalies from conductors having a large horizontal surface such as flatly dipping graphite or sulfide sheets, saline water-saturated sedimentary formations, conductive overburden and rock, and geothermal zones. A vertical conductive slab with a width of 200 m would straddle these two classes.

The vertical sheet (half plane) is the most common model used for the analysis of discrete conductors. All anomalies plotted on the electromagnetic map are analyzed according to this model. The following section entitled Discrete conductor analysis describes this model in detail, including the effect of using it on anomalies caused by broad conductors such as conductive overburden.

The conductive earth (half space) model is suitable for broad conductors. Resistivity contour maps result from the

use of this model. A later section entitled Resistivity mapping describes the method further, including the effect of using it on anomalies caused by discrete conductors such as sulfide bodies.

Geometric interpretation

The geophysical interpreter attempts to determine the geometric shape and dip of the conductor. This qualitative interpretation of anomalies is indicated on the map by means of interpretive symbols (see EM map legend). Figure II-1 shows typical DIGHEM anomaly shapes and the interpretive symbols for a variety of conductors. These classic curve shapes are used to guide the geometric interpretation.

Discrete conductor analysis

The EM anomalies appearing on the electromagnetic map are analyzed by computer to give the conductance (i.e., conductivity-thickness product) in mhos of a vertical sheet model. This is done regardless of the interpreted geometric shape of the conductor. This is not an unreasonable procedure, because the computed conductance increases as the electrical quality of the conductor increases, regardless of its true shape. DIGHEM anomalies are divided into six

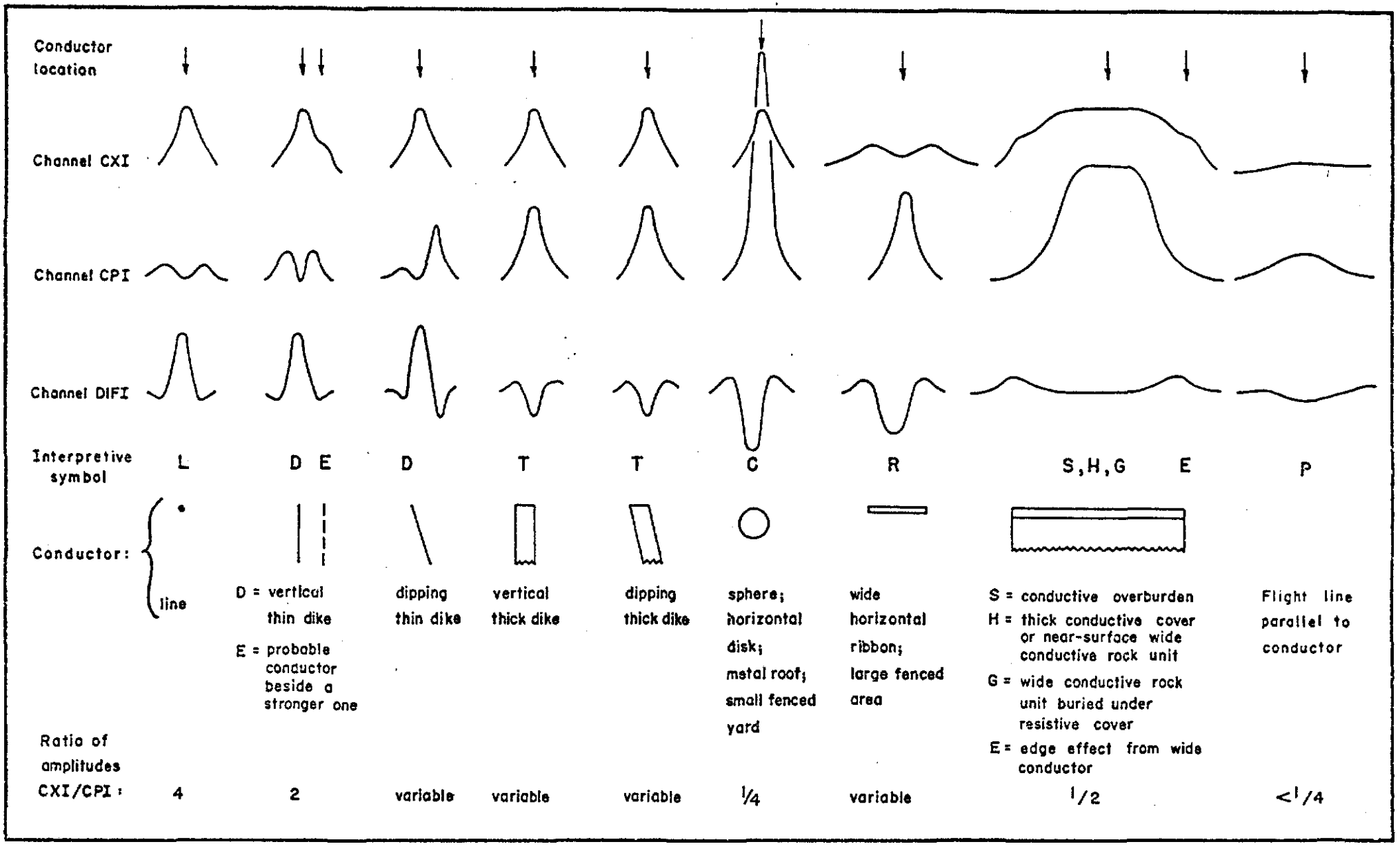

Figure II -1 Typical DIGHEM anomaly shapes

grades of conductance, as shown in Table II-1. The conductance in mhos is the reciprocal of resistance in ohms.

Table II-1. EM Anomaly Grades

Anomaly Grade	Mho Range
6	> 99
5	50 - 99
4	20 - 49
3	10 - 19
2	5 - 9
1	< 5

The conductance value is a geological parameter because it is a characteristic of the conductor alone; it generally is independent of frequency, and of flying height or depth of burial apart from the averaging over a greater portion of the conductor as height increases.[1] Small anomalies from deeply buried strong conductors are not confused with small anomalies from shallow weak conductors because the former will have larger conductance values.

Conductive overburden generally produces broad EM responses which are not plotted on the EM maps. However, patchy conductive overburden in otherwise resistive areas

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[1] This statement is an approximation. DIGHEM, with its short coil separation, tends to yield larger and more accurate conductance values than airborne systems having a larger coil separation.

can yield discrete anomalies with a conductance grade (cf. Table II-1) of 1, or even of 2 for conducting clays which have resistivities as low as 50 ohm-m. In areas where ground resistivities can be below 10 ohm-m, anomalies caused by weathering variations and similar causes can have any conductance grade. The anomaly shapes from the multiple coils often allow such conductors to be recognized, and these are indicated by the letters S, H, G and sometimes E on the map (see EM legend).

For bedrock conductors, the higher anomaly grades indicate increasingly higher conductances. Examples: DIGHEM's New Insco copper discovery (Noranda, Canada) yielded a grade 4 anomaly, as did the neighbouring copper-zinc Magusi River ore body; Mattabi (copper-zinc, Sturgeon Lake, Canada) and Whistle (nickel, Sudbury, Canada) gave grade 5; and DIGHEM's Montcalm nickel-copper discovery (Timmins, Canada) yielded a grade 6 anomaly. Graphite and sulfides can span all grades but, in any particular survey area, field work may show that the different grades indicate different types of conductors.

Strong conductors (i.e., grades 5 and 6) are characteristic of massive sulfides or graphite. Moderate conductors (grades 3 and 4) typically reflect sulfides of a less massive character or graphite, while weak bedrock conductors

(grades 1 and 2) can signify poorly connected graphite or heavily disseminated sulfides. Grade 1 conductors may not respond to ground EM equipment using frequencies less than 2000 Hz.

The presence of sphalerite or gangue can result in ore deposits having weak to moderate conductances. As an example, the three million ton lead-zinc deposit of Restigouche Mining Corporation near Bathurst, Canada, yielded a well defined grade 1 conductor. The 10 percent by volume of sphalerite occurs as a coating around the fine grained massive pyrite, thereby inhibiting electrical conduction.

Faults, fractures and shear zones may produce anomalies which typically have low conductances (e.g., grades 1 and 2). Conductive rock formations can yield anomalies of any conductance grade. The conductive materials in such rock formations can be salt water, weathered products such as clays, original depositional clays, and carbonaceous material.

On the electromagnetic map, a letter identifier and an interpretive symbol are plotted beside the EM grade symbol. The horizontal rows of dots, under the interpretive symbol, indicate the anomaly amplitude on the flight record. The

vertical column of dots, under the anomaly letter, gives the estimated depth. In areas where anomalies are crowded, the letter identifiers, interpretive symbols and dots may be obliterated. The EM grade symbols, however, will always be discernible, and the obliterated information can be obtained from the anomaly listing appended to this report.

The purpose of indicating the anomaly amplitude by dots is to provide an estimate of the reliability of the conductance calculation. Thus, a conductance value obtained from a large ppm anomaly (3 or 4 dots) will tend to be accurate whereas one obtained from a small ppm anomaly (no dots) could be quite inaccurate. The absence of amplitude dots indicates that the anomaly from the coaxial coil-pair is 5 ppm or less on both the inphase and quadrature channels. Such small anomalies could reflect a weak conductor at the surface or a stronger conductor at depth. The conductance grade and depth estimate illustrates which of these possibilities fits the recorded data best.

Flight line deviations occasionally yield cases where two anomalies, having similar conductance values but dramatically different depth estimates, occur close together on the same conductor. Such examples illustrate the reliability of the conductance measurement while showing that the depth estimate can be unreliable. There are a

number of factors which can produce an error in the depth estimate, including the averaging of topographic variations by the altimeter, overlying conductive overburden, and the location and attitude of the conductor relative to the flight line. Conductor location and attitude can provide an erroneous depth estimate because the stronger part of the conductor may be deeper or to one side of the flight line, or because it has a shallow dip. A heavy tree cover can also produce errors in depth estimates. This is because the depth estimate is computed as the distance of bird from conductor, minus the altimeter reading. The altimeter can lock onto the top of a dense forest canopy. This situation yields an erroneously large depth estimate but does not affect the conductance estimate.

Dip symbols are used to indicate the direction of dip of conductors. These symbols are used only when the anomaly shapes are unambiguous, which usually requires a fairly resistive environment.

A further interpretation is presented on the EM map by means of the line-to-line correlation of anomalies, which is based on a comparison of anomaly shapes on adjacent lines. This provides conductor axes which may define the geological structure over portions of the survey area. The absence of

conductor axes in an area implies that anomalies could not be correlated from line to line with reasonable confidence.

DIGHEM electromagnetic maps are designed to provide a correct impression of conductor quality by means of the conductance grade symbols. The symbols can stand alone with geology when planning a follow-up program. The actual conductance values are printed in the attached anomaly list for those who wish quantitative data. The anomaly ppm and depth are indicated by inconspicuous dots which should not distract from the conductor patterns, while being helpful to those who wish this information. The map provides an interpretation of conductors in terms of length, strike and dip, geometric shape, conductance, depth, and thickness (see below). The accuracy is comparable to an interpretation from a high quality ground EM survey having the same line spacing.

The attached EM anomaly list provides a tabulation of anomalies in ppm, conductance, and depth for the vertical sheet model. The EM anomaly list also shows the conductance and depth for a thin horizontal sheet (whole plane) model, but only the vertical sheet parameters appear on the EM map. The horizontal sheet model is suitable for a flatly dipping thin bedrock conductor such as a sulfide sheet having a thickness less than 10 m. The list also shows the

resistivity and depth for a conductive earth (half space) model, which is suitable for thicker slabs such as thick conductive overburden. In the EM anomaly list, a depth value of zero for the conductive earth model, in an area of thick cover, warns that the anomaly may be caused by conductive overburden.

Since discrete bodies normally are the targets of EM surveys, local base (or zero) levels are used to compute local anomaly amplitudes. This contrasts with the use of true zero levels which are used to compute true EM amplitudes. Local anomaly amplitudes are shown in the EM anomaly list and these are used to compute the vertical sheet parameters of conductance and depth. Not shown in the EM anomaly list are the true amplitudes which are used to compute the horizontal sheet and conductive earth parameters.

X-type electromagnetic responses

DIGHEM maps contain x-type EM responses in addition to EM anomalies. An x-type response is below the noise threshold of 3 ppm, and reflects one of the following: a weak conductor near the surface, a strong conductor at depth (e.g., 100 to 120 m below surface) or to one side of the flight line, or aerodynamic noise. Those responses that

have the appearance of valid bedrock anomalies on the flight profiles are indicated by appropriate interpretive symbols (see EM map legend). The others probably do not warrant further investigation unless their locations are of considerable geological interest.

The thickness parameter

DIGHEM can provide an indication of the thickness of a steeply dipping conductor. The amplitude of the coplanar anomaly (e.g., CPI) increases relative to the coaxial anomaly (e.g., CXI) as the apparent thickness increases, i.e., the thickness in the horizontal plane. (The thickness is equal to the conductor width if the conductor dips at 90 degrees and strikes at right angles to the flight line.) This report refers to a conductor as thin when the thickness is likely to be less than 3 m, and thick when in excess of 10 m. Thin conductors are indicated on the EM map by the interpretive symbol "D", and thick conductors by "T". For base metal exploration in steeply dipping geology, thick conductors can be high priority targets because many massive sulfide ore bodies are thick, whereas non-economic bedrock conductors are often thin. The system cannot sense the thickness when the strike of the conductor is subparallel to the flight line, when the conductor has a shallow dip, when

the anomaly amplitudes are small, or when the resistivity of the environment is below 100 ohm-m.

Resistivity mapping

Areas of widespread conductivity are commonly encountered during surveys. In such areas, anomalies can be generated by decreases of only 5 m in survey altitude as well as by increases in conductivity. The typical flight record in conductive areas is characterized by inphase and quadrature channels which are continuously active. Local EM peaks reflect either increases in conductivity of the earth or decreases in survey altitude. For such conductive areas, apparent resistivity profiles and contour maps are necessary for the correct interpretation of the airborne data. The advantage of the resistivity parameter is that anomalies caused by altitude changes are virtually eliminated, so the resistivity data reflect only those anomalies caused by conductivity changes. The resistivity analysis also helps the interpreter to differentiate between conductive trends in the bedrock and those patterns typical of conductive overburden. For example, discrete conductors will generally appear as narrow lows on the contour map and broad conductors (e.g., overburden) will appear as wide lows.

The resistivity profile (see table in Appendix A) and the resistivity contour map present the apparent resistivity using the so-called pseudo-layer (or buried) half space model defined in Fraser (1978)[2]. This model consists of a resistive layer overlying a conductive half space. The depth channel (see Appendix A) gives the apparent depth below surface of the conductive material. The apparent depth is simply the apparent thickness of the overlying resistive layer. The apparent depth (or thickness) parameter will be positive when the upper layer is more resistive than the underlying material, in which case the apparent depth may be quite close to the true depth.

The apparent depth will be negative when the upper layer is more conductive than the underlying material, and will be zero when a homogeneous half space exists. The apparent depth parameter must be interpreted cautiously because it will contain any errors which may exist in the measured altitude of the EM bird (e.g., as caused by a dense tree cover). The inputs to the resistivity algorithm are the inphase and quadrature components of the coplanar coil-pair. The outputs are the apparent resistivity of the

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[2] Resistivity mapping with an airborne multicoil electromagnetic system: Geophysics, v. 43, p. 144-172.

conductive half space (the source) and the sensor-source distance. The flying height is not an input variable, and the output resistivity and sensor-source distance are independent of the flying height. The apparent depth, discussed above, is simply the sensor-source distance minus the measured altitude or flying height. Consequently, errors in the measured altitude will affect the apparent depth parameter but not the apparent resistivity parameter.

The apparent depth parameter is a useful indicator of simple layering in areas lacking a heavy tree cover. The DIGHEM system has been flown for purposes of permafrost mapping, where positive apparent depths were used as a measure of permafrost thickness. However, little quantitative use has been made of negative apparent depths because the absolute value of the negative depth is not a measure of the thickness of the conductive upper layer and, therefore, is not meaningful physically. Qualitatively, a negative apparent depth estimate usually shows that the EM anomaly is caused by conductive overburden. Consequently, the apparent depth channel can be of significant help in distinguishing between overburden and bedrock conductors.

The resistivity map often yields more useful information on conductivity distributions than the EM map. In

comparing the EM and resistivity maps, keep in mind the following:

(a) The resistivity map portrays the absolute value of the earth's resistivity. (Resistivity = 1/conductivity.)

(b) The EM map portrays anomalies in the earth's resistivity. An anomaly by definition is a change from the norm and so the EM map displays anomalies, (i) over narrow, conductive bodies and (ii) over the boundary zone between two wide formations of differing conductivity.

The resistivity map might be likened to a total field map and the EM map to a horizontal gradient in the direction of flight[3]. Because gradient maps are usually more sensitive than total field maps, the EM map therefore is to be preferred in resistive areas. However, in conductive areas, the absolute character of the resistivity map usually causes it to be more useful than the EM map.

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[3] The gradient analogy is only valid with regard to the identification of anomalous locations.

Interpretation in conductive environments

Environments having background resistivities below 30 ohm-m cause all airborne EM systems to yield very large responses from the conductive ground. This usually prohibits the recognition of discrete bedrock conductors. The processing of DIGHEM data, however, produces six channels which contribute significantly to the recognition of bedrock conductors. These are the inphase and quadrature difference channels (DIFI and DIFQ), and the resistivity and depth channels (RES and DP) for each coplanar frequency; see table in Appendix A.

The EM difference channels (DIFI and DIFQ) eliminate up to 99% of the response of conductive ground, leaving responses from bedrock conductors, cultural features (e.g., telephone lines, fences, etc.) and edge effects. An edge effect arises when the conductivity of the ground suddenly changes, and this is a source of geologic noise. While edge effects yield anomalies on the EM difference channels, they do not produce resistivity anomalies. Consequently, the resistivity channel aids in eliminating anomalies due to edge effects. On the other hand, resistivity anomalies will coincide with the most highly conductive sections of conductive ground, and this is another source of geologic

noise. The recognition of a bedrock conductor in a conductive environment therefore is based on the anomalous responses of the two difference channels (DIFI and DIFQ) and the two resistivity channels (RES). The most favourable situation is where anomalies coincide on all four channels.

The DP channels, which give the apparent depth to the conductive material, also help to determine whether a conductive response arises from surficial material or from a conductive zone in the bedrock. When these channels ride above the zero level on the electrostatic chart paper (i.e., depth is negative), it implies that the EM and resistivity profiles are responding primarily to a conductive upper layer, i.e., conductive overburden. If both DP channels are below the zero level, it indicates that a resistive upper layer exists, and this usually implies the existence of a bedrock conductor. If the low frequency DP channel is below the zero level and the high frequency DP is above, this suggests that a bedrock conductor occurs beneath conductive cover.

Channels REC1, REC2, REC3 and REC4 are the anomaly recognition functions. They are used to trigger the conductance channel CDT which identifies discrete conductors. In highly conductive environments, channel REC2

is deactivated because it is subject to corruption by highly conductive earth signals. Similarly, in moderately conductive environments, REC4 is deactivated. Some of the automatically selected anomalies (channel CDT) are discarded by the geophysicist. The automatic selection algorithm is intentionally oversensitive to assure that no meaningful responses are missed. The interpreter then classifies the anomalies according to their source and eliminates those that are not substantiated by the data, such as those arising from geologic or aerodynamic noise.

Reduction of geologic noise

Geologic noise refers to unwanted geophysical responses. For purposes of airborne EM surveying, geologic noise refers to EM responses caused by conductive overburden and magnetic permeability. It was mentioned above that the EM difference channels (i.e., channel DIFI for inphase and DIFQ for quadrature) tend to eliminate the response of conductive overburden. This marked a unique development in airborne EM technology, as DIGHEM is the only EM system which yields channels having an exceptionally high degree of immunity to conductive overburden.

Magnetite produces a form of geological noise on the inphase channels of all EM systems. Rocks containing less than 1% magnetite can yield negative inphase anomalies caused by magnetic permeability. When magnetite is widely distributed throughout a survey area, the inphase EM channels may continuously rise and fall reflecting variations in the magnetite percentage, flying height, and overburden thickness. This can lead to difficulties in recognizing deeply buried bedrock conductors, particularly if conductive overburden also exists. However, the response of broadly distributed magnetite generally vanishes on the inphase difference channel DIFI. This feature can be a significant aid in the recognition of conductors which occur in rocks containing accessory magnetite.

EM magnetite mapping

The information content of DIGHEM data consists of a combination of conductive eddy current response and magnetic permeability response. The secondary field resulting from conductive eddy current flow is frequency-dependent and consists of both inphase and quadrature components, which are positive in sign. On the other hand, the secondary field resulting from magnetic permeability is independent of frequency and consists of only an inphase component which

is negative in sign. When magnetic permeability manifests itself by decreasing the measured amount of positive inphase, its presence may be difficult to recognize. However, when it manifests itself by yielding a negative inphase anomaly (e.g., in the absence of eddy current flow), its presence is assured. In this latter case, the negative component can be used to estimate the percent magnetite content.

A magnetite mapping technique was developed for the coplanar coil-pair of DIGHEM. The technique yields channel "FEO" (see Appendix A) which displays apparent weight percent magnetite according to a homogeneous half space model.[4] The method can be complementary to magnetometer mapping in certain cases. Compared to magnetometry, it is far less sensitive but is more able to resolve closely spaced magnetite zones, as well as providing an estimate of the amount of magnetite in the rock. The method is sensitive to 1/4% magnetite by weight when the EM sensor is at a height of 30 m above a magnetitic half space. It can individually resolve steeply dipping narrow magnetite-rich bands which are separated by 60 m. Unlike magnetometry, the EM magnetite method is unaffected by remanent magnetism or magnetic latitude.

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[4] Refer to Fraser, 1981, Magnetite mapping with a multi-coil airborne electromagnetic system: Geophysics, v. 46, p. 1579-1594.

The EM magnetite mapping technique provides estimates of magnetite content which are usually correct within a factor of 2 when the magnetite is fairly uniformly distributed. EM magnetite maps can be generated when magnetic permeability is evident as indicated by anomalies in the magnetite channel FEO.

Like magnetometry, the EM magnetite method maps only bedrock features, provided that the overburden is characterized by a general lack of magnetite. This contrasts with resistivity mapping which portrays the combined effect of bedrock and overburden.

Recognition of culture

Cultural responses include all EM anomalies caused by man-made metallic objects. Such anomalies may be caused by inductive coupling or current gathering. The concern of the interpreter is to recognize when an EM response is due to culture. Points of consideration used by the interpreter, when coaxial and coplanar coil-pairs are operated at a common frequency, are as follows:

1. Channels CXS and CPS (see Appendix A) measure 50 and 60 Hz radiation. An anomaly on these channels shows

that the conductor is radiating cultural power. Such an indication is normally a guarantee that the conductor is cultural. However, care must be taken to ensure that the conductor is not a geologic body which strikes across a power line, carrying leakage currents.

2. A flight which crosses a line (e.g., fence, telephone line, etc.) yields a center-peaked coaxial anomaly and an m-shaped coplanar anomaly.[5] When the flight crosses the cultural line at a high angle of intersection, the amplitude ratio of coaxial/coplanar (e.g., CXI/CPI) is 4. Such an EM anomaly can only be caused by a line. The geologic body which yields anomalies most closely resembling a line is the vertically dipping thin dike. Such a body, however, yields an amplitude ratio of 2 rather than 4. Consequently, an m-shaped coplanar anomaly with a CXI/CPI amplitude ratio of 4 is virtually a guarantee that the source is a cultural line.

3. A flight which crosses a sphere or horizontal disk yields center-peaked coaxial and coplanar anomalies with a CXI/CPI amplitude ratio (i.e., coaxial/coplanar) of 1/4. In the absence of geologic bodies of this geometry, the most likely conductor is a metal roof or

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5 See Figure II-1 presented earlier.

small fenced yard.[4] Anomalies of this type are virtually certain to be cultural if they occur in an area of culture.

4. A flight which crosses a horizontal rectangular body or wide ribbon yields an m-shaped coaxial anomaly and a center-peaked coplanar anomaly. In the absence of geologic bodies of this geometry, the most likely conductor is a large fenced area.[4] Anomalies of this type are virtually certain to be cultural if they occur in an area of culture.

5. EM anomalies which coincide with culture, as seen on the camera film, are usually caused by culture. However, care is taken with such coincidences because a geologic conductor could occur beneath a fence, for example. In this example, the fence would be expected to yield an m-shaped coplanar anomaly as in case #2 above. If, instead, a center-peaked coplanar anomaly occurred, there would be concern that a thick geologic conductor coincided with the cultural line.

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[4] It is a characteristic of EM that geometrically identical anomalies are obtained from: (1) a planar conductor, and (2) a wire which forms a loop having dimensions identical to the perimeter of the equivalent planar conductor.

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6. The above description of anomaly shapes is valid when the culture is not conductively coupled to the environment. In this case, the anomalies arise from inductive coupling to the EM transmitter. However, when the environment is quite conductive (e.g., less than 100 ohm-m at 900 Hz), the cultural conductor may be conductively coupled to the environment. In this latter case, the anomaly shapes tend to be governed by current gathering. Current gathering can completely distort the anomaly shapes, thereby complicating the identification of cultural anomalies. In such circumstances, the interpreter can only rely on the radiation channels CXS and CPS, and on the camera film.

MAGNETICS

The existence of a magnetic correlation with an EM anomaly is indicated directly on the EM map. An EM anomaly with magnetic correlation has a greater likelihood of being produced by sulfides than one that is non-magnetic. However, sulfide ore bodies may be non-magnetic (e.g., the Kidd Creek deposit near Timmins, Canada) as well as magnetic (e.g., the Mattabi deposit near Sturgeon Lake, Canada).

The magnetometer data are digitally recorded in the aircraft to an accuracy of one nT (i.e., one gamma). The digital tape is processed by computer to yield a total field magnetic contour map. When warranted, the magnetic data also may be treated mathematically to enhance the magnetic response of the near-surface geology, and an enhanced magnetic contour map is then produced. The response of the enhancement operator in the frequency domain is illustrated in Figure II-2. This figure shows that the passband components of the airborne data are amplified 20 times by the enhancement operator. This means, for example, that a 100 nT anomaly on the enhanced map reflects a 5 nT anomaly for the passband components of the airborne data.

The enhanced map, which bears a resemblance to a downward continuation map, is produced by the digital bandpass filtering of the total field data. The enhancement is equivalent to continuing the field downward to a level (above the source) which is 1/20th of the actual sensor-source distance.

Because the enhanced magnetic map bears a resemblance to a ground magnetic map, it simplifies the recognition of trends in the rock strata and the interpretation of

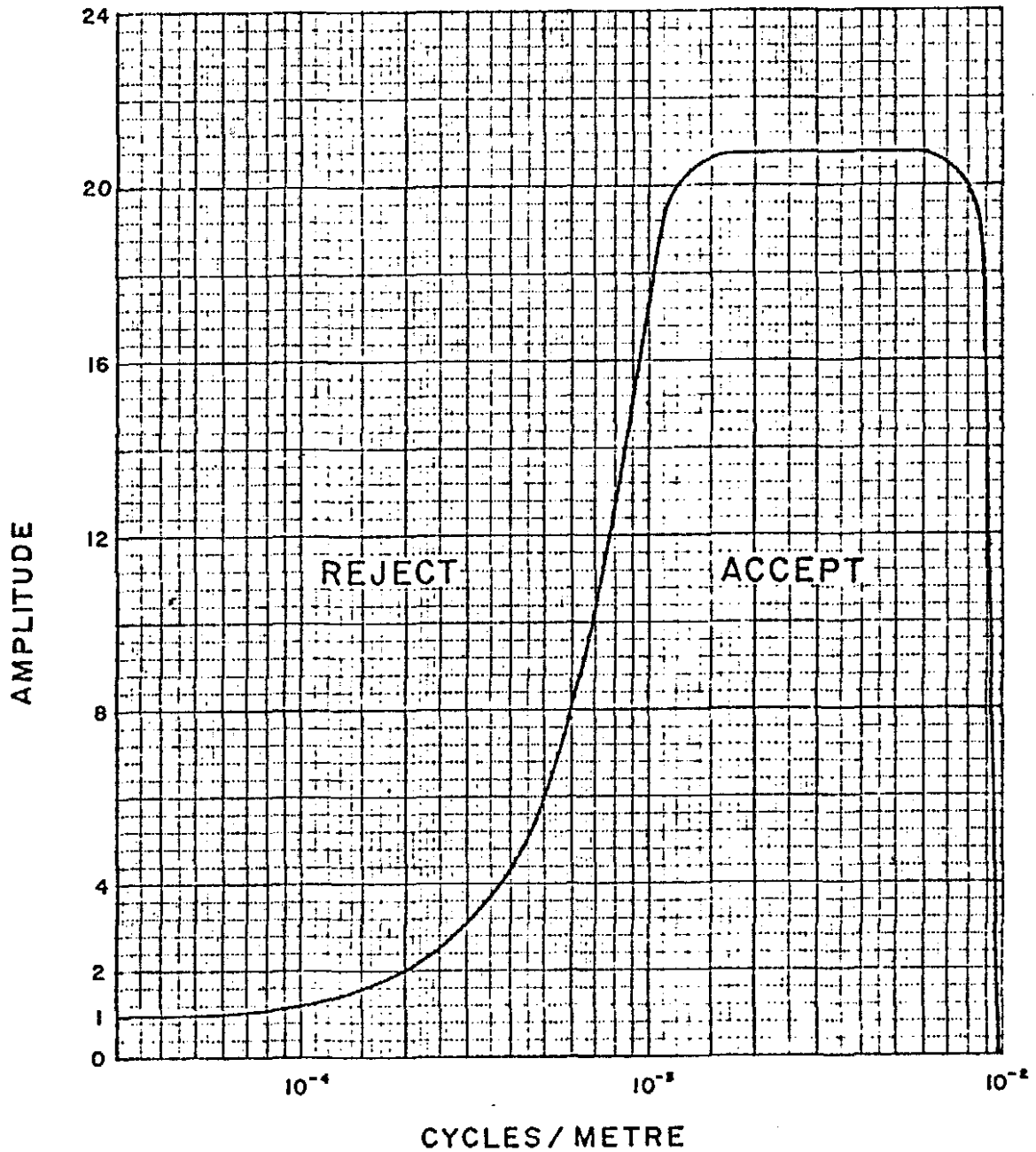

Figure II-2 Frequency response of magnetic enhancement operator.

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geological structure. It defines the near-surface local geology while de-emphasizing deep-seated regional features. It primarily has application when the magnetic rock units are steeply dipping and the earth's field dips in excess of 60 degrees.

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MAPS ACCOMPANYING THIS REPORT

See IC Doc 2747

32 map sheets accompany this report:

Electromagnetic Anomalies	8 map sheets
Probable Bedrock Conductors	8 map sheets
Resistivity	8 map sheets
Magnetics (IGRF Removed)	8 map sheets

Respectfully submitted,
DIGHEM LIMITED

Z. Dvorak

Z. Dvorak
Vice-President

U ZD-157/cs 14/7/83

APPENDIX A

THE FLIGHT RECORD AND PATH RECOVERY

Both analog and digital flight records were produced. The analog profiles were recorded on chart paper in the aircraft during the survey. The digital profiles were generated later by computer and plotted on electrostatic chart paper at a scale of 1:10,000. The digital profiles are listed in Table A-1.

In Table A-1, the log resistivity scale of 0.03 decade/mm means that the resistivity changes by an order of magnitude in 33 mm. The resistivities at 0, 33, 67, 100 and 133 mm up from the bottom of the digital flight record are respectively 1, 10, 100, 1,000 and 10,000 ohm-m.

The fiducial marks on the flight records represent points on the ground which were recovered from camera film. Continuous photographic coverage allowed accurate photo-path recovery locations for the fiducials, which were then plotted on the geophysical maps to provide the track of the aircraft.

The fiducial locations on both the flight records and flight path maps were examined by a computer for unusual helicopter speed changes. Such speed changes may denote

an error in flight path recovery. The resulting flight path locations therefore reflect a more stringent checking than is provided by standard flight path recovery techniques.

Table A-1. The Digital Profiles

Channel Name	(Freq)	Observed parameters	Scale units/mm
MAG		magnetics	5 or 10 nT
ALT		bird height	3 m
CXI	(900 Hz)	vertical coaxial coil-pair inphase	1 ppm
CXQ	(900 Hz)	vertical coaxial coil-pair quadrature	1 ppm
CXS	(900 Hz)	ambient noise monitor (coaxial receiver)	1 ppm
CPI	(900 Hz)	horizontal coplanar coil-pair inphase	1 ppm
CPQ	(900 Hz)	horizontal coplanar coil-pair quadrature	1 ppm
CPS	(900 Hz)	ambient noise monitor (coplanar receiver)	1 ppm
CPI	(385 Hz)	horizontal coplanar coil-pair inphase	1 ppm
CPQ	(385 Hz)	horizontal coplanar coil-pair quadrature	1 ppm
CPS	(385 Hz)	ambient noise monitor (coplanar receiver)	1 ppm
		Computed Parameters	
DIFI	(900 Hz)	difference function inphase from CXI and CPI	1 ppm
DIFQ	(900 Hz)	difference function quadrature from CXQ and CPQ	1 ppm
REC1		first anomaly recognition function	1 ppm
REC2		second anomaly recognition function	1 ppm
REC3		third anomaly recognition function	1 ppm
REC4		fourth anomaly recognition function	1 ppm
CDT		conductance	1 grade
RES	(900 Hz)	log resistivity	.03 decade
RES	(385 Hz)	log resistivity	.03 decade
DP	(900 Hz)	apparent depth	3 m
DP	(385 Hz)	apparent depth	3 m
FEO%	(900 Hz)	apparent weight percent magnetite	0.25%

074

APPENDIX B

EM ANOMALY LIST

075

365 CHS EAST CHESTER

426076

ANOMALY/ FID/INTERP	COAXIAL 900 HZ REAL PPM	COAXIAL 900 HZ QUAD PPM	COPLANAR 900 HZ REAL PPM	COPLANAR 900 HZ QUAD PPM	COPLANAR 385 HZ REAL PPM	COPLANAR 385 HZ QUAD PPM	VERTICAL DIKE COND MHOS	VERTICAL DIKE DEPTH* M	HORIZONTAL SHEET COND MHOS	HORIZONTAL SHEET DEPTH M	CONDUCTIVE EARTH RESIS OHM-M	CONDUCTIVE EARTH DEPTH M
LINE 40	(FLIGHT 39)											
B 447 L	10	12	1	5	14	1	534	26	48	115	1	106
LINE 80	(FLIGHT 38)											
A 708 L	3	5	2	2	6	0	1191	30	17	132	1	110
LINE 90	(FLIGHT 38)											
B 349 L	3	15	0	1	12	22	11	0	35	125	1	113
LINE 110	(FLIGHT 37)											
A 2579 L	1	1	2	1	7	6	20	2	16	132	2	108
LINE 130	(FLIGHT 37)											
A 2257 L	0	3	0	1	4	0	2000	56	6	167	12	127
LINE 140	(FLIGHT 37)											
A 2160 L	3	0	2	2	11	21	10	0	33	127	1	114
LINE 160	(FLIGHT 37)											
A 1885 L	1	8	1	1	13	0	2000	25	45	108	1	98
LINE 170	(FLIGHT 37)											
A 1670 L	2	3	0	1	10	13	14	0	26	115	1	99

* 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.

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365 NPI NORTH PIEMAN

426077

	COAXIAL 900 HZ		COPLANAR 900 HZ		COPLANAR 385 HZ		VERTICAL DIKE		HORIZONTAL SHEET		CONDUCTIVE EARTH	
ANOMALY/ FID/INTERP	REAL PPM	QUAD PPM	REAL PPM	QUAD PPM	REAL PPM	QUAD PPM	COND MHOS	DEPTH* M	COND MHOS	DEPTH M	RESIS OHM-M	DEPTH M
LINE 10	(FLIGHT 2)											
A 270 D	4	4	4	5	2	3	6	12	1	72	144	23
LINE 20	(FLIGHT 2)											
A 420 B	3	4	3	7	1	3	4	25	1	80	271	27
LINE 30	(FLIGHT 2)											
A 503 D	6	6	8	10	3	6	7	20	1	70	172	25
LINE 40	(FLIGHT 2)											
A 649 B	15	14	14	22	5	18	9	15	2	69	54	35
LINE 50	(FLIGHT 2)											
A 749 D	13	7	11	12	7	9	16	8	1	67	62	29
LINE 60	(FLIGHT 2)											
A 867 S	2	9	3	26	3	20	1	0	1	3	599	0
D 922 T	24	20	34	41	15	29	13	16	2	59	25	34
LINE 70	(FLIGHT 2)											
B 1062 S	1	16	5	28	1	17	1	0	1	7	592	0
C 1060 B?	1	5	5	28	1	19	1	0	1	49	374	0
D 1010 T?	9	5	14	12	9	10	15	14	4	92	23	53
F 1008 D?	9	7	14	13	7	11	12	16	1	77	86	36
LINE 80	(FLIGHT 2)											
A 1108 B?	1	5	6	11	0	7	2	0	1	62	96	19
B 1158 D	7	6	7	10	3	6	8	29	1	77	141	33
LINE 90	(FLIGHT 2)											
A 1298 B	6	19	12	39	0	27	3	0	1	34	66	1
B 1294 B	5	19	10	41	0	28	2	0	1	55	80	19
C 1251 D	6	6	4	7	2	4	6	16	1	70	187	22
LINE 100	(FLIGHT 2)											
A 1343 D	5	11	14	23	0	20	4	7	1	61	66	25
C 1345 D	5	13	15	28	2	21	4	2	1	50	85	15
D 1388 D	5	6	3	6	1	4	5	4	1	54	296	2
LINE 110	(FLIGHT 2)											
A 1745 B?	4	0	2	2	3	1	59	60	1	105	606	11
B 1740 B?	1	7	5	12	3	6	2	0	1	32	946	0

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426078

365 NPI NORTH PIEMAN

ANOMALY/ FID/INTERP	COAXIAL 900 HZ REAL PPM	COAXIAL 900 HZ QUAD PPM	COPLANAR 900 HZ REAL PPM	COPLANAR 900 HZ QUAD PPM	COPLANAR 385 HZ REAL PPM	COPLANAR 385 HZ QUAD PPM	VERTICAL DIKE COND MHOS	VERTICAL DIKE DEPTH* M	HORIZONTAL SHEET COND MHOS	HORIZONTAL SHEET DEPTH M	CONDUCTIVE EARTH RESIS OHM-M	CONDUCTIVE EARTH DEPTH M
LINE 110	(FLIGHT 2)											
C 1737 B?	1	0	5	8	3	5	8	24	5	193	16	150
D 1701 D	6	2	5	4	4	3	20	24	2	150	47	107
E 1695 D	15	6	7	7	5	4	23	30	1	94	83	51
F 1693 B?	15	6	7	14	5	4	19	54	3	110	45	62
LINE 111	(FLIGHT 3)											
A 516 D	4	3	4	6	5	3	7	35	2	150	39	112
B 508 D	9	7	7	18	3	8	7	15	1	60	182	17
C 504 E	4	13	7	24	0	12	2	0	1	24	346	0
LINE 120	(FLIGHT 2)											
A 1806 H	4	11	6	23	1	11	2	0	1	0	201	0
B 1826 B	6	8	9	16	7	9	5	21	1	85	63	47
C 1834 D	9	5	4	8	3	4	10	27	1	93	140	44
LINE 130	(FLIGHT 2)											
C 1975 B	2	4	6	16	5	15	5	11	3	141	31	96
D 1958 S	3	10	4	17	0	8	2	0	1	24	236	0
E 1943 B	17	7	33	17	22	20	31	9	4	87	9	65
F 1937 D	8	3	6	3	6	2	25	35	1	118	78	72
G 1936 B	8	0	6	3	6	2	78	62	7	165	9	131
LINE 140	(FLIGHT 2)											
A 2029 D	8	7	14	16	5	16	10	3	1	53	68	17
B 2062 B	16	4	27	8	24	9	63	0	7	51	4	33
C 2063 D	16	2	28	7	24	8	118	28	5	115	8	94
D 2069 D	11	4	7	5	2	3	28	43	1	104	149	55
LINE 150	(FLIGHT 2)											
A 2205 B?	2	1	4	10	2	6	4	11	2	129	89	66
C 2201 P	3	19	23	38	1	32	4	0	2	44	43	15
G 2162 D	15	9	8	10	3	7	15	34	1	88	121	45
H 2160 D	10	11	8	8	3	7	8	19	1	63	187	20
I 2142 L?	4	4	1	2	2	1	5	0	1	23	559	0
LINE 160	(FLIGHT 2)											
A 2253 D	9	8	18	17	8	16	12	0	2	42	38	9
B 2283 D	6	5	6	11	2	7	7	4	1	51	120	9
C 2289 D	8	4	9	7	6	6	19	27	2	84	59	45
D 2291 D	8	5	8	8	5	6	11	31	1	107	89	62
E 2303 L?	2	6	1	4	2	0	2	6	1	69	280	17

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078

426079

365 NPI NORTH PIEMAN

ANOMALY/ FID/INTERP	COAXIAL 900 HZ REAL PPM	COAXIAL 900 HZ QUAD PPM	COPLANAR 900 HZ REAL PPM	COPLANAR 900 HZ QUAD PPM	COPLANAR 385 HZ REAL PPM	COPLANAR 385 HZ QUAD PPM	VERTICAL DIKE COND MHOS	VERTICAL DIKE DEPTH* M	HORIZONTAL SHEET COND MHOS	HORIZONTAL SHEET DEPTH M	CONDUCTIVE EARTH RESIS OHM-M	CONDUCTIVE EARTH DEPTH M
LINE 170	(FLIGHT 2)											
A 2411 L?	1	4	2	8	0	4	1	2	1	75	411	14
B 2404 B	4	2	6	2	2	4	21	56	1	103	91	58
C 2380 D	4	10	2	21	0	10	2	1	1	32	255	0
D 2374 B	9	4	12	7	9	6	23	18	3	81	25	53
E 2359 B?	3	3	2	0	2	0	8	45	1	66	262	16
F 2354 B	12	5	13	9	8	7	22	27	2	80	40	47
LINE 180	(FLIGHT 2)											
A 2482 D	24	23	30	35	12	24	12	11	2	48	50	19
B 2502 S	0	9	3	14	0	6	1	1	1	38	416	0
C 2504 B	0	8	2	11	1	5	2	11	1	39	928	0
E 2512 D	43	34	101	75	54	70	24	13	5	53	6	38
F 2513 B?	13	14	78	66	40	56	16	17	2	87	56	52
G 2524 D	6	7	2	9	2	4	4	27	1	76	217	30
H 2528 B	11	1	12	6	11	6	52	27	3	92	18	65
LINE 190	(FLIGHT 2)											
A 2626 B?	4	0	2	3	2	2	26	52	1	160	489	51
B 2614 D	10	14	9	30	3	13	5	14	1	44	161	9
C 2612 B	10	9	12	30	5	11	6	18	1	47	102	15
D 2609 S?	0	1	3	18	2	8	2	23	1	25	736	0
G 2591 T	28	14	59	30	40	31	35	19	6	70	4	54
H 2584 T?	14	8	18	17	8	15	15	20	2	69	30	41
I 2580 D	19	9	15	9	10	9	26	29	3	115	19	87
K 2563 D	20	20	35	49	12	32	10	0	2	30	39	4
LINE 200	(FLIGHT 2)											
A 2662 B	21	5	53	19	49	25	73	0	24	19	1	5
C 2701 D	16	8	22	16	12	14	22	25	3	81	22	55
D 2708 B	4	4	5	8	3	5	6	30	2	97	50	60
LINE 210	(FLIGHT 2)											
A 2840 D	31	11	64	32	58	32	44	0	15	18	1	7
B 2810 B	6	7	4	13	4	6	4	23	1	107	105	60
C 2804 L?	7	7	5	9	8	5	6	30	1	61	191	19
E 2800 L	4	6	16	4	4	25	14	38	1	83	528	16
F 2798 L	2	3	16	16	3	27	8	25	2	163	54	121
H 2790 B	5	3	9	4	9	3	17	43	4	115	14	89
I 2784 B	12	12	24	25	10	18	10	11	3	59	21	34
J 2782 D	12	12	17	24	10	19	8	15	4	102	10	79
K 2769 L?	1	6	1	7	2	3	1	4	1	97	239	44

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ANOMALY/ FID/INTERP	COAXIAL 900 HZ REAL PPM	COAXIAL 900 HZ QUAD PPM	COPLANAR 900 HZ REAL PPM	COPLANAR 900 HZ QUAD PPM	COPLANAR 385 HZ REAL PPM	COPLANAR 385 HZ QUAD PPM	VERTICAL DIKE COND MHOS	VERTICAL DIKE DEPTH* M	HORIZONTAL SHEET COND MHOS	HORIZONTAL SHEET DEPTH M	CONDUCTIVE EARTH RESIS OHM-M	CONDUCTIVE EARTH DEPTH M
LINE 220 (FLIGHT 2)												
A 2878 B	132	72	273	172	191	160	47	0	11	11	1	2
C 2904 B	6	9	7	19	2	10	4	5	1	48	82	13
D 2909 B	3	9	9	14	3	9	3	9	1	59	77	23
E 2921 B	13	6	23	8	18	8	35	15	6	80	5	62
F 2923 B	12	12	8	18	7	9	7	7	2	62	56	27
LINE 230 (FLIGHT 3)												
C 401 B	8	5	12	13	6	9	12	35	2	79	46	46
E 409 B?	0	47	18	87	5	59	1	0	1	0	330	0
F 410 C	5	30	18	13	7	36	4	8	1	52	62	22
G 412 B?	6	5	15	23	7	14	7	13	1	78	100	35
H 415 D	9	4	7	6	7	4	22	39	2	130	49	93
I 421 D	16	2	15	3	17	4	128	30	6	119	5	98
J 428 D	5	3	4	4	3	4	10	37	4	170	15	139
LINE 240 (FLIGHT 3)												
B 606 L	8	21	0	4	3	31	3	0	1	71	1035	0
D 619 D	10	13	16	20	6	12	8	14	2	62	43	31
E 625 B?	6	8	2	13	1	6	4	16	1	57	115	20
F 629 B?	4	15	7	26	3	11	2	0	1	49	125	13
G 643 T	19	4	34	11	29	13	70	11	11	78	2	63
H 649 B	3	2	5	3	4	2	15	31	4	152	13	122
LINE 250 (FLIGHT 3)												
A 729 B?	5	14	5	21	4	9	2	0	1	28	200	0
B 719 L	21	13	0	12	2	2	12	19	1	208	1035	0
C 704 B	7	18	22	25	9	6	6	14	1	43	131	9
D 703 D	33	24	32	22	13	19	20	18	2	57	36	29
E 701 D	14	23	32	26	13	19	9	11	2	43	51	15
F 691 B?	4	13	5	17	3	9	2	5	1	58	193	16
G 682 B	3	1	11	2	12	2	61	11	13	106	1	92
LINE 260 (FLIGHT 3)												
A 764 L?	8	9	19	12	8	15	12	9	2	68	38	36
C 766 L?	10	22	19	29	8	16	5	0	1	30	103	0
D 770 L	4	11	27	12	2	7	10	0	55	77	1	74
F 791 B	3	9	4	16	2	9	2	13	1	55	181	16
G 822 D	40	12	59	17	53	19	75	5	12	67	1	54
LINE 270 (FLIGHT 3)												
A 913 L?	10	13	9	18	4	10	6	0	2	71	51	20

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ANOMALY/ FID/INTERP	COAXIAL 900 HZ REAL PPM	COAXIAL 900 HZ QUAD PPM	COPLANAR 900 HZ REAL PPM	COPLANAR 900 HZ QUAD PPM	COPLANAR 385 HZ REAL PPM	COPLANAR 385 HZ QUAD PPM	VERTICAL DIKE COND MHOS	VERTICAL DIKE DEPTH* M	HORIZONTAL SHEET COND MHOS	HORIZONTAL SHEET DEPTH M	CONDUCTIVE EARTH RESIS OHM-M	CONDUCTIVE EARTH DEPTH M
LINE 270	(FLIGHT 3)											
B 911 S	10	13	9	18	4	10	6	0	1	31	83	0
C 909 L	1	5	8	15	6	8	2	0	1	193	1035	0
E 902 L?	2	3	4	9	1	5	3	32	1	96	176	47
F 873 B	6	4	9	6	5	5	14	41	2	125	28	93
G 847 D	41	7	74	18	70	20	130	0	14	59	1	47
LINE 280	(FLIGHT 3)											
A 945 L	13	20	15	33	11	19	6	0	1	38	69	5
B 955 L	4	6	1	7	2	4	3	28	1	74	468	15
C 1004 D	16	3	32	11	31	12	74	25	16	87	1	75
D 1008 D	15	6	29	11	2	12	38	22	5	108	7	88
LINE 290	(FLIGHT 3)											
A 1157 B	25	16	34	26	28	18	20	0	5	48	8	28
B 1149 D	25	22	26	23	14	18	15	19	3	84	18	61
D 1142 L	144	250	22	16	14	10	12	0	4	106	11	82
E 1139 L	29	87	22	15	14	15	6	0	4	92	13	68
F 1135 L	13	15	9	13	5	8	8	4	1	69	64	31
H 1095 B	6	5	6	7	3	6	9	34	2	125	51	86
I 1083 B	7	4	10	6	7	4	15	34	1	120	69	76
K 1077 T	23	11	42	19	33	21	34	26	9	89	2	74
L 1076 D	23	11	42	19	33	21	34	18	4	101	12	77
LINE 300	(FLIGHT 5)											
A 147 D	30	20	34	28	22	20	20	9	3	61	16	40
B 154 T	327	102	450	207	471	253	108	0	17	22	1	16
C 156 E	81	26	184	91	215	99	64	8	21	40	1	32
E 165 B	3	5	8	7	10	3	6	0	3	106	19	75
F 218 E	8	3	7	4	5	2	24	42	1	125	86	78
G 228 E	9	7	7	7	5	5	11	37	1	136	77	90
LINE 310	(FLIGHT 5)											
A 356 T	52	16	88	22	84	28	90	0	18	37	1	29
B 352 D	43	21	23	21	21	8	29	12	8	63	2	50
C 349 D	23	4	17	20	13	16	34	23	16	76	1	64
D 340 T	34	3	61	3	64	9	709	4	29	55	1	49
E 295 B	5	3	10	5	5	5	19	28	2	95	39	62
LINE 311	(FLIGHT 37)											
A 81 D	16	3	18	4	27	4	90	0	9	69	3	52
LINE 320	(FLIGHT 5)											
A 402 B	25	16	12	34	11	33	11	9	4	73	10	52

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426082

365 NPI NORTH PIEMAN

ANOMALY/ FID/INTERP	COAXIAL 900 HZ REAL PPM	COAXIAL 900 HZ QUAD PPM	COPLANAR 900 HZ REAL PPM	COPLANAR 900 HZ QUAD PPM	COPLANAR 385 HZ REAL PPM	COPLANAR 385 HZ QUAD PPM	VERTICAL DIKE COND MHOS	VERTICAL DIKE DEPTH* M	HORIZONTAL SHEET COND MHOS	HORIZONTAL SHEET DEPTH M	CONDUCTIVE EARTH RESIS OHM-M	CONDUCTIVE EARTH DEPTH M
LINE 320 (FLIGHT 5)												
B 406 B	54	17	87	37	76	39	63	0	18	40	1	31
C 416 D	47	3	69	6	67	9	591	7	36	57	1	52
D 423 B	9	1	20	4	15	5	136	22	9	96	3	78
E 427 T	26	5	34	9	33	8	97	14	10	76	2	62
F 437 D	9	10	9	13	4	9	7	16	1	74	74	35
LINE 330 (FLIGHT 5)												
A 620 G	208	53	391	92	407	122	178	3	48	30	1	27
B 612 T	209	110	391	178	333	178	67	0	19	25	1	18
C 608 T	128	16	206	32	207	46	347	0	43	22	1	18
D 603 D	44	17	57	22	47	24	53	28	9	80	2	67
E 590 B	5	2	7	3	8	2	28	51	3	124	18	95
F 575 B?	1	10	3	19	0	12	1	0	1	14	713	0
G 571 B?	0	14	4	25	0	13	1	1	1	27	362	0
LINE 340 (FLIGHT 5)												
A 664 G	16	2	15	5	14	3	102	24	7	112	4	92
B 672 B?	51	140	316	288	174	247	16	0	6	44	5	29
C 673 G	183	140	332	294	183	256	34	0	8	23	2	13
E 696 P?	0	15	7	28	1	19	1	0	1	37	173	0
F 698 S	0	15	5	28	0	19	1	0	1	4	604	0
G 699 B?	0	1	1	13	1	8	5	43	1	29	761	0
LINE 350 (FLIGHT 5)												
A 848 D	16	3	7	4	7	4	71	34	4	110	10	87
B 841 B	23	2	32	4	32	5	300	30	7	100	3	83
D 837 G	19	9	12	21	36	11	15	10	10	59	2	46
E 835 B	34	20	41	24	36	22	27	6	6	55	4	40
F 832 D	18	5	33	23	23	21	31	3	3	64	15	41
G 824 B	7	4	14	6	12	5	20	38	4	121	10	97
I 814 S	0	15	2	28	0	17	1	0	1	1	591	0
J 811 B?	0	2	0	15	1	9	1	6	1	18	761	0
L 796 B	5	10	11	14	7	10	5	17	1	53	68	20
LINE 360 (FLIGHT 5)												
A 901 B	0	3	9	3	2	1	8	47	1	113	122	62
B 929 B	4	3	5	6	4	4	8	23	1	71	72	31
LINE 370 (FLIGHT 5)												
A 1045 B	4	6	5	12	0	8	4	16	1	70	157	26
B 1040 D	27	12	58	28	48	28	37	15	5	70	6	53

* ESTIMATED DEPTH MAY BE UNRELIABLE BECAUSE THE STRONGER PART OF THE CONDUCTOR MAY BE DEEPER OR TO ONE SIDE OF THE FLIGHT LINE, OR BECAUSE OF A SHALLOW DIP OR OVERBURDEN EFFECTS.

082

426083

365 NPI NORTH PIEMAN

	COAXIAL 900 HZ		COPLANAR 900 HZ		COPLANAR 385 HZ		VERTICAL DIKE		HORIZONTAL SHEET		CONDUCTIVE EARTH	
ANOMALY/ FID/INTERP	REAL PPM	QUAD PPM	REAL PPM	QUAD PPM	REAL PPM	QUAD PPM	COND MHOS	DEPTH* M	COND MHOS	DEPTH M	RESIS OHM-M	DEPTH M
LINE 390	(FLIGHT 5)											
A 1233 B?	2	5	1	6	0	5	2	22	1	74	1011	0
B 1226 B?	0	5	0	10	0	5	1	0	1	117	442	0
C 1207 S?	1	8	3	8	1	3	1	0	1	44	736	0
LINE 400	(FLIGHT 7)											
A 309 D	1563	1556	7	1	7	1557	2	0	17	115	1	96
B 307 B	1	0	7	2	9	1	272	66	14	147	2	124
C 290 ?	0	7	4	9	0	6	1	0	1	85	158	36
D 289 B?	0	7	4	9	2	6	4	13	1	49	978	0
LINE 410	(FLIGHT 7)											
A 363 D	13	10	27	15	22	20	19	5	5	71	7	51
B 364 D	13	10	27	15	22	20	19	17	3	89	21	63
C 387 ?	5	0	0	0	5	1	169	61	10	180	4	149
LINE 420	(FLIGHT 7)											
A 545 B	11	4	16	6	15	8	47	3	11	85	3	63
D 529 S?	6	6	0	7	0	5	1	0	2	129	442	0
LINE 430	(FLIGHT 7)											
A 625 B	5	2	5	3	6	3	16	48	2	158	27	122
LINE 440	(FLIGHT 7)											
A 702 B	6	2	7	6	9	8	15	9	3	93	27	61
LINE 450	(FLIGHT 7)											
A 820 D	2	3	5	2	3	3	6	27	1	112	144	56
B 821 D?	3	3	5	2	3	3	11	29	1	112	72	67
C 834 D	36	18	37	16	36	21	35	19	3	90	15	67
D 861 D	13	13	20	22	11	19	10	5	2	62	31	32
LINE 460	(FLIGHT 7)											
B 974 D	8	6	10	4	11	5	16	20	2	97	55	58
C 965 B	3	1	2	1	3	3	15	57	3	156	47	101
D 933 D	13	8	15	14	11	14	15	7	2	65	48	30
LINE 470	(FLIGHT 7)											
A 1015 S?	2	8	6	14	0	10	2	0	1	30	187	0
C 1050 D	12	6	10	8	9	8	19	13	2	89	37	56
LINE 480	(FLIGHT 7)											
B 1172 B?	7	11	4	13	3	9	4	0	1	45	238	0

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083

426084

365 NPI NORTH PIEMAN

	COAXIAL 900 HZ		COPLANAR 900 HZ		COPLANAR 385 HZ		VERTICAL DIKE			HORIZONTAL SHEET		CONDUCTIVE EARTH	
ANOMALY/ FID/INTERP	REAL PPM	QUAD PPM	REAL PPM	QUAD PPM	REAL PPM	QUAD PPM	COND MHOS	DEPTH* M		COND MHOS	DEPTH M	RESIS OHM-M	DEPTH M
LINE 480	(FLIGHT 7)												
D 1167 S?	6	7	3	10	2	7	4	1		1	58	1035	0
E 1134 D	9	3	8	4	10	5	25	4		2	99	28	66
LINE 490	(FLIGHT 7)												
A 1264 B	10	5	12	9	9	10	17	1		3	81	14	54
LINE 500	(FLIGHT 7)												
B 1349 B	5	1	6	2	7	3	37	42		4	150	13	122
C 1337 ?	4	1	1	4	6	3	36	52		12	178	3	150
D 1332 D	5	4	5	8	2	8	7	24		1	105	364	38
LINE 1010	(FLIGHT 8)												
A 225 B	4	11	12	20	3	19	4	0		2	63	41	30
LINE 1021	(FLIGHT 8)												
A 501 B	3	5	8	7	4	9	6	0		2	93	34	59
LINE 1040	(FLIGHT 8)												
A 1276 B	1	1	5	3	5	3	8	47		2	135	53	95
LINE 1053	(FLIGHT 37)												
A 551 B	3	4	6	8	2	5	5	0		1	45	77	3
LINE 1060	(FLIGHT 36)												
B 444 S	1	5	8	14	0	8	3	0		1	17	143	0
C 489 P	5	9	17	21	6	13	6	0		2	36	33	6
D 506 B?	3	7	5	15	0	7	2	16		1	57	187	16
LINE 1070	(FLIGHT 36)												
A 682 S	2	20	3	40	0	17	1	0		1	0	475	0
B 638 B	9	10	9	28	2	15	5	4		1	36	134	1
LINE 1080	(FLIGHT 36)												
A 833 D?	3	3	8	1	4	1	16	48		1	41	195	2
B 839 B	3	0	5	1	3	2	64	63		2	69	37	38
LINE 1090	(FLIGHT 36)												
A 1020 B	4	9	10	19	4	11	4	2		1	44	105	9
LINE 1100	(FLIGHT 36)												
A 1157 B	3	3	8	7	7	4	9	19		3	108	17	79

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084

426085

365 NPI NORTH PIEMAN

	COAXIAL 900 HZ		COPLANAR 900 HZ		COPLANAR 385 HZ		VERTICAL DIKE		HORIZONTAL SHEET		CONDUCTIVE EARTH	
ANOMALY/ FID/INTERP	REAL PPM	QUAD PPM	REAL PPM	QUAD PPM	REAL PPM	QUAD PPM	COND MHOS	DEPTH* M	COND MHOS	DEPTH M	RESIS OHM-M	DEPTH M
LINE 1110	(FLIGHT	36)										
A 1458 B	4	4	5	10	3	4	5	19	2	101	33	70
B 1425 B	4	7	14	21	9	11	5	20	1	61	62	28
C 1395 L?	3	10	6	13	3	13	3	5	1	39	141	3
D 1391 B?	1	35	6	65	2	42	1	0	1	0	336	0
E 1386 L	0	3	2	9	2	4	3	19	1	61	1021	0
LINE 1120	(FLIGHT	36)										
A 1486 B	15	31	28	72	8	38	5	0	2	28	41	3
C 1531 P	3	5	11	10	7	5	6	29	2	84	32	54
D 1548 L?	3	11	6	16	3	8	2	0	1	47	146	9
LINE 1130	(FLIGHT	36)										
A 1782 D	12	12	26	28	11	17	10	0	3	50	20	26
B 1736 P	1	1	7	5	4	4	9	54	2	96	36	64
C 1709 L	2	3	5	8	8	14	11	16	26	151	1	135
LINE 1140	(FLIGHT	36)										
A 1824 B	4	3	7	7	2	5	9	20	2	83	58	44
B 1895 T	8	7	23	15	20	13	14	0	5	54	7	34
C 1913 E	4	1	30	11	22	15	39	30	4	119	12	93
D 1916 P	12	9	42	19	24	26	25	15	7	67	4	52
E 1935 P	5	15	22	36	7	24	5	9	2	51	32	24
F 1938 P	5	7	11	11	5	9	7	27	2	72	34	43
LINE 1150	(FLIGHT	36)										
A 2038 B	4	3	6	5	5	3	8	27	2	98	36	65
B 2028 P	0	4	9	12	3	6	3	8	1	55	95	16
C 2021 P	3	1	10	3	8	5	28	47	5	111	9	88
D 2000 B	3	2	8	2	5	3	24	17	3	73	22	43
LINE 1160	(FLIGHT	36)										
C 2165 B?	3	1	5	3	3	2	18	44	1	94	120	44
F 2184 B	6	2	10	3	9	2	36	44	3	129	18	99
G 2192 P	6	1	26	1	23	2	223	24	17	91	1	81
J 2215 B?	0	7	0	7	0	4	7	23	1	40	949	0

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085

426086

365 SH1 ARTHUR RIVER

ANOMALY/ FID/INTERP	COAXIAL 900 HZ REAL PPM	COAXIAL 900 HZ QUAD PPM	COPLANAR 900 HZ REAL PPM	COPLANAR 900 HZ QUAD PPM	COPLANAR 385 HZ REAL PPM	COPLANAR 385 HZ QUAD PPM	VERTICAL DIKE COND MHOS	VERTICAL DIKE DEPTH* M	HORIZONTAL SHEET COND MHOS	HORIZONTAL SHEET DEPTH M	CONDUCTIVE EARTH RESIS OHM-M	CONDUCTIVE EARTH DEPTH M
LINE 2260	(FLIGHT 41)											
A 247 B?	0	8	0	14	0	5	1	7	1	57	956	0
LINE 2280	(FLIGHT 41)											
B 646 B?	5	6	5	3	0	5	7	47	1	50	295	11
C 638 S	1	5	2	8	0	3	1	1	1	22	561	0
D 614 B?	10	8	4	13	0	5	8	25	1	48	274	6
LINE 2290	(FLIGHT 41)											
A 718 S	1	8	5	17	0	8	2	0	1	40	221	0
C 721 B	5	13	6	27	1	12	3	4	1	46	164	9
LINE 2300	(FLIGHT 41)											
A 1049 B	4	8	9	23	3	10	3	4	1	32	101	0
B 1021 B	3	8	8	19	1	10	3	17	1	56	261	13
C 1019 B?	3	8	9	19	1	7	3	14	1	62	108	25
D 1017 H	6	18	10	24	1	9	1	0	1	44	372	0
E 1016 B	6	18	10	24	0	9	3	16	1	49	142	15
LINE 2311	(FLIGHT 41)											
B 1230 G	2	5	9	15	3	7	3	18	1	66	97	27
LINE 2320	(FLIGHT 41)											
A 1548 B	3	11	5	28	0	12	2	2	1	53	244	11
B 1541 G	5	16	15	36	2	18	3	11	1	45	63	18
LINE 2330	(FLIGHT 41)											
A 1606 G	3	5	5	8	1	5	4	40	1	61	85	28
B 1612 H	4	10	10	25	1	11	3	12	1	38	79	9
C 1623 H	3	14	5	29	1	11	2	8	1	28	265	0
LINE 2343	(FLIGHT 47)											
A 773 B?	3	7	9	16	3	8	4	0	1	48	63	13
B 767 H	5	16	8	28	2	11	3	5	1	40	101	9
C 764 B?	4	10	7	19	0	10	3	15	1	37	214	2
LINE 2350	(FLIGHT 42)											
A 339 B	4	8	6	19	1	9	3	3	1	40	432	0
LINE 2360	(FLIGHT 42)											
A 757 G	4	5	4	13	0	6	4	25	1	51	165	12
B 703 S	4	9	3	19	2	8	2	0	1	28	265	0

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086

365 SH1 ARTHUR RIVER

426087

	COAXIAL 900 HZ		COPLANAR 900 HZ		COPLANAR 385 HZ		VERTICAL DIKE			HORIZONTAL SHEET		CONDUCTIVE EARTH	
ANOMALY/ FID/INTERP	REAL PPM	QUAD PPM	REAL PPM	QUAD PPM	REAL PPM	QUAD PPM	COND MHOS	DEPTH* M		COND MHOS	DEPTH M	RESIS OHM-M	DEPTH M
LINE 2370	(FLIGHT 42)												
A 813 S	3	21	4	51	1	21	1	0		1	8	341	0
B 855 G?	4	4	4	9	2	4	5	31		1	67	129	26
C 864 G	4	5	4	10	2	5	4	24		1	77	118	34
LINE 2380	(FLIGHT 42)												
A 1168 B	4	10	5	21	1	9	2	11		1	35	251	0
B 1152 G	4	7	5	14	2	5	3	20		1	68	91	31
LINE 2390	(FLIGHT 42)												
A 1321 B	4	8	5	13	0	6	3	24		1	45	340	5
B 1342 H	5	8	5	18	2	8	3	0		1	43	87	8
LINE 2400	(FLIGHT 42)												
A 1657 B?	3	9	4	19	0	8	2	18		1	46	371	8
B 1655 B	2	4	4	18	2	8	2	9		1	50	167	10
C 1645 S?	4	12	5	16	2	6	3	0		1	35	285	0
LINE 2410	(FLIGHT 42)												
B 1760 B	5	13	6	19	2	8	3	8		1	46	226	7
C 1783 G	3	5	8	22	3	8	4	10		1	54	107	17
LINE 2420	(FLIGHT 42)												
A 2083 B	5	12	7	28	0	12	3	9		1	42	172	7
C 2071 G	5	13	10	35	4	16	3	0		1	33	92	3
D 2045 H	5	12	9	30	1	15	3	11		1	46	113	14
LINE 2430	(FLIGHT 42)												
A 2160 S	6	0	9	31	1	13	5	15		1	24	146	0
B 2162 B?	2	18	9	31	1	13	1	7		1	50	172	14
C 2167 H	4	16	9	30	3	15	3	8		1	46	93	15
D 2173 H	4	9	4	18	2	9	2	5		1	48	85	15
LINE 2440	(FLIGHT 42)												
A 2471 G	3	9	5	21	2	10	2	8		1	53	85	20
LINE 2450	(FLIGHT 42)												
A 2568 B	4	11	4	23	2	11	2	9		1	61	78	27
LINE 2460	(FLIGHT 42)												
A 2890 B	0	17	2	34	1	13	1	9		1	19	547	0
B 2887 B	0	2	2	9	1	0	7	51		1	71	981	4

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365 SH1 ARTHUR RIVER

	COAXIAL 900 HZ		COPLANAR 900 HZ		COPLANAR 385 HZ		VERTICAL DIKE		HORIZONTAL SHEET		CONDUCTIVE EARTH	
ANOMALY/ FID/INTERP	REAL PPM	QUAD PPM	REAL PPM	QUAD PPM	REAL PPM	QUAD PPM	COND MHOS	DEPTH* M	COND MHOS	DEPTH M	RESIS OHM-M	DEPTH M
LINE 2460	(FLIGHT 42)											
D 2864 G	3	8	7	16	2	9	3	22	1	52	83	21
E 2856 G	3	10	6	22	2	10	2	3	1	49	66	18
LINE 2470	(FLIGHT 42)											
A 2993 B	5	15	3	29	1	13	2	7	1	50	78	20
B 2998 B	5	7	5	9	2	4	4	20	1	54	75	20
LINE 2501	(FLIGHT 47)											
A 1598 E	4	7	7	16	2	8	4	2	1	40	190	0

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088

426089

365 SH2 ARTHUR RIVER

	COAXIAL 900 HZ		COPLANAR 900 HZ		COPLANAR 385 HZ		VERTICAL DIKE		HORIZONTAL SHEET		CONDUCTIVE EARTH	
ANOMALY/ FID/INTERP	REAL PPM	QUAD PPM	REAL PPM	QUAD PPM	REAL PPM	QUAD PPM	COND MHOS	DEPTH* M	COND MHOS	DEPTH M	RESIS OHM-M	DEPTH M
LINE 2010	(FLIGHT 39)											
A 1052 H	4	8	4	16	1	7	3	14	1	54	103	20
LINE 2020	(FLIGHT 39)											
A 1130 S	3	11	7	25	3	11	2	0	1	34	124	0
C 1116 G	3	11	6	24	2	13	2	5	1	50	161	13
LINE 2050	(FLIGHT 39)											
A 1347 G	5	10	9	24	3	11	4	16	1	57	82	24
LINE 2070	(FLIGHT 47)											
A 83 B	2	5	5	10	3	4	3	0	2	65	53	28
LINE 2080	(FLIGHT 47)											
A 206 E	3	12	8	22	2	11	2	9	1	40	164	6
B 208 B?	3	12	8	22	2	11	2	16	1	54	101	22
LINE 2090	(FLIGHT 47)											
A 328 G	3	4	5	7	2	5	4	34	2	67	53	33
LINE 2100	(FLIGHT 47)											
A 434 B	5	13	8	8	2	10	4	29	1	53	162	17
LINE 2140	(FLIGHT 40)											
A 535 G	5	8	7	17	0	9	4	17	1	56	92	21
LINE 2151	(FLIGHT 40)											
A 950 E	7	10	9	25	0	12	4	10	1	47	144	10
B 952 S	6	8	9	24	1	12	4	15	1	47	97	15
C 979 S	3	4	4	9	2	5	4	15	2	58	50	24
LINE 2160	(FLIGHT 40)											
A 1196 G	3	5	5	10	2	5	3	24	1	47	110	13
LINE 2170	(FLIGHT 40)											
A 1434 S	3	3	1	6	0	3	3	16	1	26	505	0
B 1467 H	2	5	6	10	2	5	3	7	1	52	70	16
C 1475 H	3	5	4	7	1	4	4	19	1	55	86	18
D 1484 H	2	7	7	13	3	7	3	6	2	54	53	21
LINE 2180	(FLIGHT 40)											
A 1643 G	5	6	8	9	4	7	7	34	2	66	44	35

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089

365 SH2 ARTHUR RIVER

426090

ANOMALY/ FID/INTERP	COAXIAL 900 HZ REAL PPM	COAXIAL 900 HZ QUAD PPM	COPLANAR 900 HZ REAL PPM	COPLANAR 900 HZ QUAD PPM	COPLANAR 385 HZ REAL PPM	COPLANAR 385 HZ QUAD PPM	VERTICAL DIKE COND MHOS	VERTICAL DIKE DEPTH* M	HORIZONTAL SHEET COND MHOS	HORIZONTAL SHEET DEPTH M	CONDUCTIVE EARTH RESIS OHM-M	CONDUCTIVE EARTH DEPTH M
LINE 2180	(FLIGHT 40)											
B 1627 B?	3	14	1	23	0	9	1	0	1	15	605	0
C 1606 G	1	8	5	13	3	7	2	6	1	51	85	18
LINE 2190	(FLIGHT 40)											
A 1835 B	3	7	13	22	2	12	4	0	1	44	67	10
B 1847 B	5	9	11	19	4	10	5	13	2	50	36	22
C 1853 G	4	7	10	17	4	10	4	32	1	61	54	31
LINE 2200	(FLIGHT 40)											
A 2058 G	4	7	14	15	6	10	6	19	2	53	31	25
B 2043 B	5	5	7	11	2	6	6	29	1	60	173	19
C 2018 H	4	10	9	26	2	14	3	4	1	43	85	11
LINE 2210	(FLIGHT 40)											
B 2243 G	3	6	13	20	5	13	4	30	2	74	36	45
C 2248 G	2	0	3	13	2	5	3	34	2	70	31	41
D 2257 G	6	12	9	26	3	13	4	15	1	64	76	30
E 2258 B	6	12	9	26	3	13	4	10	1	46	123	12
F 2280 H	2	4	9	11	2	6	5	26	1	61	73	25
G 2286 G	3	12	8	24	2	11	2	4	1	53	82	19
LINE 2220	(FLIGHT 40)											
A 2452 S	5	9	6	17	1	7	4	3	1	38	123	3
LINE 2230	(FLIGHT 40)											
A 2704 S	2	5	4	11	0	5	3	10	1	44	230	2
LINE 2270	(FLIGHT 41)											
A 403 B	2	11	1	12	0	6	1	14	1	46	924	0
B 406 B	2	7	6	17	0	8	2	9	1	43	294	1
LINE 2280	(FLIGHT 41)											
A 549 E	4	10	8	19	2	9	3	13	1	68	137	28
LINE 2290	(FLIGHT 41)											
A 748 S	3	4	2	9	0	4	3	0	1	23	514	0
B 787 B?	2	14	2	26	0	11	1	5	1	43	881	0
LINE 2300	(FLIGHT 41)											
A 987 G	4	7	3	15	1	6	3	4	1	47	147	9
LINE 3000	(FLIGHT 46)											
B 323 B	2	7	3	17	1	7	1	15	1	57	93	25

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426091

365 SH2 ARTHUR RIVER

ANOMALY/ FID/INTERP	COAXIAL 900 HZ REAL PPM	COAXIAL 900 HZ QUAD PPM	COPLANAR 900 HZ REAL PPM	COPLANAR 900 HZ QUAD PPM	COPLANAR 385 HZ REAL PPM	COPLANAR 385 HZ QUAD PPM	VERTICAL DIKE COND MHOS	VERTICAL DIKE DEPTH* M	HORIZONTAL SHEET COND MHOS	HORIZONTAL SHEET DEPTH M	CONDUCTIVE EARTH RESIS OHM-M	CONDUCTIVE EARTH DEPTH M
LINE 3000 (FLIGHT 46)												
C 336 B?	6	12	11	26	5	14	4	3	2	45	45	16
D 337 G	6	12	11	26	5	14	4	10	2	48	44	19

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ANOMALY/ FID/INTERP	COAXIAL 900 HZ REAL PPM	COAXIAL 900 HZ QUAD PPM	COPLANAR 900 HZ REAL PPM	COPLANAR 900 HZ QUAD PPM	COPLANAR 385 HZ REAL PPM	COPLANAR 385 HZ QUAD PPM	VERTICAL DIKE COND MHOS	VERTICAL DIKE DEPTH* M	HORIZONTAL SHEET COND MHOS	HORIZONTAL SHEET DEPTH M	CONDUCTIVE EARTH RESIS OHM-M	CONDUCTIVE EARTH DEPTH M
LINE 2491	(FLIGHT 47)											
A 1324 G	3	3	4	11	1	6	4	24	1	61	61	26
LINE 2501	(FLIGHT 47)											
A 1584 B	2	7	5	18	2	8	2	0	1	47	57	14
LINE 2511	(FLIGHT 44)											
A 989 G	2	7	5	17	2	7	2	15	1	58	81	25
B 1004 G	3	6	5	12	2	6	3	23	1	69	62	34
C 1008 B	5	13	8	25	1	11	3	2	1	37	127	4
LINE 2520	(FLIGHT 44)											
A 1479 G	2	6	5	14	2	5	2	17	1	61	89	26
B 1465 G	3	6	5	13	2	6	3	23	1	66	70	31
LINE 2530	(FLIGHT 44)											
A 1583 B	4	7	7	20	2	9	3	18	1	49	136	14
LINE 2550	(FLIGHT 44)											
A 1941 S	3	10	4	17	1	7	2	0	1	37	140	1
B 1951 G	3	7	6	13	2	6	3	17	1	67	85	30
C 1961 B?	2	16	2	26	1	11	1	0	1	28	311	0
D 1996 B?	0	11	0	21	0	8	1	5	1	25	701	0
LINE 2560	(FLIGHT 44)											
A 2153 G	3	5	7	12	3	5	4	23	1	67	71	31
LINE 2570	(FLIGHT 44)											
A 2239 B	3	10	4	16	2	7	2	5	1	48	122	13
LINE 2580	(FLIGHT 44)											
A 2440 G	4	17	9	37	3	17	2	4	1	53	130	18
LINE 2590	(FLIGHT 44)											
A 2509 B	3	6	1	6	0	3	3	21	1	50	231	7
B 2519 G	4	4	6	11	1	7	5	35	1	69	127	30
LINE 2600	(FLIGHT 44)											
A 2687 B?	4	9	5	15	0	6	3	18	1	49	211	10
LINE 2610	(FLIGHT 44)											
A 2810 B	3	8	3	12	1	6	2	14	1	53	149	15

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ANOMALY/ FID/INTERP	COAXIAL 900 HZ REAL PPM	COAXIAL 900 HZ QUAD PPM	COPLANAR 900 HZ REAL PPM	COPLANAR 900 HZ QUAD PPM	COPLANAR 385 HZ REAL PPM	COPLANAR 385 HZ QUAD PPM	VERTICAL DIKE COND MHOS	VERTICAL DIKE DEPTH* M	HORIZONTAL SHEET COND MHOS	HORIZONTAL SHEET DEPTH M	CONDUCTIVE EARTH RESIS OHM-M	CONDUCTIVE EARTH DEPTH M
LINE 2610	(FLIGHT 44)											
B 2843 H	0	3	0	3	0	2	1	0	2	132	442	0
D 2864 S	5	6	10	6	2	14	9	33	1	29	110	0
E 2869 B?	4	8	11	18	3	10	4	12	1	34	75	5
F 2890 G	7	15	19	36	6	20	5	10	2	46	39	19
LINE 2620	(FLIGHT 44)											
A 3038 E	2	4	2	9	2	4	2	20	1	60	303	13
B 2980 G	2	7	8	10	3	6	3	33	1	64	76	32
C 2964 E	8	13	18	27	7	14	6	0	2	39	51	9
D 2962 G	5	1	14	27	6	14	7	15	2	47	37	18
E 2959 G	2	7	8	14	4	8	3	11	2	46	32	20
LINE 2630	(FLIGHT 44)											
A 3149 B?	0	7	0	8	0	4	1	0	1	90	1035	0
B 3158 E	8	18	18	38	4	19	5	5	1	48	55	18
C 3160 G	7	11	3	38	5	19	2	6	2	56	45	26
D 3162 G	3	8	8	15	3	9	3	18	2	54	33	27
E 3169 B	1	0	4	11	2	5	3	37	2	101	30	72
LINE 2640	(FLIGHT 44)											
A 3237 B	8	14	17	34	4	16	5	10	1	39	61	12
B 3222 G	3	6	6	7	3	7	4	23	2	55	37	25
C 3210 H	3	33	22	64	4	31	2	0	2	23	36	0
LINE 2650	(FLIGHT 44)											
B 3402 H	7	13	9	35	0	15	3	3	1	53	103	18
C 3409 G	4	7	7	14	2	8	4	18	2	65	52	32
D 3421 G	9	14	14	24	6	14	6	25	2	60	39	32
E 3434 H	7	38	18	80	5	36	2	0	2	21	41	0
LINE 2660	(FLIGHT 47)											
A 1789 B?	3	11	13	21	3	9	4	0	2	50	54	14
B 1768 G	3	6	8	13	5	8	4	19	2	61	34	32
C 1754 H	9	35	16	74	5	34	3	0	2	22	40	1
F 1746 L	0	11	12	15	12	19	13	0	57	94	1	86
LINE 2670	(FLIGHT 47)											
A 1988 H	3	5	5	15	1	7	3	17	1	47	97	15
C 2022 H	6	25	11	38	3	17	3	0	2	23	39	0
E 2026 L	7	0	15	29	9	13	14	0	51	99	1	90
LINE 2680	(FLIGHT 47)											
A 2099 G	4	3	6	8	3	6	7	32	1	77	62	39

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365 SH3 ARTHUR RIVER

ANOMALY/ FID/INTERP	COAXIAL 900 HZ REAL PPM	COAXIAL 900 HZ QUAD PPM	COPLANAR 900 HZ REAL PPM	COPLANAR 900 HZ QUAD PPM	COPLANAR 385 HZ REAL PPM	COPLANAR 385 HZ QUAD PPM	VERTICAL DIKE COND MHOS	VERTICAL DIKE DEPTH* M	HORIZONTAL SHEET COND MHOS	HORIZONTAL SHEET DEPTH M	CONDUCTIVE EARTH RESIS OHM-M	CONDUCTIVE EARTH DEPTH M
LINE 2680	(FLIGHT 47)											
B 2066 H	5	18	11	40	3	19	2	0	2	24	37	0
C 2064 H	2	7	8	27	1	10	2	0	2	22	37	0
E 2059 L	1560	15	4	12	8	4	43	24	64	97	1	90
LINE 2690	(FLIGHT 47)											
A 2223 G	3	5	7	12	3	5	4	28	1	75	104	35
B 2301 B	4	10	8	24	2	11	3	3	1	43	141	7
C 2310 B?	0	6	0	0	0	3	1	0	2	136	442	0
E 2332 L	0	1	8	8	6	4	31	0	9	108	5	79
LINE 2700	(FLIGHT 47)											
A 2479 E	4	8	11	20	4	10	4	8	1	53	101	16
B 2476 G	4	6	12	20	5	9	5	0	1	46	57	11
C 2426 S?	2	13	5	36	1	15	1	5	1	30	261	0
D 2404 B	4	9	7	21	2	8	3	8	1	49	124	14
F 2394 B?	0	8	0	11	0	5	2	15	1	41	928	0
H 2382 E	0	8	8	21	1	8	2	0	1	79	442	0
I 2380 G	5	5	8	15	1	7	6	24	1	51	134	14
K 2369 L	2	8	17	9	6	10	7	0	3	44	18	21
LINE 2710	(FLIGHT 47)											
A 2538 G	3	7	8	11	5	7	4	0	2	52	45	17
B 2611 B	4	13	9	33	4	14	2	0	1	27	122	0
C 2614 P	3	3	11	6	8	6	12	38	3	101	18	74
D 2636 G	5	8	13	23	6	14	5	10	2	58	33	29
E 2638 L	0	4	18	32	9	21	4	0	2	46	31	17
F 2640 G	2	15	18	33	9	21	3	0	2	47	42	18
LINE 2720	(FLIGHT 47)											
B 2783 G	6	14	15	33	6	15	4	0	1	37	56	7
D 2711 T	6	19	12	47	5	19	3	0	1	20	109	0
G 2678 B?	11	19	15	28	11	27	6	8	2	46	36	19
H 2676 L	11	19	15	28	11	27	6	0	2	39	27	13
LINE 2730	(FLIGHT 47)											
B 2865 E	3	10	8	23	1	11	3	0	1	39	175	1
C 2915 P	1	7	5	23	0	9	2	9	1	39	238	4
E 2931 B?	4	11	0	18	0	7	1	0	1	20	871	0
F 2961 L?	11	15	31	14	13	27	14	4	2	37	30	10
LINE 2740	(FLIGHT 47)											
A 3107 G	3	8	11	14	4	10	5	10	2	41	53	10

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ANOMALY/ FID/INTERP	COAXIAL 900 HZ REAL PPM	COAXIAL 900 HZ QUAD PPM	COPLANAR 900 HZ REAL PPM	COPLANAR 900 HZ QUAD PPM	COPLANAR 385 HZ REAL PPM	COPLANAR 385 HZ QUAD PPM	VERTICAL DIKE COND MHOS	VERTICAL DIKE DEPTH* M	HORIZONTAL SHEET COND MHOS	HORIZONTAL SHEET DEPTH M	CONDUCTIVE EARTH RESIS OHM-M	CONDUCTIVE EARTH DEPTH M
LINE 2740	(FLIGHT 47)											
B 3058 S	0	24	4	54	0	22	1	0	1	2	369	0
D 3053 H	3	7	8	7	2	7	5	28	1	37	128	5
E 3050 E	0	12	3	24	0	10	1	0	1	23	426	0
F 3035 B	2	4	4	10	2	5	3	22	1	86	111	41
G 3027 T	4	11	25	32	10	19	6	0	2	70	30	41
I 3001 E	46	46	31	48	21	221	3	0	2	87	53	43
J 3000 L	51	46	17	5	25	236	15	0	2	32	37	6
L 2994 P	7	21	17	40	1	26	4	0	2	35	36	9
M 2992 L?	7	7	22	49	8	22	7	0	15	111	2	88
LINE 2750	(FLIGHT 48)											
A 352 G	4	5	6	12	3	6	4	12	2	51	49	18
B 302 L?	24	14	1	20	48	28	11	28	1	71	981	4
C 261 B	2	6	6	17	2	9	2	11	1	59	161	19
D 239 L	24	21	16	106	8	112	5	0	1	30	837	0
LINE 2760	(FLIGHT 48)											
A 425 G	4	8	9	15	4	9	4	30	1	65	65	33
B 442 H	1	5	0	6	0	3	1	16	1	78	1018	2
D 456 S?	4	3	0	4	0	1	5	29	1	98	1035	0
E 535 L	0	14	15	16	20	26	3	0	4	99	11	75
LINE 2770	(FLIGHT 48)											
A 681 G	7	12	13	24	4	14	5	3	1	47	59	15
B 570 L	2	7	3	1	6	6	14	18	12	164	3	135
LINE 2780	(FLIGHT 48)											
A 809 L	0	1	7	5	1	0	6	24	6	142	6	116
LINE 3000	(FLIGHT 46)											
A 133 S	0	6	2	10	1	4	1	0	1	39	896	0

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365 SH4 ARTHUR RIVER

426096

ANOMALY/ FID/INTERP	COAXIAL 900 HZ REAL PPM	COAXIAL 900 HZ QUAD PPM	COPLANAR 900 HZ REAL PPM	COPLANAR 900 HZ QUAD PPM	COPLANAR 385 HZ REAL PPM	COPLANAR 385 HZ QUAD PPM	VERTICAL DIKE COND MHOS	VERTICAL DIKE DEPTH* M	HORIZONTAL SHEET COND MHOS	HORIZONTAL SHEET DEPTH M	CONDUCTIVE EARTH RESIS OHM-M	CONDUCTIVE EARTH DEPTH M
LINE 2180	(FLIGHT	40)										
A 1589 B	3	3	5	6	3	5	6	25	2	60	38	28
B 1564 L?	6	13	1	10	7	23	3	0	1	25	217	0
C 1561 L	5	0	1	9	12	22	11	0	45	106	1	96
LINE 2190	(FLIGHT	40)										
A 1908 G	9	15	14	2	5	11	10	28	2	54	23	30
C 1939 L	0	0	2	8	8	6	24	31	23	150	1	132
LINE 2200	(FLIGHT	40)										
A 2003 G	3	6	11	16	5	10	4	15	2	55	31	27
B 1987 B	3	5	5	7	2	6	4	9	2	66	41	32
D 1969 L	2	12	1	4	10	1	263	26	40	113	1	102
LINE 2210	(FLIGHT	40)										
A 2295 B	3	10	6	18	0	7	2	3	1	45	137	9
B 2309 P?	4	7	9	14	3	7	5	19	2	56	52	24
C 2344 L	0	0	1	6	13	21	13	0	45	101	1	91
LINE 2220	(FLIGHT	40)										
A 2423 B	4	8	8	25	1	11	3	18	1	53	118	19
B 2404 G	4	6	6	12	2	5	4	4	1	50	57	16
D 2378 L	0	0	0	6	8	24	6	0	33	129	1	116
LINE 2230	(FLIGHT	40)										
A 2768 G	3	6	5	10	1	5	3	15	2	55	55	21
B 2790 ?	0	4	5	6	0	3	2	27	2	84	52	48
LINE 2250	(FLIGHT	40)										
A 3166 G	5	5	5	11	0	4	6	29	1	67	91	29
B 3191 L	1	0	5	9	5	4	20	0	9	132	5	100
LINE 2260	(FLIGHT	41)										
A 154 S?	3	11	3	15	0	7	1	9	1	24	670	0
LINE 2270	(FLIGHT	41)										
A 423 B?	4	13	13	30	1	15	3	12	1	46	94	15
LINE 2290	(FLIGHT	41)										
A 794 P?	2	12	11	25	0	13	2	14	1	50	87	20
LINE 2300	(FLIGHT	41)										
A 949 P	2	3	7	11	1	5	4	25	1	62	70	27

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365 SH4 ARTHUR RIVER

	COAXIAL 900 HZ		COPLANAR 900 HZ		COPLANAR 385 HZ		VERTICAL DIKE		HORIZONTAL SHEET		CONDUCTIVE EARTH	
ANOMALY/ FID/INTERP	REAL PPM	QUAD PPM	REAL PPM	QUAD PPM	REAL PPM	QUAD PPM	COND MHOS	DEPTH* M	COND MHOS	DEPTH M	RESIS OHM-M	DEPTH M
LINE 2300	(FLIGHT	41)										
B 939 P	2	5	9	12	2	6	4	32	2	62	53	30
LINE 2311	(FLIGHT	41)										
A 1299 P	3	4	10	14	1	8	5	31	1	59	91	25
B 1313 P	3	9	10	17	2	9	3	15	1	52	75	20
D 1346 B	3	4	8	19	1	6	4	22	1	46	80	15
LINE 2320	(FLIGHT	41)										
A 1434 S	2	20	3	45	1	20	1	2	1	19	463	0
B 1400 B	4	5	7	12	2	7	5	25	1	41	86	11
LINE 2330	(FLIGHT	41)										
B 1724 S	10	17	5	33	4	18	3	14	1	58	171	21
E 1755 E	3	12	1	24	0	11	1	0	1	44	913	0
G 1762 B	6	10	8	11	3	4	5	33	1	64	61	33
LINE 2343	(FLIGHT	47)										
A 629 D	8	15	7	17	3	7	4	0	1	46	158	7
B 609 B	4	6	8	10	4	6	6	21	2	59	55	26
D 587 L	15	27	4	24	8	39	4	0	56	108	1	100
LINE 2350	(FLIGHT	42)										
A 472 D	8	21	5	34	0	14	2	0	1	30	296	0
B 491 B?	0	9	5	19	0	9	1	0	1	30	834	0
C 496 B	5	6	10	10	5	7	7	26	1	47	82	15
D 510 S	4	26	9	58	3	26	2	0	1	14	105	0
F 513 G?	17	24	5	16	10	8	6	2	1	35	73	5
G 516 L	15	14	9	24	10	7	32	14	63	99	1	92
LINE 2360	(FLIGHT	42)										
A 615 D	6	11	6	21	0	9	4	22	1	73	89	37
B 580 E?	5	0	8	11	10	100	15	32	1	26	74	0
D 576 H	33	40	7	17	14	102	4	0	3	42	30	9
E 574 L	31	48	5	17	9	109	3	0	2	60	45	24
F 572 H	31	52	18	20	2	110	8	0	1	23	52	0
LINE 2370	(FLIGHT	42)										
A 951 P	1	3	8	6	5	4	5	6	2	65	41	31
C 988 H	12	27	2	14	5	10	4	0	1	26	78	0
D 991 L	11	21	2	5	3	46	5	0	1	28	62	0
E 992 G	5	2	6	5	3	4	14	38	1	39	58	9

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ANOMALY/ FID/INTERP	COAXIAL 900 HZ REAL PPM	COAXIAL 900 HZ QUAD PPM	COPLANAR 900 HZ REAL PPM	COPLANAR 900 HZ QUAD PPM	COPLANAR 385 HZ REAL PPM	COPLANAR 385 HZ QUAD PPM	VERTICAL DIKE COND MHOS	VERTICAL DIKE DEPTH* M	HORIZONTAL SHEET COND MHOS	HORIZONTAL SHEET DEPTH M	CONDUCTIVE EARTH RESIS OHM-M	CONDUCTIVE EARTH DEPTH M
LINE 2380	(FLIGHT 42)											
A 1101 S?	4	12	8	31	3	14	3	0	1	19	105	0
B 1070 B	2	4	4	8	3	4	3	22	1	82	93	39
C 1036 L	21	29	3	24	11	78	6	0	1	30	99	0
D 1032 H	24	34	5	24	8	84	6	0	1	28	66	0
LINE 2390	(FLIGHT 42)											
A 1413 D	2	4	4	13	0	6	2	28	1	63	148	25
LINE 2400	(FLIGHT 42)											
A 1572 G	2	6	10	12	4	8	4	0	1	42	96	4
B 1568 G	2	4	6	7	3	5	4	17	2	47	51	14
C 1565 S	0	11	6	18	3	5	1	0	1	68	83	30
D 1559 D	18	26	48	66	24	39	9	0	2	24	23	1
F 1551 B?	4	10	4	12	1	5	3	11	1	36	146	2
H 1512 L	3	0	2	14	7	45	4	0	25	135	1	119
I 1509 S	13	4	2	11	7	8	13	21	1	26	122	0
LINE 2410	(FLIGHT 42)											
A 1832 E	4	4	9	12	3	7	6	15	1	60	464	0
C 1841 L?	1	4	10	13	6	5	4	35	1	72	96	35
D 1846 B	16	37	34	68	16	33	6	0	3	30	20	8
E 1850 D	18	31	21	44	11	22	6	0	1	28	69	1
LINE 2420	(FLIGHT 42)											
A 1994 P	2	4	9	10	4	7	5	14	2	62	48	28
B 1979 T	107	48	274	97	226	83	76	3	15	36	1	28
C 1977 B	31	39	209	78	177	41	38	2	2	34	21	12
D 1973 L?	3	6	13	24	6	14	4	16	1	49	130	13
E 1953 S?	5	9	6	17	1	7	4	2	1	24	126	0
LINE 2430	(FLIGHT 42)											
A 2239 S?	5	8	6	14	2	7	4	20	1	47	270	6
B 2241 P	5	8	6	14	2	6	4	14	1	61	151	20
C 2254 B	3	10	7	17	3	7	3	0	1	54	91	16
D 2281 L	35	21	7	9	2	4	21	3	1	26	125	0
F 2295 L	10	3	4	10	10	4	64	26	28	132	1	117
LINE 2440	(FLIGHT 42)											
A 2391 S	2	41	2	99	2	40	1	4	1	6	275	0
B 2383 S	3	20	3	39	1	17	1	0	1	27	188	0
C 2373 S	5	17	7	39	2	16	2	0	1	13	142	0

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LIST OF MAPS DIGHEM III SURVEY

PLAN NO.	
	EAST CHESTER AREA, TASMANIA.
001	ELECTROMAGNETIC ANOMALIES, SHEET 1
002	" " " SHEET 2
003	PROBABLE BEDROCK CONDUCTORS, SHEET 1
004	" " " SHEET 2
005	RESISTIVITY SHEET 1
006	" " SHEET 2
007	MAGNETICS (TOTAL FIELD-IGRF + 62,600) nT SHEET 1
008	" " " SHEET 2
009	" " " SHEET 1
010	" " " SHEET 2
	NORTH PIEMAN AREA, TASMANIA.
011	ELECTROMAGNETIC ANOMALIES, SHEET 1
012	" " SHEET 2
013	PROBABLE BEDROCK CONDUCTORS, SHEET 1
014	" " SHEET 2
015	RESISTIVITY SHEET 1
016	RESISTIVITY SHEET 2
017	MAGNETICS (TOTAL FIELD-IGRF + 62,600) nT SHEET 1
018	" " SHHET 2
019	" " SHEET 1
020	" " SHEET 2
	ARTHUR RIVER AREA, TASMANIA.
021	ELECTORMAGNETIC ANOMALIES, SHEET 1
022	" " SHEET 2
023	" " SHEET 3
024	" " SHEET 4
025	PROBABLE BEDROCK CONDUCTORS, SHEET 1
026	" " SHEET 2
027	" " SHEET 3
028	" " SHEET 4
029	RESISTIVITY SHEET 1
030	" " SHEET 2
031	" " SHEET 3
032	" " SHEET 4

ANOMALY/ FID/INTERP	COAXIAL 900 HZ REAL PPM	COAXIAL 900 HZ QUAD PPM	COPLANAR 900 HZ REAL PPM	COPLANAR 900 HZ QUAD PPM	COPLANAR 385 HZ REAL PPM	COPLANAR 385 HZ QUAD PPM	VERTICAL DIKE COND MHOS	VERTICAL DIKE DEPTH* M	HORIZONTAL SHEET COND MHOS	HORIZONTAL SHEET DEPTH M	CONDUCTIVE EARTH RESIS OHM-M	CONDUCTIVE EARTH DEPTH M
LINE 2440	(FLIGHT 42)											
D 2364 B?	2	15	4	21	2	10	1	0	1	3	547	0
E 2351 L	26	38	12	18	1	12	8	0	1	29	96	0
G 2336 L	15	1	3	4	8	33	5	0	20	146	1	125
LINE 2450	(FLIGHT 42)											
A 2666 S?	4	4	13	13	3	7	8	4	2	40	53	7
B 2685 L	22	15	2	13	1	3	12	9	1	30	160	0
LINE 2460	(FLIGHT 42)											
A 2758 L?	4	9	6	13	2	5	3	1	1	32	77	1
B 2741 L	8	13	3	7	1	3	5	2	1	39	105	4
D 2730 L	8	20	2	12	8	2	105	40	23	143	1	124
LINE 2470	(FLIGHT 42)											
A 3079 S	6	44	11	102	0	44	1	0	1	4	219	0
B 3084 H?	3	11	10	23	5	7	3	0	1	24	53	0
D 3102 H	4	3	7	2	2	9	15	41	1	29	85	0
LINE 2483	(FLIGHT 47)											
A 1098 S	10	27	22	1	4	3	8	0	1	19	58	0
B 1096 H	6	3	15	15	4	8	12	17	2	27	34	2
C 1077 L	1	8	8	17	1	6	2	0	1	18	160	0
D 1073 H	13	24	14	25	4	12	6	0	2	28	45	0
E 1070 L	1551	9	15	18	13	9	30	0	48	101	1	91
LINE 2491	(FLIGHT 47)											
A 1414 S	9	43	20	87	2	39	2	0	1	13	84	0
B 1417 S?	13	47	30	110	7	50	4	0	1	15	58	0
C 1418 S?	13	47	30	110	7	50	3	0	1	14	93	0
D 1436 B?	19	4	20	23	10	13	25	12	2	35	39	8
LINE 2501	(FLIGHT 47)											
A 1481 S	4	20	6	41	0	17	1	0	1	13	122	0
B 1472 L	24	18	11	36	3	12	9	3	1	14	104	0
LINE 2512	(FLIGHT 44)											
A 1259 H?	5	1	9	9	5	4	17	41	1	17	172	0
B 1253 S	5	17	6	27	4	16	2	2	1	12	128	0
C 1249 S	4	17	12	32	5	13	3	0	1	14	69	0
D 1248 L	5	17	12	32	5	13	3	0	1	19	54	0
LINE 2520	(FLIGHT 44)											
A 1376 B?	0	37	0	69	0	28	1	1	1	0	277	0

* 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.

099

426101

365 SH4 ARTHUR RIVER

ANOMALY/ FID/INTERP	COAXIAL 900 HZ REAL PPM	COAXIAL 900 HZ QUAD PPM	COPLANAR 900 HZ REAL PPM	COPLANAR 900 HZ QUAD PPM	COPLANAR 385 HZ REAL PPM	COPLANAR 385 HZ QUAD PPM	VERTICAL DIKE COND MHOS	VERTICAL DIKE DEPTH* M	HORIZONTAL SHEET COND MHOS	HORIZONTAL SHEET DEPTH M	CONDUCTIVE EARTH RESIS OHM-M	CONDUCTIVE EARTH DEPTH M
LINE 2520	(FLIGHT 44)											
C 1371 S	11	24	8	79	7	31	4	0	2	46	63	6
LINE 2560	(FLIGHT 44)											
A 2078 S	0	20	1	45	0	19	1	0	1	0	467	0
B 2075 B?	2	44	3	100	1	43	1	0	1	0	282	0
LINE 2570	(FLIGHT 44)											
A 2325 H	3	13	5	29	1	12	2	2	1	28	208	0
LINE 2610	(FLIGHT 44)											
A 2905 S	6	13	9	13	0	6	4	2	1	32	55	3
B 2909 L	6	0	13	27	8	13	11	0	31	118	1	105
LINE 2620	(FLIGHT 44)											
A 2948 G	4	13	8	30	3	14	2	7	2	40	44	15
C 2943 L	18	53	16	8	11	140	3	0	2	40	48	7
E 2939 L	10	32	18	214	6	118	2	0	1	38	67	6
LINE 2630	(FLIGHT 44)											
A 3180 H	27	53	23	39	9	47	7	0	2	25	43	0
B 3182 L	16	17	19	45	9	23	8	0	26	132	1	116
LINE 2640	(FLIGHT 44)											
A 3206 L	7	11	22	28	10	27	7	0	43	112	1	102
LINE 3000	(FLIGHT 46)											
A 254 B?	3	6	2	9	0	4	2	10	1	52	222	8

* 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.

426102

PLAN NO.		
	ARTHUR RIVER AREA, TASMANIA. (CONT)	
033	MAGNETICS (TOTAL FIELD-IGRF + 62,600) nT	SHEET 1
034	"	" SHEET 2
035	"	SHEET 3
036	"	" SHEET 4
037	"	" SHEET 1
038	"	" SHEET 2
039	"	" SHEET 3
040	"	" SHEET 4

426103

PROJECT NAME:

TITLE: DIGHEM III SURVEY OF THE EAST CHESTER, NORTH PIEMAN AND ARTHUR RIVER AREAS, TASMANIA

VOLUME 2 OF 5 - MAPS, EAST CHESTER

AREA NAME/S, STATE 1:250,000 SHEET NO/S & COORDINATES:

COMMODITY/IES:

TEXT PAGES NO:

PLAN NOS:

TABLE NOS:

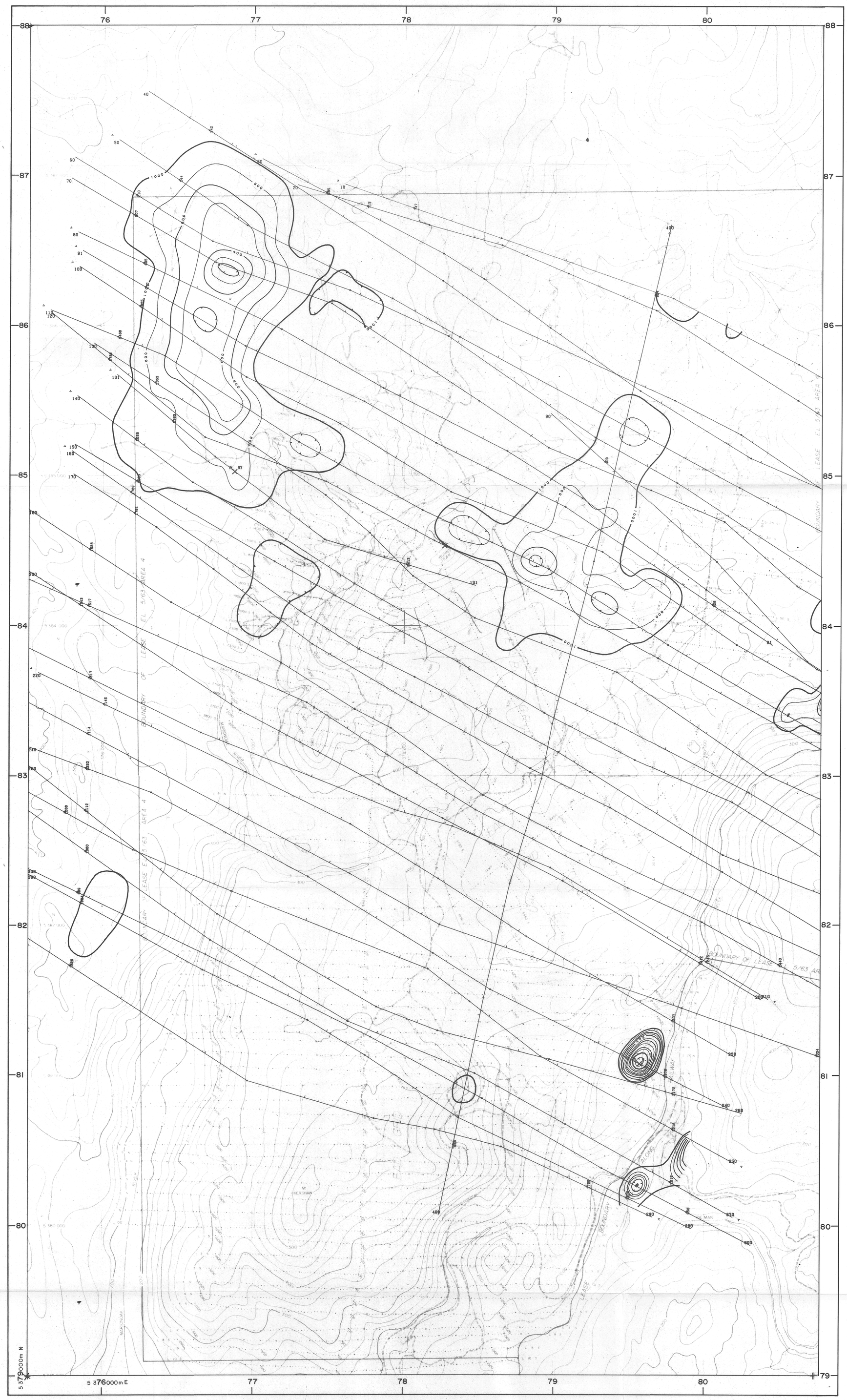
APPENDICES:

AUTHOR/S:

DATE:

AUSTRALIAN ANGLO AMERICAN LIMITED

Incorporated in the State of Victoria



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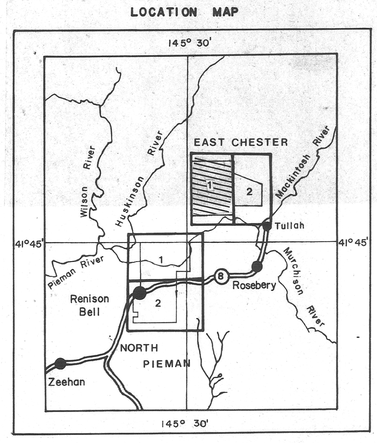


Scale 1: 500,000

DIGHEM III SURVEY

EAST CHESTER AREA, TASMANIA

RESISTIVITY

FOR

COMSTAFF PTY. LTD.

5 cm

Scale 1:10,000

1/2 0 1/2 1 Kilometres

1/4 0 1/4 1/2 Miles

REGISTERED PROFESSIONAL ENGINEER
D. C. FRASER
PROVINCE OF ONTARIO

Flight Line

2118 — Fiducial 2120 (Not recovered from film)
Fiducial 2118 (Recovered from film)

Fiducial 2110 (Not recovered from film)

2104 — Fiducial 2104 (Recovered from film)

301 ^ Line number and Flight direction

LEGEND

Contours in ohm — m
at ten intervals per decade

1000
800
600
500
400
300
250
200
150
125
100

Note

The numbers face in the direction of increasing value.

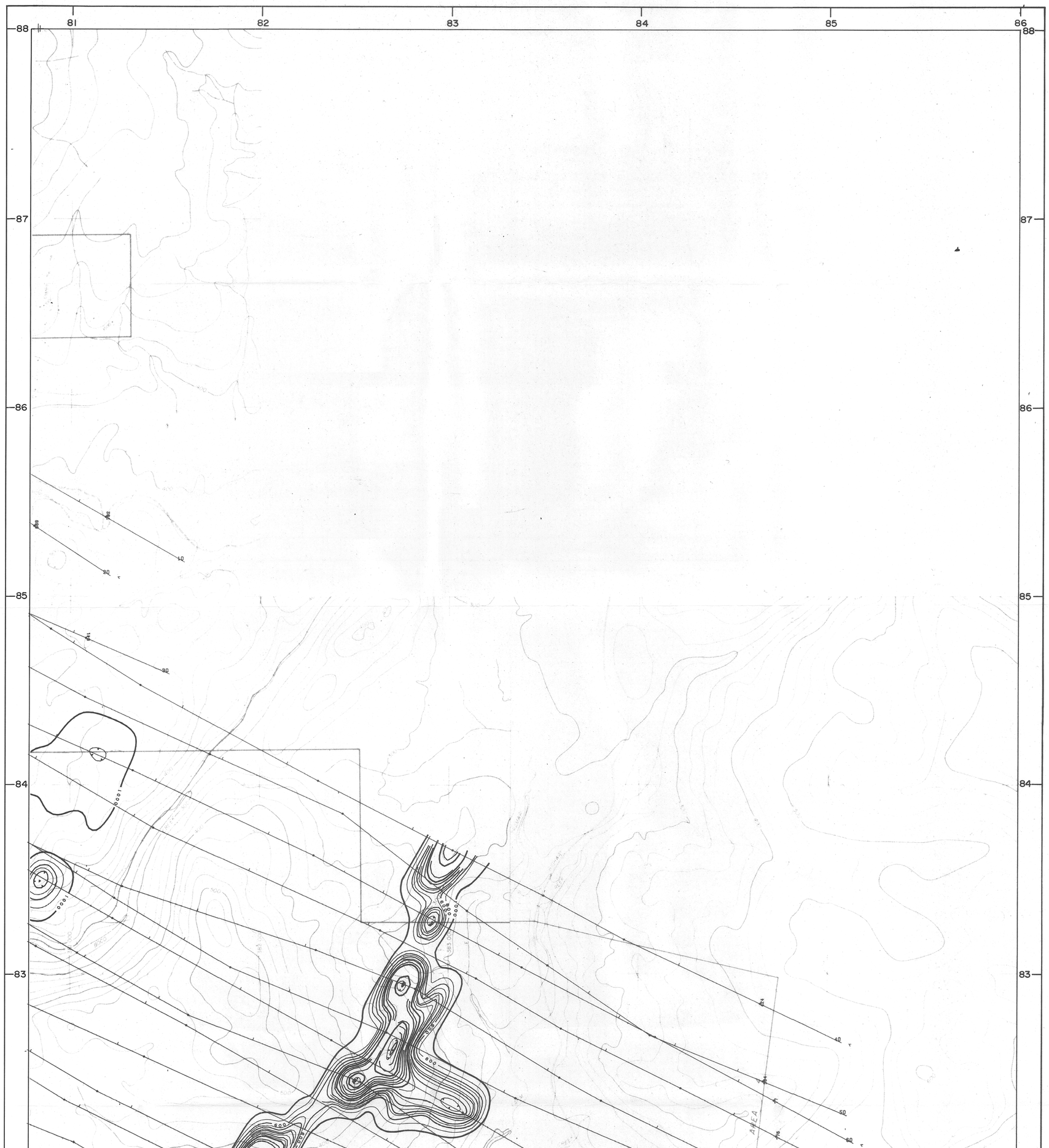
005

426104

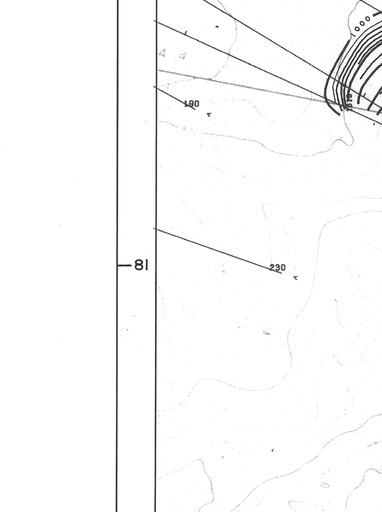
84-2129 2/5

JOB	DATE	DRAWN BY	CHECKED BY
365	JULY 1983	KM	D.C.F.

SHEET 1



LOCATION MAP



Scale 1: 500,000

DIGHEM III SURVEY

EAST CHESTER AREA, TASMANIA

RESISTIVITY

FOR

COMSTAFF PTY. LTD.

REGISTERED PROFESSIONAL ENGINEER
D. C. FRASER
PROVINCE OF ONTARIO

5 cm

Scale 1:10,000

1/2 0 1/2 1 Kilometres

1/4 0 1/4 1/2 Miles

Flight Line

2118 — Fiducial 2120 (Not recovered from film)
Fiducial 2118 (Recovered from film)

Fiducial 2110 (Not recovered from film)

2104 — Fiducial 2104 (Recovered from film)

301 Line number and Flight direction

LEGEND

Contours in ohm — m at ten intervals per decade

1000
800
600
500
400
300
250
200
150
125
100

Note

The numbers face in the direction of increasing value.

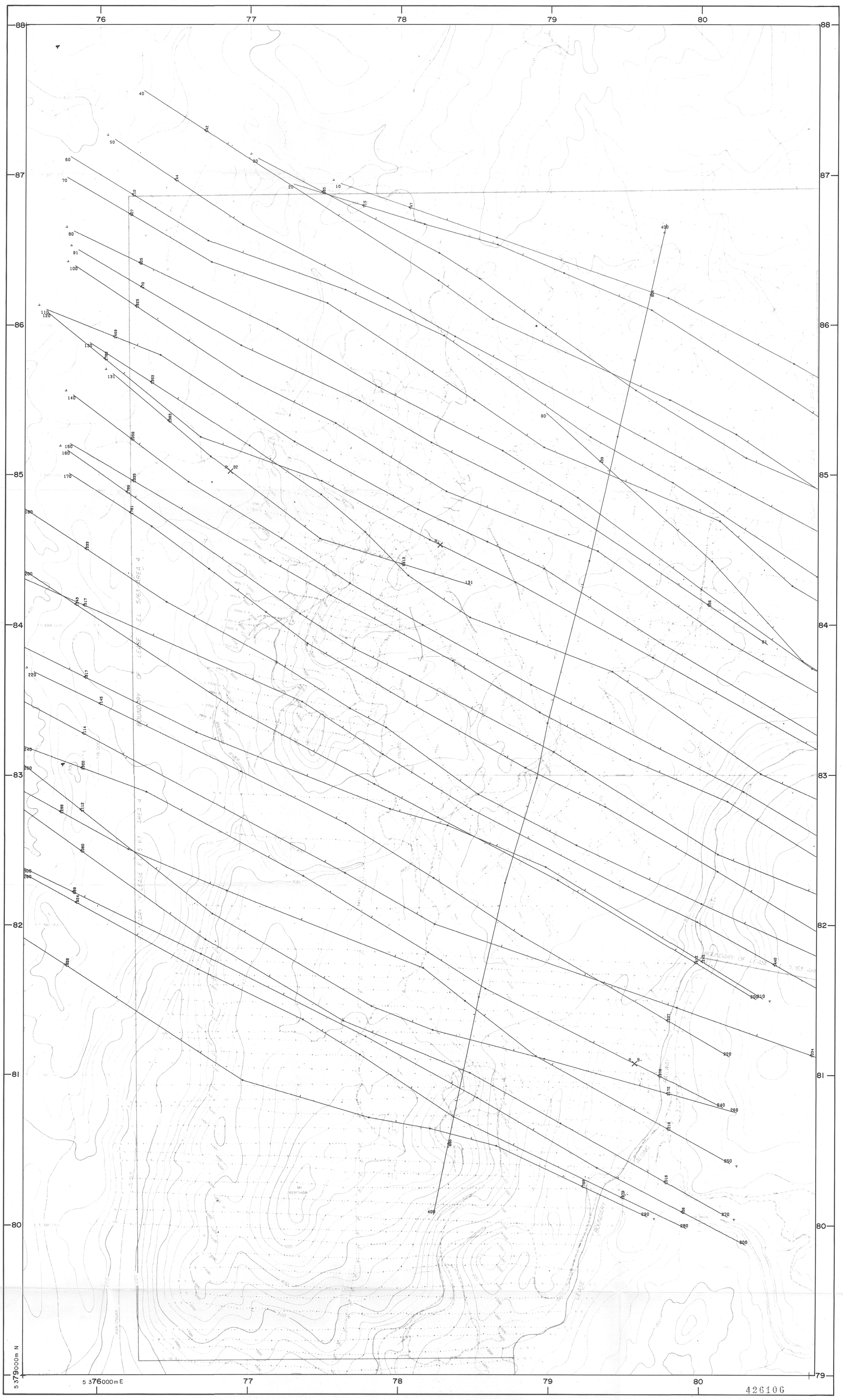
006

426105

84-2129 2/5

SHEET 2

JOB	DATE	DRAWN BY	CHECKED BY
365	JULY 1983		


76
77
78
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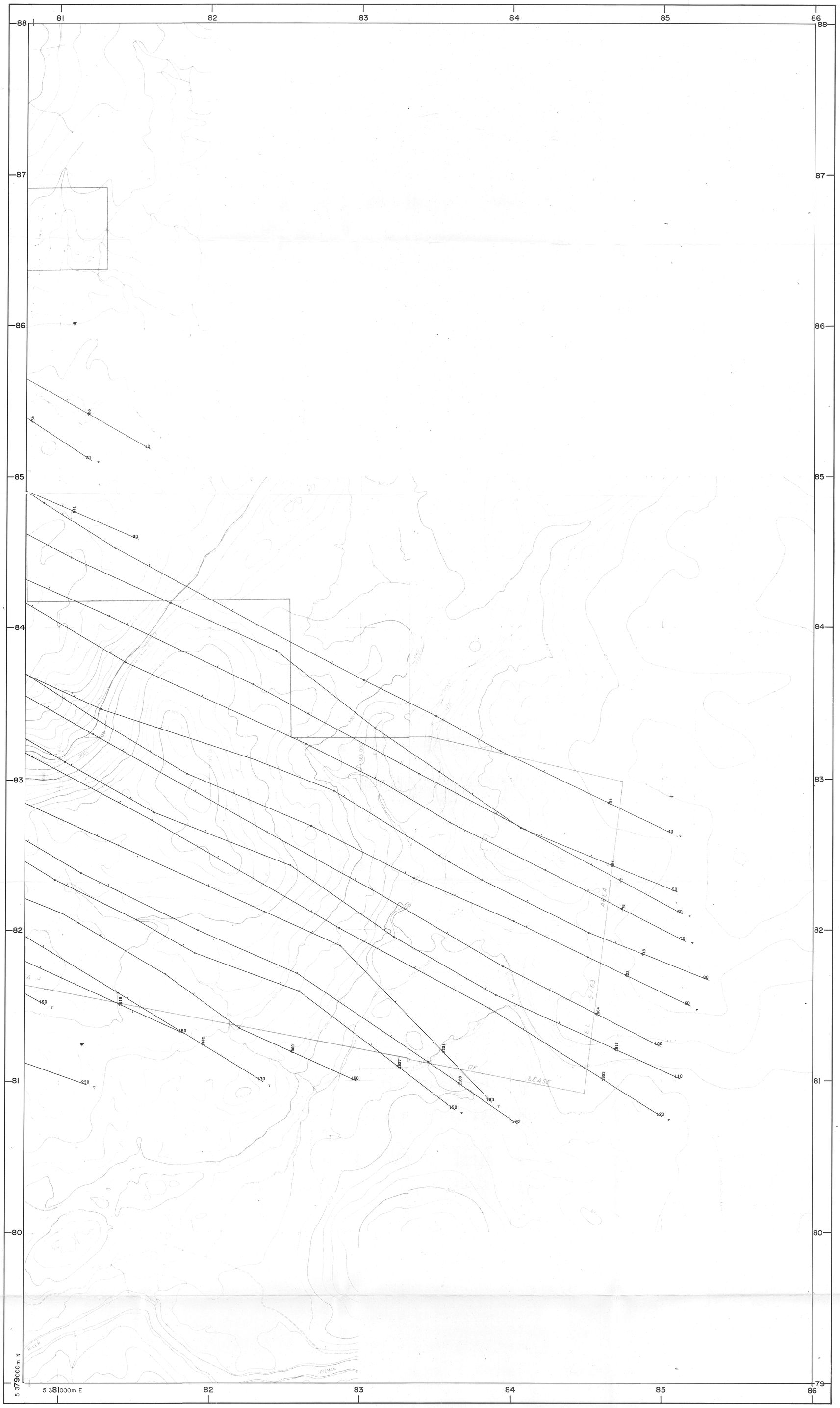
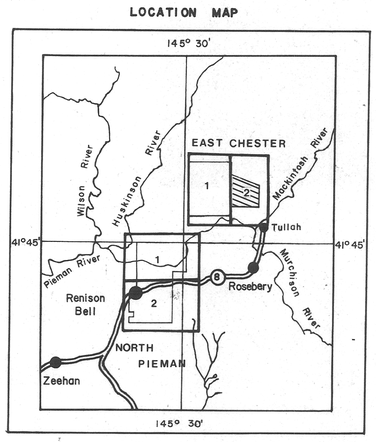
86
85
84
83
82
81
80
79
5 379 000m N
5 376 000m E
BOUNDARY OF LEASE E 5/63 AREA 4
BOUNDARY OF LEASE E 5/63 AREA 4
BOUNDARY OF LEASE E 5/63 AREA 4



LOCATION MAP



Scale 1: 500,000

REGISTERED PROFESSIONAL ENGINEER
D. C. FRASER
PROVINCE OF ONTARIO

DIGHEM III SURVEY

EAST CHESTER AREA, TASMANIA

PROBABLE BEDROCK CONDUCTORS

FOR

COMSTAFF PTY. LTD.

Flight Line

2118 — Fiducial 2120 (Not recovered from film)
Fiducial 2118 (Recovered from film)

Fiducial 2110 (Not recovered from film)

2104 — Fiducial 2104 (Recovered from film)

301 A — Line number and Flight direction

5 cm

Scale 1:10,000

1/2 0 1/2 1 Kilometres

1/4 0 1/4 1/2 Miles

426107

ANOMALY GRADE	EM GRADE SYMBOL	CONDUCTANCE RANGE (MHOS)
6	●	> 99
5	✹	50—99
4	●	20—49
3	◎	10—19
2	○	5— 9
1	○	< 5
—	×	Indeterminate

DIGHEM anomalies are divided into six grades of conductivity — thickness product. This product in mhos is the reciprocal of resistance in ohms. The mho is a measure of conductance, and is a geologic parameter.

identifier name — Depth is greater than: . 15 m; : 30 m; ⋮ 45 m; ⋮ 60 m — interpretive symbol — Inphase and Quadrature of Coaxial Coil is greater than: . 5 ppm; .. 10 ppm; ... 15 ppm; .... 20 ppm

Refer to list of anomalies in survey report for the actual ppm values for all coils, and for the conductance and depth of conductors.

The interpretation is shown by the interpretive symbol (see legend below). The left letter is the anomaly **identifier**. The horizontal rows of **dots** indicate anomaly amplitude on the flight record, and the vertical column gives the estimated depth. This 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 conductive overburden effects.

SYMBOL	GEOPHYSICAL MODEL	BEDROCK CONDUCTOR	or	NON-BEDROCK CONDUCTOR	MOST LIKELY
D_x	steeply-dipping thin dike	steeply-dipping planar conductor	or	metal culture which contacts conductive ground	discrete bedrock conductor
T_x	thick dike	thick conductor, with thickness greater than 10 m.	or		
B_x	indeterminate	bedrock conductor	or		
P_x	conductor to one side of flight line	flight line passed off the end or side of conductor	or	flight line passed off the end or side of culture	
E_x	indeterminate	discrete conductor close to a much stronger conductor	or	edge of large conductive zone	$\frac{f}{c}$
H_x	half space (close to surface)	conductive rock unit	or	deep conductive weathering or thick conductive cover	conductive rock or cover
G_x	buried half space	conductive rock unit, "buried" under non-conductive cover or under a dense forest canopy	or	deep conductive weathering or thick conductive cover, "buried" under a dense forest canopy	
S_x	horizontal sheet	weak bedrock conductor masked by conductive cover	or	thick conductive cover or, occasionally, culture which contacts conductive cover	conductive cover
R_x	horizontal ribbon	flatly-dipping narrow conductor (not computer picked)	or	narrow surface conductor, e.g., stream sediments, or large fenced area	culture
C_x	sphere, horizontal disk	steeply-plunging compact conductor	or	metal roof or fenced yard	
L_x	line	bedrock conductor masked by culture	or	fence, pipeline, power line	
a?	"a" is one of the above symbols; "a?" means that the correct identification of the geophysical model is only a reasonable possibility, rather than being a reasonable probability.				
?	probable aerodynamic noise, meaning that conductive material may, in fact, not exist				

dip direction
magnetic correlation in nT
conductor axis
flight line

004

SHEET 2

JOB	DATE	DRAWN BY	CHECKED BY
365	JULY 1983	TM	RD

84-2129
215

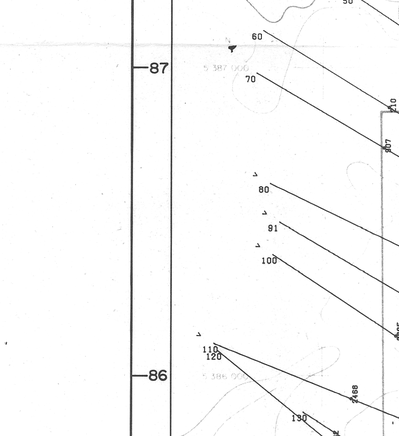
DIGHEM^{III} SURVEY

EAST CHESTER AREA, TASMANIA

ELECTROMAGNETIC ANOMALIES

FOR

COMSTAFF PTY. LTD.





Flight Line

- Fiducial 2120 (Not recovered from film)
- 2118 — Fiducial 2118 (Recovered from film)
- Fiducial 2110 (Not recovered from film)
- 2104 — Fiducial 2104 (Recovered from film)
- 301 — Line number and Flight direction

5 cm

Scale 1:10,000

1/2 0 1/2 1 Kilometres

1/4 0 1/4 1/2 Miles

ANOMALY GRADE	EM GRADE SYMBOL	CONDUCTANCE RANGE (MHOS)
6	●	> 99
5	✹	50—99
4	●	20—49
3	◉	10—19
2	○	5— 9
1	○	< 5
—	×	Indeterminate

DIGHEM anomalies are divided into six grades of conductivity — thickness product. This product in mhos is the reciprocal of resistance in ohms. The mho is a measure of conductance, and " is a geologic parameter.

identifier name → C — interpretive symbol

Depth is greater than
- 15 m
- 30 m
- 45 m
- 60 m

Inphase and Quadrature of Coaxial Coil is greater than
- 5 ppm
- 10 ppm
- 15 ppm
- 20 ppm

Refer to list of anomalies in survey report for the actual ppm values for an conductance and for the conductance and depth of conductors

The interpretation is shown by the interpretive symbol (see legend below). The left letter is the anomaly **identifier.** The horizontal rows of **dots** indicate anomaly amplitude on the flight record, and the vertical column gives the estimated depth. This 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 conductive overburden effects.

SYMBOL	GEOPHYSICAL MODEL	BEDROCK CONDUCTOR	or	NON-BEDROCK CONDUCTOR	MOST LIKELY
D_x	steeply-dipping thin dike	steeply-dipping planar conductor	or	metal culture which contacts conductive ground	discrete bedrock conductor
T_x	thick dike	thick conductor, with thickness greater than 10 m	or		
B_x	indeterminate	bedrock conductor	or		
P_x	conductor to one side of flight line	flight line passed off the end or side of conductor	or	flight line passed off the end or side of culture	
E_x	indeterminate	discrete conductor close to a much stronger conductor	or	edge of large conductive zone	▽ or ▽
H_x	half space (close to surface)	conductive rock unit	or	deep conductive weathering or thick conductive cover	conductive rock or cover
G_x	buried half space	conductive rock unit, "buried" under non-conductive cover or under a dense forest canopy	or	deep conductive weathering or thick conductive cover, "buried" under a dense forest canopy	
S_x	horizontal sheet	weak bedrock conductor masked by conductive cover	or	thin conductive cover or, occasionally, culture which contacts conductive cover	conductive cover
R_x	horizontal ribbon	flatly-dipping narrow conductor (not computer picked)	or	narrow surface conductor, e.g., stream sediments; or large fenced area	culture
C_x	sphere; horizontal disk	steeply-plunging compact conductor	or	metal roof on fenced yard	
L_x	line	bedrock conductor masked by culture	or	fence, pipeline, power line	

$a^?$ is one of the above symbols; "?" means that the correct identification of the geophysical model is only a reasonable possibility, rather than being a reasonable probability

? probable aerodynamic noise, meaning that conductive material may, in fact, not exist

dip direction

magnetic correlation in nT

conductor axis

flight line

001

JOB	DATE	DRAWN BY	CHECKED BY
365	JULY 1983	LM	D.

BH-2129

2/5

SHEET 1

426108

DIGHEM^{III} SURVEY

EAST CHESTER AREA, TASMANIA

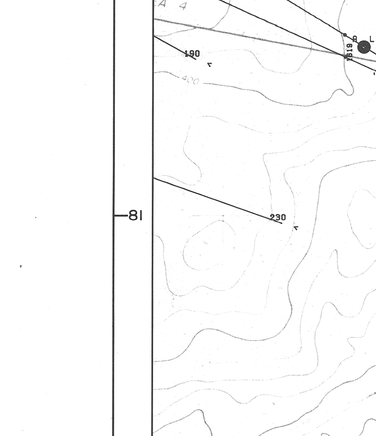
ELECTROMAGNETIC ANOMALIES

FOR

COMSTAFF PTY. LTD.

426109

LOCATION MAP



Scale 1: 500,000



REGISTERED PROFESSIONAL ENGINEER
D. C. FRASER
PROVINCE OF ONTARIO

Flight Line

Fiducial 2120 (Not recovered from film)
Fiducial 2118 (Recovered from film)
Fiducial 2110 (Not recovered from film)
Fiducial 2104 (Recovered from film)
Line number and Flight direction

5 cm

Scale 1:10,000

1/2 0 1/2 1 Kilometres

1/4 0 1/4 1/2 Miles

DIGHEM anomalies are divided into six grades of conductivity — thickness product. This product in mhos is the reciprocal of resistance in ohms. The mho is a measure of conductance, and is a geologic parameter.

ANOMALY GRADE	EM GRADE SYMBOL	CONDUCTANCE RANGE (MHOS)
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3	◉	10—19
2	○	5—9
1	○	< 5
—	×	Indeterminate

Identifier name → interpretive symbol
Depth is greater than: . 15 m; : 30 m; ⁝ 45 m; ⁞ 60 m
Inphase and Quadrature of Coaxial Coil is greater than: . 5 ppm; .. 10 ppm; ... 15 ppm; .... 20 ppm

Refer to list of anomalies on survey report for the actual ppm values for all coils, and for the conductance and depth of conductors.

The interpretation is shown by the interpretive symbol (see legend below). The left letter is the anomaly **identifier**. The horizontal rows of **dots** indicate anomaly amplitude on the flight record, and the vertical column gives the estimated depth. This 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 conductive overburden effects.

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B_x	indeterminate	bedrock conductor	or		
P_x	conductor to one side of flight line	flight line passed off the end or side of conductor	or	flight line passed off the end or side of culture	
E_x	indeterminate	discrete conductor close to a much stronger conductor	or	edge of large conductive zone	↕ or ↔
H_x	half space (close to surface)	conductive rock unit	or	deep conductive weathering or thick conductive cover	conductive rock or cover
G_x	buried half space	conductive rock unit, "buried" under non-conductive cover or under a dense forest canopy	or	deep conductive weathering or thick conductive cover, "buried" under a dense forest canopy	
S_x	horizontal sheet	weak bedrock conductor masked by conductive cover	or	thin conductive cover or, occasionally, culture which contacts conductive cover	conductive cover
R_x	horizontal ribbon	flatly-dipping narrow conductor (not computer picked)	or	narrow surface conductor, e.g., stream sediments, or large fenced area	culture
C_x	sphere, horizontal disk	steeply-plunging compact conductor	or	metal roof or fenced yard	
L_x	line	bedrock conductor masked by culture	or	fence, pipeline, power line	
$x^?$	"x" is one of the above symbols; "x?" means that the correct identification of the geophysical model is only a reasonable possibility, rather than being a reasonable probability.				
$\mathcal{J}$	probable aerodynamic noise, meaning that conductive material may, in fact, not exist				

dip direction
magnetic correlation in nT
conductor axis
flight line

002

JOB	DATE	DRAWN BY	CHECKED BY
365	JULY 1983		J.D.

84-2129
2/5

SHEET 2.

DIGHEM^{III} SURVEY

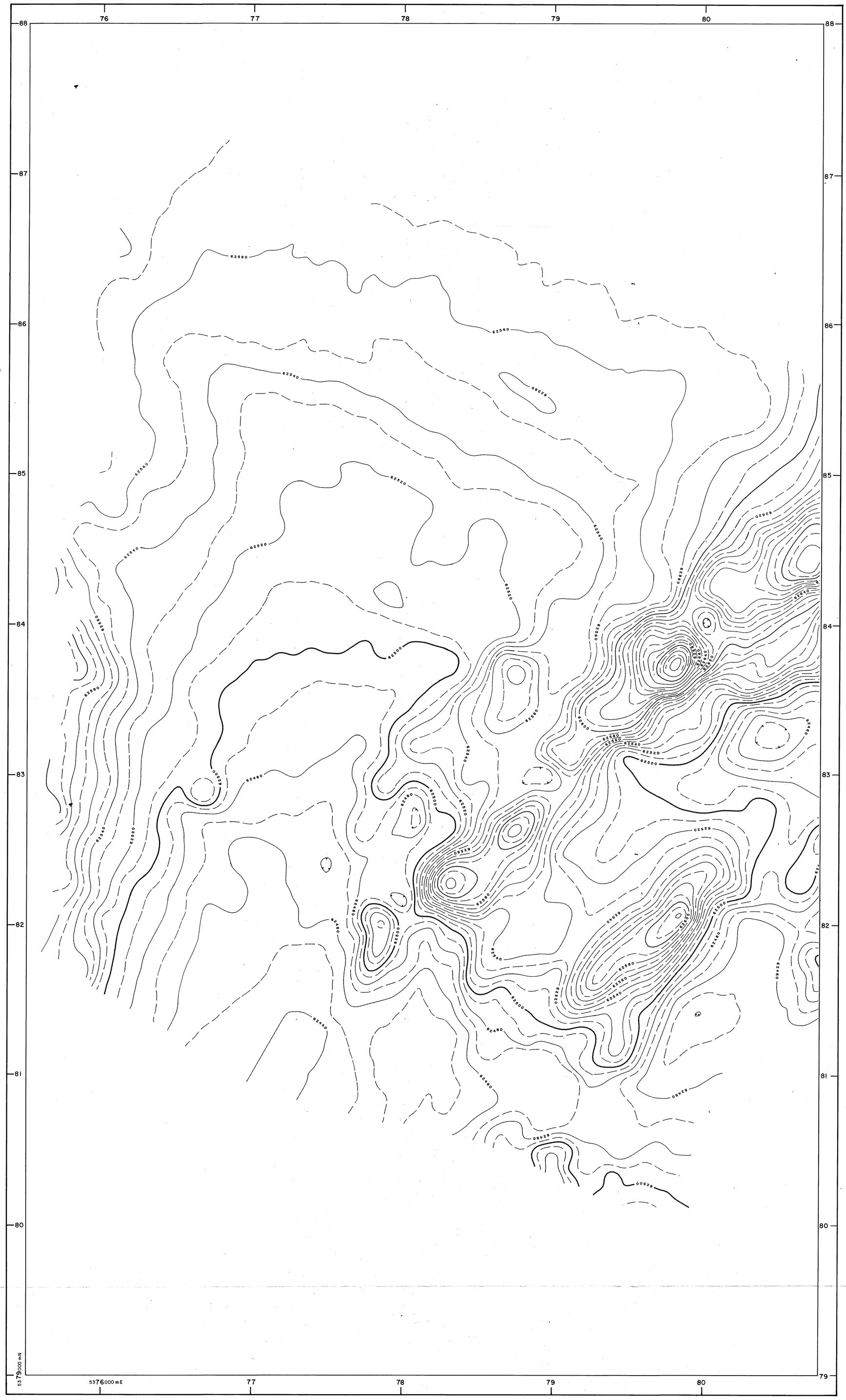
EAST CHESTER AREA, TASMANIA

MAGNETICS (Total Field-IGRF +62,600) nT

FOR

COMSTAFF PTY. LTD.

426110



LOCATION MAP

Scale 1: 500,000

REGISTERED PROFESSIONAL ENGINEER
D. C. FRASER
PROVINCE OF ONTARIO

5 cm

Scale 1:10,000

1/2 0 1/2 1 Kilometres

1/4 0 1/4 1/2 Miles

Flight Line

Fiducial 2120 (Not recovered from film)
2118 Fiducial 2118 (Recovered from film)
Fiducial 2110 (Not recovered from film)
2104 Fiducial 2104 (Recovered from film)
301 A Line number and Flight direction

ISOMAGNETIC LINES (total field)

1000 1 000 nT
100 100 nT
20 20 nT
10 nT
magnetic depression

Magnetic Inclination within the survey area: 72°

009

SHEET 1

JOB	DATE	DRAWN BY	CHECKED BY
365	JULY 1983	PM	D.D.

BH-2129 2/5

DIGHEM^{III} SURVEY

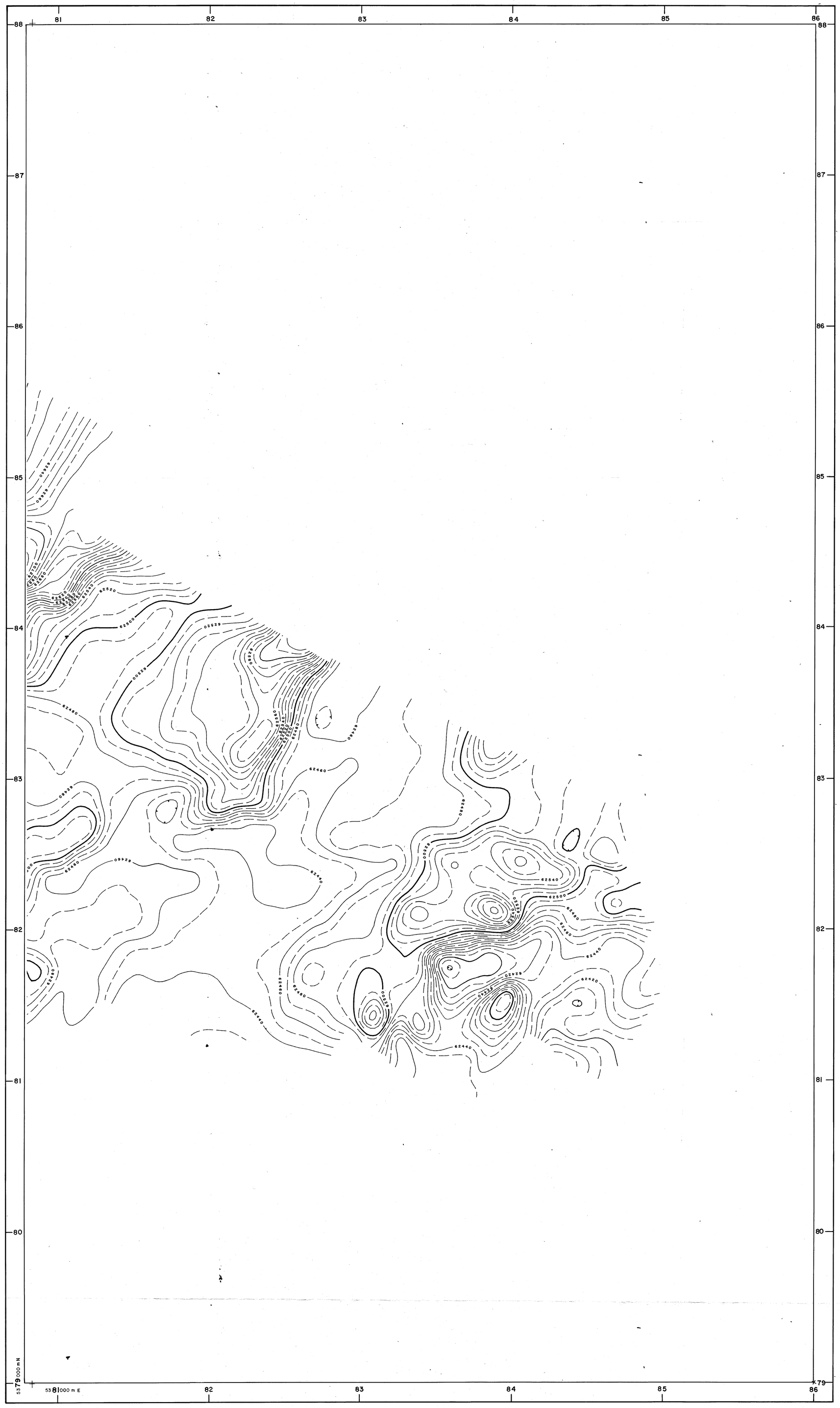
426111

EAST CHESTER AREA, TASMANIA

MAGNETICS (Total Field-IGRF + 62600) nT

FOR

COMSTAFF PTY. LTD.



LOCATION MAP

Scale 1: 500,000

REGISTERED PROFESSIONAL ENGINEER
D. C. FRASER
PROVINCE OF ONTARIO

Flight Line

2118 — Fiducial 2120 (Not recovered from film)
Fiducial 2118 (Recovered from film)
Fiducial 2110 (Not recovered from film)
2104 — Fiducial 2104 (Recovered from film)
301 — Line number and Flight direction

ISOMAGNETIC LINES
(total field)

1000 — 1 000 nT
100 — 100 nT
20 — 20 nT
10 nT
magnetic depression

Magnetic Inclination within the survey area: 72°

5 cm

Scale 1:10,000

1/2 0 1/2 1 Kilometres

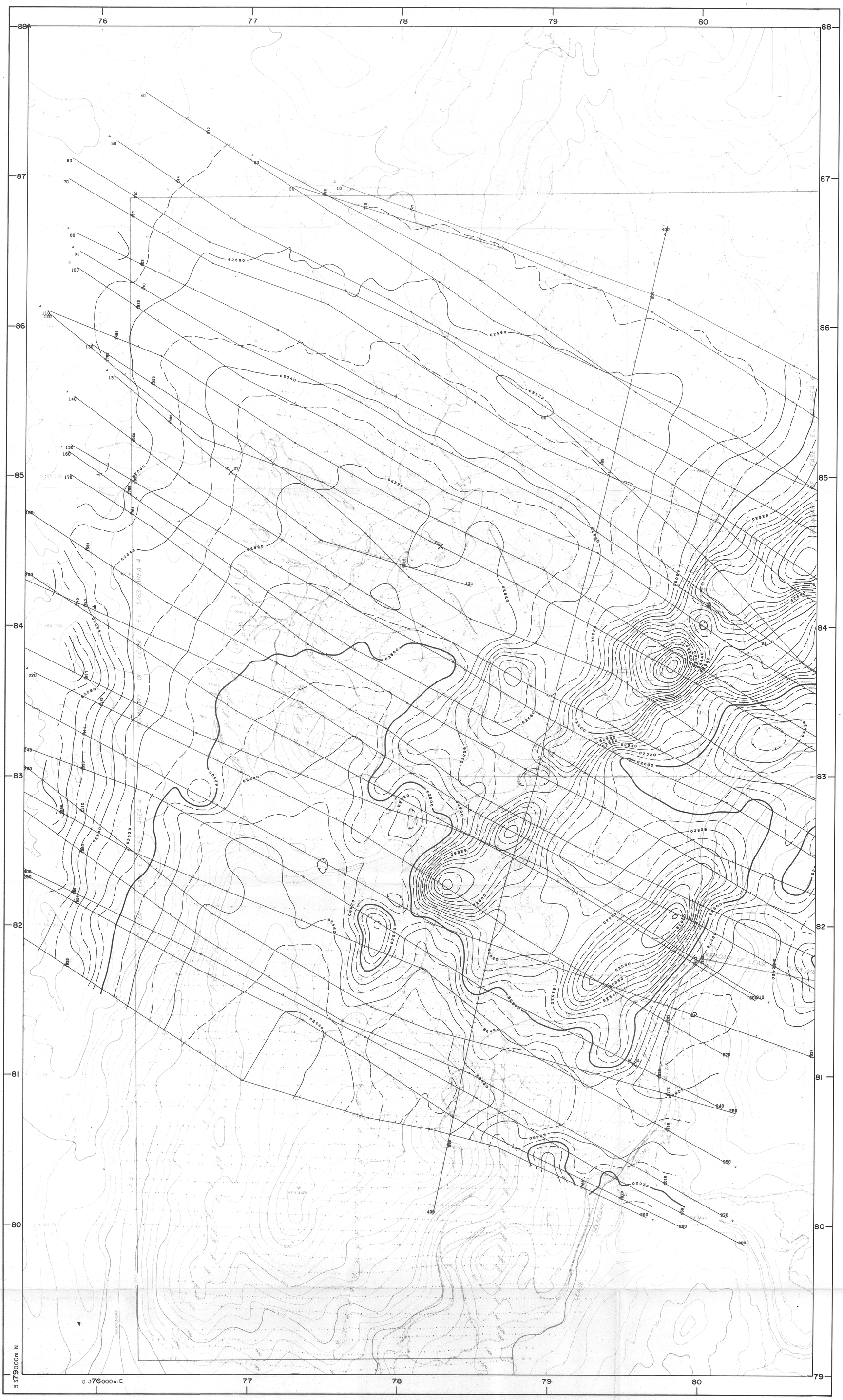
1/4 0 1/4 1/2 Miles

010

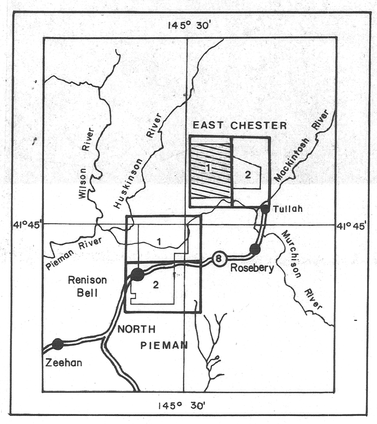
84-2129 2/5

JOB	DATE	DRAWN BY	CHECKED BY
365	JULY 1983	JM	R.B.

SHEET 2



LOCATION MAP



Scale 1: 500,000

DIGHEM^{III} SURVEY

EAST CHESTER AREA, TASMANIA

MAGNETICS (Total Field-IGRF +62,600) nT

FOR

COMSTAFF PTY. LTD.

REGISTERED PROFESSIONAL ENGINEER
D. C. FRASER
PROVINCE OF ONTARIO

5 cm

Scale 1:10,000

1/2 0 1/2 1 Kilometres

1/4 0 1/4 1/2 Miles

Flight Line

Fiducial 2120 (Not recovered from film)
2118 Fiducial 2118 (Recovered from film)
Fiducial 2110 (Not recovered from film)
2104 Fiducial 2104 (Recovered from film)
301 Line number and Flight direction

ISOMAGNETIC LINES (total field)

1000 1 000 nT
100 100 nT
20 20 nT
10 10 nT
magnetic depression

Magnetic Inclination within the survey area: 72°

426112

007

84-2129 2/5

SHEET 1

JOB	DATE	DRAWN BY	CHECKED BY
365	JULY 1983	KM	D.C.

DIGHEM III SURVEY

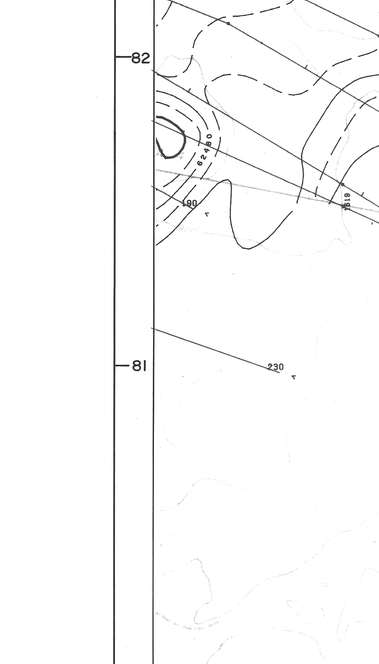
EAST CHESTER AREA, TASMANIA

MAGNETICS (Total Field-IGRF + 62600) nT

FOR

COMSTAFF PTY. LTD.

LOCATION MAP



Scale 1: 500,000

Flight Line

- Fiducial 2120 (Not recovered from film)
- Fiducial 2118 (Recovered from film)
- Fiducial 2110 (Not recovered from film)
- Fiducial 2104 (Recovered from film)

2118 / 2104 / 301 — Line number and Flight direction

ISOMAGNETIC LINES (total field)

1000	1 000 nT
100	100 nT
20	20 nT
10	10 nT
	magnetic depression

Magnetic Inclination within the survey area: 72°

REGISTERED PROFESSIONAL ENGINEER — D. C. FRASER — PROVINCE OF ONTARIO

5 cm

Scale 1:10,000

1/2 0 1/2 1 Kilometres

1/4 0 1/4 1/2 Miles

008

426113

84-2129 2/5

SHEET 2

JOB	DATE	DRAWN BY	CHECKED BY
365	JULY 1983		D.C.

426114

PROJECT NAME:

DIGHEM III SURVEY OF THE EAST CHESTER, NORTH PIEMAN AND ARTHUR RIVER AREAS, TASMANIA

TITLE: VOLUME 3 OF 5 - MAPS, NORTH PIEMAN

AREA NAME/S, STATE 1:250,000 SHEET NO/S & COORDINATES:

COMMODITY/IES:

TEXT PAGES NO:

PLAN NOS:

TABLE NOS:

APPENDICES:

AUTHOR/S:

DATE:

AUSTRALIAN ANGLO AMERICAN LIMITED

Incorporated in the State of Victoria

016

RENISON BELL

DIGHEM^{III} SURVEY

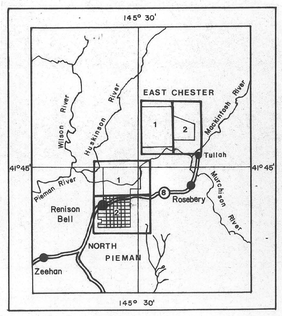
NORTH PIEMAN AREA, TASMANIA

RESISTIVITY

FOR

COMSTAFF PTY. LTD.

LOCATION MAP



Scale 1: 500,000

Scale 1:10,000

5 cm

1/2 0 1/2 1 Kilometres

1/4 0 1/4 1/2 Miles

REGISTERED PROFESSIONAL ENGINEER P. C. GRASER PROVINCE OF ONTARIO

SHEET 2

Flight Line

Fiducial 2120 (Not recovered from film)
2118 Fiducial 2118 (Recovered from film)
Fiducial 2110 (Not recovered from film)
2104 Fiducial 2104 (Recovered from film)
301 Line number and Flight direction

426115

LEGEND

Contours in ohm — m at ten intervals per decade

1000
800
600
500
400
300
250
200
150
125
100

Note

The numbers face in the direction of increasing value.

016

JOB	DATE	DRAWN BY	CHECKED BY
365	JULY 1983	TM	

84-2129 3/5

015

DIGHEM^{III} SURVEY

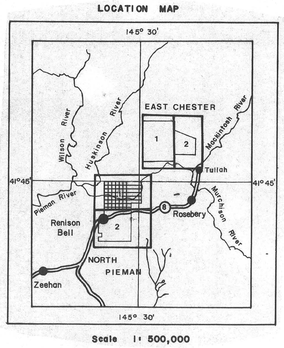
NORTH PIEMAN AREA, TASMANIA

RESISTIVITY

FOR

COMSTAFF PTY. LTD.

LOCATION MAP



Scale 1: 500,000

REGISTERED PROFESSIONAL ENGINEER
D. C. FRASER
PROVINCE OF ONTARIO

5 cm

Scale 1:10,000

1/2 0 1/2 1 Kilometres

1/4 0 1/4 1/2 Miles

SHEET 1

Flight Line

2118 — Fiducial 2120 (Not recovered from film)
Fiducial 2118 (Recovered from film)

Fiducial 2110 (Not recovered from film)

2104 — Fiducial 2104 (Recovered from film)

301 A Line number and Flight direction

426116

LEGEND

Contours in ohm — m
at ten intervals per decade

1000
800
600
500
400
300
250
200
150
125
100

Note

The numbers face in the direction of increasing value.

015

8L-2120 3/5

JOB	DATE	DRAWN BY	CHECKED BY
365	JULY 1983		D. F.

014



DIGHEM III SURVEY

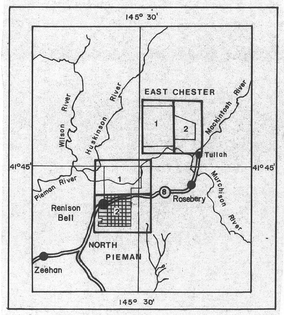
NORTH PIEMAN AREA, TASMANIA

PROBABLE BEDROCK CONDUCTORS

FOR

COMSTAFF PTY. LTD.

LOCATION MAP



Scale 1: 500,000

Flight Line

Fiducial 2120 (Not recovered from film)
Fiducial 2118 (Recovered from film)
Fiducial 2110 (Not recovered from film)
Fiducial 2104 (Recovered from film)
Line number and Flight direction

5 cm

Scale 1:10,000

1/2 0 1/2 1 Kilometres

1/4 0 1/4 1/2 Miles

REGISTERED PROFESSIONAL ENGINEER D.C. FRASER PROVINCE OF ONTARIO

SHEET 2

ANOMALY GRADE	EM GRADE SYMBOL	CONDUCTANCE RANGE (MHOS)
6	●	> 99
5	●	50—99
4	●	20—49
3	◉	10—19
2	○	5— 9
1	○	< 5
—	×	Indeterminate

DIGHEM anomalies are divided into six grades of conductivity — thickness product. This product in mhos is the reciprocal of resistance in ohms. The mho is a measure of conductance, and is a geologic parameter.

identifier name — interpretive symbol

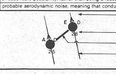
Depth is greater than: 15 m, 30 m, 45 m, 60 m

Interpretive symbol indicates: Quadrature or Coaxial Coil is greater than: 5 ppm, 10 ppm, 15 ppm, 20 ppm

Refer to list of anomalies in survey report for the actual ppm values for all coils, and for the conductance and depth of conductors.

The interpretation is shown by the interpretive symbol (see legend below). The left letter is the anomaly **identifier**. The horizontal rows of **dots** indicate anomaly amplitude on the flight record, and the vertical column gives the estimated depth. This 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 conductive overburden effects.

SYMBOL	GEOPHYSICAL MODEL	BEDROCK CONDUCTOR	or	NON-BEDROCK CONDUCTOR	MOST LIKELY
D_s	steeply-dipping thin dike	steeply-dipping planar conductor	or	metal culture which contacts conductive ground	discrete bedrock conductor
T_s	thick dike	thick conductor, with thickness greater than 10 m	or		
B_s	indeterminate	bedrock conductor	or		
P_s	conductor to one side of flight line	flight line passed off the end or side of conductor	or	flight line passed off the end or side of culture	
E_s	indeterminate	discrete conductor close to a much stronger conductor	or	edge of large conductive zone	
H_s	half space close to surface	conductive rock unit	or	deep conductive weathering or thick conductive cover	conductive rock cover
G_s	buried half space	conductive rock unit, "buried" under non-conductive cover or under a dense forest canopy	or	deep conductive weathering or thick conductive cover, "buried" under a dense forest canopy	
S_s	horizontal sheet	weak bedrock conductor masked by conductive cover	or	thin conductive cover or, occasionally, culture which contacts conductive cover	conductive cover
R_s	horizontal ribbon	flatly-dipping narrow conductor (not computer picked)	or	narrow surface conductor, e.g., stream sediments, or large fenced area	culture
C_s	sphere, horizontal disk	steeply-plunging compact conductor	or	metal roof or fenced yard	
L_s	line	bedrock conductor masked by culture	or	fence, pipeline, power line	
$a^?$	$a^?$ is one of the above symbols. "a" means that the correct identification of the geophysical model is only a reasonable possibility, rather than being a reasonable probability.				
?	probable aerodynamic noise, meaning that conductive material may, in fact, not exist				

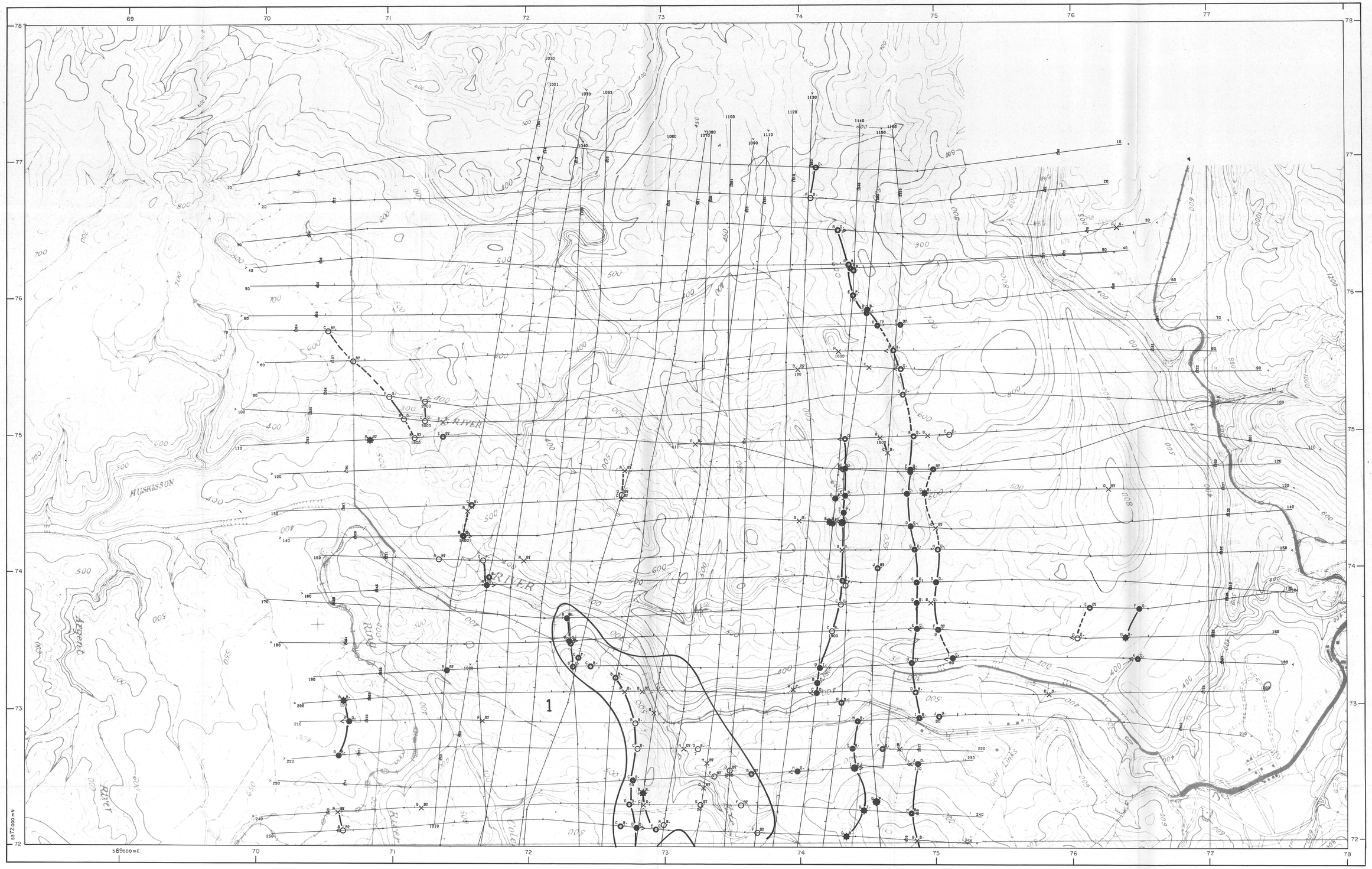


014

JOB	DATE	DRAWN BY	CHECKED BY
365	JULY 1983	PM	Z.D.

84-2129 3/5

013



DIGHEM III SURVEY

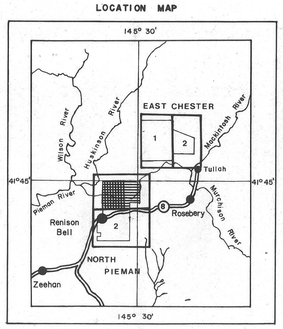
NORTH PIEMAN AREA, TASMANIA

PROBABLE BEDROCK CONDUCTORS

FOR

COMSTAFF PTY. LTD.

LOCATION MAP



Scale 1: 500,000

REGISTERED PROFESSIONAL ENGINEER
D. C. FRASER
PROVINCE OF ONTARIO

Scale 1:10,000

1/2 0 1/2 1 Kilometres

1/4 0 1/4 1/2 Miles

5 cm

SHEET 1

Flight Line

2118 — Fiducial 2120 (Not recovered from film)
— Fiducial 2118 (Recovered from film)
— Fiducial 2110 (Not recovered from film)
2104 — Fiducial 2104 (Recovered from film)

301 Line number and Flight direction

ANOMALY GRADE	EM GRADE SYMBOL	CONDUCTANCE RANGE (MHOS)
6	●	> 99
5	●	50—99
4	●	20—49
3	●	10—19
2	○	5—9
1	○	< 5
—	×	Indeterminate

DIGHEM anomalies are divided into six grades of conductivity — thickness product. This product in mhos is the reciprocal of resistance in ohms. The mho is a measure of conductance, and is a geologic parameter.

Identifier name — interpretive symbol

Depth is greater than
- 15 m
- 30 m
- 45 m
- 60 m

Inphase and Quadrature of Coaxial Coil is greater than
- 5 ppm
- 10 ppm
- 15 ppm
- 20 ppm

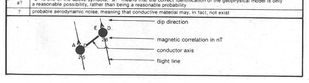
Refer to list of anomalies in survey report for the actual ppm values for all coils, and for the conductance and depth of conductors.

The interpretation is shown by the interpretive symbol (see legend below). The left letter is the anomaly identifier. The horizontal rows of dots indicate anomaly amplitude on the flight record, and the vertical column gives the estimated depth. This 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 conductive overburden effects.

SYMBOL	GEOPHYSICAL MODEL	BEDROCK CONDUCTOR	or	NON-BEDROCK CONDUCTOR	MOST LIKELY
D_1	steeply-dipping thin dike	steeply-dipping planar conductor	or	metal culture which contacts conductive ground	discrete bedrock conductor
T_1	thick dike	thick conductor, with thickness greater than 10 m.	or		
B_1	indeterminate	bedrock conductor	or		
P_1	conductor to one side of flight line	flight line passed off the end or side of conductor	or	flight line passed off the end or side of culture	
E_1	indeterminate	discrete conductor close to a much stronger conductor	or	edge of large conductive zone	$\frac{1}{2}$
H_1	half space (close to surface)	conductive rock unit	or	deep conductive weathering or thick conductive cover	conductive rock or cover
G_1	buried half space	conductive rock unit, "buried" under non-conductive cover or under a dense forest canopy	or	deep conductive weathering or thick conductive cover, "buried" under a dense forest canopy	
S_1	horizontal sheet	weak bedrock conductor masked by conductive cover	or	non-conductive cover or, occasionally, culture which contacts conductive cover	conductive cover
R_1	horizontal ribbon	fairly-dipping narrow conductor (not computer picked)	or	narrow surface conductor, e.g., stream sediments, or large fenced area	culture
C_1	sphere, horizontal disk	steeply plunging compact conductor	or	metal roof or fenced yard	
L_1	line	bedrock conductor masked by culture	or	fence, pipeline, power line	

a? — a is one of the above symbols; "a" means that the correct identification of the geophysical model is only a reasonable possibility, rather than being a reasonable probability

? — probable aerodynamic noise, meaning that conductive material may, in fact, not exist



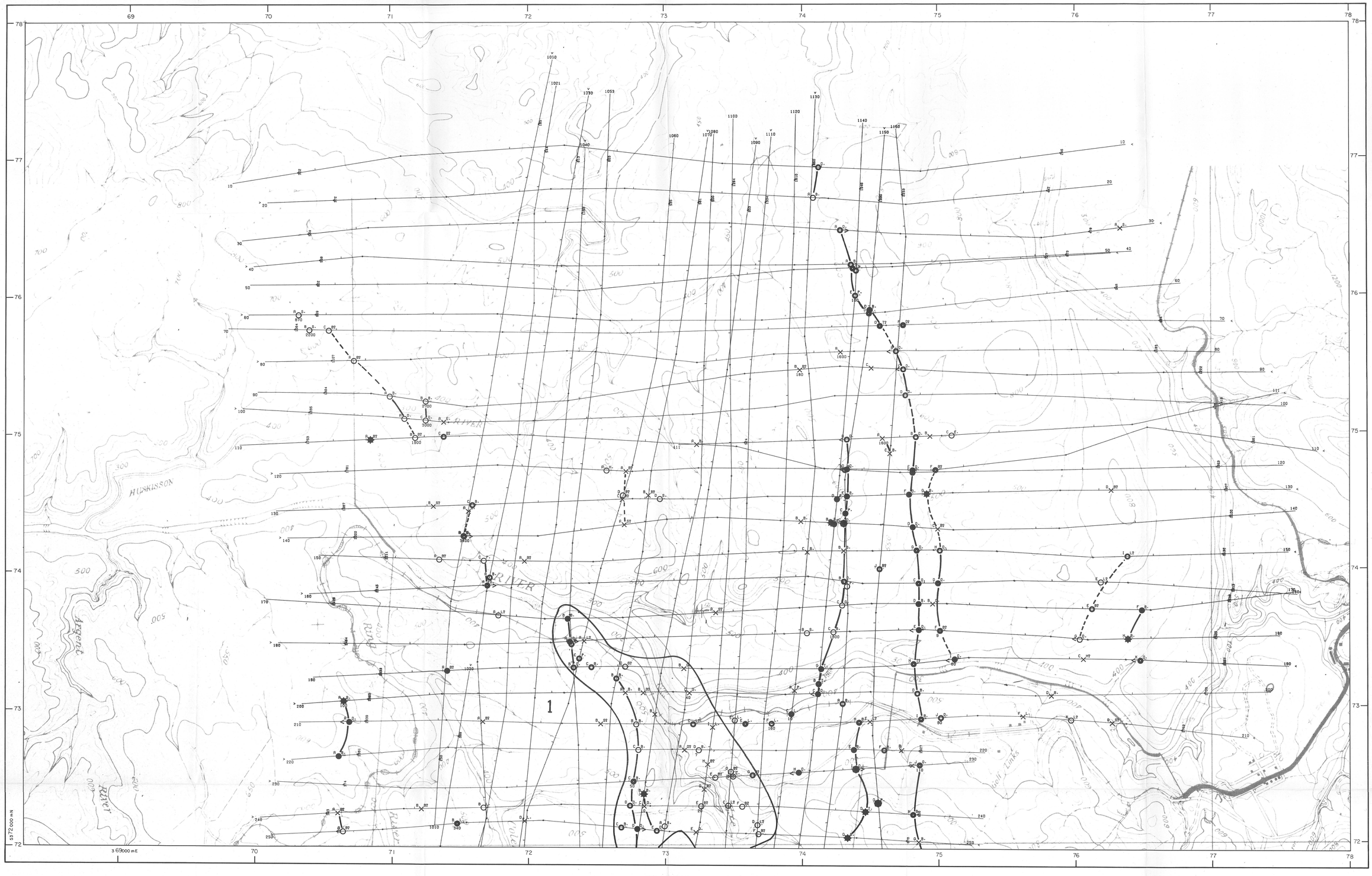
013

426118

84-2129 3/5

JOB	DATE	DRAWN BY	CHECKED BY
365	JULY 1983	[illegible]	Z.O.

011



DIGHEM III SURVEY

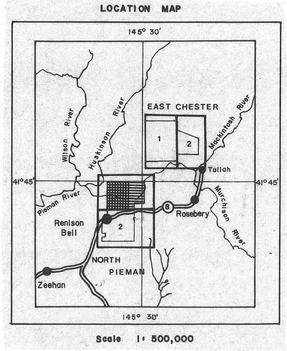
NORTH PIEMAN AREA, TASMANIA

ELECTROMAGNETIC ANOMALIES

FOR

COMSTAFF PTY. LTD.

LOCATION MAP



Scale 1: 500,000

REGISTERED PROFESSIONAL ENGINEER
D. C. FRASER
PROVINCE OF ONTARIO

5 cm

Scale 1:10,000

1/2 0 1/2 1 Kilometres

1/4 0 1/4 1/2 Miles

SHEET 1

Flight Line

Fiducial 2120 (Not recovered from film)
Fiducial 2118 (Recovered from film)
Fiducial 2110 (Not recovered from film)
Fiducial 2104 (Recovered from film)
Line number and Flight direction

ANOMALY GRADE	EM GRADE SYMBOL	CONDUCTANCE RANGE (MHOS)
6	●	> 99
5	●	50—99
4	●	20—49
3	●	10—19
2	○	5—9
1	○	< 5
	×	Indeterminate

DIGHEM anomalies are divided into six grades of conductivity — thickness product. This product in mhos is the reciprocal of resistance in ohms. The mho is a measure of conductance, and is a geologic parameter.

identifier name — interpretive symbol
Depth is greater than 15 m, 30 m, 45 m, 60 m
Inphase and Quadrature of Coaxial Coil is greater than 5 ppm, 10 ppm, 15 ppm, 20 ppm

Refer to list of anomalies in survey report for the actual ppm values for all coils, and for the conductance and depth of conductors.

The interpretation is shown by the interpretive symbol (see legend below). The left letter is the anomaly identifier. The horizontal rows of **dots** indicate anomaly amplitude on the flight record, and the vertical column gives the estimated depth. This 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 conductive overburden effects.

SYMBOL	GEOPHYSICAL MODEL	BEDROCK CONDUCTOR	or	NON-BEDROCK CONDUCTOR	MOST LIKELY
D_n	steeply-dipping thin dike	steeply-dipping planar conductor	or	metal culture which contacts conductive ground	discrete bedrock conductor
T_n	thick dike	thick conductor, with thickness greater than 10 m	or		
B_n	indeterminate	bedrock conductor	or		
P_n	conductor to one side of flight line	flight line passed off the end or side of conductor	or	flight line passed off the end or side of culture	
E_n	indeterminate	discrete conductor close to a much stronger conductor	or	edge of large conductive zone	
H_n	half space (close to surface)	conductive rock unit	or	deep conductive weathering or thick conductive cover	conductive rock or cover
G_n	buried half space	conductive rock unit, "buried" under non-conductive cover or under a dense forest canopy	or	deep conductive weathering or thick conductive cover, "buried" under a dense forest canopy	
S_n	horizontal sheet	weak bedrock conductor masked by conductive cover	or	thin conductive cover or, occasionally, culture which contacts conductive cover	conductive cover
R_n	horizontal ribbon	flatly-dipping narrow conductor (not computer picked)	or	narrow surface conductor, e.g., stream sediments, or large fenced area	culture
C_n	sphere, horizontal disk	steeply-plunging compact conductor	or	metal roof or fenced yard	
L_n	line	bedrock conductor masked by culture	or	fence, pipeline, power line	
$n?$	"n" is one of the above symbols; "n?" means that the correct identification of the geophysical model is only a reasonable possibility, rather than being a reasonable probability				
?	probable aerodynamic noise, meaning that conductive material may, in fact, not exist				

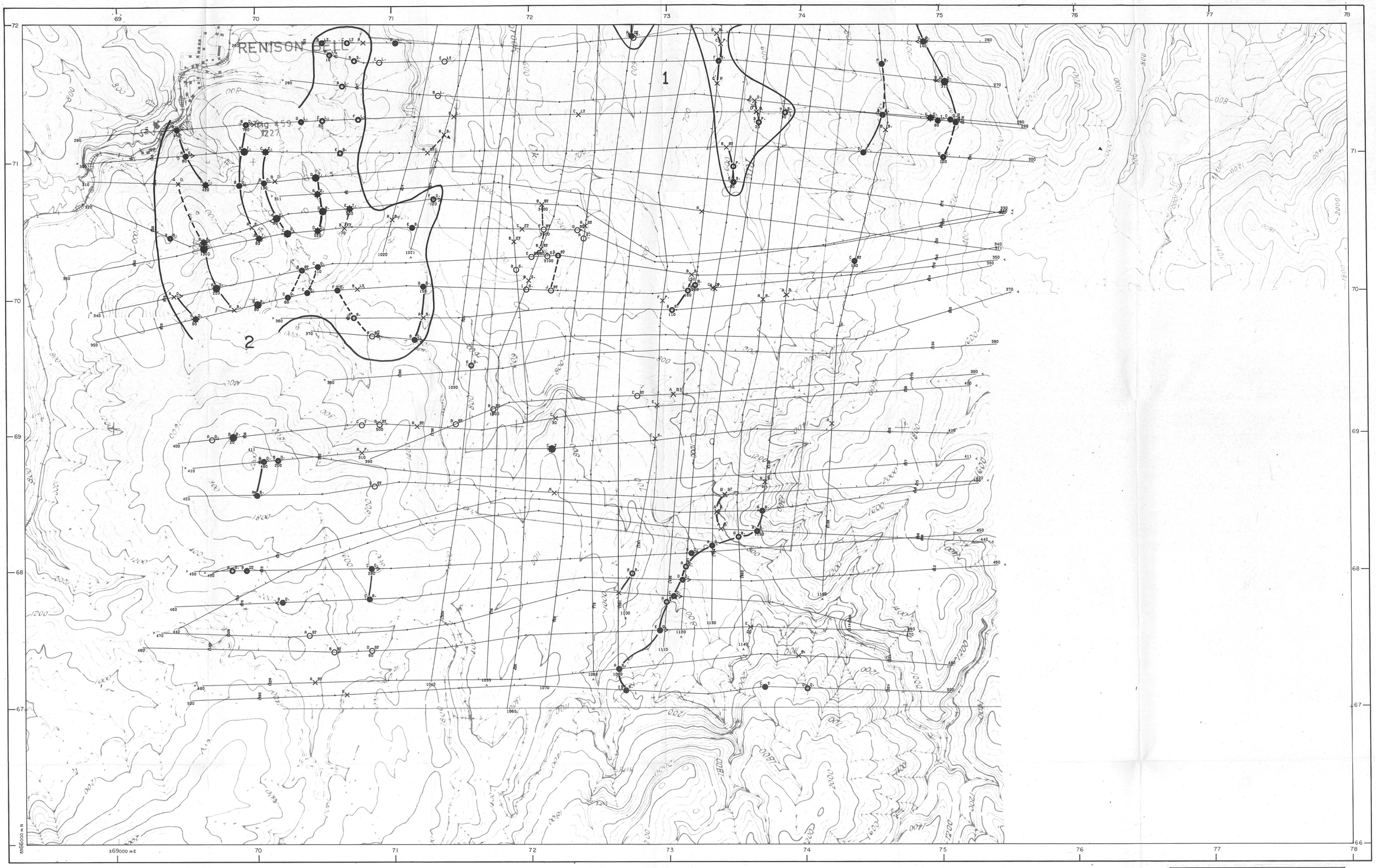
dip direction
magnetic correlation in nT
conductor axis
flight line

011 426119

84-2129 3/5

JOB	DATE	DRAWN BY	CHECKED BY
365	JULY 1983	PM	Z.S.

012



DIGHEM III SURVEY

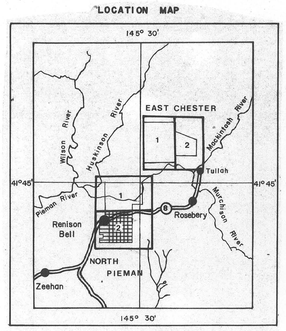
NORTH PIEMAN AREA, TASMANIA

ELECTROMAGNETIC ANOMALIES

FOR

COMSTAFF PTY. LTD.

LOCATION MAP



Scale 1: 500,000

Flight Line

Fiducial 2120 (Not recovered from film)
Fiducial 2118 (Recovered from film)
Fiducial 2110 (Not recovered from film)
Fiducial 2104 (Recovered from film)
Line number and Flight direction

5 cm

Scale 1:10,000

1/2 0 1/2 1 Kilometres

1/4 0 1/4 1/2 Miles

REGISTERED PROFESSIONAL ENGINEER D.C. FRASER PROVINCE OF ONTARIO

SHEET 2

ANOMALY GRADE	EM GRADE SYMBOL	CONDUCTANCE RANGE (MHOS)
6	●	> 99
5	●	50—99
4	●	20—49
3	●	10—19
2	○	5—9
1	○	< 5
—	×	Indeterminate

DIGHEM anomalies are divided into six grades of conductivity — thickness product. This product in mhos is the reciprocal of resistance in ohms. The mho is a measure of conductance, and is a geologic parameter.

identifier name — interpretive symbol
Depth is greater than: 15 m, 30 m, 45 m, 60 m
Inphase and Quadrature of Coaxial Coil is greater than: 5 ppm, 10 ppm, 15 ppm, 20 ppm

Refer to list of anomalies in survey report for the actual ppm values for all coils, and for the conductance and depth of conductors.

The interpretation is shown by the interpretive symbol (see legend below). The left letter is the anomaly **identifier**. The horizontal rows of **dots** indicate anomaly amplitude on the flight record, and the vertical column gives the estimated depth. This 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 conductive overburden effects.

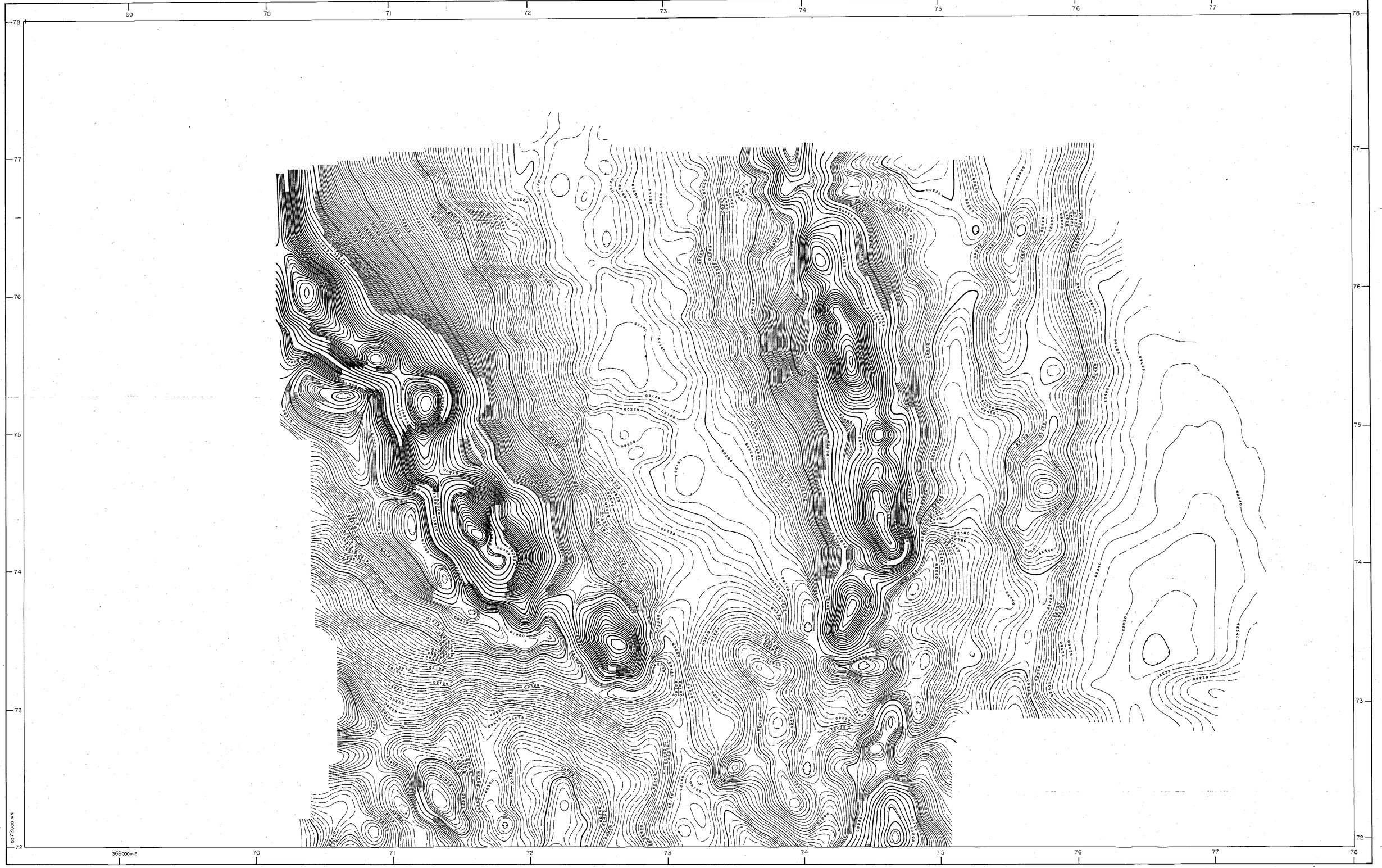
SYMBOL	GEOPHYSICAL MODEL	BEDROCK CONDUCTOR	or	NON BEDROCK CONDUCTOR	MOST LIKELY
D_L	steeply dipping thin dike	steeply-dipping planar conductor	or	metal culture which contacts conductive ground	discrete bedrock conductor
T_H	thick dike	thick conductor, with thickness greater than 10 m	or		
B_L	indeterminate	bedrock conductor	or		
P_L	conductor to one side of flight line	flight line passed off the end or side of conductor	or	flight line passed off the end or side of culture	
E_L	indeterminate	discrete conductor close to a much stronger conductor	or	edge of large conductive zone	
H_L	half space (close to surface)	conductive rock unit	or	deep conductive weathering or thick conductive cover	conductive rock or cover
G_L	buried half space	conductive rock unit, "buried" under non-conductive cover or under a dense forest canopy	or	deep conductive weathering or thick conductive cover, "buried" under a dense forest canopy	
S_L	horizontal sheet	weak bedrock conductor masked by conductive cover	or	thin conductive cover or, occasionally, culture which contacts conductive cover	conductive cover
R_L	horizontal ribbon	fairly dipping narrow conductor (not computer picked)	or	narrow surface conductor, e.g. stream sediments, or large fenced area	culture
C_L	sphere, horizontal disk	steeply-plunging compact conductor	or	metal roof or fenced yard	
L_L	line	bedrock conductor masked by culture	or	fence, pipeline, power line	
a?	"a" is one of the above symbols. "a?" means that the correct identification of the geophysical model is only a reasonable possibility, rather than being a reasonable probability				
?	probable aerodynamic noise, meaning that conductive material may, in fact, not exist				

dip direction
magnetic correlation in nT
conductor axis
flight line

012

426120

JOB	DATE	DRAWN BY	CHECKED BY
365	JULY 1983	PM	B.D.



DIGHEM^{III} SURVEY

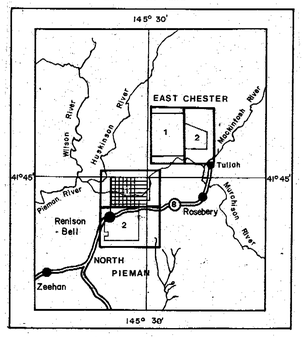
NORTH PIEMAN AREA, TASMANIA

MAGNETICS (Total Field-IGRF + 62,600) nT

FOR

COMSTAFF PTY. LTD.

LOCATION MAP



Scale 1: 500,000





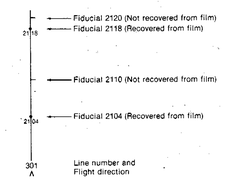
5 cm

Scale 1:10,000

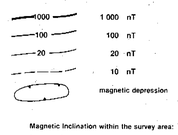
1/2 0 1/2 1 Kilometres

1/4 0 1/4 1/2 Miles

Flight Line



ISOMAGNETIC LINES
(total field)



Magnetic Inclination within the survey area: 72°

SHEET 1

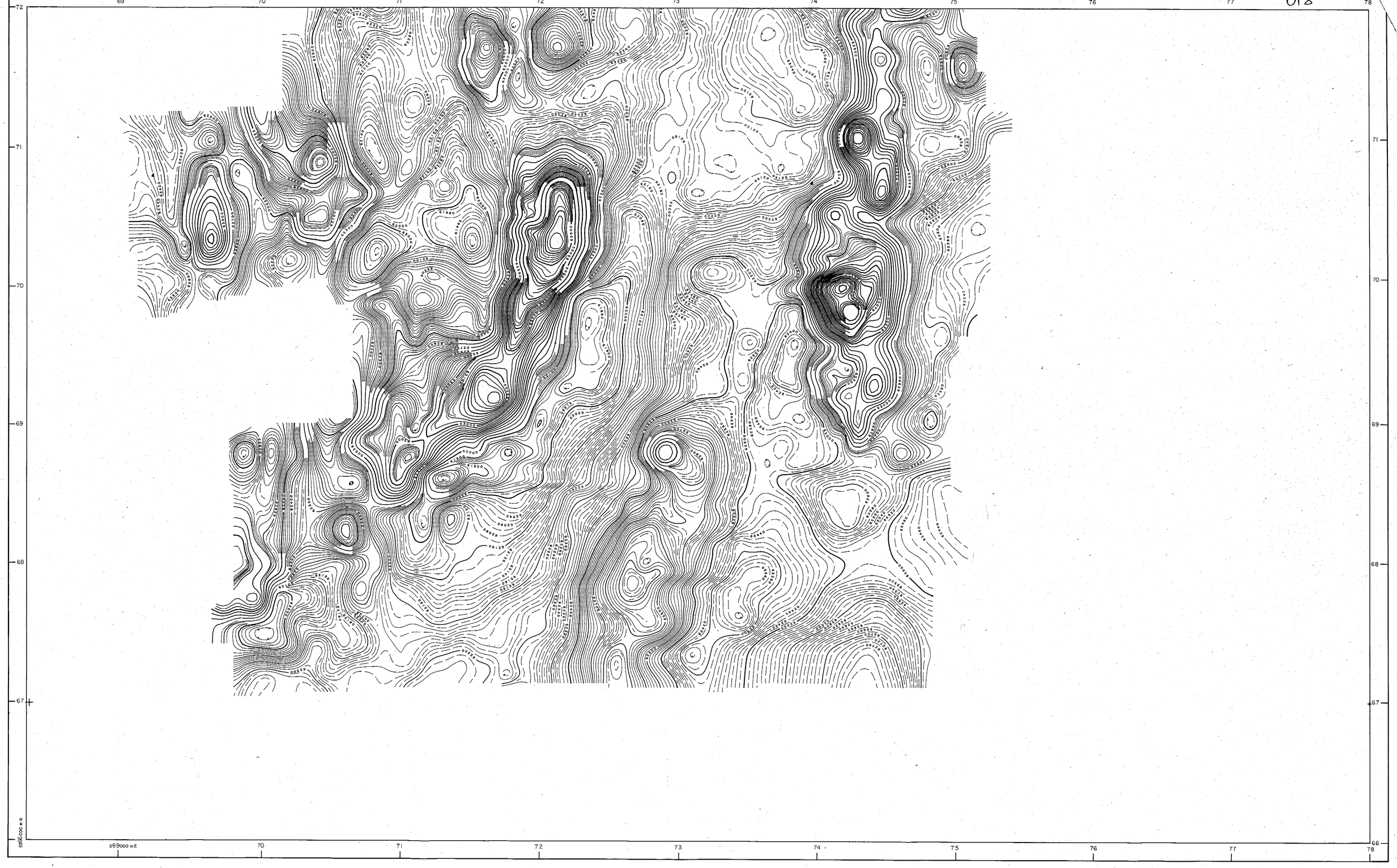
017

426121

BL-2129 3/5

JOB	DATE	DRAWN BY	CHECKED BY
365	JULY 1983		R.D.

018



DIGHEM^{III} SURVEY

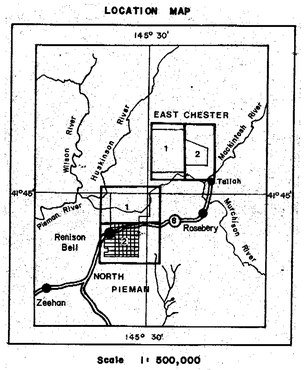
NORTH PIEMAN AREA, TASMANIA

MAGNETICS (Total Field-IGRF + 62,600) nT

FOR

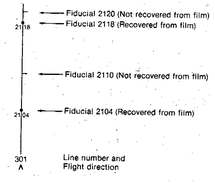
COMSTAFF PTY. LTD.

LOCATION MAP

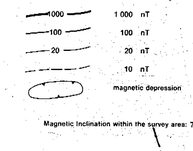


Scale 1: 500,000

Flight Line

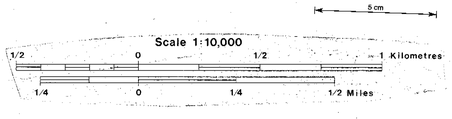


ISOMAGNETIC LINES
(total field)



Magnetic Inclination within the survey area: 72°

Scale 1:10,000



REGISTERED PROFESSIONAL ENGINEER
D. C. FRASER
PROVINCE OF ONTARIO

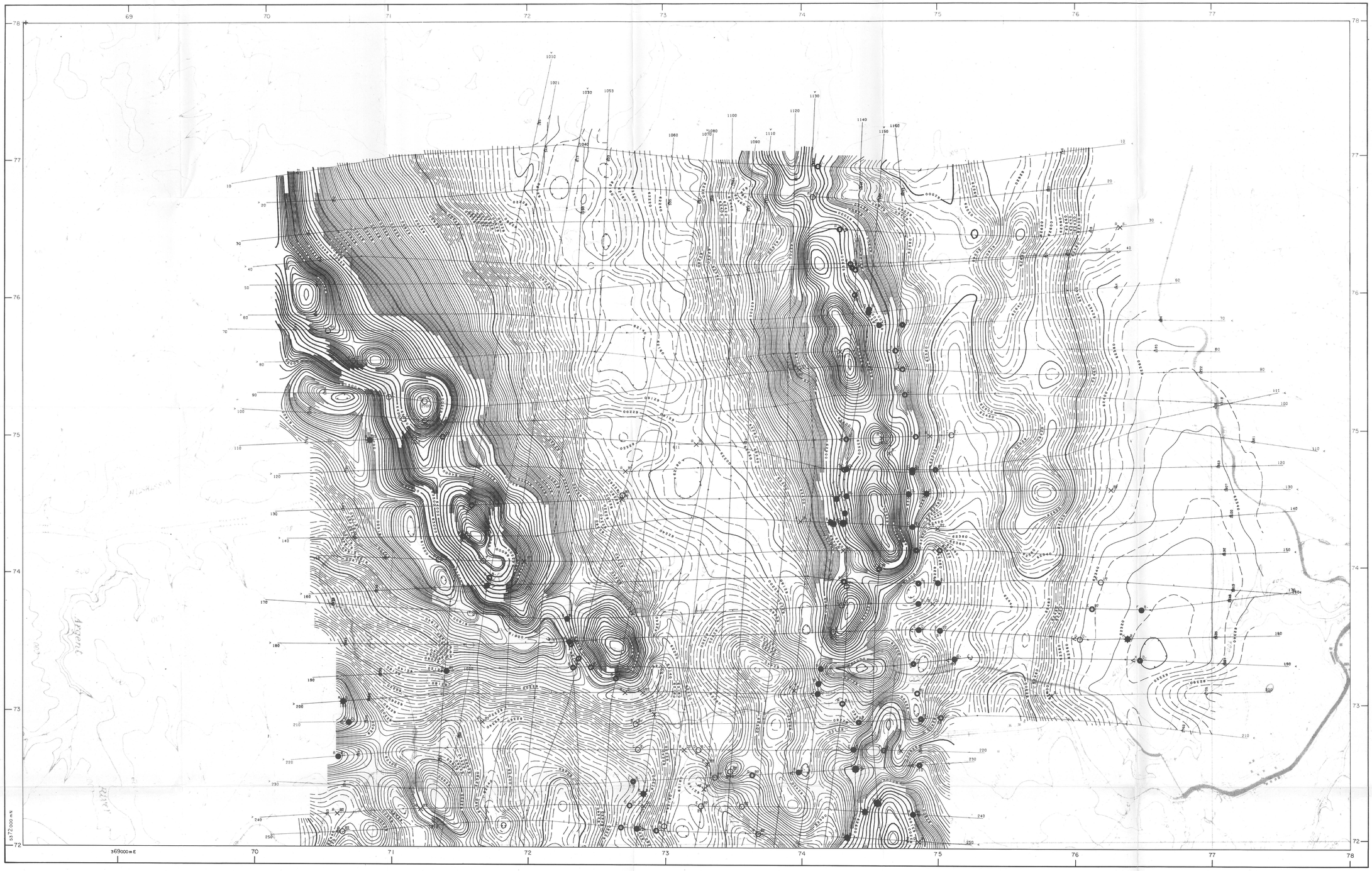
426122

018

84-2129 3/5

JOB	DATE	DRAWN BY	CHECKED BY
365	JULY 1983	KW	D.C.

019



DIGHEM^{III} SURVEY

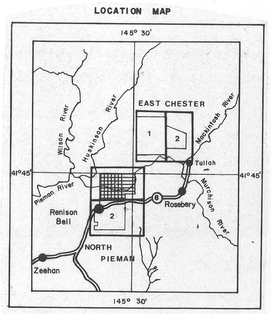
NORTH PIEMAN AREA, TASMANIA

MAGNETICS (Total Field-IGRF+62,600) nT

FOR

COMSTAFF PTY. LTD.

LOCATION MAP



Scale 1: 500,000



5cm

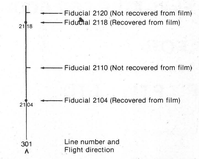
Scale 1:10,000

1/2 0 1/2 1 Kilometres

1/4 0 1/4 1/2 Miles

SHEET 1

Flight Line



ISOMAGNETIC LINES
(total field)

1000	1 000 nT
100	100 nT
20	20 nT
10	10 nT
	magnetic depression

Magnetic Inclination within the survey area: 72°

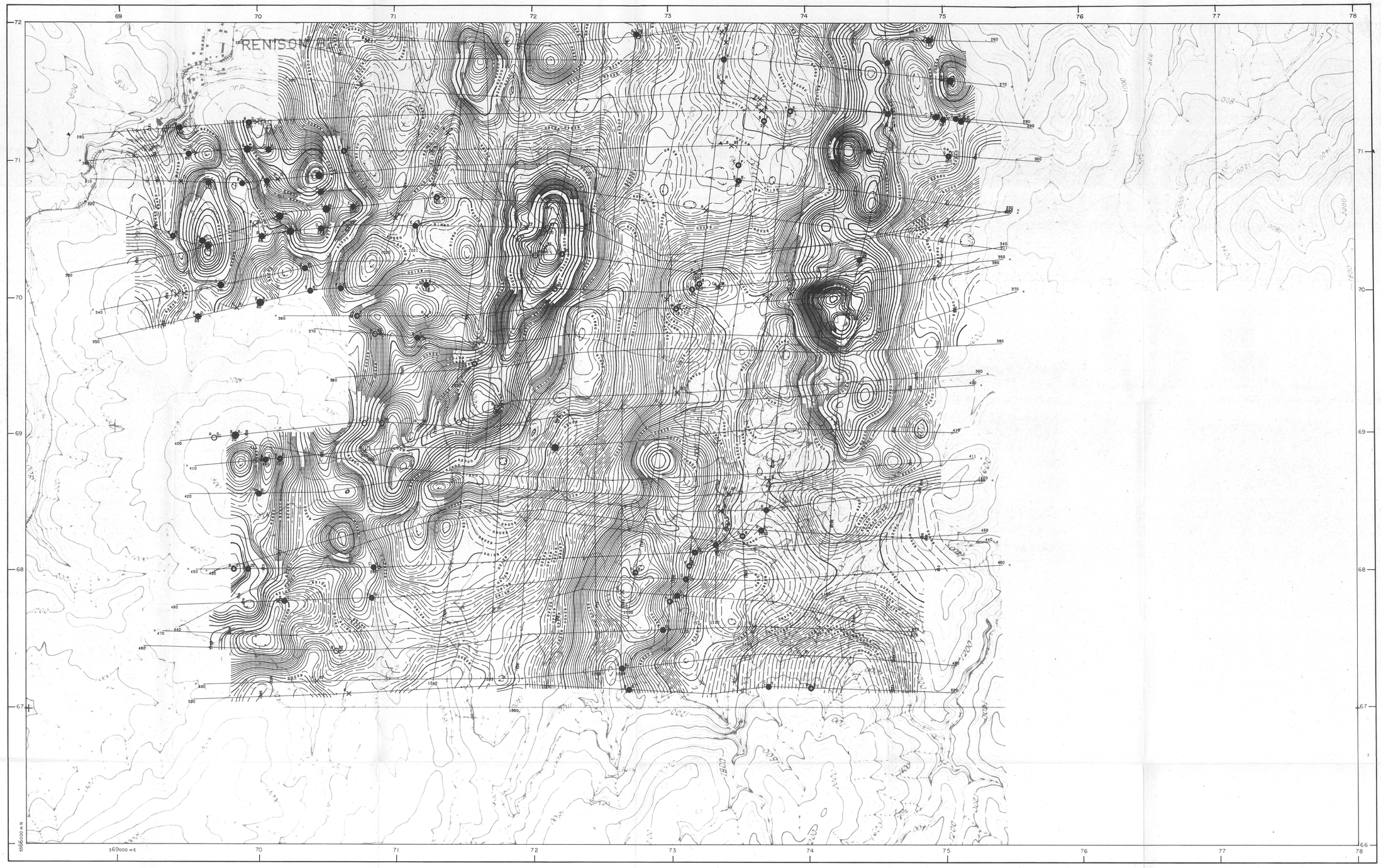
426123

019

84-2129 85

JOB	DATE	DRAWN BY	CHECKED BY
365	JULY 1983	PM	B.D.

020



DIGHEM^{III} SURVEY

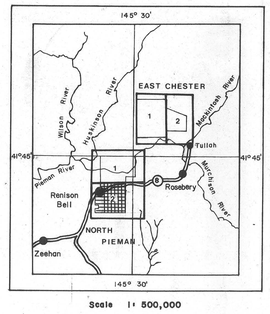
NORTH PIEMAN AREA, TASMANIA

MAGNETICS (Total Field-IGRF + 62600) nT

FOR

COMSTAFF PTY. LTD.

LOCATION MAP



Scale 1: 500,000



Scale 1:10,000

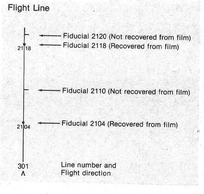
5 cm

1/2 0 1/2 1 Kilometres

1/4 0 1/4 1/2 Miles

SHEET 2

Flight Line



ISOMAGNETIC LINES (total field)

1000	1 000 nT
100	100 nT
20	20 nT
	10 nT
	magnetic depression

Magnetic inclination within the survey area: 72°

426124

020

84-2129 3/5

JOB	DATE	DRAWN BY	CHECKED BY
365	JULY 1983	JM	R.D.

426125

PROJECT NAME:

TITLE:

DIGHEM III SURVEY OF THE EAST CHESTER, NORTH PIEMAN AND ARTHUR RIVER AREAS, TASMANIA

VOLUME 4 OF 5 - MAPS, ARTHUR RIVER

AREA NAME/S, STATE 1:250,000 SHEET NO/S & COORDINATES:

COMMODITY/IES:

TEXT PAGES NO:

PLAN NOS:

TABLE NOS:

APPENDICES:

AUTHOR/S:

DATE:

AUSTRALIAN ANGLO AMERICAN LIMITED

Incorporated in the State of Victoria

030

DIGHEM^{III} SURVEY

ARTHUR RIVER AREA, TASMANIA

RESISTIVITY

FOR

COMSTAFF PTY. LTD.

5 cm

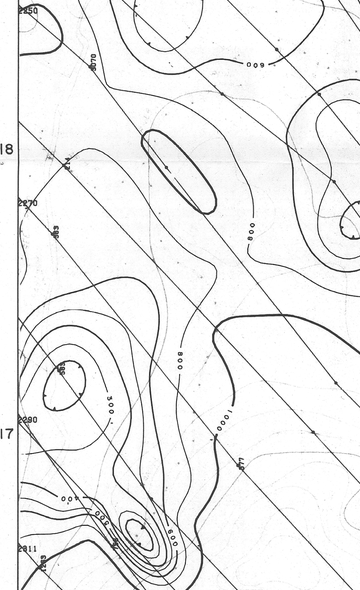
Scale 1:10,000

1/2 0 1/2 1 Kilometres

1/4 0 1/4 1/2 Miles

SHEET 2

LOCATION MAP



Scale 1:500,000





Flight Line

2118 — Fiducial 2120 (Not recovered from film)
Fiducial 2118 (Recovered from film)

Fiducial 2110 (Not recovered from film)

2104 — Fiducial 2104 (Recovered from film)

301 Line number and Flight direction

LEGEND

Contours in ohm — m at ten intervals per decade

1000
800
600
500
400
300
250
200
150
125
100

Note

The numbers face in the direction of increasing value.

030

426126

84-2129 4/5

JOB	DATE	DRAWN BY	CHECKED BY
365	AUGUST, 83	GD	B.D.

029

DIGHEM^{III} SURVEY

ARTHUR RIVER AREA, TASMANIA

RESISTIVITY

FOR

COMSTAFF PTY. LTD.

5 cm

Scale 1:10,000

1/2 0 1/2 1 Kilometres

1/4 0 1/4 1/2 Miles

SHEET 1

LOCATION MAP



Scale 1:500,000

REGISTERED PROFESSIONAL ENGINEER
D. C. FRASER
PROVINCE OF ONTARIO

Flight Line

2118 — Fiducial 2120 (Not recovered from film)
Fiducial 2118 (Recovered from film)
Fiducial 2110 (Not recovered from film)
2104 — Fiducial 2104 (Recovered from film)
301 A — Line number and Flight direction

LEGEND

Contours in ohm — m at ten intervals per decade

1000
800
600
500
400
300
250
200
150
125
100

Note

The numbers face in the direction of increasing value.

029 426127

84-229 1/5

JOB	DATE	DRAWN BY	CHECKED BY
365	AUGUST, 83	AD	D.C.

031

DIGHEM^{III} SURVEY

ARTHUR RIVER AREA, TASMANIA

RESISTIVITY

FOR

COMSTAFF PTY. LTD.

5 cm

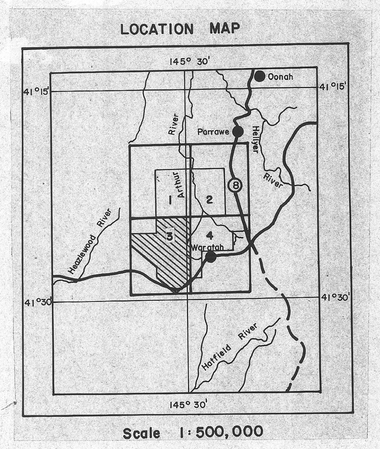
Scale 1:10,000

1/2 0 1/2 1 Kilometres

1/4 0 1/4 1/2 Miles

SHEET 3

LOCATION MAP



Scale 1:500,000

Flight Line

2118 — Fiducial 2120 (Not recovered from film)
Fiducial 2118 (Recovered from film)

Fiducial 2110 (Not recovered from film)

2104 — Fiducial 2104 (Recovered from film)

301 Line number and Flight direction

426128

LEGEND

Contours in ohm — m at ten intervals per decade

1000
800
600
500
400
300
250
200
150
125
100

Note

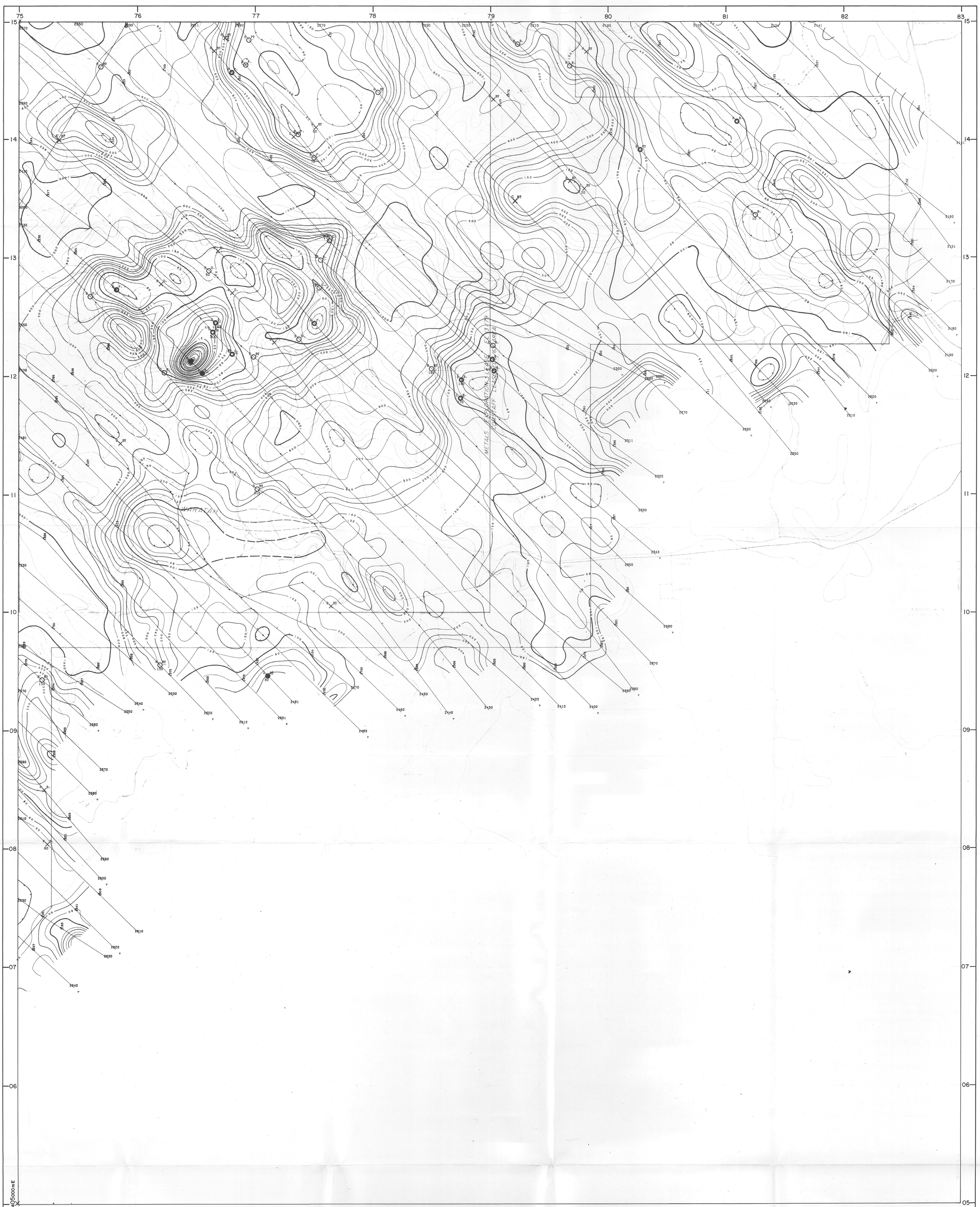
The numbers face in the direction of increasing value.

031

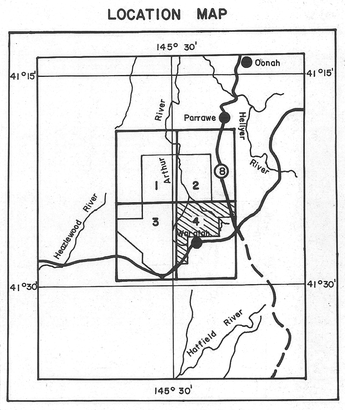
84-2129 4/5

JOB	DATE	DRAWN BY	CHECKED BY
365	AUGUST, 1983	GD.	B.O.

032



LOCATION MAP



Scale 1:500,000

DIGHEM^{III} SURVEY

ARTHUR RIVER AREA, TASMANIA

RESISTIVITY

FOR

COMSTAFF PTY. LTD.

5 cm

Scale 1:10,000

1/2 0 1/2 1 Kilometres

1/4 0 1/4 1/2 Miles

SHEET 4

REGISTERED PROFESSIONAL ENGINEER
D. C. FRASER
PROVINCE OF ONTARIO

Flight Line

2118 Fiducial 2120 (Not recovered from film)
Fiducial 2118 (Recovered from film)
Fiducial 2110 (Not recovered from film)
2104 Fiducial 2104 (Recovered from film)
301 Line number and Flight direction

426129

LEGEND

Contours in ohm — m at ten intervals per decade

1000
800
600
500
400
300
250
200
150
125
100

Note

The numbers face in the direction of increasing value.

032

84-2129 4/5

JOB	DATE	DRAWN BY	CHECKED BY
365	AUGUST, 83	pd.	J.J.

021

DIGHEM III SURVEY

ARTHUR RIVER AREA, TASMANIA

ELECTROMAGNETIC ANOMALIES

FOR

COMSTAFF PTY. LTD.

5 cm

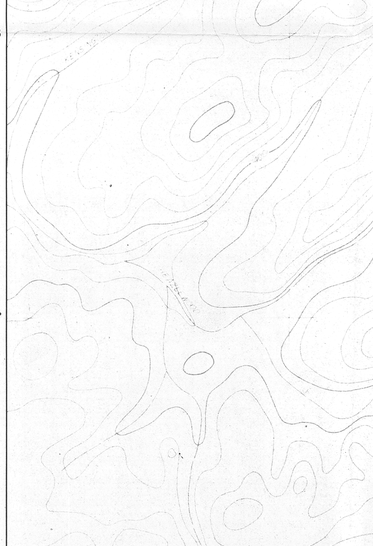
Scale 1:10,000

1/2 0 1/2 1 Kilometres

1/4 0 1/4 1/2 Miles

SHEET 1

LOCATION MAP



Scale 1:500,000

REGISTERED PROFESSIONAL ENGINEER
D. C. FRASER
PROVINCE OF ONTARIO

Flight Line

2118 — Fiducial 2120 (Not recovered from film)
Fiducial 2118 (Recovered from film)
Fiducial 2110 (Not recovered from film)
2104 — Fiducial 2104 (Recovered from film)
301 Line number and Flight direction

426130

ANOMALY GRADE	EM GRADE SYMBOL	CONDUCTANCE RANGE (MHOS)	
6		> 99	DIGHEM anomalies are divided into six grades of conductivity — thickness product. This product in mhos is the reciprocal of resistance in ohms. The mho is a measure of conductance, and is a geologic parameter.
5		50—99	
4		20—49	
3		10—19	
2		5— 9	
1		< 5	
—		Indeterminate	

Identifier name. Depth is greater than: - 15 m, ¦ 30 m, ¦ 45 m, ¦ 60 m. Interpretive symbol. Inphase and Quadrature of Coaxial Coil is greater than: - 5 ppm, – 10 ppm, — 15 ppm, ... 20 ppm.

Refer to list of anomalies in survey report for the actual ppm values for all coils, and for the conductance and depth of conductors.

The interpretation is shown by the interpretive symbol (see legend below). The left letter is the anomaly **identifier.** The horizontal rows of **dots** indicate anomaly amplitude on the flight record, and the vertical column gives the estimated depth. This 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 conductive overburden effects.

SYMBOL	GEOPHYSICAL MODEL	BEDROCK CONDUCTOR	or	NON-BEDROCK CONDUCTOR	MOST LIKELY
D_s	steeply-dipping thin dike	steeply-dipping planar conductor	or	metal culture which contacts conductive ground	discrete bedrock conductor
T_s	thick dike	thick conductor, with thickness greater than 10 m.	or		
B_s	indeterminate	bedrock conductor	or		
P_s	conductor to one side of flight line	flight line passed off the end or side of conductor	or	flight line passed off the end or side of culture	
E_s	indeterminate	discrete conductor close to a much stronger conductor	or	edge of large conductive zone	
H_s	half space (close to surface)	conductive rock unit	or	deep conductive weathering or thick conductive cover	conductive rock or cover
G_s	buried half space	conductive rock unit, "buried" under non-conductive cover or under a dense forest canopy	or	(deep) conductive weathering or thick conductive cover, "buried" under a dense forest canopy	
S_s	horizontal sheet	weak bedrock conductor masked by conductive cover	or	thin conductive cover or, occasionally, culture which contacts conductive cover	conductive cover
R_s	horizontal ribbon	flatly-dipping narrow conductor (not computer picked)	or	narrow surface conductor, e.g., stream sediments, or large fenced area	culture
C_s	sphere, horizontal disk	steeply-plunging compact conductor	or	metal roof or fenced yard	
L_s	line	bedrock conductor masked by culture	or	fence, pipeline, power line	
a?	"a" is one of the above symbols; "a?" means that the correct identification of the geophysical model is only a reasonable possibility, rather than being a reasonable probability				
?	probable aerodynamic noise, meaning that conductive material may, in fact, not exist				

dip direction
magnetic correlation in nT
conductor axis
flight line

021

84-2129 4/5

JOB	DATE	DRAWN BY	CHECKED BY
365	AUGUST, 83	DO	B.D.

022

DIGHEM III SURVEY

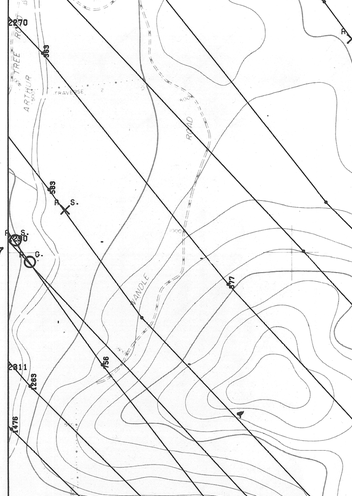
ARTHUR RIVER AREA, TASMANIA

ELECTROMAGNETIC ANOMALIES

FOR

COMSTAFF PTY. LTD.

LOCATION MAP



Scale 1:500,000



REGISTERED PROFESSIONAL ENGINEER
D. C. FRASER
PROVINCE OF ONTARIO

Flight Line



5 cm

Scale 1:10,000

1/2 0 1/2 1 Kilometres

1/4 0 1/4 1/2 Miles

SHEET 2

426131

ANOMALY GRADE	EM GRADE SYMBOL	CONDUCTANCE RANGE (MHOS)
6	●	> 99
5	✹	50—99
4	●	20—49
3	◉	10—19
2	○	5— 9
1	○	< 5
—	×	Indeterminate

DIGHEM anomalies are divided into six grades of conductivity — thickness product. This product in mhos is the reciprocal of resistance in ohms. The mho is a measure of conductance, and is a geologic parameter.

Identifier flame: Depth of greater than — 15 m, 30 m, 45 m, 60 m

Interpretive symbol: Inphase and Quadrature of Coaxial Coil is greater than — 5 ppm, 10 ppm, 15 ppm, 20 ppm

Refer to list of anomalies in survey report for the actual ppm values for all coils, and for the conductance and depth of conductors.

The interpretation is shown by the interpretive symbol (see legend below). The left letter is the anomaly **identifier.** The horizontal rows of **dots** indicate anomaly amplitude on the flight record, and the vertical column gives the estimated depth. This 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 conductive overburden effects.

SYMBOL	GEOPHYSICAL MODEL	BEDROCK CONDUCTOR	or	NON-BEDROCK CONDUCTOR	MOST LIKELY
D_x	steeply-dipping thin dike	steeply-dipping planar conductor	or	metal culture which contacts conductive ground	discrete bedrock conductor
T_x	thick dike	thick conductor, with thickness greater than 10 m.	or		
B_x	indeterminate	bedrock conductor	or		
P_x	conductor to one side of flight line	flight line passed off the end or side of conductor	or	flight line passed off the end or side of culture	
E_x	indeterminate	discrete conductor close to a much stronger conductor	or	edge of large conductive zone	$\frac{d}{c}$ or $\frac{c}{d}$
H_x	half space (close to surface)	conductive rock unit	or	deep conductive weathering or thick conductive cover	conductive rock or cover
O_x	buried half space	conductive rock unit, "buried" under a conductive cover or under a dense forest canopy	or	deep conductive weathering or thick conductive cover, "buried" under a dense forest canopy	
S_x	horizontal sheet	weak bedrock conductor masked by conductive cover	or	thin conductive cover or, occasionally, culture which contacts conductive cover	conductive cover
R_x	horizontal ribbon	flatly-dipping narrow conductor (not computer picked)	or	narrow surface conductor, e.g., stream sediments, or large fenced area	culture
C_x	sphere, horizontal disk	steeply-plunging compact conductor	or	metal roof or fenced yard	
L_x	line	bedrock conductor masked by culture	or	fence, pipeline, power line	
a?	"a" is one of the above symbols; "a?" means that the correct identification of the geophysical model is only a reasonable possibility, rather than being a reasonable probability				
?	probable aerodynamic noise, meaning that conductive material may, in fact, not exist				

dip direction

magnetic correlation in nT

conductor axis

flight line

022

JOB	DATE	DRAWN BY	CHECKED BY
365	AUGUST, 83	GO	J.D.

84-2129 4/5

024

DIGHEM^{III} SURVEY

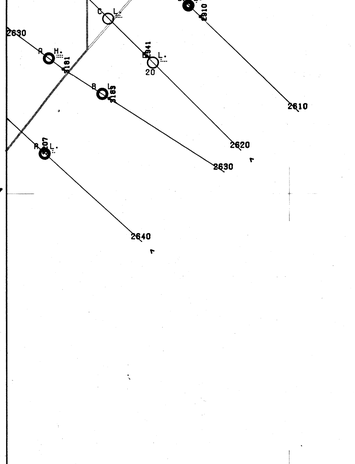
ARTHUR RIVER AREA, TASMANIA

ELECTROMAGNETIC ANOMALIES

FOR

COMSTAFF PTY. LTD.

LOCATION MAP



Scale 1:500,000

REGISTERED PROFESSIONAL ENGINEER
D. C. FRASER
PROVINCE OF ONTARIO

5 cm

Scale 1:10,000

1/2 0 1/2 1 Kilometres

1/4 0 1/4 1/2 Miles

SHEET 4

Flight Line

2118 — Fiducial 2120 (Not recovered from film)
Fiducial 2118 (Recovered from film)

Fiducial 2110 (Not recovered from film)

2104 — Fiducial 2104 (Recovered from film)

301 A — Line number and Flight direction

426132

ANOMALY GRADE	EM GRADE SYMBOL	CONDUCTANCE RANGE (MHOS)
6	●	> 99
5	✸	50—99
4	●	20—49
3	◎	10—19
2	○	5— 9
1	○	< 5
—	×	Indeterminate

DIGHEM anomalies are divided into six grades of conductivity — thickness product. This product in mhos is the reciprocal of resistance in ohms. The mho is a measure of conductance, and is a geologic parameter.

identifier name — Depth is greater than: - 15 m, | 30 m, ‡ 45 m, ‡ 60 m

interpretive symbol

Inphase and Quadrature of Coaxial Coil is greater than: - 5 ppm, -- 10 ppm, --- 15 ppm, ---- 20 ppm

Refer to list of anomalies in survey report for the actual ppm values for all coils, and for the conductance and depth of conductors.

The interpretation is shown by the interpretive symbol (see legend below). The left letter is the anomaly **identifier.** The horizontal rows of **dots** indicate anomaly amplitude on the flight record, and the vertical column gives the estimated depth. This 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 conductive overburden effects.

SYMBOL	GEOPHYSICAL MODEL	BEDROCK CONDUCTOR	or	NON-BEDROCK CONDUCTOR	MOST LIKELY
D_x	steeply-dipping thin dike	steeply-dipping planar conductor	or	metal culture which contacts conductive ground	discrete bedrock conductor
T_x	thick dike	thick conductor, with thickness greater than 10 m.	or		
B_x	indeterminate	bedrock conductor	or		
F_x	conductor to one side of flight line	flight line passed off the end or side of conductor	or	flight line passed off the end or side of culture	
E_x	indeterminate	discrete conductor close to a much stronger conductor	or	edge of large conductive zone	? or ‡
H_x	half space (close to surface)	conductive rock unit	or	deep conductive weathering or thick conductive cover	conductive rock or cover
G_x	buried half space	conductive rock unit, "buried" under non-conductive cover or under a dense forest canopy	or	deep conductive weathering or thick conductive cover, "buried" under a dense forest canopy	
S_x	horizontal sheet	weak bedrock conductor masked by conductive cover	or	thin conductive cover or, occasionally, culture which contacts conductive cover	conductive cover
R_x	horizontal ribbon	flatly-dipping narrow conductor (not computer picked)	or	narrow surface conductor, e.g., stream sediments, or large fenced area	culture
C_x	sphere, horizontal disk	steeply-plunging compact conductor	or	metal roof or fenced yard	
L_x	line	bedrock conductor masked by culture	or	fence, pipeline, power line	
a?	"a" is one of the above symbols; "a?" means that the correct identification of the geophysical model is only a reasonable possibility, rather than being a reasonable probability				
?	probable aerodynamic noise, meaning that conductive material may, in fact, not exist				

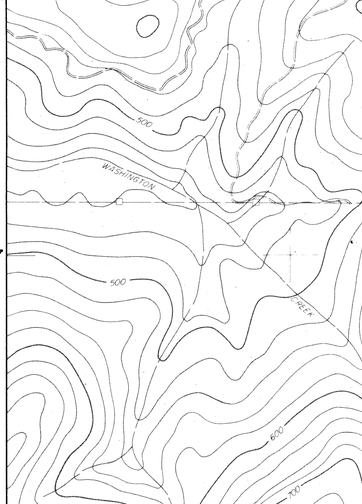
dip direction
magnetic correlation in nT
conductor axis
flight line

024

JOB	DATE	DRAWN BY	CHECKED BY
365	AUGUST, 83	DD.	JB.

84-3129 45

LOCATION MAP



Scale 1:500,000

DIGHEM III SURVEY

ARTHUR RIVER AREA, TASMANIA

ELECTROMAGNETIC ANOMALIES

FOR

COMSTAFF PTY. LTD.

5 cm

Scale 1:10,000

1/2 0 1/2 1 Kilometres

1/4 0 1/4 1/2 Miles

SHEET 3

REGISTERED PROFESSIONAL ENGINEER
D. C. FRASER
PROVINCE OF ONTARIO

426133

Flight Line

2118 — Fiducial 2120 (Not recovered from film); Fiducial 2118 (Recovered from film)

Fiducial 2110 (Not recovered from film)

2104 — Fiducial 2104 (Recovered from film)

301 A — Line number and Flight direction

ANOMALY GRADE	EM GRADE SYMBOL	CONDUCTANCE RANGE (MHOS)
6	●	> 99
5	✱	50—99
4	●	20—49
3	◎	10—19
2	○	5— 9
1	○	< 5
—	×	Indeterminate

DIGHEM anomalies are divided into six grades of conductivity — thickness product. This product in mhos is the reciprocal of resistance in ohms. The mho is a measure of conductance, and is a geologic parameter.

Identifier name — Depth is greater than: 15 m, 30 m, 45 m, 60 m

Interpretive symbol: Inphase and Quadrature of Coaxial Coil is greater than: . 5 ppm, .. 10 ppm, ... 15 ppm, ... 20 ppm

Refer to list of anomalies in survey report for the actual ppm values for all coils, and for the conductance and depth of conductors.

The interpretation is shown by the interpretive symbol (see legend below). The left letter is the anomaly **identifier.** The horizontal rows of **dots** indicate anomaly amplitude on the flight record, and the vertical column gives the estimated depth. This 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 conductive overburden effects.

SYMBOL	GEOPHYSICAL MODEL	BEDROCK CONDUCTOR	or	NON-BEDROCK CONDUCTOR	MOST LIKELY
D_x	steeply-dipping thin dike	steeply-dipping planar conductor	or	metal culture which contacts conductive ground	discrete bedrock conductor
T_x	thick dike	thick conductor, with thickness greater than 10 m.	or		
B_x	indeterminate	bedrock conductor	or		
F_x	conductor to one side of flight line	flight line passed off the end or side of conductor	or	flight line passed off the end or side of culture	
E_x	indeterminate	discrete conductor close to a much stronger conductor	or	edge of large conductive zone	½ or ?
H_x	half space (close to surface)	conductive rock unit	or	deep conductive weathering or thick conductive cover	conductive rock or cover
G_x	buried half space	conductive rock unit, "buried" under non-conductive cover or under a dense forest canopy	or	deep conductive weathering or thick conductive cover, "buried" under a dense forest canopy	
S_x	horizontal sheet	weak bedrock conductor masked by conductive cover	or	thin conductive cover or, occasionally, culture which contacts conductive cover	conductive cover
R_x	horizontal ribbon	flatly-dipping narrow conductor (not computer picked)	or	narrow surface conductor, e.g., stream sediments, or large fenced area	culture
C_x	sphere, horizontal disk	steeply-plunging compact conductor	or	metal roof or fenced yard	
L_x	line	bedrock conductor masked by culture	or	fence, pipeline, power line	
a?	"a" is one of the above symbols; "a?" means that the correct identification of the geophysical model is only a reasonable possibility, rather than being a reasonable probability.				
?	probable aerodynamic noise, meaning that conductive material may, in fact, not exist				

dip direction

magnetic correlation in nT

conductor axis

flight line

023

81-2129 4/5

JOB	DATE	DRAWN BY	CHECKED BY
365	AUGUST, 1983	DD.	J.D.

426134

PROJECT NAME:

DIGHEM III SURVEY OF THE EAST CHESTER, NORTH PIEMAN AND ARTHUR RIVER AREAS, TASMANIA

TITLE:

VOLUME 5 OF 5 - MAPS, ARTHUR RIVER

AREA NAME/S, STATE 1:250,000 SHEET NO/S & COORDINATES:

COMMODITY/IES:

TEXT PAGES NO:

PLAN NOS:

TABLE NOS:

APPENDICES:

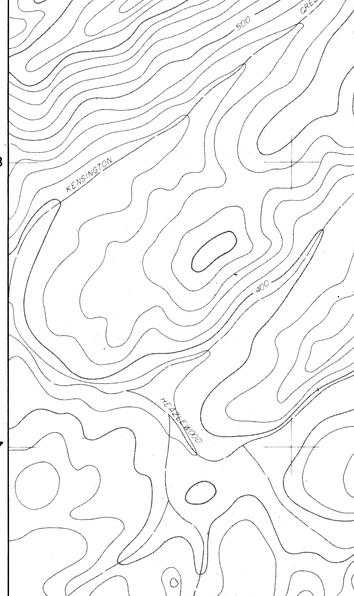
AUTHOR/S:

DATE:

AUSTRALIAN ANGLO AMERICAN LIMITED

Incorporated in the State of Victoria

LOCATION MAP



Scale 1:500,000

DIGHEM III SURVEY

ARTHUR RIVER AREA, TASMANIA

PROBABLE BEDROCK CONDUCTORS

FOR

COMSTAFF PTY. LTD.

5 cm

Scale 1:10,000

1/2 0 1/2 1 Kilometres

1/4 0 1/4 1/2 Miles

SHEET 1

REGISTERED PROFESSIONAL ENGINEER
D. C. FRASER
PROVINCE OF ONTARIO

Flight Line

- Fiducial 2120 (Not recovered from film)
- Fiducial 2118 (Recovered from film)
- Fiducial 2110 (Not recovered from film)
- Fiducial 2104 (Recovered from film)

Line number and Flight direction

426135

ANOMALY GRADE	EM GRADE SYMBOL	CONDUCTANCE RANGE (MHOS)
6	●	> 99
5	✱	50—99
4	●	20—49
3	◎	10—19
2	○	5— 9
1	○	< 5
—	×	Indeterminate

DIGHEM anomalies are divided into six grades of conductivity — thickness product. This product in mhos is the reciprocal of resistance in ohms. The mho is a measure of conductance, and is a geologic parameter.

identifier name — interpretive symbol — Depth is greater than: - 15 m, : 30 m, ⋮ 45 m, ⋮ 60 m — Inphase and Quadrature of Coaxial Coil is greater than: - 5 ppm, -- 10 ppm, --- 15 ppm, ---- 20 ppm

Refer to list of anomalies in survey report for the actual ppm values for all coils, and for the conductance and depth of conductors.

The interpretation is shown by the interpretive symbol (see legend below). The left letter is the anomaly **identifier**. The horizontal rows of **dots** indicate anomaly amplitude on the flight record, and the vertical column gives the estimated depth. This 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 conductive overburden effects.

SYMBOL	GEOPHYSICAL MODEL	BEDROCK CONDUCTOR	or	NON-BEDROCK CONDUCTOR	MOST LIKELY
D_x	steeply-dipping thin dike	steeply-dipping planar conductor	or	metal culture which contacts conductive ground	discrete bedrock conductor
T_x	thick dike	thick conductor, with thickness greater than 30 m.	or		
B_x	indeterminate	bedrock conductor	or		
P_x	conductor to one side of flight line	flight line passed off the end or side of conductor	or	flight line passed off the end or side of culture	
E_x	indeterminate	discrete conductor close to a much stronger conductor	or	edge of large conductive zone	? or ??
H_x	half space (close to surface)	conductive rock unit	or	deep conductive weathering or thick conductive cover	conductive rock or cover
G_x	buried half space	conductive rock unit, "buried" under non-conductive cover or under a dense forest canopy	or	deep conductive weathering or thick conductive cover, "buried" under a dense forest canopy	
S_x	horizontal sheet	weak bedrock conductor masked by conductive cover	or	thin conductive cover or, occasionally, culture which contacts conductive cover	conductive cover
R_x	horizontal ribbon	flatly-dipping narrow conductor (not computer picked)	or	narrow surface conductor, e.g., stream sediments; or large fenced area	culture
C_x	sphere, horizontal disk	steeply-plunging compact conductor	or	metal roof or fenced yard	
L_x	line	bedrock conductor masked by culture	or	fence, pipeline, power line	
$x^?$	"x" is one of the above symbols; "?" means that the correct identification of the geophysical model is only a reasonable possibility, rather than being a reasonable probability				
?	probable aerodynamic noise, meaning that conductive material may, in fact, not exist				

dip direction
magnetic correlation in nT
conductor axis
flight line

025

84-2129 5/5

JOB	DATE	DRAWN BY	CHECKED BY
365	AUGUST, 83	DO	J.D.

026

DIGHEM III SURVEY

ARTHUR RIVER AREA, TASMANIA

PROBABLE BEDROCK CONDUCTORS

FOR

COMSTAFF PTY. LTD.

5 cm

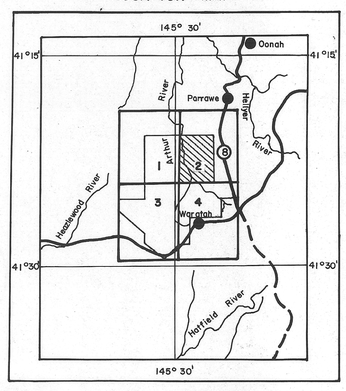
Scale 1:10,000

1/2 0 1/2 1 Kilometres

1/4 0 1/4 1/2 Miles

SHEET 2

LOCATION MAP



Scale 1:500,000

REGISTERED PROFESSIONAL ENGINEER
D. C. FRASER
PROVINCE OF ONTARIO

Flight Line

Fiducial 2120 (Not recovered from film)
Fiducial 2118 (Recovered from film)
Fiducial 2110 (Not recovered from film)
Fiducial 2104 (Recovered from film)

Line number and Flight direction

426136

ANOMALY GRADE	EM GRADE SYMBOL	CONDUCTANCE RANGE (MHOS)
6	●	> 99
5	✱	50—99
4	●	20—49
3	◎	10—19
2	○	5— 9
1	○	< 5
—	×	Indeterminate

DIGHEM anomalies are divided into six grades of conductivity — thickness product. This product in mhos is the reciprocal of resistance in ohms. The mho is a measure of conductance, and is a geologic parameter.

identifier (letter) — Depth is greater than: · 15 m, ↑ 30 m, ⋮ 45 m, ⋮ 60 m

Interpretive symbol — Inphase and Quadrature of Coaxial Coil is greater than: , 5 ppm; -- 10 ppm; --- 15 ppm; ---- 20 ppm

Refer to list of anomalies in survey report for the actual ppm values for all coils, and for the conductance and depth of conductors.

The interpretation is shown by the interpretive symbol (see legend below). The left letter is the anomaly **identifier**. The horizontal rows of **dots** indicate anomaly amplitude on the flight record, and the vertical column gives the estimated depth. This 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 conductive overburden effects.

SYMBOL	GEOPHYSICAL MODEL	BEDROCK CONDUCTOR	or	NON-BEDROCK CONDUCTOR	MOST LIKELY
D_x	steeply-dipping thin dike	steeply-dipping planar conductor	or	metal culture which contacts conductive ground	discrete bedrock conductor
T_x	thick dike	thick conductor, with thickness greater than 10 m.	or		
B_x	indeterminate	bedrock conductor	or		
F_x	conductor to one side of flight line	flight line passed off the end or side of conductor	or	flight line passed off the end or side of culture	
E_x	indeterminate	discrete conductor close to a much stronger conductor	or	edge of large conductive zone	?
H_x	half space (close to surface)	conductive rock unit	or	deep conductive weathering or thick conductive cover	conductive rock or cover
G_x	buried half space	conductive rock unit, "buried" under non-conductive cover or under a dense forest canopy	or	deep conductive weathering or thick conductive cover, "buried" under a dense forest canopy	
S_x	horizontal sheet	weak bedrock conductor masked by conductive cover	or	thin conductive cover or, occasionally, culture which contacts conductive cover	conductive cover
R_x	horizontal ribbon	flatly-dipping narrow conductor (not computer picked)	or	narrow surface conductor, e.g., stream sediments, or large fenced area	culture
C_x	sphere, horizontal disk	steeply-plunging compact conductor	or	metal roof or fenced yard	
L_x	line	bedrock conductor masked by culture	or	fence, pipeline, power line	
$x?$		"x" is one of the above symbols; "x?" means that the correct identification of the geophysical model is only a reasonable possibility, rather than being a reasonable probability			
?		probable aerodynamic noise, meaning that conductive material may, in fact, not exist			

dip direction
magnetic correlation in nT
conductor axis
flight line

026

8L-2129 5/5

JOB	DATE	DRAWN BY	CHECKED BY
365	AUGUST, 83	BD	2.D.

027

DIGHEM^{III} SURVEY

ARTHUR RIVER AREA, TASMANIA

PROBABLE BEDROCK CONDUCTORS

FOR COMSTAFF PTY. LTD.

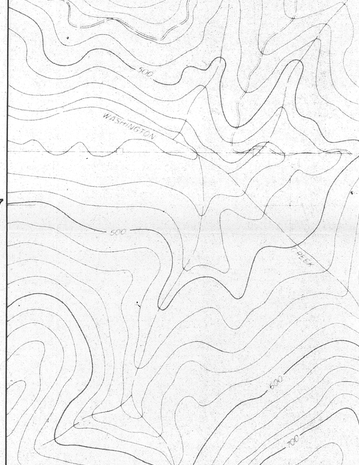
Scale 1:10,000

1/2 0 1/2 1 Kilometres

1/4 0 1/4 1/2 Miles

SHEET 3

LOCATION MAP



Scale 1:500,000

REGISTERED PROFESSIONAL ENGINEER
D. C. FRASER
PROVINCE OF ONTARIO

Flight Line

Fiducial 2120 (Not recovered from film)
2118 Fiducial 2118 (Recovered from film)
Fiducial 2110 (Not recovered from film)
2104 Fiducial 2104 (Recovered from film)
301 Line number and Flight direction.

ANOMALY GRADE	EM GRADE SYMBOL	CONDUCTANCE RANGE (MHOS)
6	●	> 99
5	●	50—99
4	●	20—49
3	◉	10—19
2	○	5— 9
1	○	< 5
—	×	Indeterminate

DIGHEM anomalies are divided into six grades of conductivity — thickness product. This product in mhos is the reciprocal of resistance in ohms. The mho is a measure of conductance, and is a geologic parameter.

Identifier flare: Depth is greater than 15 m / 30 m / 45 m / 60 m. Interpretive symbol. Inphase and Quadrature of Coaxial Coil is greater than 5 ppm / 10 ppm / 15 ppm / 20 ppm.

The interpretation is shown by the interpretive symbol (see legend below). The left letter is the anomaly identifier. The horizontal rows of dots indicate anomaly amplitude on the flight record, and the vertical column gives the estimated depth. This 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 conductive overburden effects.

Refer to list of anomalies in survey report for the actual ppm values for all coils, and for the conductance and depth of conductors.

SYMBOL	GEOPHYSICAL MODEL	BEDROCK CONDUCTOR	or	NON-BEDROCK CONDUCTOR	MOST LIKELY
D_x	steeply-dipping thin dike	steeply-dipping planar conductor	or	metal culture which contacts conductive ground	discrete bedrock conductor
T_x	thick dike	thick conductor, with thickness greater than 10 m.	or		
B_x	indeterminate	bedrock conductor	or		
P_x	conductor to one side of flight line	flight line passed off the end or side of conductor	or	flight line passed off the end or side of culture	
F_x	indeterminate	discrete conductor close to a much stronger conductor	or	edge of large conductive zone	?
H_x	half space (close to surface)	conductive rock unit	or	deep conductive weathering or thick conductive cover	conductive rock or cover
G_x	buried half space	conductive rock unit, "buried" under non-conductive cover or under a dense forest canopy	or	deep conductive weathering or thick conductive cover, "buried" under a dense forest canopy	
S_x	horizontal sheet	weak bedrock conductor masked by conductive cover	or	thin conductive cover or, occasionally, culture which contacts conductive cover	conductive cover
R_x	horizontal ribbon	flatly-dipping narrow conductor (not computer picked)	or	narrow surface conductor, e.g., stream sediments; or large fenced area	
C_x	sphere, horizontal disk	steeply-plunging compact conductor	or	metal roof or fenced yard	culture
L_x	line	bedrock conductor masked by culture	or	fence, pipeline, power line	
x?	"x" is one of the above symbols; "x?" means that the correct identification of the geophysical model is only a reasonable possibility, rather than being a reasonable probability.				
?	probable aerodynamic noise, meaning that conductive material may, in fact, not exist				

dip direction
magnetic correlation in nT
conductor axis
flight line

027

426137

RL-3129 5/5

JOB	DATE	DRAWN BY	CHECKED BY
365	AUGUST, 1983	BD	D

028

DIGHEM III SURVEY

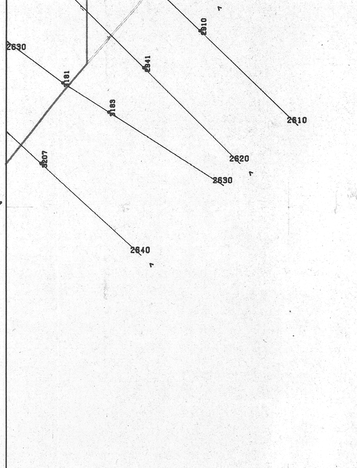
ARTHUR RIVER AREA, TASMANIA

PROBABLE BEDROCK CONDUCTORS

FOR

COMSTAFF PTY. LTD.

LOCATION MAP



Scale 1:500,000

REGISTERED PROFESSIONAL ENGINEER
D. C. FRASER
PROVINCE OF ONTARIO

5 cm

Scale 1:10,000

1/2 0 1/2 1 Kilometres

1/4 0 1/4 1/2 Miles

SHEET 4

Flight Line

- Fiducial 2120 (Not recovered from film)
- Fiducial 2118 (Recovered from film)
- Fiducial 2110 (Not recovered from film)
- Fiducial 2104 (Recovered from film)

2118 / 2104

301 ∧ Line number and Flight direction

426138

ANOMALY GRADE	EM GRADE SYMBOL	CONDUCTANCE RANGE (MHOS)
6	●	> 99
5	✹	50—99
4	●	20—49
3	◉	10—19
2	○	5— 9
1	○	< 5
—	×	Indeterminate

DIGHEM anomalies are divided into six grades of conductivity — thickness product. This product in mhos is the reciprocal of resistance in ohms. The mho is a measure of conductance, and is a geologic parameter.

Identifier name → Depth is greater than: · 15 m, : 30 m, | 45 m, ‖ 60 m

Interpretive symbol → Inphase and Quadrature of Coaxial Coil is greater than: · 5 ppm, .. 10 ppm, ... 15 ppm, ... 20 ppm

Refer to list of anomalies in survey report for the actual ppm values for all coils, and for the conductance and depth of conductors.

The interpretation is shown by the interpretive symbol (see legend below). The left letter is the anomaly **identifier.** The horizontal rows of **dots** indicate anomaly amplitude on the flight record, and the vertical column gives the estimated depth. This 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 conductive overburden effects.

SYMBOL	GEOPHYSICAL MODEL	BEDROCK CONDUCTOR	or	NON-BEDROCK CONDUCTOR	MOST LIKELY
D_x	steeply-dipping thin dike	steeply-dipping planar conductor	or	metal culture which contacts conductive ground	discrete bedrock conductor
T_x	thick dike	thick conductor, with thickness greater than 10 m.	or		
B_x	indeterminate	bedrock conductor	or		
P_x	conductor to one side of flight line	flight line passed off the end or side of conductor	or	flight line passed off the end or side of culture	
E_x	indeterminate	discrete conductor close to a much stronger conductor	or	edge of large conductive zone	?
H_x	half space (close to surface)	conductive rock unit	or	deep conductive weathering or thick conductive cover	conductive rock cover
G_x	buried half space	conductive rock unit, "buried" under non-conductive cover or under a dense forest canopy	or	deep conductive weathering or thick conductive cover, "buried" under a dense forest canopy	
S_x	horizontal sheet	weak bedrock conductor masked by conductive cover	or	thin conductive cover or, occasionally, culture which contacts conductive cover	conductive cover
R_x	horizontal ribbon	steeply-dipping narrow conductor (not computer picked)	or	narrow surface conductor, e.g., stream sediments; or large fenced area	culture
C_x	sphere, horizontal disk	steeply-plunging compact conductor	or	metal roof or fenced yard	
L_x	line	bedrock conductor masked by surface	or	fence, pipeline, power line	
a?	"a" is one of the above symbols. "a?" means that the correct identification of the geophysical model is only a reasonable possibility, rather than being a reasonable probability				
?	probable aerodynamic noise, meaning that conductive material may, in fact, not exist				

dip direction

magnetic correlation in nT

conductor axis

flight line

028

84-2179 5/5

JOB	DATE	DRAWN BY	CHECKED BY
365	AUGUST, 83	BD	J.D.

033

DIGHEM^{III} SURVEY

ARTHUR RIVER AREA, TASMANIA

MAGNETICS (Total Field-IGRF + 62400) nT

FOR

COMSTAFF PTY. LTD.

5 cm

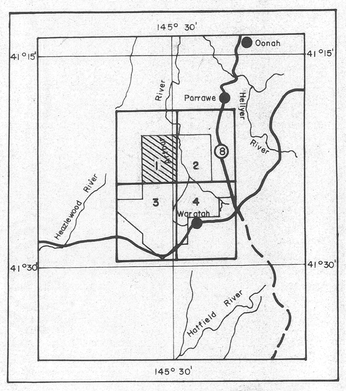
Scale 1:10,000

1/2 0 1/2 1 Kilometres

1/4 0 1/4 1/2 Miles

SHEET 1

LOCATION MAP



Scale 1:500,000

Flight Line

- Fiducial 2120 (Not recovered from film)
- 2118 Fiducial 2118 (Recovered from film)
- Fiducial 2110 (Not recovered from film)
- 2104 Fiducial 2104 (Recovered from film)

301 Line number and Flight direction

ISOMAGNETIC LINES
(total field)

1000	1 000 nT
100	100 nT
20	20 nT
10	10 nT
	magnetic depression

Magnetic inclination within the survey area: 72°

426139

033

JOB	DATE	DRAWN BY	CHECKED BY
365	AUGUST, 83	DD	R.B.

84-229 5/5

034

DIGHEM III SURVEY

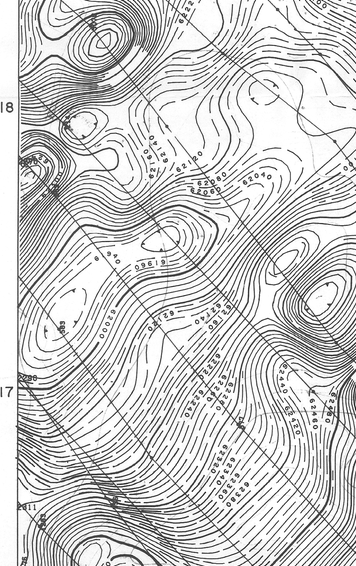
ARTHUR RIVER AREA, TASMANIA

MAGNETICS (Total Field-IGRF + 62400) nT

FOR

COMSTAFF PTY. LTD.

LOCATION MAP



Scale 1:500,000

REGISTERED PROFESSIONAL ENGINEER
D. C. FRASER
PROVINCE OF ONTARIO

5 cm

Scale 1:10,000

1/2 0 1/2 1 Kilometres

1/4 0 1/4 1/2 Miles

SHEET 2

Flight Line

- Fiducial 2120 (Not recovered from film)
- Fiducial 2118 (Recovered from film)
- Fiducial 2110 (Not recovered from film)
- Fiducial 2104 (Recovered from film)

2118 2104 301 — Line number and Flight direction

426140

ISOMAGNETIC LINES
(total field)

1000	1 000 nT
100	100 nT
20	20 nT
10	10 nT
	magnetic depression

Magnetic Inclination within the survey area: 72°

034

JOB	DATE	DRAWN BY	CHECKED BY
365	AUGUST, 83		

BH-2129 5/5

035

DIGHEM III SURVEY

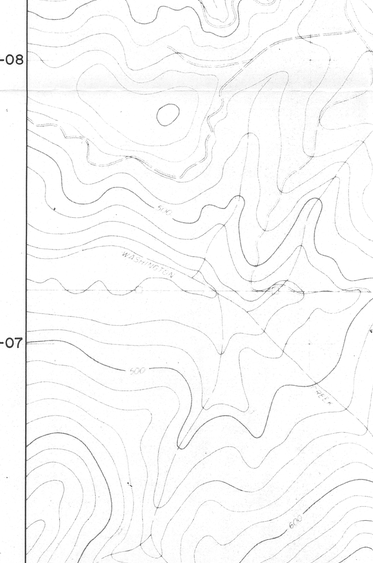
ARTHUR RIVER AREA, TASMANIA

MAGNETICS (Total Field-IGRF +62400) nT

FOR

COMSTAFF PTY. LTD.

LOCATION MAP



Scale 1:500,000

REGISTERED PROFESSIONAL ENGINEER
D. C. FRASER
PROVINCE OF ONTARIO

5 cm

Scale 1:10,000

1/2 0 1/2 1 Kilometres

1/4 0 1/4 1/2 Miles

SHEET 3

Flight Line

- Fiducial 2120 (Not recovered from film)
- Fiducial 2118 (Recovered from film)
- Fiducial 2110 (Not recovered from film)
- Fiducial 2104 (Recovered from film)

2118 2104

301 A — Line number and Flight direction

426111

ISOMAGNETIC LINES
(total field)

- 1000 — 1 000 nT
- 100 — 100 nT
- 20 — 20 nT
- 10 nT
- magnetic depression

Magnetic inclination within the survey area: 72°

035

84-2129 5/5

JOB	DATE	DRAWN BY	CHECKED BY
365	AUGUST, 1983	DD.	B.B.

036

DIGHEM^{III} SURVEY

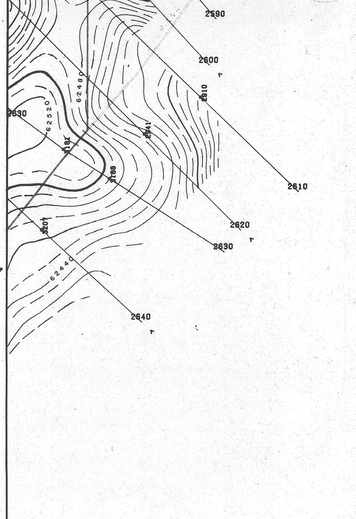
ARTHUR RIVER AREA, TASMANIA

MAGNETICS (Total Field-IGRF + 62400) nT

FOR

COMSTAFF PTY. LTD.

LOCATION MAP



Scale 1:500,000

REGISTERED PROFESSIONAL ENGINEER
D. C. FRASER
PROVINCE OF ONTARIO

5 cm

Scale 1:10,000

1/2 0 1/2 1 Kilometres

1/4 0 1/4 1/2 Miles

SHEET 4

Flight Line

- Fiducial 2120 (Not recovered from film)
- Fiducial 2118 (Recovered from film)
- Fiducial 2110 (Not recovered from film)
- Fiducial 2104 (Recovered from film)

2118 / 2104 / 301 A — Line number and Flight direction

426142

ISOMAGNETIC LINES (total field)

1000	1 000 nT
100	100 nT
20	20 nT
	10 nT
	magnetic depression

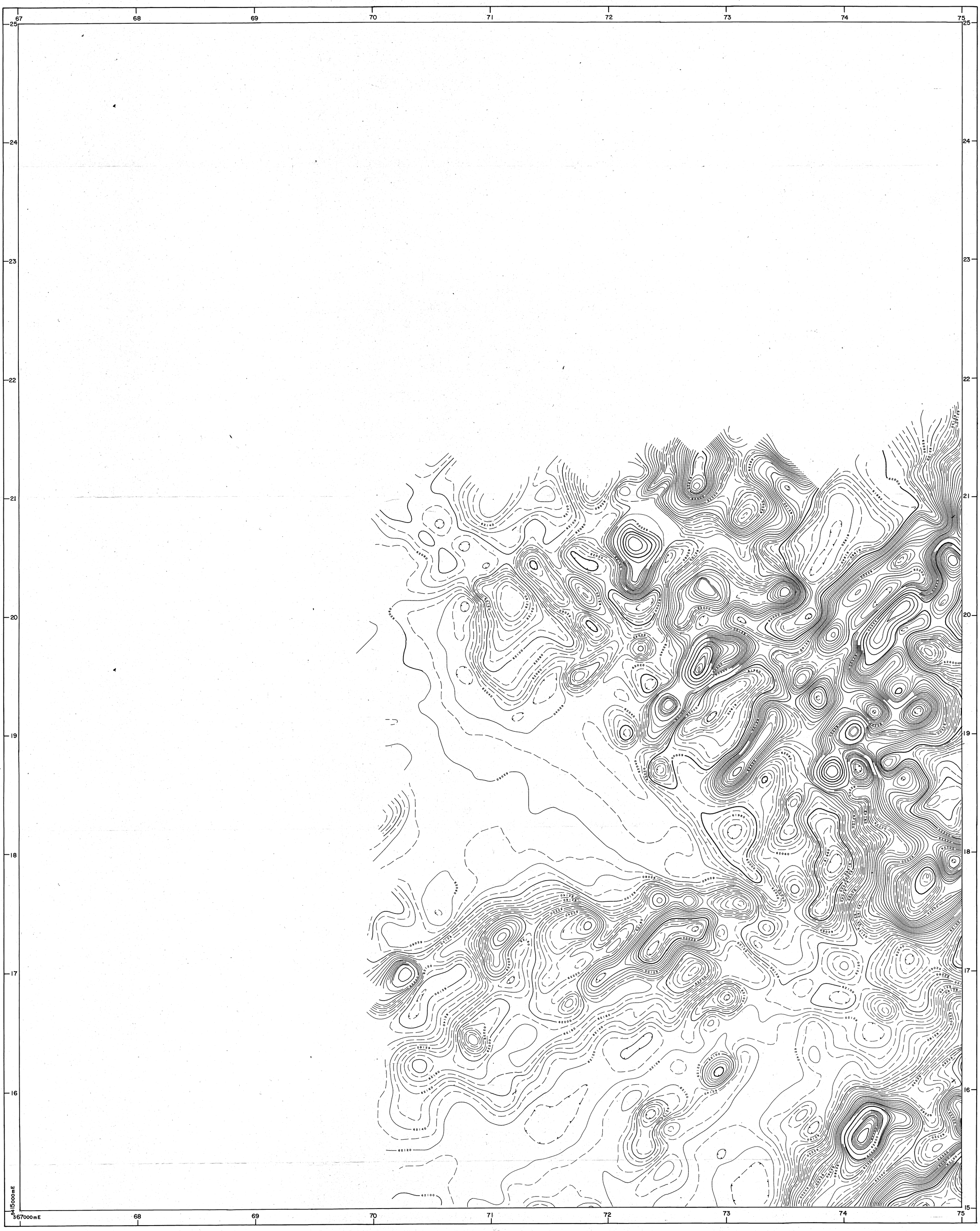
Magnetic inclination within the survey area: 72°

036

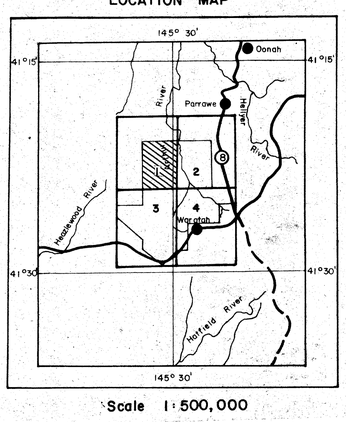
JOB	DATE	DRAWN BY	CHECKED BY
365	AUGUST, 83	DD	B.D.

BL-2129 5/5

037



LOCATION MAP



Scale 1:500,000

DIGHEM III SURVEY

ARTHUR RIVER AREA, TASMANIA

MAGNETICS (Total Field-IGRF + 62400) nT

FOR

COMSTAFF PTY. LTD.

5 cm

Scale 1:10,000

1/2 0 1/2 1 Kilometres

1/4 0 1/4 1/2 Miles

REGISTERED PROFESSIONAL ENGINEER
D.C. FRASER
PROVINCE OF ONTARIO

SHEET 1

Flight Line

2118 — Fiducial 2120 (Not recovered from film)
Fiducial 2118 (Recovered from film)

Fiducial 2110 (Not recovered from film)

2104 — Fiducial 2104 (Recovered from film)

301 A — Line number and Flight direction

426143

ISOMAGNETIC LINES
(total field)

1000 — 1 000 nT
100 — 100 nT
20 — 20 nT
10 nT
magnetic depression

Magnetic Inclination within the survey area: 72°

037

84-2129 5/5

JOB	DATE	DRAWN BY	CHECKED BY
365	AUGUST, 83	DD	BD

038

DIGHEM^{III} SURVEY

ARTHUR RIVER AREA, TASMANIA

MAGNETICS (Total Field-IGRF + 62400) nT

FOR

COMSTAFF PTY. LTD.

LOCATION MAP



Scale 1:500,000

5 cm

Scale 1:10,000

1/2 0 1/2 1 Kilometres

1/4 0 1/4 1/2 Miles

Flight Line

21118 — Fiducial 2120 (Not recovered from film)
Fiducial 2118 (Recovered from film)
Fiducial 2110 (Not recovered from film)
21104 — Fiducial 2104 (Recovered from film)
3801 ↓A — Line number and Flight direction

ISOMAGNETIC LINES (total field)

1000 — 1 000 nT
100 — 100 nT
20 — 20 nT
10 nT
magnetic depression

Magnetic inclination within the survey area: 72°

REGISTERED PROFESSIONAL ENGINEER D. C. FRASER PROVINCE OF ONTARIO

426144

038

84-2129 5/5

JOB	DATE	DRAWN BY	CHECKED BY
365	AUGUST, 83	BD	D.C.F.

SHEET 2

039

DIGHEM^{III} SURVEY

ARTHUR RIVER AREA, TASMANIA

MAGNETICS (Total Field-IGRF + 62400) nT

FOR

COMSTAFF PTY. LTD.

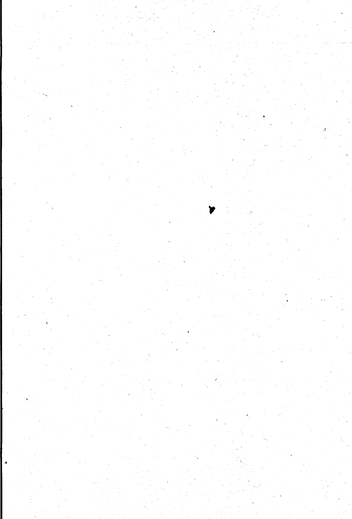
Scale 1:10,000

1/2 0 1/2 1 Kilometres

1/4 0 1/4 1/2 Miles

SHEET 3

LOCATION MAP



Scale 1:500,000

Flight Line

Fiducial 2120 (Not recovered from film)

Fiducial 2118 (Recovered from film)

Fiducial 2110 (Not recovered from film)

Fiducial 2104 (Recovered from film)

Line number and Flight direction

426145

ISOMAGNETIC LINES (total field)

1000 1 000 nT

100 100 nT

20 20 nT

10 10 nT

magnetic depression

Magnetic inclination within the survey area: 72°

039

84-2129

JOB	DATE	DRAWN BY	CHECKED BY
365	AUGUST, 1983	BD.	B.B.

040

DIGHEM III SURVEY

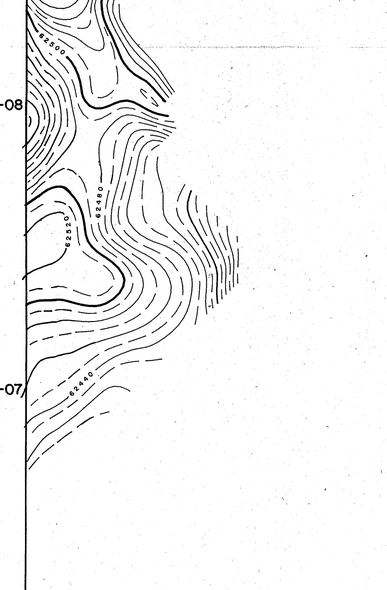
ARTHUR RIVER AREA, TASMANIA

MAGNETICS (Total Field-IGRF + 62400) nT

FOR

COMSTAFF PTY. LTD.

LOCATION MAP



Scale 1:500,000



REGISTERED PROFESSIONAL ENGINEER
D. C. FRASER
PROVINCE OF ONTARIO

5 cm

Scale 1:10,000

1/2 0 1/2 1 Kilometres

1/4 0 1/4 1/2 Miles

Flight Line

Fiducial 2120 (Not recovered from film)
Fiducial 2118 (Recovered from film)
Fiducial 2110 (Not recovered from film)
Fiducial 2104 (Recovered from film)
Line number and Flight direction

426146

ISOMAGNETIC LINES
(total field)

1000	1 000 nT
100	100 nT
20	20 nT
10	10 nT
	magnetic depression

Magnetic Inclination within the survey area: 72°

SHEET 4

040

84-2129 5/5

JOB	DATE	DRAWN BY	CHECKED BY
365	AUGUST, 1983	M.	J.O.