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DIGHEMII SURVEY

OF THE

FOLLDAL AREA

NORWAY

FOR

FOLLDAL VERK A/S

BY

DIGHEM LIMITED

TORONTO, CANADA DECEMBER 21, 1982 Z. DVORAK VICE-PRESIDENT

4100:

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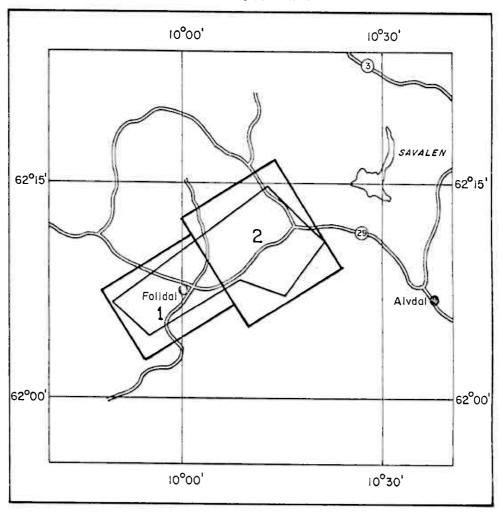
SUMMARY AND RECOMMENDATIONS

A DIGHEM^{II} airborne electromagnetic/resistivity/magnetic survey totalling 1,143 line-km was flown in September, 1982, for Folldal Verk A/S in the Folldal area of Norway.

The geologic environment in the survey area varied from resistive to very conductive. Narrow conductive zones containing a large number of EM anomalies were detected, which show good correlation with the known and assumed geology. Corresponding magnetic trends were mapped which appear to relate closely to geologic structure. Several previously unmapped features were observed which are believed to have geologic significance.

Four Cu-Zn-Pb mineral deposits located within the survey area gave rise to EM and resistivity anomalies in association with magnetic activity. Their most significant feature is that they appear to be satellitic to major conductive trends or fall on secondary conductive features. Numerous other anomalies of generally similar character were detected which are believed to reflect bedrock conductors. They appear to warrant further investigation using appropriate surface exploriation techniques. Areas of interest may be assigned priorities for follow-up work on the basis of supporting geologic and/or geochemical information, as well as on the basis of specific geophysical signatures of the known deposits.

LOCATION: MAP



SCALE 1:500 000

Figure 1
Survey Area

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INTRODUCTION

A DIGHEM^{II} survey totalling 1,092 line-km was flown with a 200 m line-spacing for Folldal Verk A/S, from September 13 to September 15, 1982, in the Folldal area of Norway (Figure 1). In addition, two tie lines were flown totalling 51 line-km.

The Lama LN-OSQ turbine helicopter flew at an average airspeed of 126 km/h with an EM bird height of approximately 34 m. Ancillary equipment consisted of a Sonotek PMH-5010 magnetometer with its bird at an average height of 49 m, a Sperry radio altimeter, a Geocam sequence camera, a Barringer 8-channel hot pen analog recorder, a Sonotek SDS-1200 digital data acquisition system and a DigiData 1140 9-track 800-bpi magnetic tape recorder. The analog equipment recorded four channels of EM data at approximately 900 Hz, two ambient EM noise channels (for the coaxial and coplanar receivers), and one channel each of magnetics and radio altitude. The digital equipment recorded the EM data with a sensitivity of 0.20 ppm/bit and the magnetic field to one gamma/bit.

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 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.

The survey represents the first time our new data handling techniques have been employed in Australia. These include the addition of "redball" EM anomalies to the preliminary resistivity contour map, an expanded EM interpretation as shown by the EM map legend, an additional EM map which displays only those anomalies which most likely reflect bedrock conductors, and a magnetic map with the IGRF removed and with a 5 nT contour interval.



SECTION I: SURVEY RESULTS

The survey covered a single grid with 1,143 line-km of flying, the results of which are shown on two separate map sheets. Table I-l summarizes the EM responses on the two sheets with respect to conductance grade and interpretation.

The survey grid covers a northeasterly elongated block which contains several conductive rock units, e.g., a greenstone belt located in the southern part of sheet 1 and extending towards the middle of sheet 2, or a serpentinite band of an east-west strike abutting against the south edge of the greenstone belt. These rocks gave rise to well defined low resistivity zones. Values of the order of 2 to 5 ohm-m were encountered at numerous locations. It should be noted that the transition from the resistive country rocks to these highly conductive rock units is very sharp, indicating an abrupt change in the electric character of these individual rock units.

Several known Cu-Zn-Pb mineral deposits exist within the survey area, e.g., Nygruve, Hovedgruve, Nordre and Sondre Geitryggen, as well as two pyrite diggings near Sörli and Grimsbu. It may be instructive to observe the EM responses and the resistivity and magnetic patterns over

CONDUCTOR GRADE	CONDUCTANCE RANGE	RESPONSES
6	> 99 MHOS	38
5	50-99 MHOS	7 5
4	20-49 MHOS	175
3	10-19 MHOS	174
2	5- 9 MHOS	187
1	< 5 MHOS	192
X	INDETERMINATE	94
TOTAL		935

CONDUCTOR MODEL	MOST LIKELY SOURCE	RESPONSES
D	DISCRETE BEDROCK	376
T	DISCRETE BEDROCK	4 5
P	DISCRETE BEDROCK	43
В	DISCRETE BEDROCK	248
G	ROCK OR COVER	71
Н	ROCK OR COVER	1
S	COVER	21
R	CULTURE	1
С	CULTURE	3
L	CULTURE	9 8
?	QUESTIONABLE	4
(BLANK)		24
TOTAL		935

(SEE EM MAP LEGEND FOR EXPLANATIONS)

these deposits. They are all distinguished as resistivity zones, but appear to be satellitic to major conductive trends (e.g., Nordre and Sondre Geitryggen), or fall on secondary conductive trends (e.g., Nygruve and Hovedgruve). All the deposits coincide with, or occur on the flanks of, magnetic activity which is particularly apparent from enhanced magnetics. The pyrite digging near Sörli occurs in an area of low resistivity and high magnetic activity. Although the location of this digging is not well established with reference to the present survey grid, it would appear that it may correspond with the north part of a conductive zone, which should be noted as being possibly satellitic to the main trend. In comparison, the pyrite diging near Grimsbu does not appear anomalous on either EM, resistivity, or magnetics. This may suggest only a very limited extent of the pyrite zone at this location.

The magnetic field in the survey area shows a number of long linear trends of east-west to northeast direction to be present. They correlate closely with the resistivity trends and relate clearly to the geology of the area. Note, for example, the enhanced magnetic patterns in the northeast part of the area which suggest that a fault may extend along the Kakella River valley. Note that an indication of the fault is also suggested by the resistivity patterns along the river valley between lines 2850 and 2890.

The magnetic and resistivity data suggest that the eastern part of sheet 2 is structurally complex. A well defined magnetic high which is centered at 2970B may occur along the micaschist/greenstone contact. It reflects a resistive magnetic body at a depth of about 100 m. The conductive zone just north of this magnetic anomaly is probably unrelated. It contains a set of short bedrock conductors which appear to be offset between lines 2990 and 3000 by a northwesterly magnetic cross-trend well portrayed by enhanced magnetics.

The conductive zone further north from this location is associated with an increased magnetic activity, particularly on lines 3130 to 3150. Note that this zone may be confined to a north-southerly striking micaschist/greenstone contact. Note also that a number of northeasterly marble-carbonate dikes occur here.

One of the most striking features is a semicircular conductive and magnetic zone which occurs in the eastern corner of sheet 2. The EM anomalies and the resistivity patterns suggest that this feature is related to a single anomalous horizon. The magnetic and enhanced magnetic maps appear to support this interpretation. The confirmation or denial of such interpretation will, however, require detailed field checking and mapping. Out interpretation

could not be confirmed independently because the preliminary geologic map of the Folldal area terminates along the 10°13'10" meridian which lies just outside of this anomalous feature.

CONDUCTORS IN THE SURVEY AREA

The Electromagnetic map shows 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 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.

Parts of the survey area contain a number of cultural sources, such as powerlines, pipelines, metal structures, etc. These features tend to distort the resistivity and electromagnetic anomaly patterns, but they can usually be readily identified on the profiles due to their characteristic signatures. These anomalies are indicated by the symbol L or L? on the maps. Occasionally, cultural features occurred in conjunction with geologic responses causing some

difficulties in positive classification of the EM anomalies. In cases where the EM data permitted the interpretation of a culture underlain by a geologic source, presumably within the bedrock, the symbol B? was used.

The following section contains the description of bedrock conductors.

Group 1, Anomalies 2010A, 2090A-2100A, 2120A

grade 1 to 6 anomalies These reflect a set of bedrock conductors ofclose to east-west strike direction. Both the airborne and geophysical the ground data indicate that these conductors terminate in the east along a southeasterly trend. The preliminary geologic map suggests that this trend reflects a greenstone/ keratophyre/micaschist contact. It should be noted that the keratophyres displaying high resistiv-(and which are probably ities non-magnetic) extend along the road leading from the survey area towards the Grimsdalgruve mine as a narrow, about 150 to 200 m wide

band, which is clearly indicated on the resistivity map. It should be also noted that the Grimsdalgruve deposit, which is indicated by anomalies 3360A and 3360C, occurs conductive within a horizon, confined greenstone/ to а keratophyre contact and extending east into group 1. Note anomaly 3360E and conductor 2010B-2080A may be parts of the same horizon. By analogy, other conducof group 1, and possibly anomaly 2010A, may reflect mineralized horizons.

Anomalies 2020E, 2040D-2090B, 2060F-2090C, 2070F-2090E

A set of approximately east-west striking bedrock conductors, which appear to occur within the greenstones, is indicated by these grade 1 to 4 anomalies. They have produced resistivities as low as 3 ohm-m (e.g., near 2080E). It is interesting to note that the enhanced magnetics suggest that anomaly 2020E may occur on the same horizon as conductor 2060F-2090C.

Anomaly 2130A-2160xA

These grade 1 and 2 anomalies, and x-type response, reflect conductor which may occur in the bedrock. Only anomaly 2130A, which also shows magnetic correlation of 60nT, is definitely due to bedrock source. The magnetic maps suggest that this conductor may be related to the group 4 conductors. Although the resistivity in between this anomaly and group 4 is in excess of 1000 ohm-m, the digital profiles display some activity be indicative of which may poorly conductive horizon extending between these anomalies.

Anomalies 2140xA-2220A, 2230A-2260A These grade 1 to 3 anomalies, which occur just inside the greenstone belt, reflect slightly magnetic bedrock conductors that are most likely parts of a single conductive body. The interruption of this body, if any, may occur in the vicinity of 2230A. The EM responses at this location are

compatible with a cultural source, such as a line. The tracking camera film does not show any obvious culture at 2230A. A linear narrow feature was noted which, however, appears to be of geologic origin.

The importance of this conductive horizon is that it contains a small economic deposit which is being mined (Nygruve mine). Note that conductors 2140xA-2220A and 2230A-2260A define a feature of limited strike length and that the further east, which anomalies appear to be confined to the same greenstone belt, reflect a different conductive horizon, or This is evidenced on horizons. both resistivity and enhanced magnetic maps.

Group 2

The grade 1 to 4 anomalies of this grouping reflect a series of bedrock conductors, some of which

magnetic exhibit correlation. Except for 2050L, 2060K, and 3350A, which may be indicative of a narrow greenstone "nose", possibly other anomalies seem to reflect amphibolites and serpentinites. Note that conductor 2130B-2170C is masked by magnetite, as indicated by negative inphase responses at all but 2160E. The difference channels 33 and 34, however, extract this conductor beyond doubt.

Anomaly 2140C-2160D

An excellent magnetic bedrock conductor is indicated by these grade 4 and 6 anomalies. The EM responses 2140C at and 2150C suggest that the conductor may be a steeply-plunging compact body which can be approximated by a sphere. It would appear that line 2160 did not cross the conductor. This would mean that the conductor may terminate west of this line.

the west, the x-type response 2130xA may constitute an extension of this very attractive target.

Anomalies 2240I-2260H, 2240J-2260I, 2290J-2300J These grade 2 to 5 anomalies are confined to the flanks of a well defined magnetic trend seems to correlate with the same amphibolite/serpentinite unit intersected further west in the area of group 2. These anomalies reflect conductors which appear to occur in the bedrock. Note that the area contains a number cultural sources which tend t₋O the geologic signal. distort Consequently, conductor 2240I-2260H may extend to 2270J, and 2240J-2260I may reflect the same conductor as 2290J-2300J. The lack of an EM response on line 2280 may be merely due to excessive flying height at the end of the survey line.

Anomalies 2050N-2120L, 2070L-2200xA, 2210xA-2220xB

These grade 1 to 4 anomalies reflect generally non-magnetic bedrock conductors which occur at, or near to, a gneiss/mafic tuff contact.

Group 3

The grade 1 to 6 anomalies of this reflect grouping а system of generally parallel bedrock conductors of northeasterly strike which are confined to the main portion of the greenstone belt covering the central part of the survey area. Closer examination of the geophysical maps reveals that this grouping has a very complex structure. Its southwest part (approximately west line 2450) contains a large number of closely spaced conductors which can be best approximated as thin dikes of northwesterly dip. Only a few anomalies deviate from this pattern, e.g., 2260E, 2270G, 2280C, 2310G, 2320H, 2330G, 2341F, 2350J, 2390O, and 2420H. They reflect either thick or buried broad conductors.

Anomaly 2320H represents a marginal case between thin and thick dike. There are several short strikelength anomalies in this part of 3 which appear to be group 2350K-2360K, satelliti**c**, e.g., 2380J, 2390P, or which may constitute extensions of intermediateto-long strike-length conductors, e.g., 2190C-2200B, 2270E, 2350J-2360J. They should be investigated on the ground. Attention should be paid to establishing the nature of strong EM anomalies which are parts of long-strike conductors, generally the grade 5 and 6 anomalies. anomalies Also, those which correlate with, or occur close to, the peak of magnetic or enhanced magnetic activity, should be investigated further, e.g., 2341E-2360H, 2370L-2380K, 2430M.

Conductor 2260G-2330H is somewhat puzzling. Its central part, between 2280E and 2300I, displays

high coaxial-to-coplanar ratios which are usually characteristic of culture. The tracking camera film, however, did not reveal any obvious culture at these locations.

One of the interesting features of group 3 is a narrow high resistivity ridge which extends along the long axis of the group. The ridge is only marginally defined in the southwest part of the group, but it becomes very prominent in northeast portion. It should be noticed that the ridge is clearly magnetic in the northeast, but only very poor magnetic activity (see enhanced magnetic map) the apparent in its southwest part. geophysical data correlates well with the geology map, which suggests that the ridge reflects a band of gabbroic rocks.

The relatively abrupt change in character of the geophysical data in the vicninty of line 2450 may suggest the existence of a weststriking structural northwest feature, possibly along the Folla River valley. The northeaster part of group 3 consists of a number of grade 1 to 6 anomalies reflecting bedrock conductors of, generally, long strike length. A series of short-to-intermediate strike-length conductors, however, occurs in the south arm of the group. It would appear that, from the exploration point of view, the south arm is attractive than the north more arm. The Sondre Geitryggen deposit occurs in this part of the group. Although the exact location of the deposit is not known, it would appear that conductor 2690F-2700F reflects the mineralization. consists of a pair of grade 5 and 6 anomalies which are due to a thick target, possibly slightly magnetic.

provided the deposit is indicated by this satellitic conductor, other similar anomalies would be potentially important for the planning of the ground follow-up work.

Anomalies 2520K-2560F, 2550L-2590xA, 2600E, 2610E-2640xA, 2620F-2640F, of the south arm, and 2570D, 2570F-2580F, 2720F, of the north arm, should be given attention. As before, anomalies reflecting thick or buried broad conductors, such as 2480G, 2520K, 2560G-2610F, 2670H-2680E, 2720H, and already mentioned 2690F-2700F, should be investigated on the ground, as well as those which correlate with, or occur on the flanks of, magnetic activity.

Anomalies 2750xA-2770B, 2750D-2770C, 2770D, 2750E-2770E, 2750F-2780F, 2780D, 2780E These grade 1 to 4 anomalies and x-type responses reflect bedrock conductors which have produced an oval-shaped low resistivity zone.

The enhanced magnetics, however,

show a system of close to northsouth and east-west crossing trends which would rather suggest cross-fault(?) offset of individual conductors. The magnetic patterns appear to be too complex to be readily explained. An east-west resistive dike may be present, separating the east end of conductor 2480H-2740E (group 3) from conductors 2750xA-2770B and 2750D-2770C. The preliminary geology map shows a narrow gabbro dike of close to east-west strike to occur in this part of the area. Conductors 2750E-2770E and 2750F-2770F may be confined to the south edge of the dike. The second conductor may not extend to 2780F which can occur on the north side of the dike.

A well developed magnetic high between 2770C and 2770D deserves a special mention. It correlates closely with a 10 to 15 ohm-m resistivity low and occurs close to the Sörli pyrite digging. The area should be investigated on the ground in order to assess the geologic/structural features as well as the significance of the mutual correlation of EM, resistivity, and magnetic activity.

Anomalies 2240B-2250C, 2270C-2410F, 2350D-2380H, 2370I

5 anomalies These grade 1 to of reflect set generally non-magnetic bedrock conductors which appear to be confined to the greenstone/keratophyre contact, or to it. occur close Both resistivity and the enhanced magnetics indicate that conductor 2270C-2410F may interrupted be between lines 2280 and 2290 by a resistive, and magnetic body of a northeast strike. The most attractive part of the conductor occurs between lines 2320 and 2360.

Note that conductor 2240B-2250C may constitute a southwesterly

extension of 2270C-2410F. The geophysical data indicate that conductor 2350D-2380H may possibly reflect the same conductive horizon as 2140xA-2260A which hosts the Nygruve mineral deposit. Note also that 2320xA, 2340xA, 2390G, and 2400xB may be related to the same horizon. The last two anomalies, however, are most likely caused by culture.

Group 4

A set of bedrock conductors of variable strike direction is indicated by these grade 1 anomalies. The resistivity patterns in the southeast part of this group are believed to reflect conductors within the greenstones, while the rest of group 4 conductors occur within the calcareous micaschists. The magnetic maps show a number of narrow trends to be present which appear to reflect well the known and assumed geology. Additional structural features are

revealed in the keratophyres which may relate to the marble-carbonate dikes.

Many of the group 4 anomalies show direct magnetic correlation as they occur on the magnetic mentioned above. They should be investigated on the ground. Attention should also be given to anomalies those which display EM characteristics better than other anomalies of this grouping, for example, 2360A-2370A, 2450B, 2460A, 2490A-2530A.

2430D-2470E, 2500C

Anomalies 2310xA, 2330A, These grade 1 to 4 anomalies are confined to the central part of sheet 1. They occur on a narrow northeasterly magnetic trend which abuts against an east-northeast trend south of Folla River. better definition of these magnetic trends, see the enhanced magnetic map.) The geology map suggests that the northeasterly trend may

reflect a narrow greenstone band located within the keratophyres.

The most interesting aspect these anomalies is that 2430D-2470E correlates with the Hovedgruve Zn-Cu-Pb deposit. Unfortunately, southwest end of conductor 2430D-2470E occurs over, or in the immediate vicinity of, the Folldal Verk mine which contains a number of cultural sources. These tend to mask the relatively weak responses of the deposit, thus making a positive classification of anomalies very difficult. It would appear that some anomalies in this part of the survey area may arise due to the combined effects of culture and geology. For example, 2380F and 2420B appear to reflect confined cultural conductors which broader top οf geologic a response. Anomalies 2310xA, 2330A, 2500C and all display strong

coplanar resonses which are characteristic of off-end, or parallel conductors. They may reflect bedrock conductors of short strike length. However, careful field check is required to confirm that no cultural sources exist at the respective locations, such as abandoned wires, barrels, etc.

Group 5

The grade 1 to 5 anomalies of this grouping reflect a set of bedrock conductors which are confined to the main greenstone belt. At its southwest end, the group appears to terminate against the Folla River valley. It is not quite clear whether or not there is a correlation with conductor 2350D-2380H. This conductor may be unrelated, offset, or interrupted by a structural feature along the Folla River valley, mentioned earlier.

The group contains several short strike-length conductors. Also,

direct magnetic correlation occurs at numerous locations. Conductors along the northwest boundary of the group display magnetic correlation varying from weak-to-nonexistent, up to 180 nT. They may be confined to the greenstone/keratophyre contact.

of short strike-length One the anomalies, namely 2670C-2700B, reflects the Nordre Geitryggen It consists of Zn-Cu-Pb deposit. the grade 1 to 4 anomalies which are indicative of a narrow dikelike body of a northwesterly dip. This conductor may occur on strike with 2560xA-2580C and with 2740B-2780A, with a possible extension to These conductors should be investigated on the ground together with other short strike-length or satellitic conductors. Attention should also be paid to those anomalies within the long strikelength conductors which display characteristics of thick bodies, e.g., 2550C, 2590B, 2620A, 2670B-2680A, and possibly 2510F.

The only two grade 6 anomalies, 2530G and 2540D, appear to be of cultural origin. The tracking camera film shows a system of roads at these locations, but no obvious large-size culture to explain the EM responses. The area should be carefully checked. If no obvious culture is present, these anomalies should be given further considera-Note that the line-to-line tion. correlation of individual anomalies this area is questionable. in Anomalies 2530F-2540C may reflect the same conductor as 2550D. Alternatively, 2550D may join up with 2530G and 2540D and continue further northeast towards 2560A. Note that both the resistivity, and the magnetic patterns provide only a limited guidance in this matter.

Anomaly 2610xA-2670xA

These grade 1 to 3 anomalies and associated x-type responses reflect a bedrock conductor confined to the flanks of a narrow magnetic trend which falls in between the group 3 and 5 conductors. It was noted that some interference from culture may have occurred at the northeast end of the conductor where the tracking camera film showed several roads.

Anomalies 2780B-2870C, 2780C, 2840xA-2870B, 2850xA, 2850B, 2860B, 2870A, 2870xA' These grade 1 to 4 anomalies and x-type responses reflect bedrock conductors of a north-south strike direction. northeasterly Conductor 2780B-2870C appears to be confined to a narrow keratophyre dike and displays similar characteristics as some long strikelength conductors of group 3 which may also be confined to keratophyre dikes.

All the conductors mentioned here abut against the presumed Kakella

The north end of River fault zone. 2780B-2870C and the other ductors follow approximately strike direction as same 2670C-2700B of group 5, which reflects the Nordre Geitryggen They should deposit. investigated on the ground.

Anomalies 2870D, 2880B, 2880C

These grade 2 to 4 anomalies appear to reflect bedrock conductors which are confined to the Katella River valley. The EM responses at 2880B and 2880C indicate that the EM bird flew parallel to, or off the end Anomaly of, these conductors. 2870D appears to reflect a thick conductor. It is difficult to see from the present data set whether 2870D reflects the same source as The anomalies should be 2880B. followed on the ground.

Anomalies 2840A, 2860A, 2890A-2940A, 2950xA, 2960A-2990A, 3010xA

A group of non-magnetic bedrock 2930A, 2940xA, conductors is indicated by these grade 1 to 4 anomalies and x-type responses. The line-to-line correlation of the individual anomalies

is somewhat doubtful because of the lack of positional accuracy which occurred, because several of these anomalies lie outside the first fiducial. The highly discordant strikes of 2890A-2940A and 2960A-2990A may be difficult to explain. Note, however, that they appear to follow the topography of the area. This may suggest that the anomalies reflect a thin sheet-like conductor of possibly intermediate dip. These anomalies should be investigated on the ground.

Anomalies 2930C-2940B, 2940C-2950B, 2950A, 2960B-2990C, 2980xA-2990B, 3000xA, 3000C-3020B

These grade 1 to 4 anomalies reflect bedrock conductors which related the may be to assumed River fault Kakella and to an greenstone/micaschist S-shaped contact which may or may not be related to the fault. The enhanced magnetic map indicates that northwesterly cross-trend lines 2990 and 3000 may have offset the conductors west and east of this trend. This appears to correlate with the shape of the geologic contact. The anomalies should be followed on the ground.

Group 6

The grade 1 to 4 anomalies of this grouping reflect a set of generally non-magnetic bedrock conductors which are confined to the greenstone/micaschist contact and/or to a set of short marblecarbonate dikes. They should be investigated on the ground. Attention should also be paid to the poorly defined low resistivity zones on lines 3200, 3210, 3220. The EM responses suggest that both zones may reflect the same conductive horizon striking at a low angle with the flight lines.

Anomalies 3070A, 3130A-3150A Two bedrock conductors are indicated by these grade 1 and 3 anomalies. They display characteristics of conductors which occur parallel to the flight line or off

its end. Conductor 3070A, which is also slightly magnetic, may be related to a marble-carbonate dike striking at a shallow angle to the flight line. The other conductor does not appear to be related to any known geologic feature in the area.

Anomalies 3090D-3110xA, 3100B-3110A, 3130F, 3150F-3190A

These grade 1 and 2 anomalies reflect bedrock conductors which occur outside the geologic map boundary, hence, no supporting geologic information is available. appear, however, that It would conductor 3100B-3110A may related to one of the marblecarbonate dikes in the area. other conductors may occur just inside the micaschists, close to a greenstone/micaschist contact. These conductors are located in close proximity to the major power line, which tended to obscure their responses. For example, anomalies 3110B and 3130F appear to occur due

to the combined effects of culture It is, therefore, and geology. difficult to assess the extent of 3090D-3110xA, and possibly of 3150F-3190A, precisely. Note that the resistivity map suggests a possible link between 3090D-3110xA and 3130F. Care must be in ground follow-up of anomalies. Equipment with high 50 Hz rejection must be employed.

Group 7

This group consists of grade 1 to 6 anomalies which reflect a system of bedrock conductors of generally east-west strike direction. They to be related appear to amphibolite/serpentinite unit which, according to the airborne geophysical data, terminates abruptly in the east against a northwesterly striking feature that may be related to one of the major structural features in the survey area.

Many of the anomalies are very attractive, particularly those on lines 2920 to 2940. It should be noted, however, that group 7 is geophysically very complex and that line-to-line correlation of individual anomalies may be questionable. The EM responses from conductors on lines 2920 to 2940 were so high that they saturated the EM equip-Consequently, the exact ment conductor classification may unreliable. The group 7 conductors constitute very attractive targets which should be investigated on the ground.

Group 8

The grade 1 to 6 anomalies of this grouping reflect bedrock conductors which are arranged in a semicircular fashion. All the geophysical data suggest that these anomalies may be related to a single conductive horizon. No speculation is made with regard to the geologic setting of this feature, which

presents an intriguing interpretation problem in spite of close correlation between EM, resistivity and enhanced magnetic data. The majority of the conductors are short strike-length conductors, many of which are thick or reflect buried broad targets, and display magnetic correlation. They should be assigned a priority in the ground exploration program.

Anomalies the at east end group 8 are difficult to correlate from line to line. For example, the EM responses at 3220D display characteristics similar to those at 3210A, 3200A and 3190B. their respective magnetic patterns are matching. Because the flight found path recovery was to be correct, a careful field check required to evaluate anomalies further. It should be noted that anomaly 3230A is similar to other anomalies in this part of group 8.

Group 8 is certainly one of the most peculiar features observed in the survey area. It contains a number of attractive anomalies which should be investigated on the ground.

Anomaly 3260A-3270A

These grade 1 anomalies reflect conductors which appear to occur in the bedrock. The anomalies are, however, located in close proximity to a number of small buildings. Consequently, cultural effects cannot be discounted.

Anomalies 3280A, 3300A, 3320A, 3330A-3340A

A string of these grade 1 and 2 anomalies reflects bedrock conductors which are located on the flanks of magnetic activity. It is proposed that the individual anomalies do not reflect a single continuous horizon. Rather, they may be indicative of a system of in echelon conductors.

The EM profiles show that magnetite occurs at a number of locations throughout the survey area. This is evident from the negative amplitudes on the inphase channels. Probably the strongest indication of magnetite occurs near fiducial 2028 on line 3200, where the magnetite concentration reaches about 4% by weight.

SECTION II: BACKGROUND INFORMATION

ELECTROMAGNETICS

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

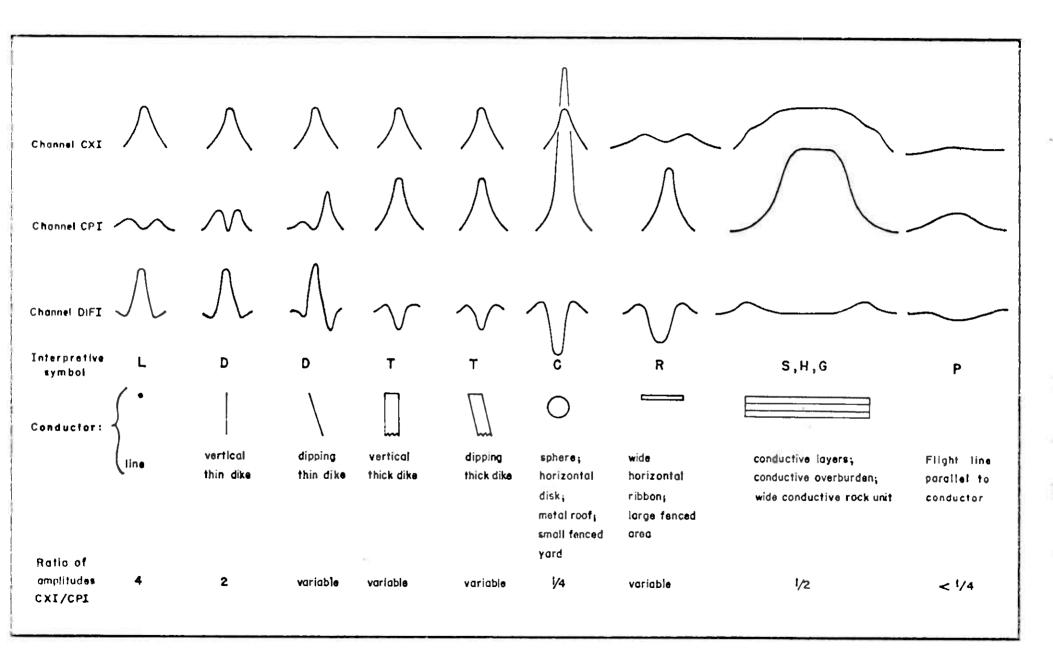


Figure $\overline{\Pi} - 1$

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	
u 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

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 or G 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 The symbols can stand alone conductance grade symbols. with geology when planning a follow-up program. 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 The accuracy is comparable to an interpretation below). 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 Thin conductors are indicated on the EM map by the interpretive symbol "D", and thick conductors by "T". 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

widespread conductivity are commonly of Areas 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. 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 The advantage of the resistivity parameter is data. 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. 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 The apparent depth (or thickness) resistive layer. 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

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 flight³. 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.

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), the resistivity and depth channels (RES and DP), the conductivity contrast channel (CC), and the product of the conductivity contrast and depth contrast channels (CCDC); 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 resistivity channel (RES). The most favourable situation is where anomalies coincide on all three channels.

Channel DP, which is the apparent depth to the conductive material, also helps determine whether a conductive response arises from surficial material or from a conductive zone in the bedrock. When this channel rides 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 channel DP is below the zero level, it indicates that a resistive upper layer exists, and this usually implies the existence of a bedrock conductor.

The conductivity contrast channel (CC) highlights local resistivity lows. This channel, and the depth contrast (DC), both yield positive anomalies from conductors at depth. Channel CCDC is the multiple of CC and DC, and it is highly sensitive to conductors at depth. The interpretation of these channels has to be done carefully, however, because they may also respond in a similar fashion to a local thickening in the conductive cover as, for example, over a buried river channel. These contrast channels are derived

from the resistivity and depth channels using digital filter techniques. The depth contrast channel DC is normally not plotted, as its information content is inherent in channel CCDC.

Channels REC1, REC2 and CC are the anomaly recognition functions. They are used to trigger the conductance channel CDT which identifies discrete conductors. In highly conducting environments, channel REC2 is deactivated because it is subject to corruption by highly conductive earth signals. Some of the automatically selected anomalies (channel CDT) are discarded by the human interpreter. 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. 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

Refer to Fraser, 1981, Magnetite mapping with a multicoil airborne electromagnetic system: Geophysics, v. 46, p. 1579-1594.

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.

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. 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.

⁵ See Figure II-1 presented earlier.

- 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 small fenced yard. 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. 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

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.

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.

The above description of anomaly shapes is valid 6. when the culture is not conductively coupled to the In this case, the anomalies arise from environment. 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. 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, for example, that a 100 nT contour interval is equivalent to a 5 nT interval for the passband components of the airborne data. This is because these components are amplified 20 times by the operator of Figure II-2.

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.

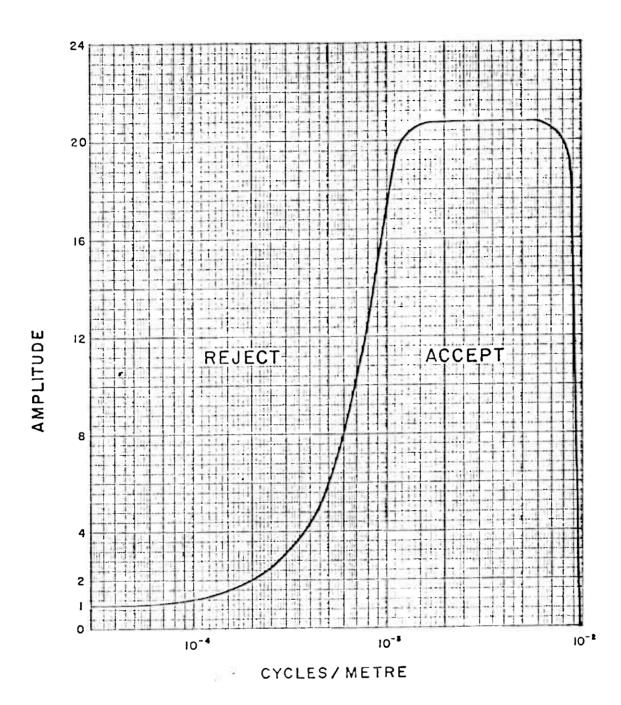


Figure $\overline{11}$ -2 Frequency response of magnetic enhancement operator.

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 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.

MAPS ACCOMPANYING THIS REPORT

Eight map sheets accompany this report:

Electromagnetic Anomalies		sheets
Resistivity	2 map	sheets
Total Field Magnetics (IGRF Removed)	2 map	sheets
Enhanced Magnetics	2 map	sheets

Respectfully submitted,

DIGHEM LIMITED

Z. Dvorak

Vice President

N ZD-101/ef

APPENDIXA

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 1:20,000. 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 and 100 mm up from the bottom of the digital flight record are respectively 1, 10, 100 and 1000 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 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		Scale
Name (Freq)	Observed parameters	units/mm
MAG	magnetics	10 nT
ALT	bird height	3 m
CXI (900)	vertical coaxial coil-pair inphase	1 ppm
CXQ (900)	vertical coaxial coil-pair quadrature	1 ppm
CXS (900)	ambient noise monitor (coaxial receiver)	1 ppm
CPI (900)	horizontal coplanar coil-pair inphase	1 ppm
CPQ (900)	horizontal coplanar coil-pair quadrature	1 ppm
CPS (900)	ambient noise monitor (coplanar receiver)	1 ppm
	Computed Parameters	
DIFI (900)	difference function inphase from CXI and CPI	1 ppm
DIFQ (900)	difference function quadrature from CXQ and CPQ	1 ppm .
REC 1	first anomaly recognition function	1 ppm
REC2	second anomaly recognition function	1 ppm
CDT (900)	conductance	1 grade
RES (900)	log resistivity	.03 decade
DP (900)	apparent depth	3 m
CC (900)	conductivity contrast	arbi trary
CCDC (900)	conductivity contrast * depth contrast	arbitrary
FEO% (900)	apparent weight percent magnetite	0.25%

A P P E N D I X B

EM ANOMALY LIST

	COAX	IAL OIL	COPL CO	ANAR .		ICAL .		ZONTAL EET	CONDUC EART	
ANOMALY/	REAL	OUAD	REAL	OUAD .	COND	DEPTH*	COND	DEPTH	RESIS	משפער
FID/INTERF		PPM	PPM		MHOS	М.	MHOS	M	OHM-M	M
	•			•	•	Ē				-
LINE 2010		LIGHT	38)			. •				
A 1312 T B 1306 T	52	44	124	86 .		0.	4	36	9	20
C 1304 D	275 46	102 76	311	126 .		10 .	7	46	3	34
D 1299 D	25	33	95 41	171 . 54 .		12 .	2	41	20	2 2
E 1295 T	117	116	151	191		15 . 4 .	2	60 34	34	32
			131	121	. 13	4.	4	34	9	18
LINE 2020	(F	LIGHT	38)	· ·	•	•				
A 1223 D	43	40	45	50 .	. 14	9.	2	58	32	30
B 1225 D	13	20	21	28 .	. 7	10 .	2	60	32	31
C 1231 B	26	29	14	25 .		8.	2	64	37	33
D 1234 B	7	5	6	3.		47 .	2	110	51	72
E 1237 B	3	8	2	8.		15 .	1	80	338	25
F 1257 B	3	1	4	4.		56 .	2	149	64	107
G 1259 B	3	3	5	5.	. 7	41 .	2	124	56	84
LINE 2030	/ फ	LIGHT	38)	•	•	•				
A 1193 D	30	26	28	25 .	. 14	14 .	2	60	24	40
B 1190 D	13	16	37	31		11 .	2	69 61	27 33	42
C 1186 D	34	40	39	53		7.	1	49	58	32
E 1165 B	6	8	10	41 .		7.	2	66	39	19 36
F 1163 B	8	17	10	27 .	-	1.	2	52	40	22
							_	J 2	40	22
LINE 2040	•	LIGHT	38)			•				
A 1065 B	8	3	16	6.		16 .	3	74	14	49
B 1067 G	10	8	14	11 .		12 .	3	66	20	41
C 1072 D	28	34	19	29 .		4.	1	57	60	24
D 1079 D E 1101 B	7	13	7	20 .		12 .	1	62	3 35	13
F 1101 B	17 16	28 27	21 21	29 .		3.	2	52	49	21
	10	21	21	29 .	6	4.	1	88	77	46
LINE 2050	(F	LIGHT	38)	•		•				
A 1023 B	10	18	17	28 .	5	0.	1	47	62	10
B 1021 G	5	4	7	8.	. 7	24 .	2	66	53	13 30
D 1015 B	16	20	23	31 .	8	0.	2	53	36	23
E 1008 D	42	17	99	72 .	30	8.	2	75	28	47
F 1007 D	58	35	99	69 .	28	7.	3	52	17	30
G 996 S	3	16	6	38 .		3.	1	18	656	0
Н 994 В	6	5	13	7.	14	45 .	2	113	28	84
J 991 G	29	21	78	68.	18	5.	4	45	9	29
K 983 S?		7	2	13 .	1	0.	1	48	455	0
L 979 B	3	17	8	31 .	2	1.	1	37	225	1

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707-SH.1 FOLLDAL

COAXIAL COIL			ANAR		'ICAL KE		ZONTAL EET	CONDUC EART			
AN	IOMALY/	REAL	QUAD	REAL	QUAD	. COND	DEPTH*	. COND	DEPTH	RESIS	рертн
FID	/INTERP	PPM	PPM	PPM		. MHOS	M		M	OHM-M	M
						•		•	•••	01111 11	1.1
LI	NE 2050		LIGHT	38)		•		•			
N	967 D	52	33	58	42	. 25	4	. 3	72	21	48
						•		•			
	NE 2060		LIGHT	38)	4-	•		•			
A B	866 D 867 D	14	12	29	15		0	. 3	64	16	39
С	870 B	17	11	19	15		1	. 2	77	48	41
E	879 B	27 79	44 47	15	42	-	8 .	. 1	49	84	18
F	881 D	7 9 76		138	73		9	. 3	57	18	34
H	901 B	29	68 1 4	138	124		2	. 2	50	27	24
I	903 B	38	50	85 82	81 94		2	. 3	79	22	54
Ĵ	911 B?	2	10	2	9 4 16		0 .	. 2	32	27	9
ĸ	916 B	4	16	2			0 .		53	318	6
L	925 D	9	15	4	20 9		1 .	. 1	34	693	0
			13	4	,	• 4	15 .	. 1	105	15 <u>4</u>	53
LI	NE 2070	(F	LIGHT	38)		•	•	•			
Α	817 B	4	8	8	15	. 4	18	. 1	65	134	24
В	813 D	123	53	200	83		4 .		51	2	39
C	808 B	1	6	17	12		27		99	33	68
D	806 B	17	18	22	30	. 9	6 .		52	40	22
F	802 G	8	7	16	15	. 11	23		85	28	57
I	796 S?	0	5	3	11	. 2	13		55	1035	0
J	789 G	31	22	95	50	. 29	3.	. 8	50	3	37
K	784 B	4	13	2	14	. 2	6.	. 1	30	770	0
L	770 B	3	3	7	4	. 10	39 .	. 1	106	115	55
M	766 B?	1	6	2	5	. 1	7 .	. 1	96	1035	0
						•		•			
	NE 2080		LIGHT	38)		•		•			
A	636 D	20	33	25	47	. 6	6.	. 1	47	87	16
В	640 D	72	68	245	82		3 .		53	5	37
	641 D			245	97	. 75	0.		47	3	34
D	649 G	4	9	4	8		24 .		97	42	63
E F	653 D 658 B	149	109	286	192 .		0.	•	34	6	20
r G	665 B	1	10	5	21		0.		52	211	11
H	673 D	2	3	5	8 .		30 .	•	88	177	37
I	678 D	43 6	51	49	63 .		4.	_	51	29	25
J	691 D	9	20 6	5	18 .		12 .		39	516	1
K	693 B?	1	8	11 2	7	. 14	35		107	65	65
		ı	- O	2	6 .	. 1	4.	. 1	100	320	42
LII	NE 2090	(म)	LIGHT	38)	•	•	•	•			
	576 P			9	10	. 6	28 .	•	(7	446	2.5
	- ·	•	•	,	10 .	. 0	40 .	. 1	6/	116	26

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707-SH.1 FOLLDAL

COAXIAL		COPL	ANAR .		ICAL KE		ZONTAL EET	CONDUC EARI			
AN	OMALY/	REAL	QUAD	REAL	QUAD	COND	DEPTH*	. COND	DEPTH	RESIS	DEPTH
FID	/INTERP	PPM	PPM	PPM	PPM .	MHOS	М		М	OHM-M	М
		/15	IT TOUM	201	•	,		•			
В	NE 2090 573 B	(r 9	LIGHT	38) 17	33	5	12	. 2	78	40	AE
С	572 B	9	11	17	33 .		7		67	71	4 5 30
E	568 P	1	2	6	2		65		143	22	110
F	561 P	1	0	6	2.	36	75		158	21	125
J	553 B	3	6	5	21 .		5	. 1	61	114	22
K	548 D	6	10	4	13 .		5 .		85	209	32
M	537 D	49	53	65	89 .	. 13	3 .	. 2	46	45	19
LI	NE 2100	(F	LIGHT	38)	•		•	•			
Α	412 D	4	12	5	25	2	0 .	. 1	46	224	4
В	416 D	35	20	67	35 .		2		58	8	39
С	423 D	7	9	6	14 .	. 5	13	. 1	69	99	28
D	428 D	7	6	17	15 .		24	. 1	92	68	51
E	437 B?		19	8	29 .		8 .		63	253	19
H I	444 G 450 B	5	14	20	23 .		11 .		61	50	28
J	450 B	8 34	18 35	2 62	11 . 70 .		7.		60	277	13
		J-1	33	02	70 .	13	0 .	. 2	39	34	11
LI	NE 2110	(F	LIGHT	38)	•		•				
Α	333 T	11	10	22	21 .		0 .	. 3	55	23	29
В	330 B	6	6	12	12 .		19 .	. 2	88	39	54
С	315 D	18	10	34	17 .		0.	_	66	10	43
E F	296 D 293 D	16	20	30	35 .		5 .		47	170	7
	293 D 	4	13	16	30 .		5 .	. 1	50	262	6
LI	NE 2120	(F	LIGHT	38)	•		•	•			
Α	159 D	22	17	79	46 .	23	16	. 3	66	16	45
В	161 D	27	22	79	46.		15 .		66	16	44
D	166 B	7	10	12	18 .		20 .	_	100	43	65
Ē	168 D	9	11	7	22 .	4	18 .	. 1	66	87	
F	173 D	11	7	24	13 .		33 .		111	38	78
G	184 B	0	2	4	5.		31 .		103	159	49
I J	192 D 205 L?	24	25	19	21 .		2 .		58	23	32
K	214 D	1 9	1 <u>4</u> 7	1 11	14 . 8 .		0.	•	77	850	1
L	216 P	4	7	7	13 .		17 . 8 .		89	118	41
Ξ		•	•	,	15 .	4	0 .	. 1	64	89	23
	NE 2130	(F	LIGHT	37)	•						
	3909 D	18	33	19	35 .	6	4 .	. 1	57	126	20
	3875 B	0	8	2	7.		0.	. 1	65	1035	0
C :	3865 D	37	23	90	59 .	26	0.	. 4	47	11	28

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	COAX	IAL		ANAR IL		ICAL KE		ZONTAL EET	CONDUC EART	
ANOMALY/	REAL.	OLIAD	REAL	מגווט	. COND	DEPTH*	CONTO	DEPTH	DECTC	DDDawi
FID/INTERP		PPM	PPM		. MHOS				RESIS	
	FFM	FFM	FFM	PPM	· MnOS	М	. MHOS	М	OHM-M	М
LINE 2130	(F	LIGHT	37)		•		•			
D 3854 D	10	14	21	29	. 7	11	. 2	64	43	32
				_,	•	11	• 2	04	43	32
LINE 2140	(F	LIGHT	37)		•		•			
A 3728 B?	6	26	3	25	. 2	0	. 1	22	738	0
В 3760 Р	1	4	5	12		16	-	79	147	34
C 3764 C	2	0	10	1		70		144	37	108
D 3771 B?	3	24	6	27			. 1	45	1035	0
E 3775 D	26	27	54	48		_	. 2	51	24	26
F 3777 B	14	14	59	23		14		85	23	59
G 3780 D	81	55	143	112			. 3	43	12	24
H 3789 D	16	25	20	34		7		50	177	11
							•		• • •	• •
LINE 2150	(F	LIGHT	37)				•			
A 3678 B?	0	6	1	3 .	. 1	2	. 1	102	1035	0
В 3658 В	3	7	8	10	. 3	18	. 1	100	106	52
C 3646 C	6	0	19	2 .	279	45	. 4	121	10	97
E 3641 B?	- 2	7	5	12	. 2	19	. 1	39	1035	0
F 3638 B	11	16	18	24	. 7	19	. 1	90	65	51
G 3636 D	25	37	66	106	. 9	2	. 3	34	16	14
н 3631 т	40	37	105	98 .	. 17	2	. 4	43	12	25
I 3620 D	13	32	18	49	. 4	- 6	. 1	40	170	6
					•		•			
LINE 2160		LIGHT	37)	,	•		•			
A 3525 B	34	45	33	72 .		4		40	48	14
B 3532 S?	0	8	1	3 .		7		132	1035	0
C 3535 S	4	8	7	2 .	-	37		87	896	6
D 3539 P?	12	5	41	13		27		93	13	7 0
E 3546 D F 3550 B	23	40	24	48 .		2	. 1	5 5	110	19
G 3553 D	4	11	20	19		18		64	55	31
H 3563 D		35	22	38 .		6		50	100	17
n 3303 D	10	14	12	20	. 6	5	. 1	74	105	31
LINE 2170	(F	LIGHT	37)	•	•		•			
A 3431 B	3	12	37) 5	10	•	4	•			
C 3411 B	0	7	3	19 . 4 .		1			308	4
D 3408 B		15	12	35		28 0		71	1035	0
E 3404 T	46	41	113	98		1		48	77	15
F 3391 D	14	24	11	26		12		38	10	21
	, -3	# 43	11	20 .		12	. 1	46	321	5
LINE 2180	(F	LIGHT	37)	•			•			
		7		9 .	. 2	13	. 1	107	686	18
		•	•	- '		13	- '	,07	000	10

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0.	COAXIAL			ANAR	•		ICAL KE	•		ZONTAL EET	CONDUC EAR	
ANOMALY/		QUAD	REAL	QUAD	•	COND	DEPTH*	•	COND	DEPTH	RESIS	DEPTH
FID/INTERP	PPM	PPM	PPM	PPM		MHOS	М		MHOS	M	OHM-M	M
					•			•				
LINE 2180 B 3254 B	6	LIGHT 17	37) 13	27	•	4	-	•				
C 3281 D		34	44	65		4 9	5		1	57	103	21
	8	12	6	17		4	0 7		2	42 61	42 242	14 14
					•			•			- 12	1.3
LINE 2190 A 3156 D	(£	LIGHT	37)		٠	_		•				
B 3147 B?		11 7	3 0	11		3	17		1	60	424	10
C 3136 D	9	17	14	5		1	9		1	110	1035	0
		13	14,	31 20		4	8		1	49	125	13
E 3115 D	13	11	26	28		3	6		1	43	248	2
	13		20	20	•	11	9	•	2	66	26	39
LINE 2200	(F	LIGHT	37)		•			•				
A 3031 D	10	13	. 7	10		6	4	•	1	111	156	54
B 3051 D?	37	19	58	25		35	0		6	57	4	41
C 3052 D	30	19	58	25	•	30	0		3	67	14	44
D 3060 D	16	11	20	25		11	8		1	72	110	29
					•			•			-	
LINE 2210 A 2907 D		LIGHT	37)		•			•				
B 2895 D	16	14	22	21		12	7	_	1	89	67	48
C 2885 D	8	16	8	17 .		_	7		1	71	127	28
D 2875 D	56 20	28	62	43		31	0	_	3	52	13	32
E 2860 B?		16	34	25 .		16	8		2	75	51	40
F 2856 L	4 4	8	3	8 .		3	27		1	58	523	8
2030 L	4	6	1	1 .		4	46	•	1	111	882	17
LINE 2220	(F)	LIGHT	37)	•	•		,	•				
A 2728 D	5	6	4	6 .	•	5	11	•	1	100	4.4.	
B 2737 D	11	12	13	11 .		9	11 .		1	120	144	
C 2744 D	16	17	24	19 .		12	4.		1	86	72	44
D 2749 D			159	76		65	0.		2	90	30	61
E 2750 D	90	40	159	76 .		51	0.		8 6	57 39	2	43
									U	39	4	25
LINE 2230		LIGHT	37)		,		Ţ,					
A 2619 L?	6	8	1	8.		3	17 .	,	1	112	688	17
B 2612 D	61	31	46	32 .		32	1.	,	3	70	16	47
C 2611 D	19	16	40	32 .		15	9.	,	2	79	26	52
D 2601 D	36	10	83	32 .		63	0.		7	71	4	54
E 2600 G?	47	8	83	26 .		104	0.		7	46	4	31
TIME 2240	/	T 011-	25.	•			•	ı				
LINE 2240 A 2514 D		IGHT 8	37)			4-	_					
	10	0	9	6.		12	7.	ı	1	117	123	61

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	COAX	IAL		ANAR		VERT DI	ICAL KE	•		ZONTAL EET	CONDUC	
ANOMALY/	REAL	QUAD	REAL	OUAD	•	COND	DEPTH*	·	COND	DEPTH	RESIS	איייסאט
FID/INTERP	PPM	PPM	PPM			MHOS	М		MHOS	М	OHM-M	M
					٠							
LINE 2240		LIGHT	37)	^	•			•				
B 2517 B? C 2523 D		2	4	0	-	26	61		1	215	130	154
D 2529 B	38 1	9 5	43 5	9 6		97	0		4	87	11	63
F 2534 D	40	24	121	26		2	29 5		1	115	77	71
G 2536 D	96	29	121	52	-	58 72	3		5 5	65 53	7	46
H 2538 L?		5	0	6		5	36		5 1	52 96	7	35
I 2548 B	15	19	13	18		8	0		2	74	169 4 6	46 38
J 2552 B?	4	3	1	2		5	37		1	147	638	34
				_		•	3,	:		177	030	34
LINE 2250	(F	LIGHT	37)									
A 2423 L	2	3	1	3	•	4	61		1	144	1035	0
B 2388 D	11	10	6	7		9	18	•	1	107	224	48
C 2385 D	6	11	12	13		5	16		1	103	79	58
D 2380 D	64	29	55	17		50	7		4	86	12	63
E 2374 D	8	12	11	12		7	22	•	1	91	75	50
F 2369 D	84	31	117	51		59	0		6	59	5	43
G 2367 D	85	31	117	51		60	4		4	5 7	9	39
H 2365 D	34	20	38	16		28	11		4	81	12	59
I 2353 B?		10	6	12		6	20		1	75	254	25
J 2349 D	51	13	44	11	•	90	13	•	4	99	10	76
LINE 2260	(F	LIGHT	37)		•			•				
A 2289 D	16	13	37) 9	8	•	12	6	•	1	114	0.0	<i>(</i> 7
B 2296 D	39	13	47	14		63	2				80	67
C 2298 B	31	11	7	13		27	9		4 2	82 109	9	61
D 2303 D	15	12	19	18		12	10		2		51	71
E 2309 G	65	30	119	50		49	0		8	82 42	37 2	50 30
F 2311 D	0	14	47	26		9	3		2	134	52	95
G 2314 D	9	1	11	0		348	26		4	162	11	132
H 2320 D	12	14	12	12		8	14		1	95	78	52
I 2324 L?	6	2	1	1		26	17		1	176	756	25
										.,,		23
LINE 2270	(F	LIGHT	37)									
A 2194 L?	4	15	12	33	•	3	14		1	56	119	22
B 2180 B?	2	7	2	3		2	27		1	92	1035	0
C 2139 D	17	7	9	4		29	16		1	107	298	44
D 2131 D	64	50	48	37		21	7		3	68	15	47
E 2129 D	43	9 43	8	58		8	9		2	54	33	27
F 2125 D	25	16	21	19		17	11		2	69	29	40
G 2119 T	61	23	106	39		61	0		11	47	1	36
Н 2115 В	0	1	17	5	•	17	42	•	1	125	228	61

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	COAXIAL			ANAR .		ICAL KE		ZONTAL EET	CONDUC EAR	
ANOMALY/	REAL	QUAD	REAL	QUAD .	COND	DEPTH*	. COND	DEPTH	RESIS	рертн
FID/INTERP	PPM	PPM	PPM		MHOS	М		М	OHM-M	M
	,		27.	•	•		•			
LINE 2270 I 2111 D	(F 13	LIGHT 6	37) 15	4 .	34	24	. 1	135	198	71
J 2103 L?		18	0	26 .		0		133	738	0
	_		J		•	Ū	• '	13	730	U
LINE 2280		LIGHT	37)		•		•			
A 2046 B	4	2	4	1.		26	. 1	185	78	131
B 2055 G	5	0	7		1028	20		108	15	79
C 2066 B	43	8	67	25 .		0		48	3	33
D 2068 P	0	7	17	8.		11		111	174	53
E 2071 D	4	6	2	1.	. 4	32	. 1	125	459	44
LINE 2290	(F	LIGHT	37)	•			•			
A 1954 D	7	4	11	5.	18	38	. 1	127	108	7 5
B 1904 D	12	10	8	6 .		18		124	1035	0
C 1892 D	58	29	55	30 .		13		71	9	52
D 1890 D	39	29	56	40		3		58	26	32
F 1882 B	85	24	157	66 .		0		59	1	46
G 1880 B	87	30	157	66 .		8	1,500	53	3	40
H 1878 D	15	25	19	16 .	. 7	17	. 1	74	129	33
I 1874 L?	6	8	2	3.	. 4	27	. 1	79	938	0
J 1862 D	21	6	24	7.	60	12	. 4	108	12	83
TTNE 2200	/ 5	r raum	271	•	,		•			
LINE 2300 A 1807 D	10	LIGHT 8	37) 4	, •	,		•	445		
B 1814 D	11	17	_	9.		14		115	97	65
C 1817 D	24	15	15 71	9.		11	_	87	26	59
D 1818 D	67	32	71	35 . 35 .		7		69	5	52
E 1820 B	10	7	5	35.		0 31	. 4	53	10	35
F 1824 D	32	9	71	24 .	-			98	38	65
G 1825 D	51	10	71	24		0		57 5 3	1	45
	18	9	38	15		10			5	39
I 1830 B	14	8	3	4.		15		119	70	60 74
Ј 1840 В	4	0	7	2		6			46	116
		.00		377	,	ŭ		103	40	110
LINE 2310	(F	LIGHT	37)				•			
A 1655 D	25	12	26	16.	25	10	. 1	118	69	74
В 1646 В	33	31	41	33 .	15	14	. 5	65	8	47
C 1643 D	90	78	106	93.	22	6		51	9	35
D 1641 D	83	49	83	67 .	29	5	. 4	49	12	30
E 1639 L	62	36	0	13.		8	. 4	100	11	77
F 1637 B	16	13	11	13 .		24		93	33	62
G 1631 T	120	27	195	67 .	. 114	8	. 13	48	1	38

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COAXIAL				ANAR	•	VERT DI	ICAL KE	•	HORI:	CONTAL EET	CONDUC	
ANOMALY/	REAL	QUAD	REAL	QUAD	:	COND	DEPTH	* .	COND	DEPTH	DECTC	DEPTH
FID/INTERP	PPM	PPM	PPM	PPM				•	MHOS	M	OHM-M	M
								•			Oilli II	PI
LINE 2310	• • • •	LIGHT	37)									
H 1629 D	40	26	85	49		28	7	•	4	53	9	35
I 1623 D	15	7	11	7	•	22	40	•	2	141	58	100
LINE 2320	(F	LIGHT	37)		•			•				
A 1522 L	4	3	2	2	•	6	35	•	1	86	831	0
В 1553 В	11	7	21	14		16	20		2	108	31	
C 1566 D	26	13	29	15		29	17		4	91	10	76 69
D 1568 D	39	24	29	1 5 .	•	25	18		3	79	14	57
E 1570 D	37	18	29	15		31	10		3	83	19	57 58
F 1573 D	14	16	17	18		9	23		2	90	32	60
H 1578 D	151	39	64	58		71	0		10	39	1	28
I 1580 D	22	39	64	58		11	12	•	2	5 7	27	32
J 1584 D	15	6	13	4 .	•	34	31	-	2	136	42	100
LINE 2330	/ F	LIGHT	37)	•	•			•				
A 1436 P	2	1	10	7	•	0	2=	٠	_			
B 1427 D	18	12	17	7 . 13 .		9	37		2	119	33	84
C 1416 D	63	16	98	18 .		16	23		1	90	94	47
D 1413 D	31	30	22	19 .		124 13	9		16	61	1	50
E 1410 D	25	13	25	15			15		2	83	40	51
F 1406 D	14	14	14	14 .		25	15		3	76	21	52
G 1401 T	98	35	112	52 .		10	11		2	75	32	4 5
Н 1391 Р	1	9	8	18 .		61 2	3		7	50	3	36
	•		· ·			2	13	•	1	76	125	35
LINE 2340	(F	LIGHT	37)									
A 1232 D	66	28	135	69 .		46	8		5	58	7	41
B 1242 D	76	19	99	28 .		101	9		20	95	1	86
C 1243 D	82	22	122	32 .	,	105	6		16	56	1	46
D 1247 D	30	19	30	20 .	,	22	20		3	102	22	75
	27	17	25	11.	,	25	9		2	78	39	45
F 1253 D	33	24	40	25 .	,	21	4		3	63	15	41
G 1257 D	93	22	122	47 .		94	2		8	52	3	39
Н 1259 В	16	24	30	32 .	,	8	11		3	68	15	47
І 1264 В	3	5	1	3.		3	30		1	118	805	13
				•				•				_
LINE 2341		LIGHT	37)					•				
B 1337 D	95	18	137	27 .	•	171	9		19	55	1	46
C 1340 D	23	21	32	37		12	6		3	66	20	42
D 1343 D E 1346 D	27	21	25	14.		19	11		3	83	23	57
F 1350 T	51	42	51	41 .		19	11		3	62	20	38
F 1220 T	118	66	154	103 .		38	9	•	7	49	3	36

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707-SH.1 FOLLDAL

COAXIAL COIL		COPL CO			ICAL KE	. HORIZ	ONTAL EET	CONDUC EART		
ANOMALY/	REAL	OLIAD	REAL	CLAD	COND	DEPTH*	· COND	DEPTH	RESIS	пертн
FID/INTERP		PPM	PPM		MHOS	M		M	OHM-M	M
					•		•		¥	
LINE 2350	•	LIGHT	37)		•		•			
A 1154 B	3	3	2	4	. 4	43	. 1	101	368	40
B 1145 L	1	5	0		. 1	17	. 1	108	1035	0
С 1112 Т	152	69	280	130		0		33	2	22
D 1108 D	14	17	21	25	-	15		82	5 3	47
E 1103 D	45	14	67	31	. 51	15		71	6	54
F 1099 D	88	11	93	18	235	15		68	2	55
G 1096 B	43	66	46	91	. 8	8	. 2	45	24	23
H 1093 D	38	58	44		. 8	6		49	30	24
I 1089 D	124	65	267	78		0	. 7	43	4	30
Ј 1087 Т К 1085 В	167 0	65 0	267	92 44		3		42	1	33
K 1003 B	•	U	102	44	. 37	18	. 2	86	33	55
LINE 2360		LIGHT	37)		•		•			
A 1001 D	16	12	19	22	. 11	9	. 2	62	53	27
B 1017 L	2	4	1	2	_	29		73	984	0
C 1033 D	42	12	55	20		2		74	8	53
D 1036 D	= 5	6	5	4		27		112	83	65
E 1043 B	1	1	15	4		31		143	10	114
F 1046 D	61	11	86	20	. 143	8	. 8	71	3	56
G 1048 B	12	13	15	11	. 10	14	. 2	83	45	48
H 1052 D	28	25	32	32	. 14	9	. 3	61	19	38
I 1057 D	73	42	196	78	. 49	0	. 8	47	3	34
J 1058 D	138	40	70	78	. 53	2	. 10	43	2	33
K 1060 D	33	13	67	36	. 37	12	. 5	57	6	40
	•				•		•			
LINE 2370		FLIGHT	37)		•					
A 950 G	53	28	65	53		0			16	26
B 942 L3	2	8 7	1	5		19		75	1035	0
C 926 L D 920 L		7	0 29	2		10		88	1035	0
E 918 L	34	47	29 29	3 119		20			190	30 25
F 915 L3		62	18	142		0		64 7	131 109	25 0
G 906 D	51	36	80	93		4			29	15
H 903 D	26	21	54	3 5		10			26	36
I 901 D	23	21	5 4	35		11			30	51
J 895 L		11	15	12		17			19	57
K 892 D	76	17	96	23		1			2	51
L 889 D	40	28	40	28		14			14	44
M 886 G	7	5	11	14		27			38	39
N 884 B	? 1	8	15	14	. 4	34			119	45
O 881 D	37	17	56	25	. 38	9	. 4	72	10	51

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707-SH.1 FOLLDAL

COAXIAL COIL		COPL	ANAR		RTICAL DIKE	•	HORIZ SHI	ZONTAL EET	CONDUC				
AN	OMALY	<i>(</i> / 1	REAL	QUAD	REAL	QUAD	. CONI	DEPTH	*.	COND	DEPTH	RESIS	рертн
FID	/INTE	ERP	PPM	PPM	PPM	_	. MHOS		•	MHOS	М	OHM-M	M
							•						
	NE 23			LIGHT	37)		•		•				
A	793		16	15	11	16			•	1	86	77	42
В	801		1	5	0	4		-	_	1	93	1031	0
C	811 816		3	5	1	2			•	1	71	961	0
D E	818		10 7	19 44	22	1 1 2 0			•	2	99	41	65
F	819		8	52	22 17	128 129			•	1	44	295	0
G	827		43	25	61	129 40		_	•	1 3	4	123	0
Н		В	16	17	21	19			•	3 1	59	22	35
I	840		76	16	99	10			•	16	63 68	58	29
J	842		11	12	23	11	. 14		•	5	76	1 7	58 56
K	844	D	16	9	23	11				3	88	24	60
L	846	D	13	7	24	12				2	87	32	57
М	851	В	4	5	19	15	_			1	83	194	39
N	856	D	40	17	44	26	. 34		•	3	48	15	27
							•		•				
	NE 23			LIGHT	37)		•						
A	759		12	16	5	9	. 6	6	•	1	94	165	41
В	753		1	9	3	8	. 1	-	•	1	80	193	31
С	748		2	5	0	1	. 2		•	1	86	1035	0
D	724		10	2	34	15			•	3	79	17	55
E F	720		4	3	20	18			•	2	38	31	11
r G	717 711		17	8	25		. 18		•	2	24	41	0
Н	709		4 3	36 16	8	66		•	•	1	16	193	0
I	702		27	19	0 65	23		_	•	1	31	279	0
J	700		53	13	65	14 15			•	4	72	10	51
K	697		22	25	41	35			•	8	6 5	3	50
L	694		38	5	52	2 2			•	2 5	52	41	23
М		B?	9	23	44	33			•	3	75 89	7 19	55
N	689		50	59	219	67	37		•	7	59	3	6 4 4 4
0	687	\mathbf{r}		50	123	102			•	8	39	3	26
P	686	В	42	50	123	102				5	39	7	24
								·	•	•	33	,	27
LI	NE 24		(F	LIGHT	37)		,						
A	595		8	444	2	1 .	. 1	0		1	190	130	1 29
В	601		4	8	3	6.	. 3	17		1	98	256	41
С	609		2	6	7	6 .	. 3	12	•	2	104	48	66
D	612		2	16	1	11 .		-		1	72	330	20
E	626		24	0	107		2000			17	92	1	81
F	627		33	2	107		1233			18	82	1	73
G	633	L	7	4	20	9 .	21	17	•	1	58	60	21

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COAXIAL COIL			ANAR		ICAL KE		ZONTAL EET	CONDUC EART			
AN	OMALY/	REAL	QUAD	REAL	OUAD	. COND	DEPTH*	COND	DEPTH	RESIS	DEDUM
FID	/INTERP	PPM	PPM	PPM	PPM		М.		M	OHM-M	M
		•				•	,	•			••
	NE 2400	•	LIGHT	37)		•		•			
H I	636 L 647 D	11 38	11	22	25		2 .		33	49	3
J	649 D	36	4	54	4 .		6.		90	9	69
K	652 B	4	3 7	5 4 75	4 11		12 . 18 .		75	3	58
L	654 D	59	14	86	16				72	52	37
м	658 B?		10	37	18		• •	_	67 05	5	50
N	660 D	24	9	35	9	50	13 .	. 8	85 62	17 3	60 46
0	662 B	9	4	24	4		0.	. 3	71	18	46 42
									,,	16	42
LI	NE 2410	(F	LIGHT	37)	,	,		,			
Α	562 D	1	12	1	8	. 1	0.	. 1	77	1035	0
В	556 ?	1	8	7	24	. 2	7.	1	124	634	3 3
С	554 D	5	26	7	24	. 2	0.	. 1	57	284	11
ď	547 B?	_	6	2	6.	_	27 .		76	1035	0
E	516 L	3	3	1	7 .	. 2	10 .		43	399	0
F	513 B?		4	9	10 .		18 .		53	117	13
G	507 L	11	9	3	5 .	_	21 .		32	305	0
H	498 B 496 D	60	11	63	11 .		14 .		89	9	6 8
J	496 D	57 17	4 18	63	26		18.		7 5	6	57
K	491 D	22	14	30 25	20 .		11 .		58	18	36
L	488 B?		12	25 20	27 . 27 .		14.		101	23	73
M	486 D	18	4	34	8 .		11 . 8 .		109	27	78
N	485 D	18	5	30	9.		3.		74	1	60
			3	30	,	. 05	J ,	0	75	3	58
LI	NE 2420	(F	LIGHT	37)	Ì	•					
Α	415 B?	6	7	3	4 .	6	11 .	1	92	250	32
В	433 L	9	11	5	13 .	. 5	0.	1	35	206	0
С	441 L	7	1	5	1 .	65	34 .	1	71	127	24
D		16	8	35	2 .	63	21 .	5	92	6	73
E	452 D	25	7	35	2 .		11 .	5	82	6	63
F	455 B	8	7	8	11 .		15 .		63	54	28
	458 B	3	1	7	3.		53 .		101	50	63
H	462 G	12	3	29	8.	57	5 .	6	69	6	50
T T	NE 2430	/ T3	TITOUM	271	•		•				
A	370 B?		LIGHT 11	37) 3	5 .	•			400	444-	_
В	359 D	6	22	4	15.		22 .		109	1035	0
c	341 L	2	11	0	2.		1. 9.	="	57	840	0
D	336 S?		10	5	25 .		0.		150	1035	0
E	333 P	6	9	27	16 .		14.	1	27 68	281 22	0
		_	-				13 •	2	00	24	43

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			COAX			ANAR	•	VERT DI	ICAL KE			ZONTAL EET	CONDUC EART	
AN	OMALY	/ F	REAL	QUAD	REAL	QUAD	•	COND	DEPTH'	•	COND	DEPTH	RESIS	DEPTH
FID	/INTE	RP		PPM	PPM	PPM			М		MHOS	М	OHM-M	M
				_										
	NE 24			LIGHT	37)	•	•			•	_			
F G	331 321		4 9	4 12	21 19	9 15	•	16 9	30 13		1 2	45	963	0
Н	318		29	23	25	15		18	4		1	63 65	38	32
I	314		5	10	17	21		5	13		1	48	100 100	25 13
J	307		52	17	72	16		82	11		3	70	24	44
K	305	D	51	16	72	16		82	18		4	75	9	55
L	301		11	11	7	9		8	28		1	69	95	31
М	298		7	8	3	7		5	34		1	96	65	57
N	293	D	23	8	19	8	•	42	25	•	4	85	10	63
	NE 24	40	(77	T T 011m	271		•			•				
A	NE 24		(r 4	LIGHT 10	37) 3	8	•	3	10	•	1	0.6	245	22
В	220		17	16	11	8	•	12	15		2	86 113	245 54	33
C	231		7	12	22	28		6	15		2	72	38	74 41
E	241	В	19	7	31	19		29	6		2	64	26	36
F	245	L	12	10	3	4		10	13		1	70	113	25
G	252	D	14	0	14	8		78	20		2	7 5	38	42
H	255	D	5	5	7	7	•	8	20		2	72	58	34
							•							
	NE 24			LIGHT	37)	•	•	_	_	•				
A B	159 151		7 10	17 3	7 9	20		3	9		1	50	1035	0
C	136		14	15	18	6 15		24 10	25 8		1	132	76	86
D	116		10	9	3	7		7	13		2	104 80	42 223	7 0
E	108		5	6	2	8		4	14		1	47	309	28 0
F	99		11	3	12	5		39	21		1	76	68	35
G	95	в?	3	4	2	3	•	4	25		1	71	188	22
H	86	D	19	4	23	6	•	83	15		2	93	49	55
							•							
				LIGHT	36)		•							
	4190		92	63	93	67		28	8		4	60	10	42
	4196		12	42	18	47		3	6		1	44	122	12
	4198 4200		10 22	35 40	27	45		4	9		1	39	158	7
	4215		8	12	2 7 5	37 19		7	9		1	66	56	3 3
	4226		10	6	20	8		4 23	11 2		1	96	122	48
	4232		3	5	4	9		3	0	•	3	89 60	15 171	62 12
			-	•	-	_		3	5	:	•	00	171	12
	NE 24		(F	LIGHT	36)									
	4155		10	15	6	11	•	5	20		1	98	160	48
В	4146	D	21	42	16	39		5	2		1	36	292	0

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707-SH.1 FOLLDAL

COAXI		COPLAN		VERT:			CONTAL	CONDUCT EARTI	
ANOMALY/ REAL	OUAD F	REAL (OUAD .	COND	DEPTH*.	COND	DEPTH	RESIS !	DEPTH
	-	PPM	PPM .		м.		М	OHM-M	М
								-	
LINE 2470 (F)	LIGHT 3	36)							
C 4142 D 10	11	28	25 .	10	19.	. 2	89	44	55
D 4138 B? 1	9	0	8.		15 .		78	1035	0
E 4125 D 15	19	15	16.	8	12 .	. 1	100	82	56
F 4110 D 8	7	7	7.		13 .		106	125	53
G 4091 B 8	2	14	4.		29 .		89	49	52
H 4087 G 4	8	4	11 .		16.		72	75	34
I 4083 D 3	3	6	3.	12	38 .	. 2	109	61	67
LINE 2480 (F	LIGHT :	36)	•		•	•			
A 3997 D 9	13	30) 7	13 .	5	3 .	. 1	77	241	25
B 4002 B? 1	5	ó	4.		4 .		122	1035	0
C 4009 B? 2	9	1	11 .		0 .		62	919	0
D 4020 L 6	1	Ö	1.		65			1035	0
E 4031 D 9	7	7	7.		1 .	. 1	100	72	55
F 4045 D 15	2	13	4.	82	22	. 2	94	28	64
G 4052 G 3	0	7	0.	139	55	. 2	100	32	68
н 4055 в 4	3	5	5.	. 8	35	. 1	81	84	38
				•		•			
-		36)			_	•		••	
A 3964 D 48	35	33	34 .		9			38 1035	50
B 3957 S? 1	11	7	15		7			1035	0 29
C 3956 D 3 D 3948 D 2	9 15	7 7	15 . 20 .		18 4			245 567	1
D 3948 D 2 E 3917 D 30	15 10	46	18		0			17	51
F 3897 D 12	6	21	3		14			54	52
F 3097 D 12	ŭ	41	3	. 45			. ,		
LINE 2500 (F	LIGHT	36)		•		•			
A 3799 D 29	21	25	21	. 17	12	. 2	98	31	68
B 3813 B 1	8	2	9	. 1	0		114	797	14
C 3821 P 0	1	7	0	. 39	69	. 5	174	8	145
E 3836 D 13	3	23	5		0			12	82
F 3851 D 14	1	17	5		14			38	57
G 3857 D 6	3	9	5		22			42	44
H 3860 G 2	2	5	3	. 7	22	. 2	93	35	59
	or roum	261		•		•			
LINE 2510 (F A 3667 D 17		36) 9	4	. 19	17	•	137	175	7 5
C 3660 D 0	9	6	8		14		94	1035	0
D 3649 B? 0	3	0	2		39		1 230	1035	
F 3617 T? 133	65	189	107		0		5 40	5	
G 3611 R 3		13	7		26		3 106	20	

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	COAX			ANAR		TICAL KE		ZONTAL EET	CONDUC	
ANOMALY/ FID/INTERP		QUAD PPM	REAL PPM		. COND . MHOS	DEPTH*		DEPTH M	RESIS OHM-M	DEPTH M
LINE 2510	(F	LIGHT	36)		•	•	•			
H 3600 D	19	14	24	13	. 18	13	. 2	78	27	50
I 3596 B	45	31	28	38		5 ,		55	18	32
J 3592 D	13	12	24	26		16 .	=	51	39	22
K 3588 D	20	11	38	20		15		70	23	45
					•		•			
LINE 2520	•	LIGHT	36)		•		•			
A 3500 D	15	5	12	6		16 .	. 2	129	40	92
B 3504 B	1	17	8	22		0.		59	162	19
C 3505 B D 3513 P	1	17	8	22		7.		69	1035	0
E 3523 ?	0	2	3	4		48		156	137	98
F 3536 D	5 3 9	2 12	0	5		64 .		119	1035	0
G 3542 L	39 4	4	55 1	21		0.		59	5	42
H 3545 L	4	1	1 1	3 .	_	23 .		132	912	6
I 3551 D	8	1	12	1 .	. ,	53 . 21 .		194	1035	0
J 3553 D	27	12	37	18		0.		124 61	23	90
K 3559 G	9	1	14	2	· -	9.	. 4	81	20	37
L 3560 B	10	2	15	3		7.	3	86	9 18	58 57
					•			00	10	37
LINE 2530		LIGHT	36)							
A 3469 D	56	30	41	19	. 34	11 .	. 5	95	8	74
B 3467 B?	2	17	29	19	. 6	15 .	. 1	104	81	60
C 3463 D	12	37	13	21		0.		36	1035	0
D 3423 D	26	10	31	17		1.		76	16	51
F 3415 D G 3413 L	30 5	13	59	25 .		12 .		88	6	70
H 3408 L?	16	0	16	1 .		49 .		177	16	146
I 3407 D	11	9 7	19 19	10 . 10 .		13.		96	6	76
J 3404 D	14	9	5	4.0		14.		99	6	78
K 3397 D		8	30	10 . 7 .		5 . 7 .		81	39	47
L 3395 D	34	6	47	14 .		0.		71 62	4	54
			• •		. 102	•	J	02	6	43
LINE 2540	(F	LIGHT	36)		•					
B 3343 D	56	18	90	32	67	5.	6	67	4	52
C 3349 G	4	3	9	8.	. 10	30 .		130	35	94
D 3352 L	8	0	8	1.		45.		176	5	151
E 3357 L	8	3	5	4.		21 .	4	116	11	90
F 3361 D	_ 11	5	13	7.		5.	2	81	31	50
G 3367 B	26	12	69	15 .		0.	5	80	7	60
H 3368 D	43	15	67	27 .	53	0.	5	53	5	36
TIME SECO	/***		261	•	•	•				
LINE 2550 A 3271 L	14	LIGHT	36)	٠.						
A 34/1 L	14	33	8	22 .	. 4	5.	1	74	169	31

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707-SH.1 FOLLDAL

	COAX			ANAR	•		ICAL KE	•		ZONTAL EET	CONDUC EART	
ANOMALY/		QUAD	REAL	QUAD	•	COND	DEPTH	٠ ۲	COND	DEPTH	RESIS	DEPTH
FID/INTERP	PPM	PPM	PPM	PPM		MHOS	М		MHOS	М	OHM-M	M
			261		•			•				
LINE 2550 C 3226 T	(F 116	LIGHT 43	36) 209	77	•	76	-	•	•		_	
D 3217 D	64	32	74	30	•	76	5		9	50	2	39
E 3214 L	4	8	15	30	•	42 10	12 39	-	5	85	8	65
F 3212 B?		5	15	7		26	28		1 8	75	658	9
G 3209 D	23	13	30	14		25	14		4	121 109	4 11	101
H 3207 D	46	21	53	29		37	5		4	62		85
I 3199 L	0	0	93	4		49	13		4	95	13 12	41 70
J 3198 B	109	45	140	72		54	1		13	59	1	47
К 3197 В	104	42	140	72		54	5		5	46	7	31
L 3194 D	23	34	8	26		6	9		2	58	49	27
					•			•			-	
LINE 2560		LIGHT	36)		•			•				
A 3147 B?	5	3	3	3		9	29		2	174	38	131
B 3153 D C 3156 D	8	9	25	7		19	26		3	134	20	103
F 3162 B	37 25	15 1	16	18		28	6		3	78	14	54
G 3164 T	62	14	35		•	49	12	-	7	107	4	86
Н 3166 В	6	12	103 15	46		71	5		10	50	2	39
11 3100 B	0	12	15	9	•	6	12	•	1	70	61	33
LINE 2570	(F)	LIGHT	36)		•			•				
A 3027 D	95	72	158	109	:	29	4	•	4	50	9	33
B 3020 B	11	15	14	27		6	14		1	61	88	26
C 3015 L?	2	5	1	1		3	48		1	143	1035	0
D 3007 B?	6	15	33	12		11	16		2	92	49	55
E 3005 D	59	17	69	25		71			5	69	8	50
F 3003 D	13	25	30	27		8	5		2	76	53	40
G 2995 т	39	17	59	30		37	9		6	61	4	45
н 2990 в	3	3	6	4	•	9	30		1	91	75	47
					•			•				
LINE 2580		LIGHT	36)		•							
A 2922 D	54	46	49	68		15	1	-	2	44	36	17
B 2924 D C 2930 B	57	38	130	69		33	4		7	48	3	34
D 2942 L?	2 2	5	4		•	2	13	•	1	85	207	33
E 2944 D	49	10 16	23	8		8		•	2	120	38	86
F 2945 D	50	23	57	21	•	61		•	4	7 5	11	54
G 2952 T	43	18	22 55	23 26	•	28	6	•	1	89	107	43
Н 2956 В	7	5	5	40 5		41	7	•	6	61	4	45
	,	8	5	Э	•	9	23	•	1	80	81	37
LINE 2590	(FI	LIGHT	36)		•			•				
В 2813 Т	185		356	134		82	0	•	9	38	2	27
					•		•	•	,	20	2	27

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707-SH.1 FOLLDAL

	COAX	IAL	COPL CO	ANAR .	VERT	ICAL . KE .		ZONTAL EET	CONDUC EART	
ANOMALY/	REAL	QUAD	REAL	OUAD .	COND	DEPTH*	COND	перти	RESIS	משמשת
FID/INTERP		PPM	PPM		MHOS	м.		M	OHM-M	M
					,	•	111100	11	OIIM-M	M
LINE 2590		LIGHT	36)		,	•				
C 2811 D	14	8	. 26	21 .	. 16	27 .	3	94	22	68
D 2787 B		27	61	40 .		3.	5	59	6	42
Е 2777 Т	143	40	181	80	85	3.	10	42	1	32
T TND 2600	/ 17	T T 411	261	•	•	•				
LINE 2600 B 2708 D		LIGHT	36)		,	•				
C 2732 B	133 55	71 32	169 53	98 . 51 .		3.	4	53	11	35
	97	24	150	43		5.	4	61	10	42
E 2744 G	37	17	49	19.		0 . 5 .	13 2	43	1	32
	٠,	.,	4,7	19.	. 41	э.	2	54	25	27
LINE 2610	(F	LIGHT	36)		•	•				
B 2592 D	85	59	125	102	27	7.	3	47	14	28
C 2583 P	1	8	5	14.		12 .	1	84	419	27
D 2565 D	74	24	74	33 .	62	1.	5	61	6	43
E 2556 D	23	15	51	21 .	29	3.	4	78	10	56
F 2554 T	34	9	50	24 .	53	8.	6	57	5	41
TTND 0000				•	•	•				
LINE 2620 A 2453 T	(F)	LIGHT 19	36) 44	25	. 21	•				
B 2469 B?	0	5	1	35 . 5 .		2.	4	58	10	3 9
C 2476 D	36	10	33	12.		0.	1	167	1029	25
D 2482 B	8	4	10	5.		0 . 15 .	4	82	13	58
	12	7	15	6.		12 .	3 4	98 74	21 11	67 51
F 2487 G	5	2	7	8.		19	3	72	20	51 46
						•	J	12	20	40
LINE 2630	(F	LIGHT	36)							
B 2328 D	108	41	158	71 .	62	0.	7	45	3	31
C 2314 D	18	21	18	18 .		15 .	1	101	68	60
D 2304 D	78	31	70	43 .		4.	4	61	13	40
E 2294 D				14 .		16 .	4	88	12	64
F 2291 B G 2288 L	10	10	9	18 .		6.	2	62	55	26
G 2288 L	4	9	7	10 .	4	16 .	1	90	329	33
LINE 2640	(स	LIGHT	36)	•		•				
A 2237 P	2	3	9	9.	5	38 .	1	0.6	0.0	- 4
B 2242 D	18	14	17	14.			1	96 100	80	54
D 2250 D	47	12	49	19 .		0.	2 4	102 70	57 13	63 47
E 2258 D	41	18	56	26 .		0.	4	60	10	40
F 2261 D	11	12	7	10 .		11 .	1	78	65	39
					55	· · ·	•	, ,	0.5	3,

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707-SH.1 FOLLDAL

	COAXIAL COIL			COPLANAR COIL		•	VERTICAL DIKE		•	HORIZONTAL SHEET		CONDUCTIVE EARTH		
AN	OMAL	7/	REAL	QUAD	REAL	QUAD	•	COND	DEPTH*	•	COND	DEPTH	RESIS	DEPTH
FID	/INTE	ERP	PPM	PPM	PPM	PPM	•	MHOS	М	•	MHOS	M	OHM-M	М
LI	NE 33	350	(F	LIGHT	39)		•			•				
Α	231	В	4	3	11	8	•	11	29		3	100	19	71
В	287	P	1	0	9	5		15	42		3	124	22	91
С	345	rs	3	2	3	8		4	11		4	58	9	37
D	348	G	7	5	22	5		28	16		9	58	2	43
E	351	G	2	1	8	3		15	35		4	62	10	40
F	356	P	3	0	16	2		193	27		10	94	2	7 7
							٠			•				
LI	NE 33	360	(F	LIGHT	39)									
Α	1055	P	6	2	35	10	•	49	16		18	5 7	1	47
С	1051	P	6	2	26	9		39	27		12	65	1	52
E	1039	P	2	0	6	0		2000	95		1	127	94	78
F	882	D	4	2	3	3		11	39		1	147	1020	7
Ħ	844	S	0	3	0	15		1	6		1	26	823	0

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707-SH.2 FOLLDAL

	COAX	IAL	COPL CO	ANAR	•	VERT DI	ICAL KE	•		ZONTAL EET	CONDUC EART	
ANOMALY/	REAL	QUAD	REAL	OUAD	•	COND	DEPTH*	•	COND	DEPTH	RESIS	Denma
FID/INTERP		PPM	PPM	_		MHOS	M		MHOS	M	OHM-M	M
					•		•••	•	111100	M	OHM-M	IAI
LINE 2640	•	LIGHT	36)									
A 2228 D		95	210	151		37	0		4	39	10	22
B 2237 P?	2	3	9	9		5	38		1	96	81	53
					•			•				
LINE 2650 A 2100 B?	•	LIGHT	36)	20	•	•		•				
B 2097 D	22 166	18	75	30		28	22		2	108	29	79
C 2090 D	8	113 13	221 15	193		32	2		4	33	8	17
D 2076 L?		14	16	19 6		6 10	18		1	68	103	30
E 2073 D		24	33	24		10	20		2	110	64	68
G 2062 D	26	14	30	14		19 28	9 1		1	72	66	35
			30	1.2	•	20		•	3	78	23	51
LINE 2660	(F	LIGHT	36)					•				
A 1968 D	44	23	68	46		29	0		3	53	17	31
B 1975 D	1	8	3	9		1	6		1	83	256	32
	6	7	6	7		6	33		1	119	101	70
D 1986 D	51	24	46	23		38	2		4	74	9	53
E 1989 D	18	12	12	8	•	17	6		2	111	38	76
F 1992 L?		4	3	1		9	41		1	138	341	59
G 1998 D	22	11	25	9	•	30	5	•	4	98	13	72
TIME 2670	/ F3	r zoum	261		•			•				
LINE 2670 B 1832 T	228	LIGHT	36)	405	•			•				
C 1827 B?	19	87 59	356	135		89	1	_	10	40	1	30
D 1825 B?	9	32	25 14	96		4	0	-	1	31	73	4
E 1812 D	23	22	15	83 21		2	0		1	61	181	20
F 1808 D	45	20	37	20		10	7		2	81	56	44
H 1795 G	14	14	27	22		36 11	2	-	3	75	18	51
	, -		2,	22	•		11	•	3	70	20	46
LINE 2680	(F)	LIGHT	36)					•				
А 1682 Т	91	55	126	95		31	0		4	46	12	28
В 1687 Т	53	58	77	99		13	8		2	39	37	15
C 1701 B?	6	5	5	0		14	28	-	1	186	120	128
D 1705 D	24	10	21	13		30	3		2	82	29	54
E 1715 G	17	10	24	14		20	0		3	69	15	45
					•						, ,	.0
LINE 2690		LIGHT	36)		•							
A 1533 G	62	42	60	70		20	4	-	2	52	24	27
B 1528 D	73	58	88	76		22	1		3	46	17	25
C 1513 L? D 1508 D	10	12	2	2		6	12		1	122	633	22
E 1498 L?	29 10	17	28	15		24		•	2	84	31	54
1470 DE	10	23	17	26	•	5	3	•	3	66	20	42

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	COAX			ANAR .		ICAL .		ZONTAL EET	CONDUC EART	
ANOMALY/	REAL	OUAD	REAL	QUAD	COND	DEPTH*	COND	DEPTH	RESIS	ркрич
FID/INTERP		PPM	PPM		MHOS	м.		M	OHM-M	M
					•	•			0	••
LINE 2690		LIGHT	36)							
F 1495 T	47	9	50	27	. 65	6.	6	59	4	43
* TND 2700	(17)		261		•	•				
LINE 2700 A 1406 B	38	LIGHT 17	36) 35	20	•	•	_			
B 1410 D	19	19	26	29 . 31 .		2 . 12 .	2 2	65 97	28	37 51
C 1425 L?	13	13	20	4 .		12 .	2	87	49	51
D 1429 D		33	57	32		5 .	3	128 73	67 16	84
E 1439 B		18	86	25		0.	7	73 52		50
F 1440 G		5	68	25		4.	9	52 52	3 2	37 39
					,	* •	,	72	2	39
LINE 2710	(F	LIGHT	36)	,	•	•				
A 1240 D	32	25	43	39	. 16	5.	3	64	24	38
B 1238 D	23	19	23	39	. 10	7.	1	99	66	58
C 1231 D		6	21	14 .		22 .	2	106	37	74
D 1220 D		19	9	8 .		12 .	1	94	168	42
E 1216 B?		5	3	2 .		34 .	1	124	151	67
F 1204 D	12	9	9	8 .	. 11	12 .	1	104	73	60
LINE 2720	/ F	LIGHT	36)		•	•				
A 1110 D	28	31	30)	44	. 10	•	2	47		
B 1117 D	4	4	6	7 .		2 . 36 .	2		50	17
C 1120 P?	5	6	19	16		23 .	1 2	108	351	46
D 1128 D	36	36	25	23	_	= 10	2	97 - 89	46 39	61
E 1132 D	4	8	2	7		21 .	1	97		56
F 1134 B?		5	1	2		38 .	1	106	115 786	50 14
H 1142 G		15	17	18	-	12 .	2		38	51
				, ,		12	2	04	30	31
LINE 2730	(F	LIGHT	36)							
A 933 B	7	13	8	16	. 4	5.	1	71	125	27
B 910 D	24	15	17	10	20	4.	2	95	36	63
C 907 B	14	18	2	7	. 6	11 .	1	89	175	38
D 894 D	13	6	9	7 .	. 19	27 .	1	119	82	72
	(-		0.51	•	•	•				
LINE 2740		LIGHT	36)	_ ,						
A 801 D	1	6	5	5		6.	1	143	160	80
B 805 D C 822 D	7 17	12 14	13 13	19 .		15 .	1	77	102	36
D 825 B	1	5	2	13 . 1 .		4.	2		48	60
E 837 B	2	4	1	2		18 .	1	132	194	69
	4	-7	'	۷	• 4	27 .	1	191	141	128
LINE 2750	(F	LIGHT	36)	1	•	•				
A 608 D	7		8	7	• • 7	13 .	1	74	469	n
	- 50	•	•	, ,	. ,	13 •	1	/4	409	9

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		COAX			ANAR	•		ICAL KE			ZONTAL EET	CONDUC EART	
AN	OMALY/	REAL	QUAD	REAL	OUAD	•	COND	DEPTH*	•	COND	DEPTH	RESIS	DEDUN
	/INTERP		PPM	PPM			MHOS	M		MHOS	M	OHM-M	M
						•	11100		:	MIOS	1-1	Onn-M	PI
LI	NE 2750	(F	LIGHT	36)									
В	605 D	19	21	35	34		11	6		2	67	53	33
С	586 D	36	27	24	24		17	5		2	72	37	41
D	574 D	44	16	76	38		45	1		5	63	7	44
E	566 D	32	26	33	21		18	13		3	84	25	57
F	564 D	11	13	16	18	•	8	14		1	75	190	29
						•							
	NE 2760		LIGHT	36)		•							
A	480 D	6	7	15	10		10	14		1	98	91	51
В	482 D	4	5	14	16		7	27	•	1	86	117	41
С	499 G	41	21	33	24		27	5	•	3	71	16	48
D	509 D	30	15	49	31	-	28	0		4	61	10	40
E	516 D	13	9	13	12		13	17		2	96	36	63
F	517 B	10	9	13	12	•	10	17	•	2	97	35	6 5
		/17	T T011m	261		•			•				
	NE 2770 267 D		LIGHT	36)		•	4.0	_	•	_			
A B	256 B	4 9 7	35	23	24		18	9	•	2	84	41	51
			14	9	5		5	18		2	109	61	68
C D	233 B 249 B	3 11	2 13	18 26	7		22	43		4	116	11	92
E	249 B	11			27		9	20		2	81	44	47
F	239 B	10	8 8	12 10	12 12		11 9	22		2	87	47	51
		10	o o	10	12	•	9	29	•	1	89	173	41
LI	NE 2780	(F	LIGHT	36)		•			•				
Α	156 D	3	4	6	7	•	5	22	•	1	108	116	56
В	172 D	28	27	39	51		12	18		2	69	37	40
С	173 ?	21	23	39	51		10	12		1	117	175	62
D	185 L?	2	9	8	12		3	22		1	79	273	29
E	187 B?	4	4	5	2		9	50		2	146	67	102
F	194 D	7	7	7	11		7	23		1	89	152	40
	NE 2790					•							
	954 D	12	12	11	14	•	9	11	•	1	111	233	51
						•			•				
	NE 2800			35)		•	_		•				
	832 P				9		8	30				53	69
	847 B	/	7	6	5	•	8	27	•	2	131	63	88
	NE 2810	- (P	LIGHT	251		•			•				
	613 L	(F.	11GnT		2	•	3	27	•		244	4005	_
		J	7	U	2	•	3	37	•	1	214	1035	0
	NE 2820	(교	LTGHT	35)		٠			•				
	502 P			16		•	12	21	•	2	0.4	0.4	
••		,	3	10	10	•	12	21	•	3	94	21	65

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707-SH.2 FOLLDAL

		COAX		COPL	ANAR .		ICAL .		ZONTAL EET	CONDUC EAR	
ANOM	ALY/	REAL	QUAD	REAL	DAUQ.	COND	DEPTH*.	COND	DEPTH	RESIS	DEPTH
FID/I	NTERP	PPM	PPM	PPM	PPM	MHOS	м.		М	OHM-M	М
	2020	(==	r r cum	251	•	•	•				
	2830 30 D	28	LIGHT 24	35) 4 7	38	. 16	11 .	2	77	31	48
	86 L	0	3	4	8 .		15 .		81	246	30
					•	•	•				•
	2840		LIGHT	35)			•				
	01 D	18	11	18	21		0.	2	43	28	14
В 1	78 D	7	7	12	11 .	. 9	12 .	1	89	98	42
LINE	2850	· F	LIGHT	34)	•	•	•				
A 20		9	16	10	19	. 4	10 .	2	91	46	56
B 20	50 D	9	18	6	19		11 .		50	210	10
C 20	44 D	20	17	18	18		12 .		79	45	45
D 20	28 L	1	4	0	1 .	. 1	10 .		161	1035	0
E 19	80 P	2	250	7	9 .	. 1	0.	2	76	46	40
LINE	2060	/17	T TOUM	221	•	•	•				
A 24	2860	-	LIGHT	33)	2		47		4=0	400	
B 23		7 3	2 4	8 7	2 . 14 .		17 . 30 .	1	159	123	100
C 23		10	9	21	18		21 .		69	147	28
D 23		14	9	19	12		14.		73 9 3	59 57	3 7 53
E 23		3	2	17	7 .		37 .		117	8	94
	24 B?		13	44	28		0.		122	154	63
G 23	22 D	28	19	5 3	31 .		0.		64	12	42
						•	•				
	2870		LIGHT	33)		,					
A 21		9	17	26	34		9.	2	68	48	35
B 21		11	16	24	31 .		17 .		55	98	21
C 21 D 21		17	15	26	20		16.		75	35	45
F 22		11 38	9 38	36 113	29 92		16 .		75	32	45
		50	30	113	94	. 19	0.	4	45	12	27
LINE	2880	(F	LIGHT	33)	,	•	•				
A 19	74 S	1		1	3 .	. 1	12 .	1	52	538	3
В 19	71 P	3	5	11	13		4.		52	77	13
C 19	64 P	6	3	30	15 .	21	24 .			11	68
D 19		1	5	0	1 .	. 1	4.	1	216	1035	0
	15 B?		8	3	6 .		15 .		81	460	23
	11 D	7	8	6	10	. 6	32 .	1	90	250	39
	2000			221	•	•	•				
	2890 23 B?		LIGHT 14	33) 0	10		•		•	- المام م	_
	23 Б: 78 В?		5	2	10 . 4 .		0. 16.		82	1035	
- ''		٠.	J	2	"2 .	• '	10.	1	81	772	2

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	COAX CO	IAL		ANAR OIL		CICAL .		ZONTAL EET	CONDUC EAR	
ANOMALY/					. COND	DEPTH*.	COND	DEPTH	RESIS	DEPTH
FID/INTERF	PPM	PPM	PPM	PPM	. MHOS	м.	MHOS	М	OHM-M	М
LINE 2890) (F	LIGHT	33)		•	•				
C 1801 L	3	7	1	1	•	28 .	1	217	851	62
D 1811 L	1	1	6	6	. 8	47 .			96	46
E 1843 D	1		1	10	•	3.	1		328	22
F 1847 B		13	3	16	• 2	9.	1	53	304	9
LINE 2900		LIGHT	33)		•	•				
A 1604 L	2	5	0	1	. 1	21 .	1	217	1035	0
B 1559 D	55	29	153	7 7	. 41	1.		76	8	57
C 1557 D	74	41	153	77	. 41	0.	7	40	3	26
LINE 2910		LIGHT	33)		•	•				
A 1339 B?			0	7	• • 1	0.	1	0.3	1005	
B 1390 B	2	7	1	8		12.	1	83 67	1035 1035	0 0
С 1412 L	4	4	1	1		48 .	1	224	1035	0
		71	127	107		2.	4	67	11	47
E 1468 D		71	128	103		1.	3	55	14	35
F 1470 D	83	44	128	78	• 38	2.	6	41	4	27
LINE 2920		LIGHT	33)		•	•				
A 1301 D	2	8	1	6	. 1	6.	1	91	1035	0
в 1216 г	5	4	0	1		45 .	1	217	1035	0
C 1164 D	34	16	121	165		4.	2	75	53	40
D 1162 G	0	55	188	156		0.	4	49	8	32
E 1160 G		18	173	0 .	_	6.		31	1	24
F 1158 G G 1157 G	305 230	136 166	332 205	256		0.	9	21	1	11
	230	100	205	352	. 24	0.	7	18	3	8
LINE 2930	(F	LIGHT	33)			•				
A 942 B	0	8	7	6	. 2	18 .	1	59	218	15
B 945 D		39	38	54	. 8	3.	2	46	45	18
C 987 B	2	1	4	3 .	. 8	69 .	1	137	131	81
D 1076 B	11	1	30	14 .		36 .	1	94	95	51
E 1078 B F 1081 T	31 205	69	86	173		0.	2	82	31	52
G 1083 G	248	65 129	177 215	159 . 327 .		0.	3	43	14	23
H 1087 G	49	24	170	48		0. 4.	20	32	1	24
I 1094 B	11	48	11	79		4.	20 1	26 28	1 177	19
						7 •	'	20	177	1
LINE 2940		LIGHT	33)	•	•	•				
A 909 D	5	6	12	4.		9.	2	93	37	59
B 860 B	2	5	6	10 .	3	28 .	1	86	200	37

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	COAX CO	IAL IL		ANAR		ICAL .		ZONTAL EET	CONDUC EART	
ANOMALY/	REAL	OUAD	REAL	CILIO	. COND	DEPTH*.	COND	DEPTH	RESIS	משמשת
FID/INTERE		PPM	PPM		. MHOS	M .		M	OHM-M	М
					• •	r	MIOS	М	OnM-M	M
LINE 2940) (F	LIGHT	33)							
C 850 B	4	13	6	21	. 2	8.	1	54	233	12
D 829 L	1	3	0	1	. 1	21 .	1	197	1035	0
E 780 D	13	11	0	5	. 8	22 .	1	81	267	29
F 777 D	14	7	36	8 .	. 45	20 .	16	68	1	57
G 776 G	52	35	143	80	. 32	0.	6	73	5	56
н 774 т	87	52	189	104		0.		23	2	12
J 771 G	32	17	83	46		2.		46	17	24
к 768 т	107	24	290	65		0.	-	28	1	19
L 766 G	250	84	404	135		0.		38	15	18
M 764 G	275	100	406	206	. 81	0.	12	22	1	14
LINE 2950	. / Ter	LIGHT	221	•	•	•				
A 597 B7	•	6	33) 2	7	. 1	4.		0.0	647	•
B 615 P	1	3	5	9 .		22 .		80	647	8
C 651 D	2	6	1	4 .		10 .		93	149	42
D 705 D	81	43	188	87 .		3.	·-	49 42	710 3	0
				0,		_	0	42	3	30
LINE 2960	(F	LIGHT	33)		•					
A 2494 G	3	2	11	8 .	. 10	35 .	2	105	36	73
B 2556 D	8	19	10	27 .	. 3	0.	1	38	214	0
С 2634 Т	20	30	43	63	. 8	5.	2	52	40	23
					•					
LINE 2970		LIGHT	33)		•	•				
A 2780 D	15	22	23	35 .		9.	1	54	73	21
B 2770 L	1	3	0	0 .		35 .		142	1035	0
C 2707 D	5	15	7	24	. 2	6.	1	45	248	5
LINE 2980		LIGHT	33)	•	•	•				
A 2878 D	, (<u>r</u> 8	10	33) 24	31	. 7	16.	2	62	20	22
B 2943 D	_					5.		63	38	3 3
D 3021 B		12	8	19 .		22 .			44	18
			Ū	1,7	• •	22 .	'	73	187	30
LINE 2990) (F	LIGHT	33)			•				
A 3235 D	17	14	19	20	. 11	5.	2	75	48	39
B 3172 D	8	13	23	28		3.		54	45	22
C 3168 T?	27	13 25	59	58		1.	_	45	20	22
D 3160 L	0	5	0 3	5 .		0.	_	92	1035	0
E 3103 B		8	3	15 .	. 2	0.	1	48		0
				•	•	•				-
LINE 3000		LIGHT				•				
A 3278 S?	' 0	9	0	7.	. 1	3.	1	7 7	1035	0

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Co	OAXIAL COIL	COPL CO		VERT		HORIZ SHE	ONTAL	CONDUC EART	
ANOMALY/ RE	-	REAL PPM		COND MHOS	DEPTH*.	COND MHOS	DEPTH M	RESIS OHM-M	DEPTH M
LINE 3000	(FLIGHT	33)			•				
B 3323 S	2 11	3	26	. 1	0.	1	25	523	0
C 3330 D	18 7	27	22	. 21	0.	2	43	26	16
D 3401 D	7 25	8	43	. 2	3.	1	31	351	0
LINE 3010	(FLIGHT	221	,	•	•				
	61 34	33) 137	86	. 34	•	_	27		
B 3490 B	2 9	2	13		0.	6 1	37 55	4 373	23 4
		-			•	•	33	373	**
LINE 3020	(FLIGHT	33)		•	•				
A 3679 S?	1 17	2	31 .	. 1	1.	1	32	880	0
	17 2 8	24	53	_	0.	1	37	82	7
C 3823 B?	2 9	1	11 .	. 1	2.	1	48	963	0
	(FLIGHT	34)	•	•	•				
	28 22	53	65	. 13	0.	4	39	9	22
F 1777 P	1 2	12	9 ,		34 .	2	102	38	69
	_	100		,		-	102	30	09
LINE 3050	(FLIGHT	34)	,		•				
A 1595 B	84 66	144	146	. 22	0.	4	27	9	11
	10 17	13	29	. 4	6.	1	17	641	0
C 1569 L	2 4	0	2 .	-	28 .	1	149	1035	0
D 1540 P	2 2	5	5 .		38 .	1	117	139	61
E 1520 B	3 3	8	9 .	•	29 .	1	82	107	37
F 1484 B?	1 7	0	10 .	. 1	0.	1	65	1035	0
LINE 3060	(FLIGHT	34)	•	•	•				
A 1315 B	6 16	13	31	. 3	0.	1	50	68	1.5
C 1376 D	8 7	18	21		21 .	2	76	48	15 42
D 1383 B	3 3	4	7		32 .	1	108	114	57
				•		,	,,,,		3,
	(FLIGHT	34)		•	•				
A 1228 P	2 1	9	6 .		26 .	2	107	36	71
B 1208 D	2 6	2	7		0.	1	78	981	0
C 1148 G	6 13	12	24 .		12 .	1	62	102	25
D 1140 G	3 1	9	8		28 .	2	98	40	64
E 1118 B	6 7	6	6 .		21 .	2	75	36	43
	10 7	31	18		7.	4	58	9	37
H 1106 T I 1094 S?	16 15	49	34	_	2.	4	55	10	35
T 1034 91	2 14	0	19	. 1	0.	1	28	906	0
LINE 3080	(FLIGHT	34)	•	•	•				
	16 17	25	15	. 13	15 .	2	100	42	65

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	COAXIAL COIL		COPLANAR COIL			VERTICAL . DIKE .		•	HORIZONTAL SHEET		CONDUCTIVE EARTH	
ANOMALY/		QUAD	REAL	QUAD		COND	DEPTH*		COND	DEPTH	RESIS	DEPTH
FID/INTER	PPM	PPM	PPM	PPM	•	MHOS	М	•	MHOS	М	OHM-M	М
LINE 3080	· \	LIGHT	241		•			•				
B 946 D	, (r 9	11 11 11 11 11 11 11 11 11 11 11 11 11	34) 24	25	٠	8	24	•	2	0.0	27	
C 997 P	1		· 9	5		8	69		2 2	82 130	37	51
D 1007 D	11	5	23	9		28	27		2	139	34	106
E 1009 D	4	5	5	12		3	15	-	1	116 74	27 121	85 29
F 1012 G	7	1	26	9		47		•	6	108	5	87
G 1035 T	32	15	69	33		37	0		7	43	4	29
н 1038 в	23	5	56	13		94	0		8	75	3	59
I 1046 D	5	7	13	10		8	10		1	100	69	57
	•	_			•			•				
LINE 3090	•	LIGHT	34)		•			•				
B 845 G	8	15	24	38		5	12		2	67	46	34
C 841 D	34	34	69	63		15	8		3	61	23	35
D 811 B E 804 L	7 7	6	7	7		8	22		1	97	79	52
F 780 G	6	10	0	1	-	5	3		1	143	1035	0
G 778 G	17	4 15	16 25	12 20		12	20		3	99	24	69
H 751 D	9	7	34	25		14		•	3	75	14	52
J 744 G	21	13	57	33		15 24	17 5	-	2 5	75	27	46
L 734 D	5	8	7	10		5	8		1	68 80	6 119	49
	- 3		•	. •		,	ŭ	•	•	80	113	33
LINE 3100	(F	LIGHT	34)		•							
A 584 D	15	11	46	28		20	4		3	75	20	50
B 600 D	6	9	14	18		6	9		1	80	63	41
C 612 L	6	5	4	6		7	19		1	94	159	40
D 631 D	28	22	30	22	•	17	2		4	64	12	43
E 636 G	4	3	9	9	•	8	17		2	92	27	62
F 639 D	5	2	15	9	•	19	27		3	104	25	74
G 673 B H 677 T	1 7	3	4	3	•	3	35	•	1	129	71	84
n 0// 1	. '	4	16	10	•	17	23	•	3	105	20	76
LINE 3110	न)	LIGHT	34)		•			•				
A 455 D		14	14	17	•	6	10	•	1	78	o c	20
в 434 L?		8	8	7		7	17		1	78 98	85	36
C 414 D	10	3	8	, 5		25	12		2	90	80 4 6	53
D 411 G	8	7	6	4		11	19		2	104	41	54 71
E 404 B	2	2	4	7		4	36		1	100	148	48
F 374 P	7	12	31	42		7	7		2	53	30	26
					•				_			
LINE 3120		LIGHT	33)									
A 329 B		4	9	10	•	6	41	•	2	113	61	72
					•			•				
LINE 3121			34)		•			•				
A 143 B	3	1	12	4	•	27	40	•	2	109	5 7	69

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LINE 3121 (FLIGHT 34) B 148 T 24 26 47 53 . 12 0 . 3 49 15 28 C 152 B 15 19 31 47 . 8 11 . 1 73 409 19 D 198 G 36 23 65 37 . 26 0 . 5 59 8 40 F 207 D 8 12 14 12 . 7 5 . 1 91 76 47 LINE 3122 (FLIGHT 34) A 314 T 52 43 86 73 . 20 0 . 3 50 17 28	COAXIAL COIL		COPLANAR COIL		VERTICAL . DIKE .			HORIZONTAL SHEET		CONDUCTIVE EARTH	
FID/INTERP PPM PPM PPM PPM MHOS M MHOS M OHM-M M LINE 3121 (FLIGHT 34) B 148 T 24 26 47 53 12 0 3 49 15 28 C 152 B 15 19 31 47 8 11 1 73 409 19 D 198 G 36 23 65 37 26 0 5 59 8 40 F 207 D 8 12 14 12 7 5 1 91 76 47 LINE 3122 (FLIGHT 34) A 314 T 52 43 86 73 20 0 3 50 17 28	ANOMALY/	REAL QUAD	REAL QUAI	· .	COND	DEPTH*	COND	DEPTH	RESIS	DEPTH	
LINE 3121 (FLIGHT 34) B 148 T 24 26 47 53 . 12 0 . 3 49 15 28 C 152 B 15 19 31 47 . 8 11 . 1 73 409 19 D 198 G 36 23 65 37 . 26 0 . 5 59 8 40 F 207 D 8 12 14 12 . 7 5 . 1 91 76 47 LINE 3122 (FLIGHT 34) A 314 T 52 43 86 73 . 20 0 . 3 50 17 28	FID/INTERP	PPM PPM	PPM PPM	Α.	MHOS					М	
B 148 T 24 26 47 53 . 12 0 . 3 49 15 28 C 152 B 15 19 31 47 . 8 11 . 1 73 409 19 D 198 G 36 23 65 37 . 26 0 . 5 59 8 40 F 207 D 8 12 14 12 . 7 5 . 1 91 76 47 . LINE 3122 (FLIGHT 34) A 314 T 52 43 86 73 . 20 0 . 3 50 17 28	7.7ND 2424 /DV 7.0VM		24)	•		•					
C 152 B 15 19 31 47 8 11 1 73 409 19 D 198 G 36 23 65 37 26 0 5 59 8 40 F 207 D 8 12 14 12 7 5 1 91 76 47 LINE 3122 (FLIGHT 34) A 314 T 52 43 86 73 20 0 3 50 17 28			•	3.	12	0.	3	49	15	28	
D 198 G 36 23 65 37 . 26 0 . 5 59 8 40 F 207 D 8 12 14 12 . 7 5 . 1 91 76 47	C 152 B									19	
LINE 3122 (FLIGHT 34) A 314 T 52 43 86 73 20 0 3 50 17 28		36 23			26					40	
A 314 T 52 43 86 73 . 20 0 . 3 50 17 28	F 207 D	8 12	14 12	2.	7	5.	1	91	76	47	
A 314 T 52 43 86 73 . 20 0 . 3 50 17 28	LINE 3122	LINE 3122 /FITCHE		•		•					
D 240 D 40 40				3.	20	0.	3	50	17	28	
	B 318 D	19 19	32 32	2.	11	7.	2			34	
LINE 3130 (FLIGHT 32)	TINE 2120	/77. T.O.I.M.	20)	•		•					
X 2200 B				5 .	4	54 .	1	147	73	101	
73 101					_					86	
7 2000 0 0 0	D 3290 G									39	
F 3245 B? 5 10 7 11 . 4 3 . 2 71 59 33					4			71		33	
								92	45	56	
7 3404 % - 4 4 4 4										33	
* 2424 0 5 4 4 4 4		•								85	
W 2104 B 21 40 40										68 29	
			15	•			,	32	10	23	
LINE 3131 (FLIGHT 33) .				•		•					
n 000 m 4							_			56	
B 232 B 6 9 13 16 6 17 . 2 69 51 34		6 9	13 16	5.	6	17 .	2	69	51	34	
LINE 3140 (FLIGHT 32)		(FLIGHT	32)	•		•					
D 2022 m 24 20 45 45	В 3023 Т			7.	16	9.	3	57	18	35	
C 3024 G 28 22 70 60 . 18 9 . 5 53 7 37		28 22	70 60) .	18					37	
								71	439	16	
m 0400 - 4 - 4 - 4 - 4 - 4 - 4 - 4 - 4 -										36	
// 2122 B 25 24 45 A4 .=											
W 2120 P. 42										48	
H 3130 D 43 29 61 47 . 22 0 . 3 50 15 30		45 29	01 47	•	22	υ.	3	50	15	3 0	
LINE 3150 (FLIGHT 32)		(FLIGHT	32)			•					
				5.	4	52 .	2	147	6 5	103	
										42	
E 2040 B C O 40 A										21	
TO 2004 TO 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1										22	
C 2004 D 2 2 2 5										47	
H 2077 W 20 00 10 10 10 10 10 10 10 10 10 10 10 10										29 28	

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	COAXIAL COIL		COPLANAR COIL		VERTICAL . DIKE .		HORIZONTAL SHEET		CONDUCTIVE EARTH	
ANOMALY/	REAL	QUAD	REAL	QUAD .	COND	DEPTH*.	COND	DEPTH	RESIS	DEPTH
FID/INTERP	PPM	PPM	PPM		MHOS	м.	MHOS	M	OHM-M	M
				•						
LINE 3150 I 2844 D	(F 13	LIGHT 16	32)	177	•					
1 2044 D	13	10	13	17 .	. 8	18.	1	86	108	43
LINE 3160	(FLIGHT		32)	•		•				
A 2718 P?	5	6	18	22 .	7	10 .	2	63	31	22
B 2741 B	9	9	30	25		5.	1	105	207	33 47
		10	40	30 .	15	7.	4		10	44
D 2789 B	2	2	5	5.	6	39 .	1	127	112	73
T.T.N.D. 2170	/=			•		•				
LINE 3170 A 2559 D		LIGHT	32)		•	•				
B 2539 B	5 3	4	9 8	11 .		23 .	1	70	118	26
C 2533 P	1	0	8	1 . 9 .		50 ·	3	129	15	100
E 2530 D	8	5	32	14.	•	26 . 13 .	2 4	78	35	47
F 2499 B	0	3	2	7.		12 .	1	80	13	56
	·	J	-	, .	1		ı	87	426	26
LINE 3180	(FLIGHT		32)			•				
A 2394 G	11	5	21	19 .	15	14 .	4	71	13	48
B 2398 G	3	2	8	15 .	5	23 .	2	72	30	43
				•		•	_	, 2	30	43
LINE 3190		LIGHT	32)	•		•				
A 2226 B		3	9	10 .	•	30 .	1	101	67	59
B 2162 G	11	20	9	19 .	4	7.	1	63	165	21
LINE 3200	/Dr. 7.0		22)	•		•				
A 2111 B	(F) 8	LIGHT 14	32) 7	15 .	4	8.		60	4.40	
	·	1-2	,	15.	4	δ.	1	68	149	24
LINE 3210	(F)	LIGHT	32)	•		•				
A 1817 D	21	10	16	11 .	24	16 .	2	103	47	67
В 1805 Р	1	1	5	7.	4	25 .	1	103	101	6 7 52
							•	103	101	32
LINE 3220	(F)	LIGHT	32)			•				
B 1703 B D 1751 D	2	3	9	8.	6	45 .	2	124	35	91
	9	12	8	14.	6	15 .	1	93	124	45
LINE 2220	(17)		201	•		•				
LINE 3230						•				
A 1422 D	10	7	11	10 .	12	16 .	1	112	68	68
	(FLIGHT		321	•		•				
A 1296 D	11		31	38 .	8	9.	2	90	55	43
					J	<i>,</i>	2	00	55	43
LINE 3260	(F)	LIGHT	32)			•				
A 947 B?	3	4	5	11 .	3	17 .	1	54	345	2
•				·	-	. , •	,	34	313	J

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707-SH.2 FOLLDAL

	COAXIAL COIL		COPLANAR COIL		VERTICAL . DIKE .		HORIZONTAL SHEET		CONDUCTIVE EARTH	
ANOMALY/	REAL (QUAD	REAL	QUAD .	COND	DEPTH*		DEPTH	RESIS	DEPTH
FID/INTERP	PPM	PPM	PPM	PPM .	MHOS	м.	MHOS	М	OHM-M	М
LINE 3270) (FL1	GHT	32)	•		•			7.2	
A 853 B	3	4	6	12	. 3	12	. 1	66	149	21
LINE 3280) (RT.1	IGHT	32)	•	ı	•				
A 741 B	5	4	5	5.	8	24 .	1	138	79	90
LINE 3300	- \	r Crrm	221		•	•				
A 578 G	3	IGHT 4	32) 8	8 .	5	23	. 1	119	72	74
	- /==:		201							
LINE 3320 A 425 P	0 (E.P.	IGHT 1	32) 5	10	2	28 .		91	150	41
	•	'	5			20 .		91	158	41
LINE 3330	(FL	IGHT	32)		i					
A 309 D	5	7	11	12 .	6	13 .	. 1	75	197	25
LINE 3340		IGHT	32)	•	•	•	ı			
A 269 D	6	8	12	16	6	18 .	1	7 5	169	29

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