CONTACT INFORMATION
Mining Records Curator
Arizona Geological Survey
3550 N. Central Ave, 2nd floor
Phoenix, AZ, 85012
602-771-1601
http://www.azgs.az.gov
inquiries@azgs.az.gov

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INDUCED POLARIZATION SURVEY

OF THE

KELVIN AREA, PINAL COUNTY, ARIZONA

FOR

TIPPERARY RESOURCES CORPORATION

MAY 1970

BY

HEINRICHS GEOEXPLORATION COMPANY
P.O. BOX 5964 TUCSON, ARIZONA 85703
PHONE: 623-0578 Area Code: 602

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GENERAL LOCATION
of
THE KELVIN AREA
FOR
TIPPERARY RESOURCES CORPORATION

ARIZONA

HEINRICHS
GEOEXPLORATION COMPANY
GEOPHYSICAL ENGINEERS

AUSTRALIA
(SYDNEY)
39 Hume Street
Crows Nest, NSW
Phone: 439-1793

U.S.A.
Post Office Box 5964
Tucson, Arizona 85703
Phone: (602) 623-0578
Cable: GEOEX, Tucson

INTRODUCTION

At the request of Mr. C.R. Williams, Senior Minerals Geologist, Tipperary Resources Corporation, Heinrichs GEOEXploration Company conducted and completed a comprehensive induced polarization survey in the Kelvin Area, Pinal County, Arizona. The field work was done during the interim March 10 to May 5,1970.

A total of eleven lines were completed, all oriented N-S. A coordinate grid was used whose origin is the southeast corner of Section 8, T4S, R13E to which all lines and stations have been referred. The lines are separated by 1000 feet and a station spacing (dipole or "a" spacing) of 1000 feet was utilized except on Lines OE/W, 10E and 10W where a more detailed spacing of 500 feet was also employed. The total surface coverage counting both dipole spacings was 37.5 miles of which 24.5 miles was "subsurface" plotted data points.

The dual frequency I.P. technique was used with sending frequencies of 0.3 and 3.0 Hz with a GEOEX MK-7 sender and a GEOEX MK-4C receiver. The collinear dipole-dipole configuration was the electrode arrangement employed which on a 1000 foot spacing should typically give resolvable penetration within the zone from roughly 300 feet to approximately 1200 to 1500 feet below surface.

The purpose of this survey was to aid in delineating a subsurface sulfide zone and thereby help to define drilling targets in a mineralized area evidenced by several surface showings of copper and molybdenum and partially defined by several existing drill holes.

The data are presented on Sectional Data Sheets, one for each line and spacing, showing resistivity, percent frequency effect (PFE) and metallic conduction factor (MCF) contoured in section with self potential (SP) in profile form. An "Induced Polarization Location and Interpretation Plan" is also included showing the surface projected plan interpretation of the 1000 foot dipole data relative to the land net and overlays a portion of the U.S.G.S. 1:24,000 scale Grayback Topographic Quadrangle which is also included herewith and which shows the surface projected 500 foot dipole data interpretation. For additional details concerning theory, interpretation and presentation, see the "Basis of the Induced Polarization Method" appended to the report.

Heinrichs personnel involved in the field work were D. Chaffin, geophysical crew chief; D. Kern, J. Boduch, J. Patten, B. Coons and W. Wright, technical assistants with W. Freeman, Geophysicist supervising in the field. Report and interpretation by C. Ludwig, Senior Geophysicist assisted by the GEOEX staff.

CONCLUSIONS

Anomalous induced polarization effects are seen on all lines and define a WNW-ESE trending zone roughly through the central portion of the area surveyed. The total width of this zone varies from about 3500 feet to 5000 feet considering the very weak (and sometime poorly defined) fringes. The stronger core of the anomaly is about 1500 feet to 2000 feet in width and lies roughly between 15W and 35E.

The cause of the anomalous response is likely metallic lustered sulfide mineralization. Within the stronger anomalous core about 0.5 to 2.0% by volume total bulk average sulfides is indicated based on a comparison with "typical" disseminated sulfide zones in the Southwest. This concentration crudely represents 1.0 to 4.0% total sulfide by weight and therefore could certainly be of economic interest providing the ratio between minerals of copper, molybdenum etc., to the iron minerals is reasonably high.

Depth to the top of this indicated mineralization varies from within 150 feet of the surface on portions of Lines 0E/W and 10E and becomes progressively deeper east and west thereof. The greatest depth to the top of polarizable mineralization noted is on Line 50E where the main causative body may be deeper than 1500 feet below surface. Dip is difficult to determine by the I.P. technique but there is some evidence of a southerly dip (or top slope of a broad body) in several portions of the area.

Based on the geologic data available to us, no obvious correlation is noted between any particular geologic units or structure and the I.P. anomaly. Therefore it is possible that the polarizable zone is caused by or related to some unexposed intrusive or structure at depth roughly below the anomalous area. However, no obvious change is seen in the geophysical data with depth, thereby suggesting in excess of 1500 feet to this postulated intrusive or structure or simply that there is a lack of electrical contrast with the overlying material. The induced polarization response in general shows no obvious evidence of having a depth limited source. Sulfides are expected to persist to at least 1500 feet in depth - the probable limit of resolvable "penetration" of the resultant data.

The resistivity is relatively uniform and rather non-diagnostic. Portions of the more strongly polarized zone have lower associated resistivities probably caused by the concentration of conductive sulfide mineralization and associated alteration.

Lower resistivity is also seen where there is an appreciable thickness of recent alluvium overlying the crystalline bedrock as on the north ends of Lines 20E and 30E in the Gila River gravels. Higher resistivities are associated with the topographic effect of erosional resistant ridge crests and perhaps tighter or more silicified rock. The highest resistivities are noted near 35N on Lines 40W and 50W where the most extreme topography on the survey was traversed.

Many of the lines show a broad self potential low, correlating with the anomalous I.P. response, which is likely reflecting concentrations of relatively interconnected, actively oxidizing sulfides within several hundred feet of the surface.

RECOMMENDATIONS

Because of the geophysical correlation with encouraging copper - molybdenum mineralization at depth in DH-2 it is recommended that a fairly extensive and deep drilling program be executed to more completely evaluate the rest of the significant appearing induced polarization anomaly. Eight drill holes are proposed in order of geophysical priority - some of which will of course depend on the results of higher priority holes, existing drilling and geological and geochemical information available, all of which should be in constant correlation.

1. Line 0E/W near 19N to test a rather strong but narrow near surface polarizable zone apparently merging at depth with the broad main anomaly. This drill hole should go to about 600 feet to evaluate the shallow anomaly but could effectively be carried to at least 1000 feet and preferably to 1500 feet to also test the northern portion of the broad anomaly at depth.

2. Line 10E near 13N to test the strongest I.P. response noted on the survey. This hole should be at least 1000 feet in vertical depth to properly evaluate the zone of interest. Mineralization is expected from within about 150 feet of the surface to at least 1200 to 1500 feet in depth.

3. Line 0E/W near 7.5N (or essentially equivalently near 5N on Line 10E)to test one of the stronger and deeper portions of the main anomaly. This hole is approximately midway between your DH-1 and DH-2 and will give additional information as to the mineralization across the width of the anomalous zone. To completely evaluate the section of interest, the hole should be programmed for about 1500 feet total depth and should depend to some degree on the results of Recommendation 1. above.

4. Line 0E/W near 7S to test a minor zone of increased mineralization, within the fringe zone, which shows up best on the more detailed 500 foot coverage. A relatively shallow hole - about 500 feet - should suffice to evaluate this target unless encouragement is obtained. The expected strength of mineralization in this area is roughly only one half that of the stronger core of the main anomaly and it will therefore necessitate a very high copper to iron ratio to be economically interesting. Because of this low expected sulfide content, drilling at this stage should only be considered if there is supporting geological or geochemical data.

5. If Recommendation 2. proves encouraging then a hole is suggested near 7.5N on Line 20E to test a zone of similar response. A minimum drilling depth of 1000 feet should be considered to properly sample the interesting section.

6. If Recommendation 5. proves encouraging, a drill hole near 5S on Line 30E should be considered and again should be programmed for a minimum of 1000 feet in depth.

7. and 8. Depending on drilling results on Line 0E/W, two holes could be considered on Line 10W; near 17.5N and 7.5N. Somewhat deeper and/or weaker mineralization is expected compared to Line 0E/W and drilling here should be in excess of 1000 feet in depth to effectively sample the target.

All of the above drilling is considered vertical as recommended. However, if after several holes have been completed and if a definite and persistent dip is established, inclined drilling may prove more efficient.

Additional geophysical drill targets can be located by reference to the interpretation plan surface projected anomalism and its correlation with existing drill information. The weaker fringes of the I.P. anomaly should be given some consideration especially if in areas having evidence of a high copper to iron ratio. In fact in many mining areas, the weaker I.P. zones are of more interest than the stronger portions which may only be reflecting high pyrite concentrations. In this area, because of the rather low overall indicated sulfide concentration, initial attention has been focused on the stronger sulfide zones in the hope that they would have the highest probability of being economically interesting.

Further detailed I.P. coverage should be considered particularly if some of the more shallow mineralization becomes of interest. Reconnaissance I.P. along the general strike of the mineralized zone east and west of the present coverage is also suggested if the prospect continues viable. A semi-reconnaissance ground magnetic survey would conceivably delineate a related intrusive at depth as well as other possibly significant features of mineralization and structure and would be relatively inexpensive.

DRILLING OF I.P. TARGETS

To maximize the probability that a recommended drill hole will intersect the source of an induced polarization anomaly, the following points should be considered.

1. The anomaly has been caused by some physical property, hopefully a polarizable body containing economically interesting metallic mineralization, and this property should be determined before abandoning the anomaly.

2. Location of drill holes should be made relative to the actual sending and receiving electrode positions as they exist on the ground.

3. Due to inherent limitations in the I.P. method, depth interpretations are only approximate and the determination of dip is severely limited, particularly for angles greater than 45°. Also, targets can generally be laterally resolved no finer than the station spacing (dipole length). Because of these limitations, targets less than one dipole spacing in width, particularly when steeply dipping or deeper than the dipole length, may be difficult to intersect. In these cases, several drill holes in a fence line should be considered. For the steeply dipping cases, angle drilling may also prove advantageous, mainly where the direction of dip can be geologically inferred and the drill hole oriented such that an optimum intersection of the zone of interest is obtained.

4. An observed anomaly can be the effect of a polarizable body laterally offset to the side of a line and therefore if practical, drilling should be confined to those portions of the anomalous zones well defined by several lines. Also, it should be noted that a single line cannot define the strike direction of an elongate anomalous zone - another reason for utilizing several parallel lines.

5. Logging of the drill core must be done with special care to note the quantity of all possible polarizable material such as pyrite, graphite, magnetite, manganese oxides and clay minerals as well as the polarizable ore minerals. The anomalous source could conceivably be overlooked if the core is not carefully logged.

6. Typical sections of core representing the gross physical properties of material encountered in the drilling should be tested in the laboratory for their I.P. parameters, if there is some doubt about confirmation of the anomalous source.

INTERPRETATION

Line OE/W (Spread 1, a = 1000', Spreads 2 & 3, a = 500'):

The detailed coverage on Spreads 2 & 3 defines a moderately strong, narrow (about 500' in width) near surface and somewhat depth limited anomaly whose source is indicated near 20N and is associated with a self potential low suggestive of relatively interconnected, actively oxidizing sulfides. Depth to the top of this anomaly source is likely less than 150 feet and the source probably continues to 300 or 400 feet below surface where it becomes weaker in indicated strength of mineralization. This somewhat reduced indicated mineralization may persist indefinitely below the near surface body and in fact may persist below 1500 feet based on the 1000 foot dipole coverage. There is even some indication that the overall sulfide content may increase again below about 1000 feet in depth.

North of this moderate strength anomaly, the response fairly rapidly decreases to background near 27.5N. A minor probably very narrow source anomaly is noted near 45N and is apparently quite limited in size since it is not observed on nearby parallel traverses.

South of the moderate anomaly the response more gradationally diminishes to very weak in strength from 12.5N to 2.5S where slightly increased response is noted continuing to about 10S. This minor increase in anomalism is probably caused by a zone roughly 500 feet in width, coming to within 150 feet of the surface but having very good depth persistence. South of 15S very uniform background is noted.

The deeper penetrating 1000 foot dipole coverage shows a zone between about ON/S to 25N of moderate strength I.P. response having very good depth persistence and a sharp cutoff to background to the north and a gradational decrease to the south.

In the area of the moderate anomalism, there is some evidence of a fairly steep southerly dip of the overall mineralization. This may explain in part why DH-2 intersected interesting mineralization shallower than DH-1. Both of these drill holes appear to be within the zone of stronger anomalism but DH-1 is quite near the southern fringe and this may also explain why less mineralization was intersected compared to DH-2 which is more centrally situated in the anomalous zone.

This deeper information suggests that the shallow anomalies seen near 20N and 7S on Spreads 2 and 3 are continuous with and just projections of the broad deeper main anomaly.

The resistivity is quite uniform on this Line. A minor low correlates with portions of the stronger I.P. zone. The weak zone near 7S appears to relate to an area slightly higher in resistivity perhaps due to silicification or simply less fractured, tighter rock. The self potential shows a general low over the entire width of the complete I.P. anomaly but with a pronounced fairly narrow low relating to the shallow moderate strength I.P. anomaly at 20N on Spread 2 likely reflecting the near surface oxidizing concentrated sulfides in that area.

Line 10E (Spread 1, a = 1000', Spreads 2 & 3, a = 500'):

The I.P. response on the Line is quite similar to that seen on Line OE/W, but is somewhat stronger, in fact the strongest seen on the survey. There is a rather pronounced resistivity low associated with the stronger I.P. response which lies mainly between 7.5N and 20N. A definite self potential low also correlates with the stronger I.P. effects. Again there seems to be several near surface zones of concentrated sulfide merging at depth with the main broad anomaly. The strongest of these shallow zones appears to originate from near 17.5N and to progressively become deeper to the south. Another, but weaker, near surface zone is noted near 7.5S correlating with a similar anomaly 1000 feet to the west on Line OE/W. Resistivities on this line are more erratic, at least on Spread 2, than on Line OE/W perhaps due in part to topographic ridge effects.

Line 20E (Spread 1, a = 1000'):

Line 20E shows a good correlation to Line 10E, Spread 1 except for being somewhat weaker in I.P. response and indicating about 300 to 500 feet to the top of the main concentration of mineralization instead of less than 150 feet as on Line 10E. Also, the two near surface projections noted on the two lines directly west are no longer evident. There is still a broad self potential low and a minor resistivity low correlating with the stronger I.P. effects which lie mostly between ON/S and 15N.

Line 30E (Spread 1, a = 1000'):

This Spread shows a well defined I.P. anomaly whose source is mainly between 20S and 15N and having a moderate strength core from 10S to 5N obviously correlating with the moderate zone on Line 20E but displaced about 1000 feet to the south. Depth to the source and anomaly strength is similar to Line 20E and again there are

associated resistivity and self potential lows.

The extreme north end of this line and Line 20E show lower resistivities apparently related to relatively conductive gravels in the Gila River channel.

Line 40E (Spread 1, a = 1000'):

As on Line 30E, a well defined anomaly is seen between 20S and 15N. However this anomaly suggests a considerably deeper source than on Line 30E, perhaps in excess of 1000 feet to the zone of most concentrated sulfides. Weak mineralization may come to much closer to the surface, however. Again there is an associated broad self potential low, Minor zones of high and low resistivity are seen to relate to the I.P. anomaly.

Line 50E (Spread 1, a = 1000'):

A very deep source is indicated on this Spread, perhaps in excess of 1500 feet below surface, and likely correlating with the deep response noted on Line 40E. A broad self potential low and erratic resistivities are associated. As on Line 40E, weak sulfides may be present much shallower than the indicated depth to the main concentration of mineralization.

Line 10W (Spread 1, a = 1000', Spreads 2 & 3, a = 500'):

Line 10W shows a fair degree of pattern correlation with Line OE/W but is quite a bit weaker in strength of I.P. response and somewhat deeper appearing. The near surface anomaly near 20N is much subdued and has almost completely merged with the main broad anomaly. At depth, on the 1000 foot dipole coverage, the response is nearly as strong as data from a similar depth on Line OE/W and is therefore of some interest. It is possible however, that the response at depth is actually a lateral effect from mineralization east of the line near Line OE/W.

The resistivities are fairly uniform and show no obvious correlation with the I.P. response. The self potential also shows no well defined relation to the I.P. response.

Line 20W (Spread 1, a = 1000'):

The I.P. response on this line is quite similar to that noted on Line 10W in strength (except at depth where it is weaker), position, shape and indicated depths. However, there is a pronounced resistivity high centered near ON/S which gives some complexity

to the MCF pattern. This resistivity high may be caused by a quartz monzonite or aplite dike as indicated on the Geologic Map by Mr. T.L. Hanks. There is no obvious significant appearing sulfide response from this dike based on the I.P. data. No self potential data was obtained on this line due to improperly balanced non-polarizing electrodes.

Line 30W (Spread 1, a = 1000'):

An I.P. anomaly centered near 10N similar to that on Line 20W is noted but which is somewhat deeper and narrower. The resistivities are quite complex and again show a high area near ON/S perhaps caused by the same dike as on Line 20W. Another resistivity high is noted near 20N which is likely related to the high ridge topographic effects and/or erosionally resistant, tighter, less conductive material. A broad self potential low is apparently related to the zone of increased I.P. response.

Line 40W (Spread 1, a = 1000'):

This line shows only very weak and very deep appearing I.P. effects. The depth to the causative source may be in excess of 1200 feet in the vicinity of 5N but the source is likely a portion of the same sulfide zone seen on lines to the east. A minor but more shallow appearing anomaly is noted south of 15S. There is no obvious resistivity correlation but a broad self potential low seems to relate to the 5N I.P. zone. There is a very high zone of resistivity near 30N again apparently reflecting the high topographic ridge in that area.

Line 50W (Spread 1, a = 1000'):

Very similar I.P. effects are seen here compared to Line 40W with deep response below about 5N and more shallow but still very weak effects south thereof. The resistivity is erratic but still shows very high values crossing the ridge near 35N. A near surface conductive zone is present roughly between 25S and 5N perhaps reflecting more deeply weathered material. No significant self potential effects are seen along the traverse.

Respectfully submitted:

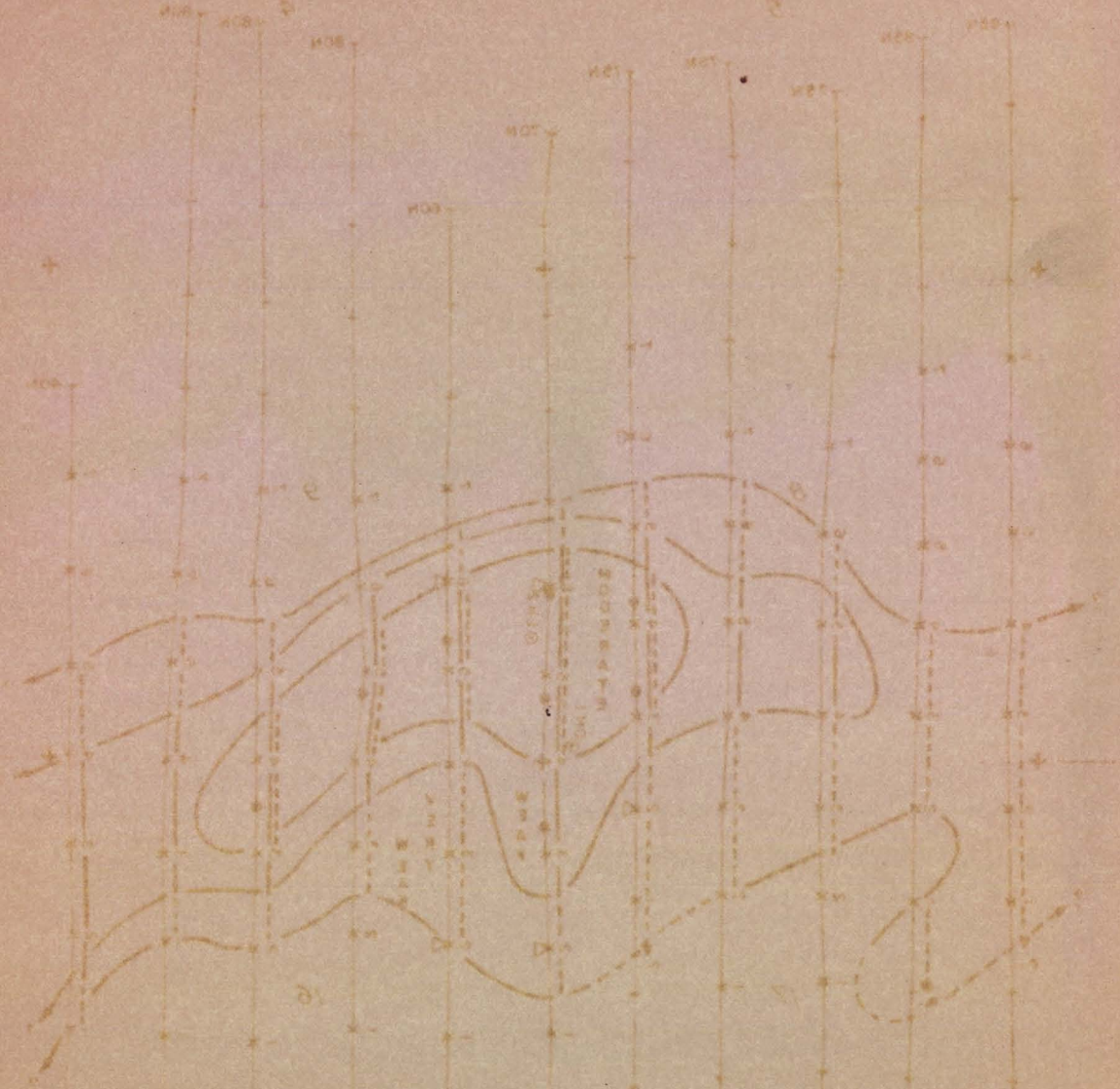
HEINRICHS GEOEXPLORATION COMPANY

Chris S. Ludwig

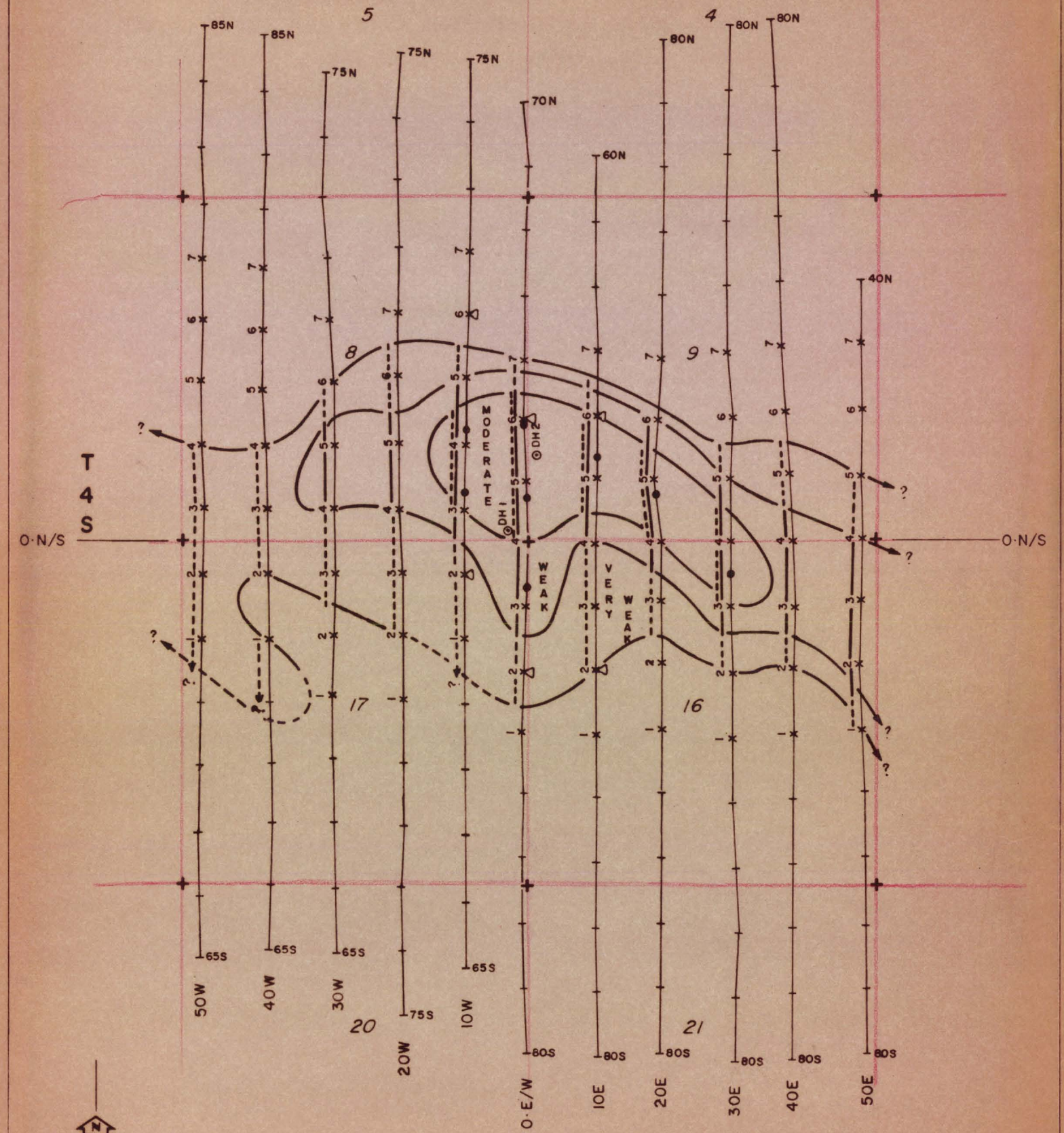
Chris S. Ludwig
Senior Geophysicist

APPROVED: _____
Walter E. Heinrichs, Jr.
President

May 22, 1970
Tucson, Arizona



R 13 E



516-70
MAY 1970

INDUCED POLARIZATION LOCATION AND INTERPRETATION PLAN

of

THE KELVIN AREA
PINAL COUNTY, ARIZONA

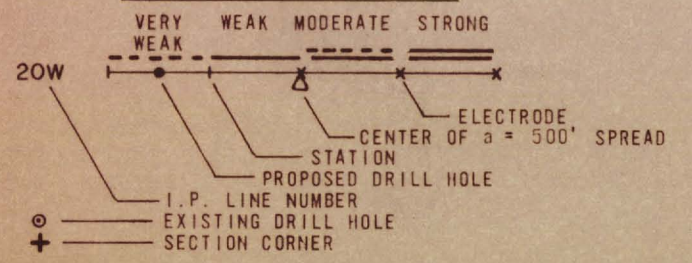
for

TIPPERARY RESOURCES CORPORATION

by

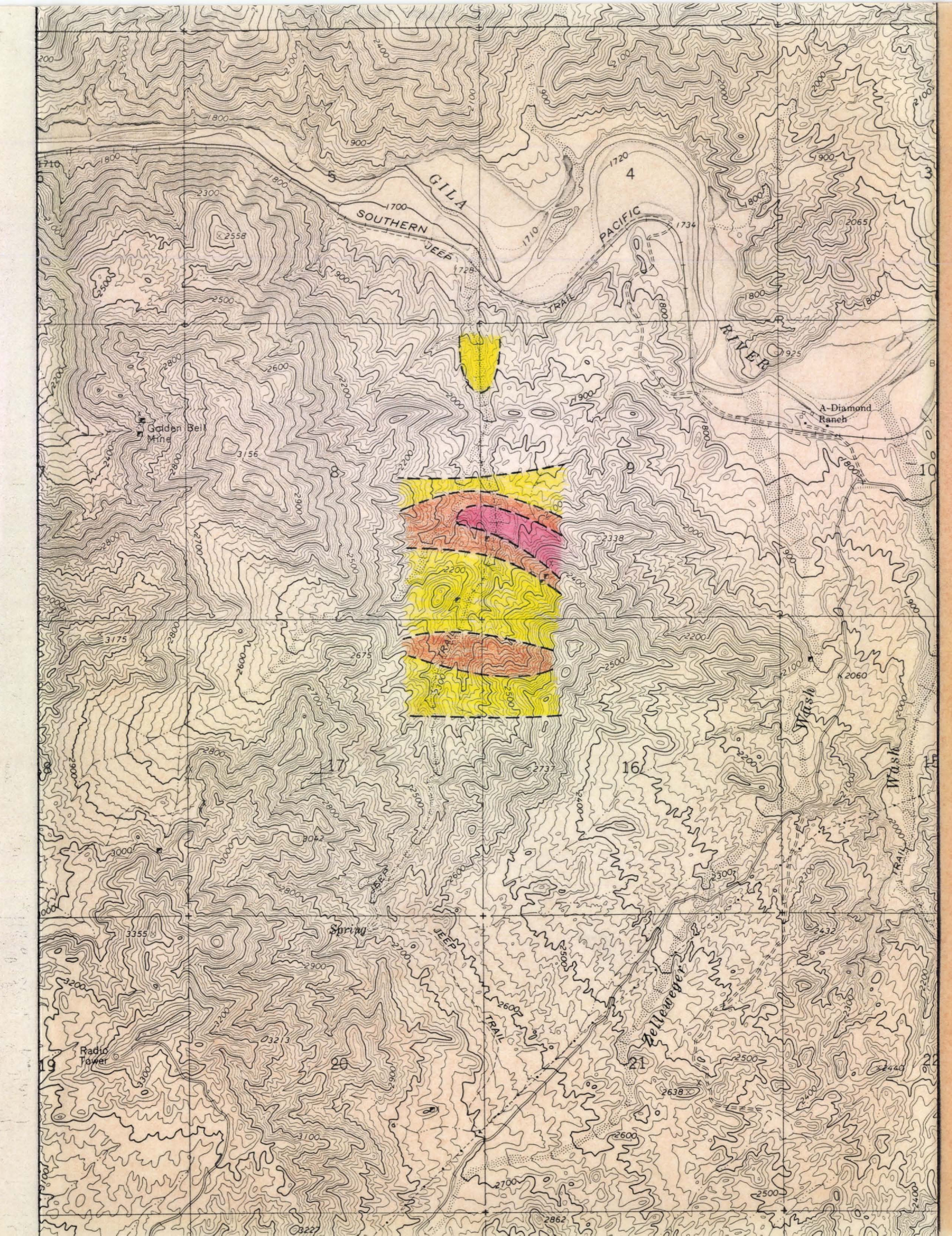
HEINRICHS GEOEXPLORATION COMPANY

RELATIVE ANOMALY STRENGTH



NOTE: This sheet overlays U.S.G.S Grayback quadrangle 7.5 minute series (scale 1:24 000) 1964.

HEINRICHS
GEOEXPLORATION COMPANY
POST OFFICE BOX 5964 · TUCSON, ARIZONA, 85703
Phone: 602/623-0578 Cable: GEOEX, Tucson
vancouver
sydney
geophysical engineers



516-70
MAY 1970

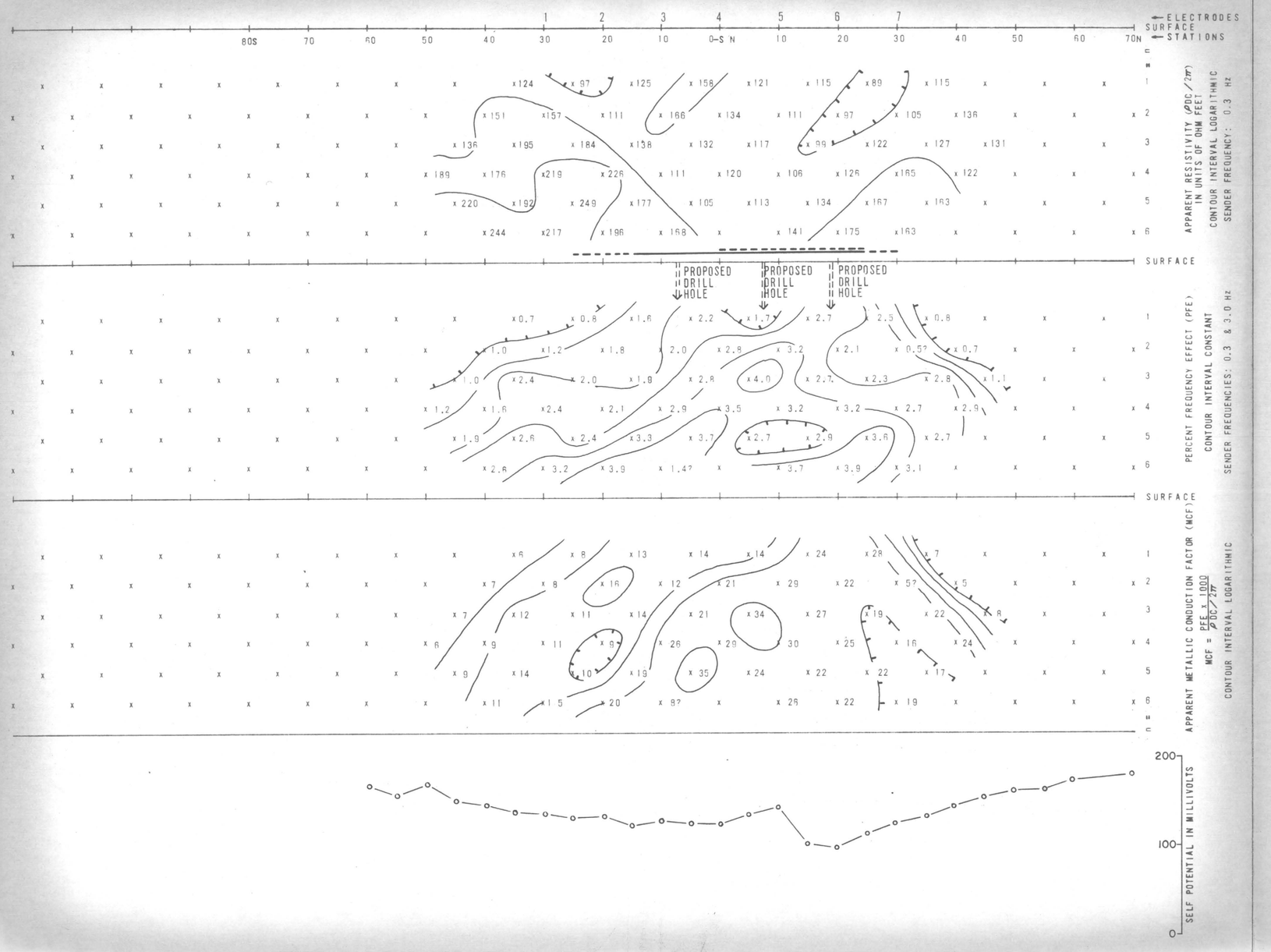
TOPOGRAPHIC MAP
of
THE KELVIN AREA
PINAL COUNTY, ARIZONA
for
TIPPERARY RESOURCES CORPORATION
by
HEINRICHS GEOEXPLORATION COMPANY

ZONES OF EQUAL RELATIVE ANOMALY STRENGTH
BASED ON a = 500' DATA:

- MODERATE
- WEAK
- VERY WEAK

NOTE: This map is a portion of U.S.G.S. Grayback quadrangle, 7.5 minute series (scale 1:24 000) 1964.

HEINRICHS
GEOEXPLORATION COMPANY
POST OFFICE BOX 5964. TUCSON, ARIZONA, 85703
Phone: 602/623-0578 Cable: GEOEX, Tucson
geophysical engineers
vancouver
sydney



516-70

LINE NO.
0 E/W
SPREAD(S)
1

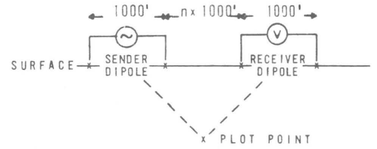
INDUCED POLARIZATION TRAVERSE SECTIONAL DATA SHEET for

TIPPERARY RESOURCES CORPORATION

RELATIVE ANOMALY STRENGTH

VERY WEAK — WEAK — MODERATE — STRONG

DIPOLE DIPOLE ELECTRODE ARRAY

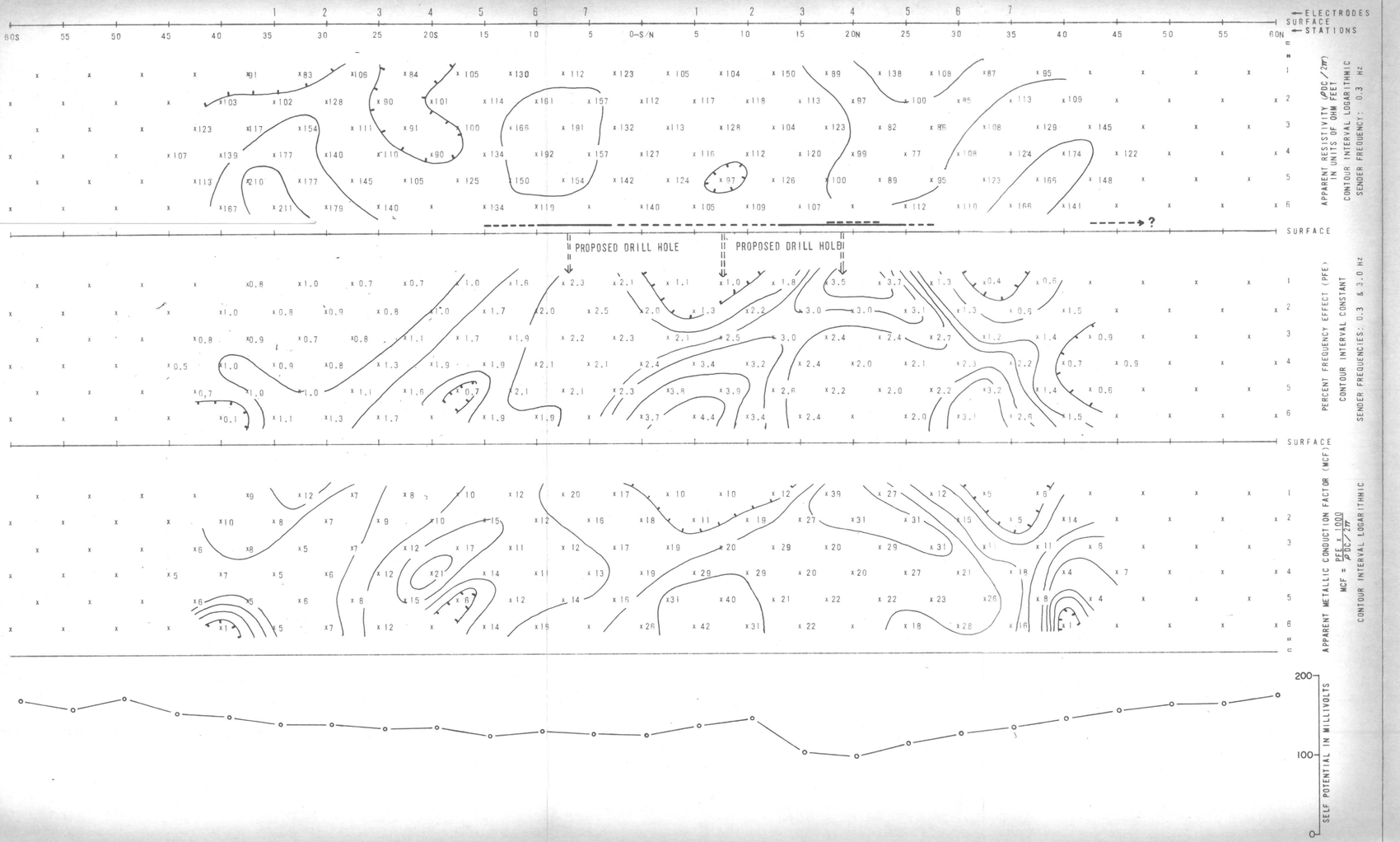


AREA
KELVIN

LOOKING
WEST

DATE
MARCH 1970

HEINRICHS
GEOEXPLORATION COMPANY
GEOPHYSICAL ENGINEERS
AUSTRALIA
(SYDNEY)
39 Hume Street
Crows Nest, NSW
Phone: 439-1793
U.S.A.
Post Office Box 5964
Tucson, Arizona 85703
Phone: (602) 623-0578
Cable: GEOEX, Tucson



516-70

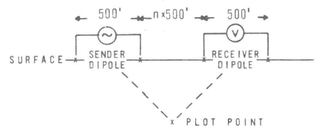
LINE NO.
0 E/W
SPREAD(S)
2 & 3

INDUCED POLARIZATION TRAVERSE SECTIONAL DATA SHEET
for

TIPPERARY RESOURCES CORPORATION

RELATIVE ANOMALY STRENGTH

DIPOLE DIPOLE ELECTRODE ARRAY



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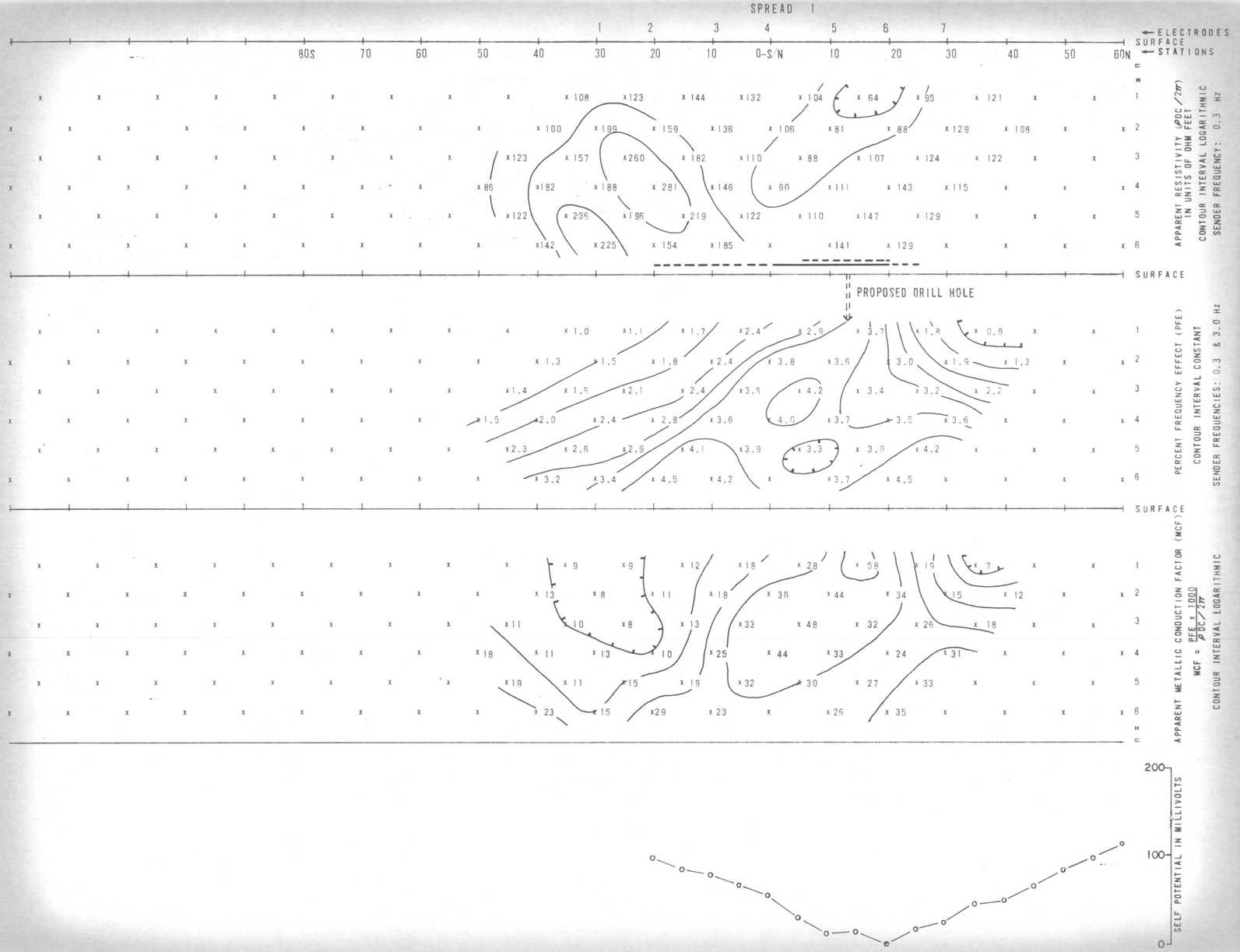
HEINRICHS
GEOEXPLORATION COMPANY
GEOPHYSICAL ENGINEERS

AUSTRALIA
(SYDNEY)
39 Hume Street
Crows Nest, NSW
Phone: 439-1793

U.S.A.
Post Office Box 5964
Tucson, Arizona 85703
Phone: (602) 623-0578
Cable: GEOEX, Tucson



516-70

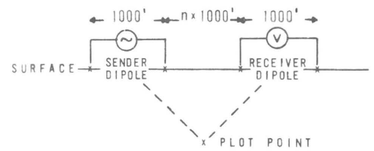
LINE NO.
10E
SPREAD(S)
1

INDUCED POLARIZATION TRAVERSE SECTIONAL DATA SHEET for

TIPPERARY RESOURCES CORPORATION

RELATIVE ANOMALY STRENGTH

DIPOLE DIPOLE ELECTRODE ARRAY



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WEST

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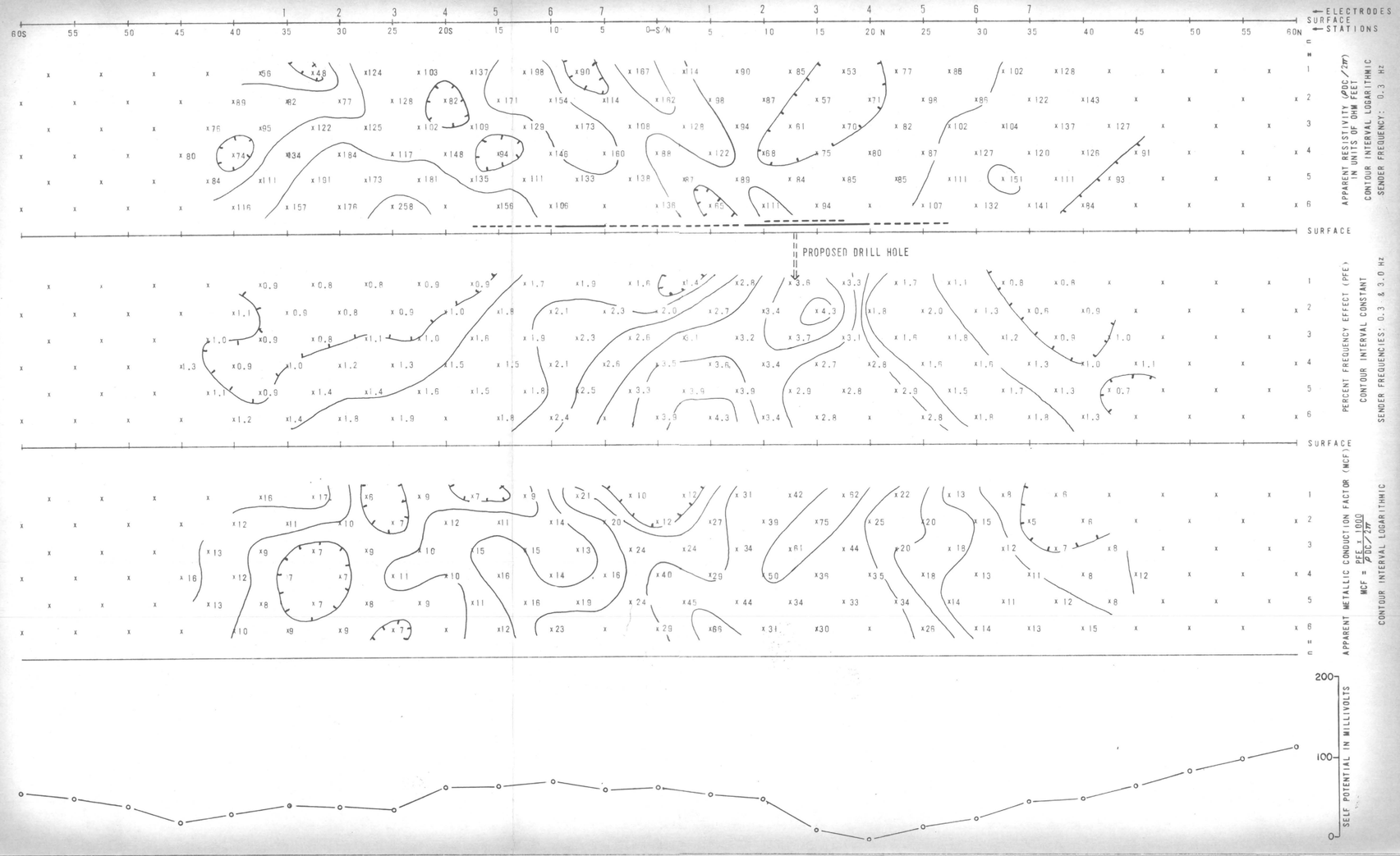
HEINRICHS
GEOEXPLORATION COMPANY
GEOPHYSICAL ENGINEERS
AUSTRALIA
(SYDNEY)
39 Hume Street
Crows Nest, NSW
Phone: 439-1783
U.S.A.
Post Office Box 5964
Tucson, Arizona 85703
Phone: (602) 623-0578
Cable: GEOEX, Tucson



516-70

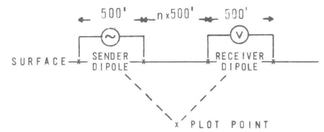
LINE NO.
10E
SPREAD(S)
2&3

INDUCED POLARIZATION TRAVERSE SECTIONAL DATA SHEET for TIPPERARY RESOURCES CORPORATION

RELATIVE ANOMALY STRENGTH

VERY WEAK — WEAK — MODERATE — STRONG

DIPOLE DIPOLE ELECTRODE ARRAY



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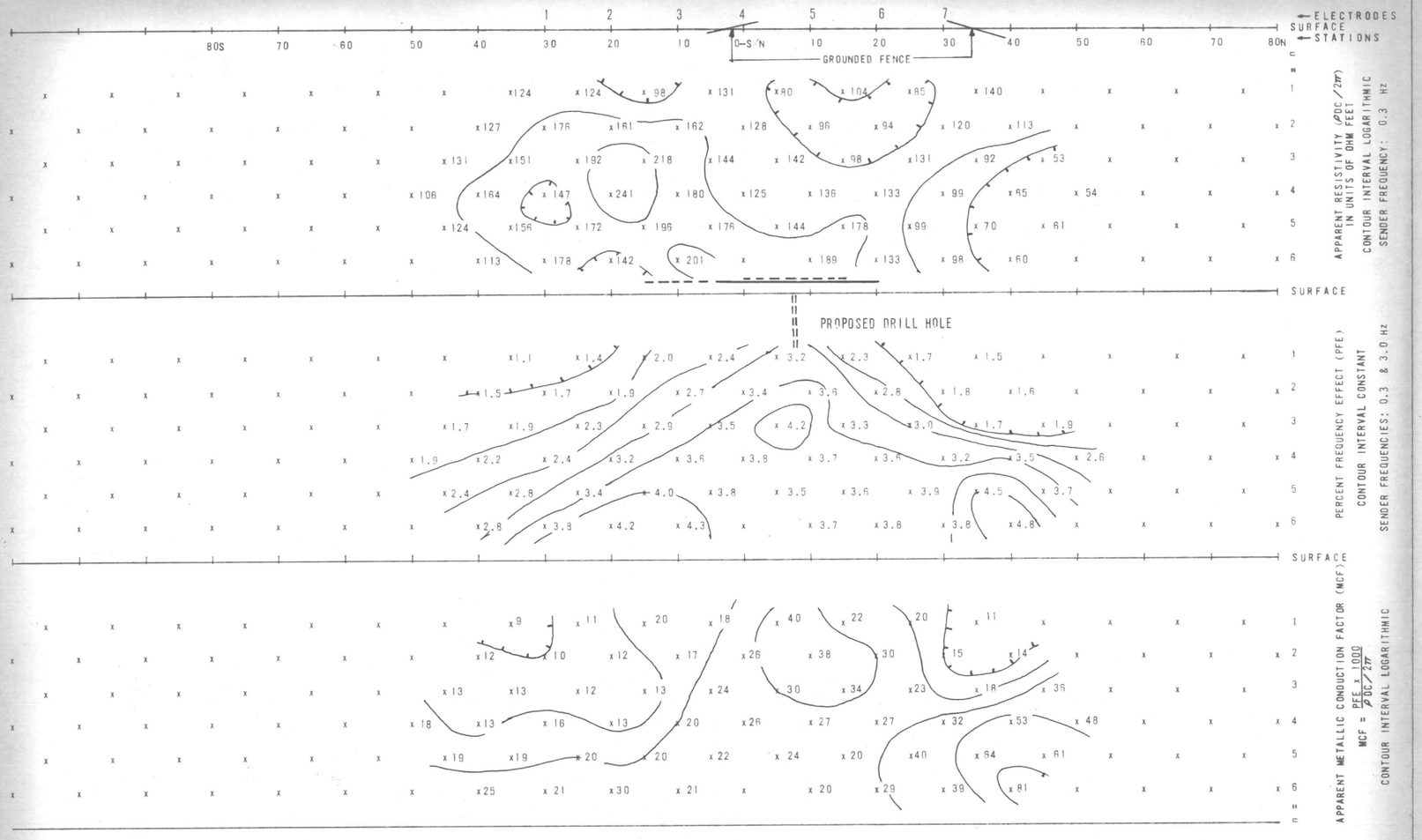
HEINRICHS
GEOEXPLORATION COMPANY
GEOPHYSICAL ENGINEERS
AUSTRALIA
(SYDNEY)
39 Hume Street
Crows Nest, NSW
Phone: 439-1793
U.S.A.
Post Office Box 5964
Tucson, Arizona 85703
Phone: (602) 623-0578
Cable: GEOEX, Tucson

SPREAD 1

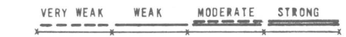


LINE NO.
20E
SPREAD(S)
I

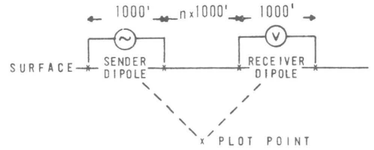
INDUCED POLARIZATION TRAVERSE SECTIONAL DATA SHEET for

TIPPERARY RESOURCES CORPORATION

RELATIVE ANOMALY STRENGTH

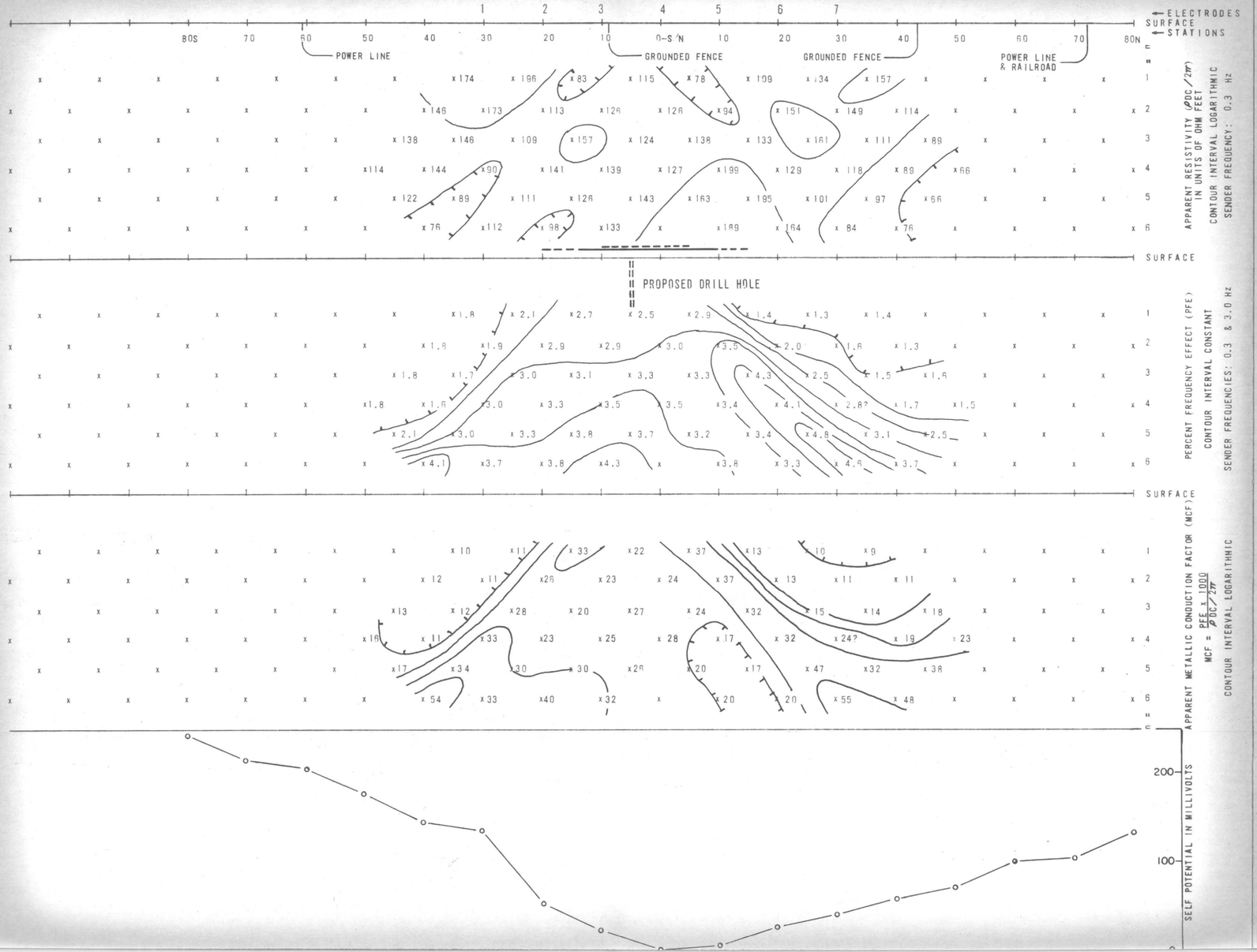


DIPOLE DIPOLE ELECTRODE ARRAY



AREA
KELVIN
LOOKING
WEST
DATE
APRIL 1970

HEINRICHS
GEOEXPLORATION COMPANY
GEOPHYSICAL ENGINEERS
AUSTRALIA
(SYDNEY)
39 Hume Street
Crows Nest, NSW
Phone: 439-1793
U.S.A.
Post Office Box 5964
Tucson, Arizona 85703
Phone: (602) 623-0578
Cable: GEOEX, Tucson



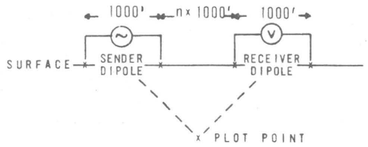
516-70

LINE NO.
30E
SPREAD(S)
I

INDUCED POLARIZATION TRAVERSE SECTIONAL DATA SHEET for TIPPERARY RESOURCES CORPORATION

RELATIVE ANOMALY STRENGTH

DIPOLE DIPOLE ELECTRODE ARRAY



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39 Hume Street
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U.S.A.
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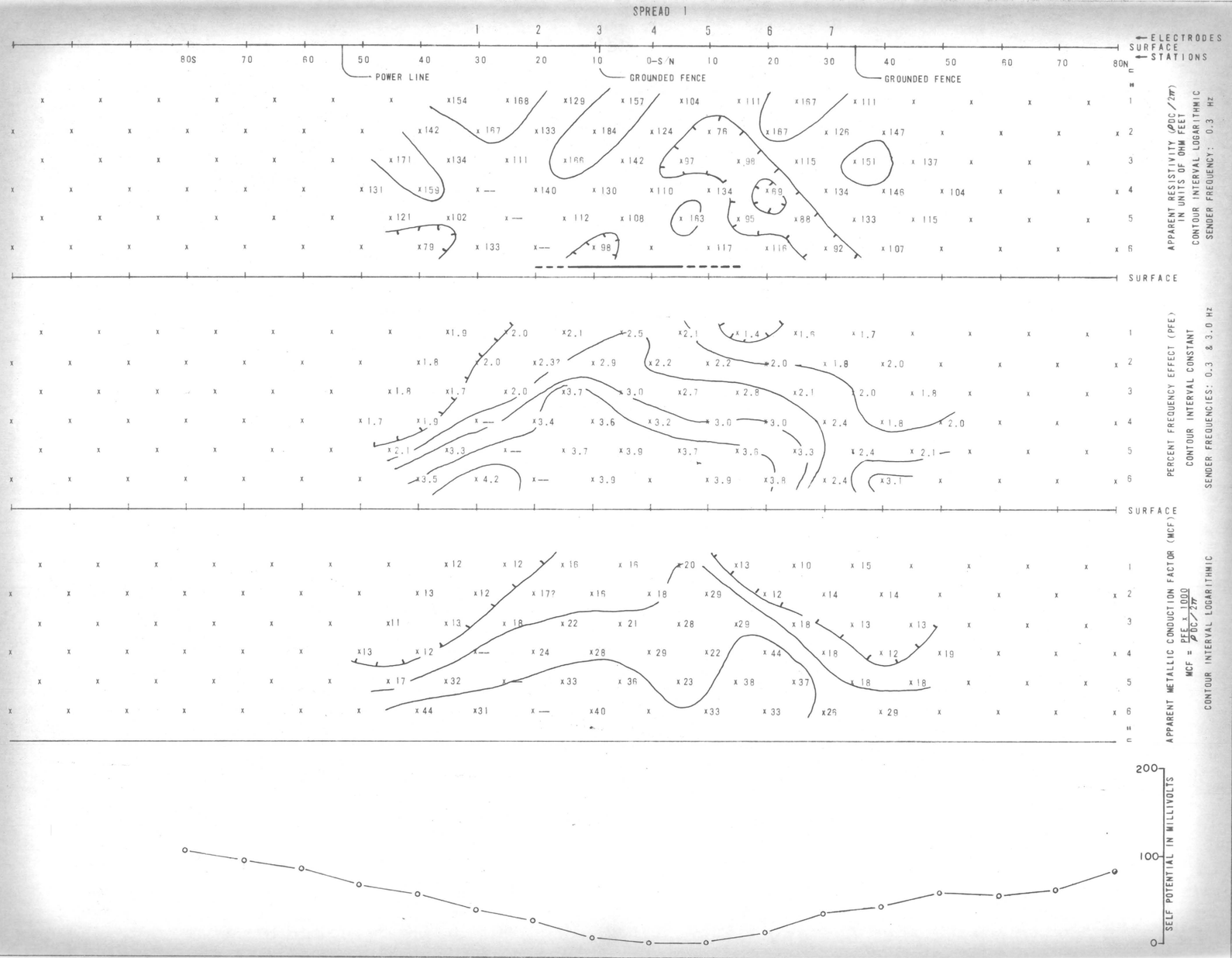


516-70

LINE NO.
40E
SPREAD(S)
I

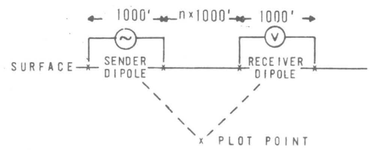
INDUCED POLARIZATION TRAVERSE SECTIONAL DATA SHEET for

TIPPERARY RESOURCES CORPORATION

RELATIVE ANOMALY STRENGTH

VERY WEAK — WEAK — MODERATE — STRONG

DIPOLE DIPOLE ELECTRODE ARRAY



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GEOEXPLORATION COMPANY
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39 Hume Street
Crows Nest, NSW
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U.S.A.
Post Office Box 5964
Tucson, Arizona 85703
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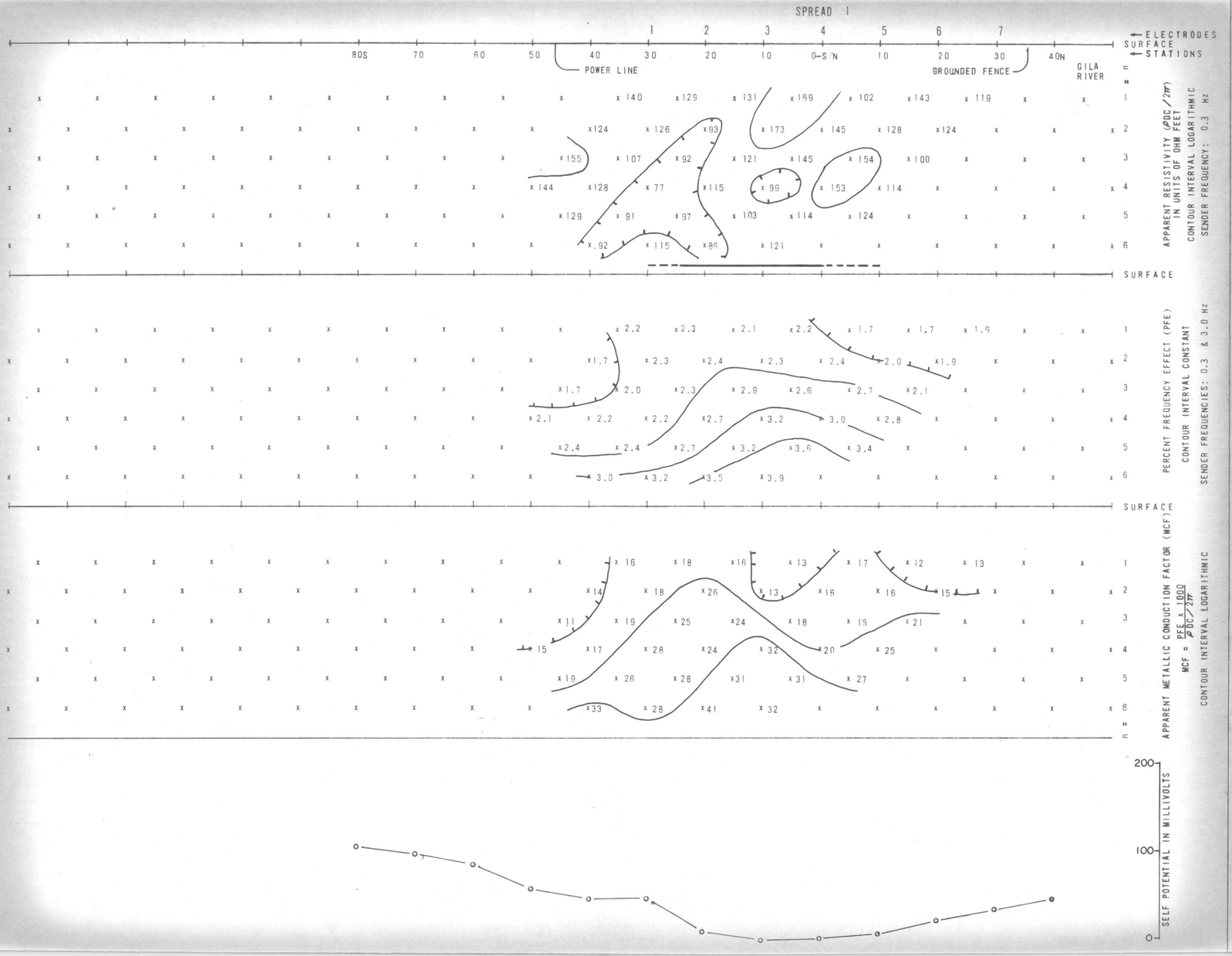


LINE NO.
50E
SPREAD(S)
I

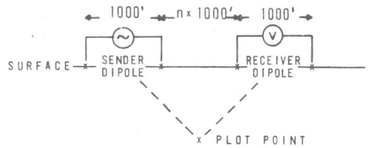
INDUCED POLARIZATION TRAVERSE SECTIONAL DATA SHEET for

TIPPERARY RESOURCES CORPORATION

RELATIVE ANOMALY STRENGTH

VERY WEAK — WEAK — MODERATE — STRONG

DIPOLE DIPOLE ELECTRODE ARRAY



AREA
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GEOEXPLORATION COMPANY
GEOPHYSICAL ENGINEERS
AUSTRALIA
(SYDNEY)
39 Hume Street
Crows Nest, NSW
Phone: 439-1793
U.S.A.
Post Office Box 5964
Tucson, Arizona 85703
Phone: (602) 623-0578
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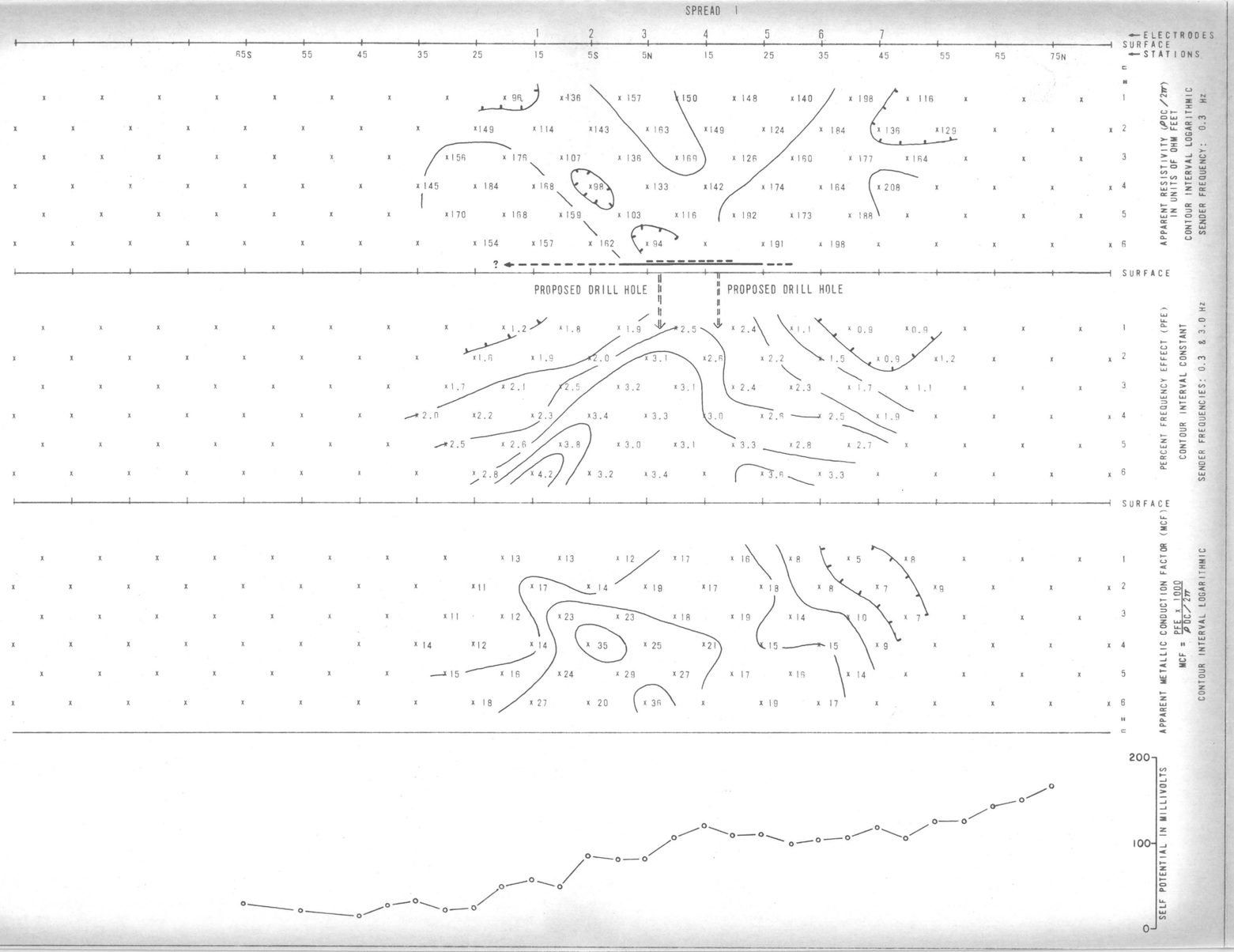
LINE NO. 10W
SPREAD(S) 1

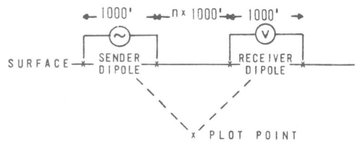
INDUCED POLARIZATION TRAVERSE SECTIONAL DATA SHEET for

TIPPERARY RESOURCES CORPORATION



RELATIVE ANOMALY STRENGTH

DIPOLE DIPOLE ELECTRODE ARRAY



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KELVIN
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MARCH 1970

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GEOEXPLORATION COMPANY
GEOPHYSICAL ENGINEERS
AUSTRALIA
(SYDNEY)
39 Hume Street
Crows Nest, NSW
Phone: 439-1793
U.S.A.
Post Office Box 5964
Tucson, Arizona 85703
Phone: (602) 623-0578
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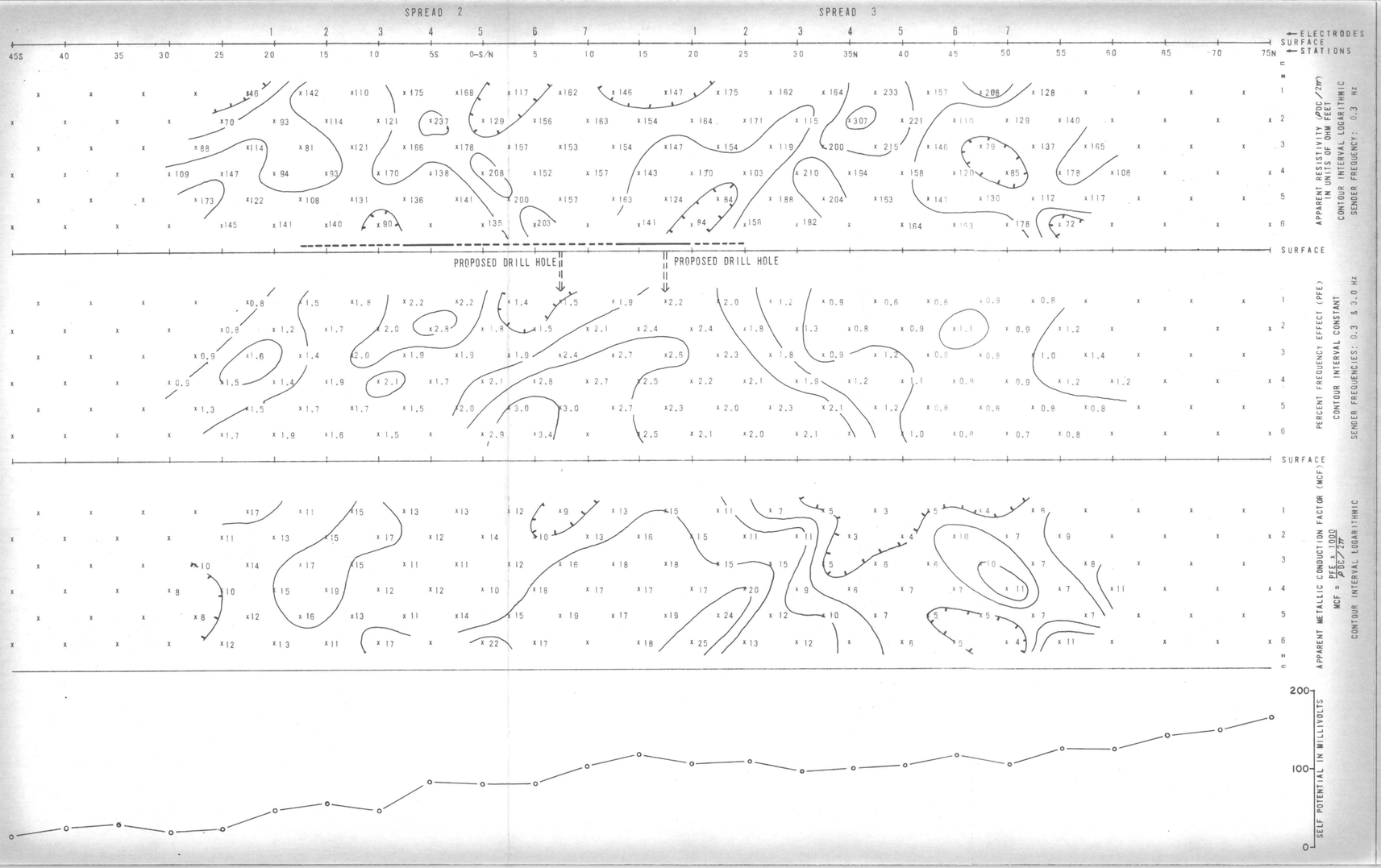


516-70

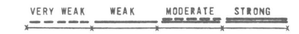
LINE NO.
10W

SPREAD(S)
2 & 3

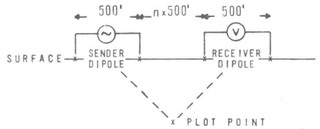
INDUCED POLARIZATION TRAVERSE SECTIONAL DATA SHEET
for

TIPPERARY RESOURCES CORPORATION

RELATIVE ANOMALY STRENGTH



DIPOLE DIPOLE ELECTRODE ARRAY



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GEOEXPLORATION COMPANY
GEOPHYSICAL ENGINEERS
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39 Hume Street
Crows Nest, NSW
Phone: 439-1799
U.S.A.
Post Office Box 5964
Tucson, Arizona 85703
Phone: (602) 623-0578
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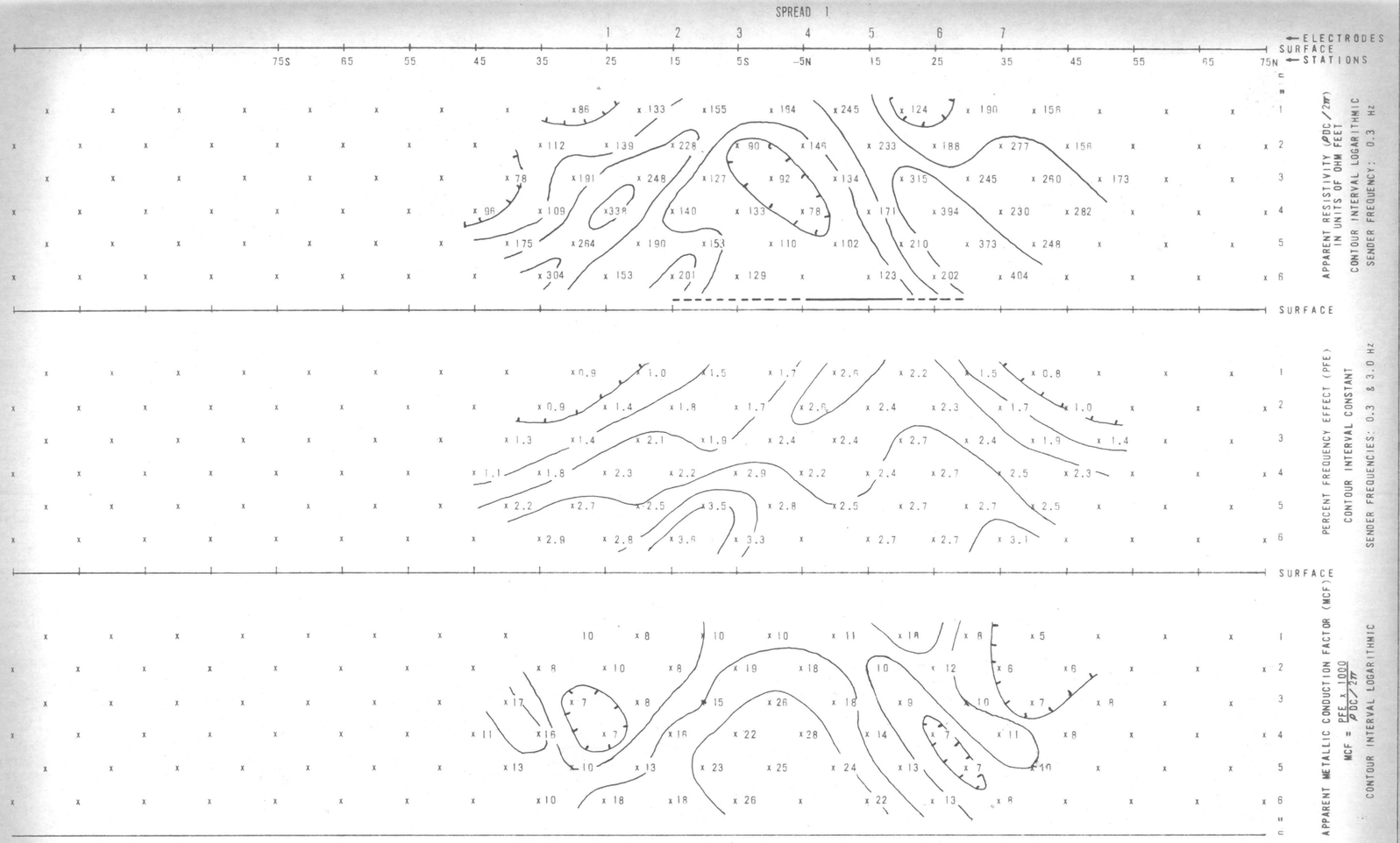


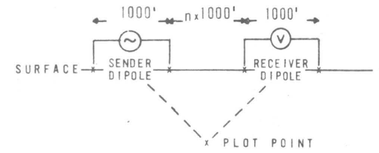
516-70

LINE NO.
20W
SPREAD(S)
1

INDUCED POLARIZATION TRAVERSE SECTIONAL DATA SHEET for TIPPERARY RESOURCES CORPORATION

RELATIVE ANOMALY STRENGTH

DIPOLE DIPOLE ELECTRODE ARRAY



AREA
KELVIN

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DATE
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HEINRICHS
GEOEXPLORATION COMPANY
GEOPHYSICAL ENGINEERS
AUSTRALIA
(SYDNEY)
39 Hume Street
Crows Nest, NSW
Phone: 439-1783
U.S.A.
Post Office Box 5964
Tucson, Arizona 85703
Phone: (602) 623-0578
Cable: GEOEX, Tucson

516-70

LINE NO.
30W
SPREAD(S)
I

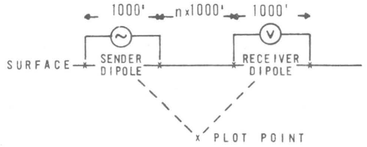
INDUCED POLARIZATION TRAVERSE SECTIONAL DATA SHEET
for

TIPPERARY RESOURCES CORPORATION

RELATIVE ANOMALY STRENGTH

VERY WEAK — WEAK — MODERATE — STRONG

DIPOLE DIPOLE ELECTRODE ARRAY



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GEOEXPLORATION COMPANY
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39 Hume Street
Crows Nest, NSW
Phone: 439-1793

U.S.A.
Post Office Box 5964
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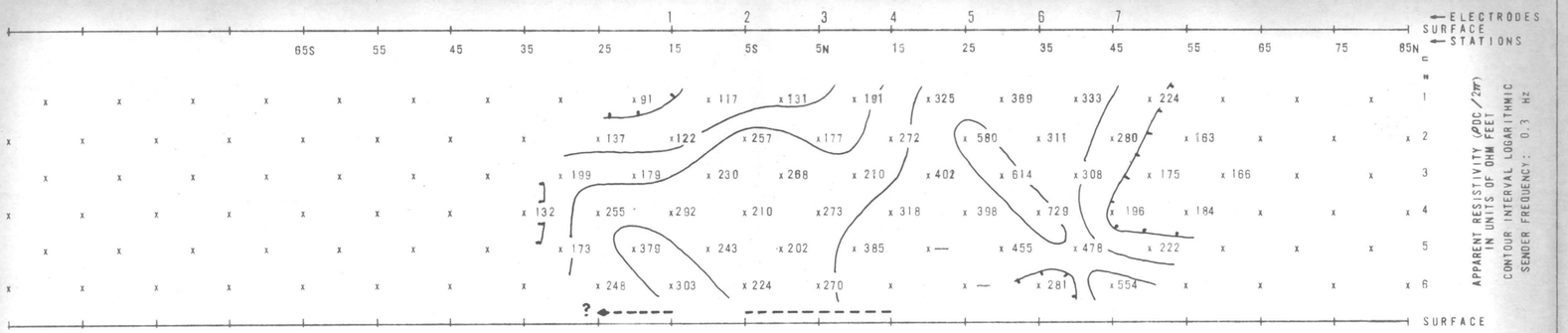
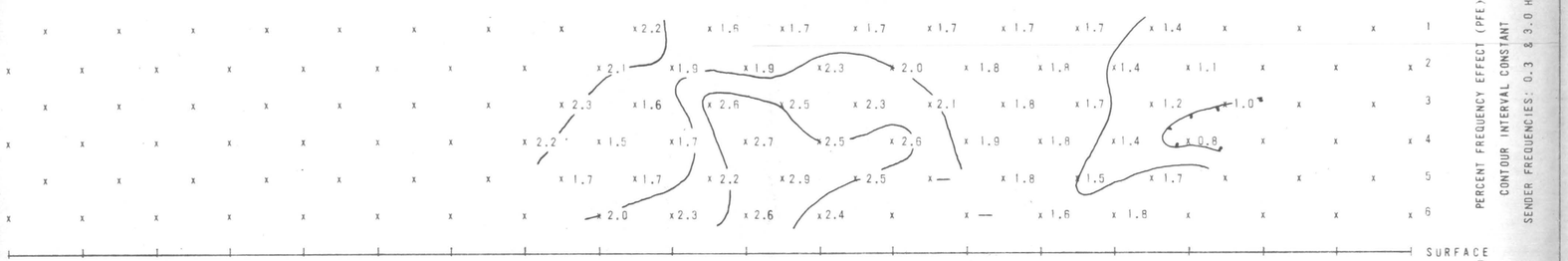
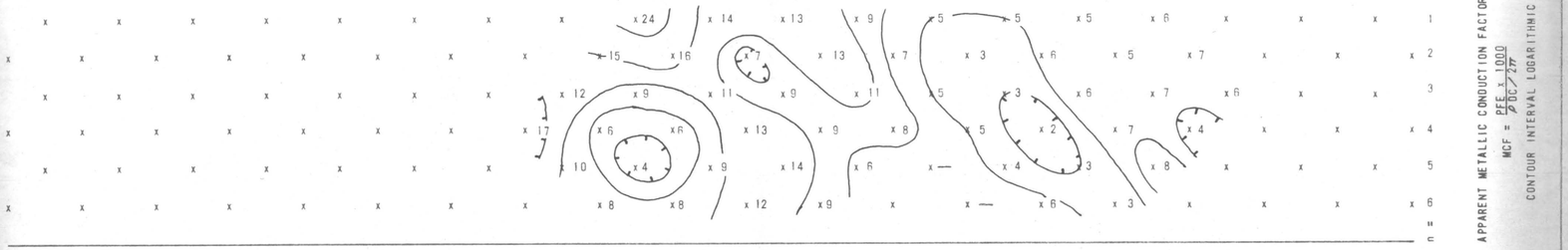
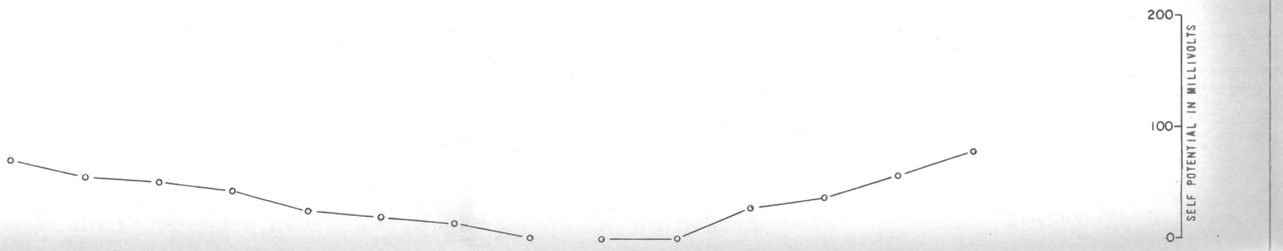
Phone: (602) 623-0578
Cable: GEOEX, Tucson

SPREAD 1









516-70

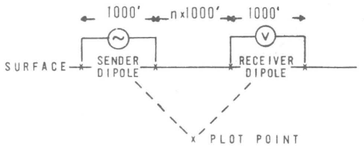
LINE NO.
40W
SPREAD(S)
1

INDUCED POLARIZATION TRAVERSE SECTIONAL DATA SHEET
for

TIPPERARY RESOURCES CORPORATION

RELATIVE ANOMALY STRENGTH

DIPOLE DIPOLE ELECTRODE ARRAY



AREA
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WEST

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MAY 1970

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GEOEXPLORATION COMPANY
GEOPHYSICAL ENGINEERS

AUSTRALIA
(SYDNEY)
39 Hume Street
Crows Nest, NSW
Phone: 439-1793

U.S.A.
Post Office Box 5964
Tucson, Arizona 85703
Phone: (602) 623-0578
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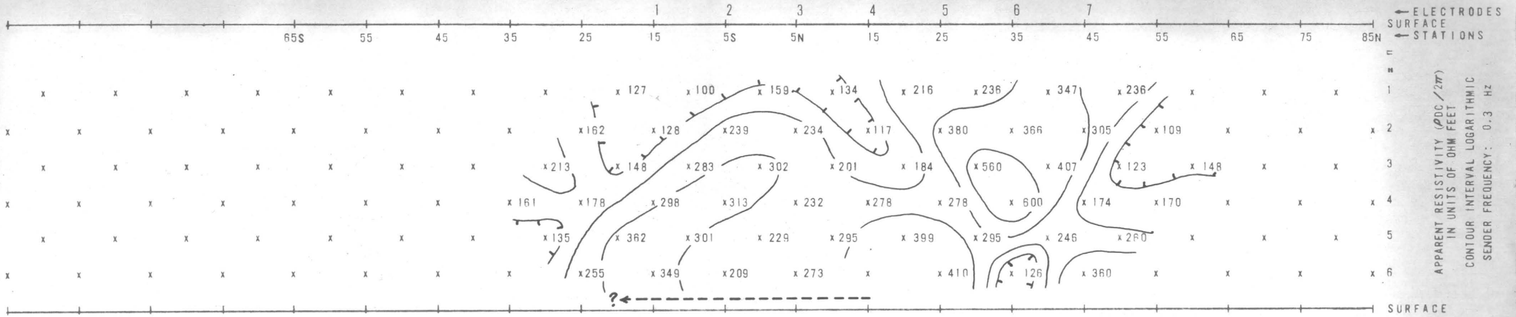
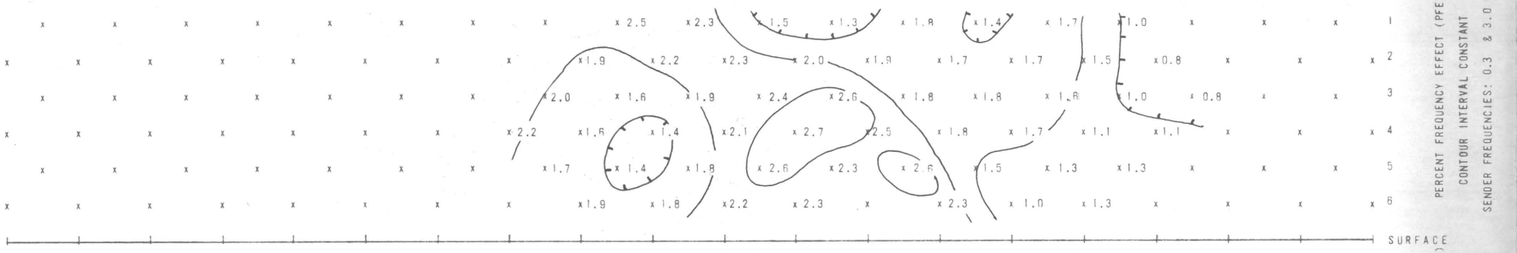
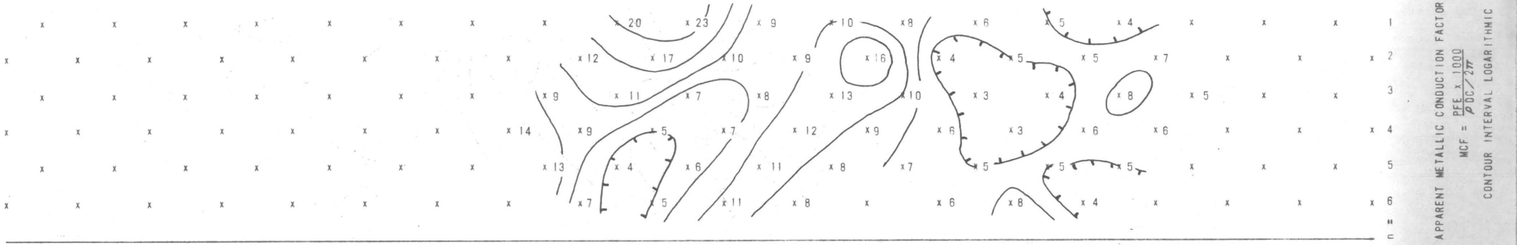
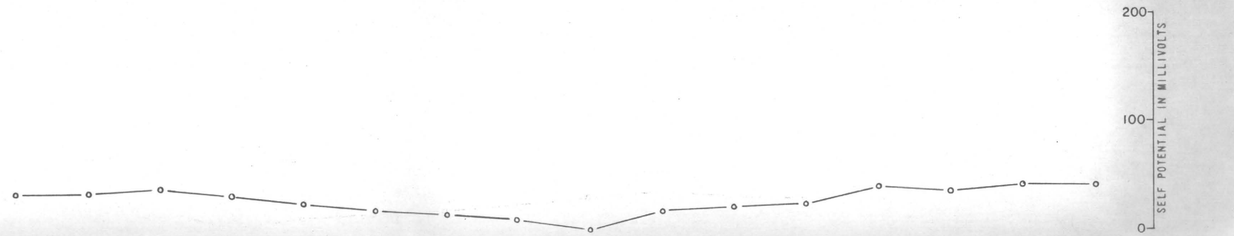
LINE NO.
50W
SPREAD(S)
I

SPREAD I





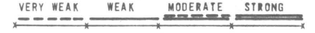




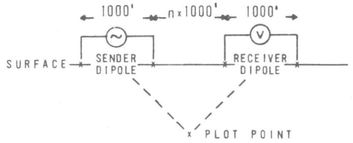
INDUCED POLARIZATION TRAVERSE SECTIONAL DATA SHEET for

TIPPERARY RESOURCES CORPORATION

RELATIVE ANOMALY STRENGTH



DIPOLE DIPOLE ELECTRODE ARRAY



AREA
KELVIN
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GEOEXPLORATION COMPANY
GEOPHYSICAL ENGINEERS
AUSTRALIA
(SYDNEY)
39 Hume Street
Crows Nest, NSW
Phone: 439-1793
U.S.A.
Post Office Box 5964
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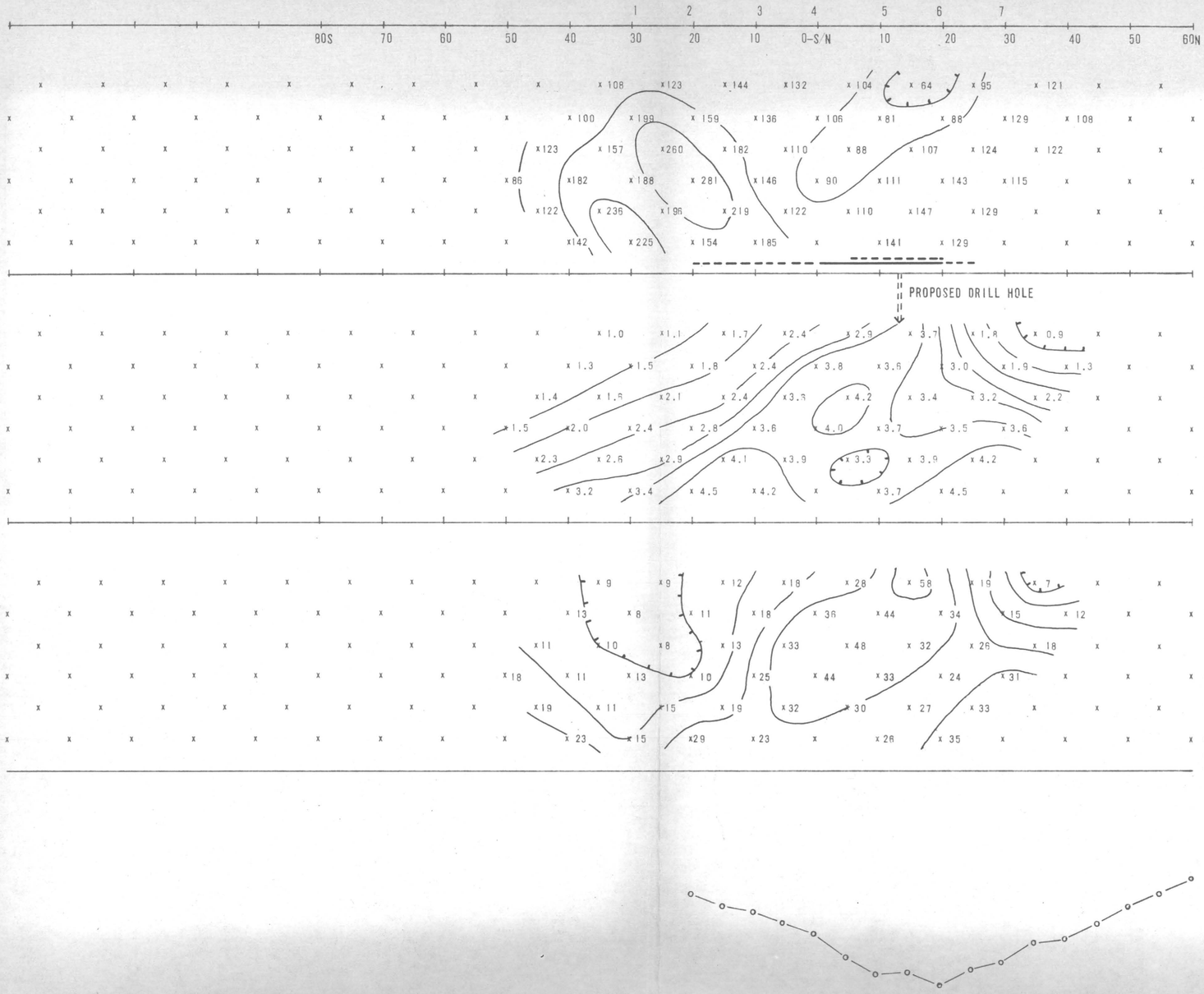


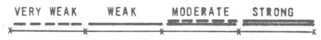
516-70

LINE NO.
10E
SPREAD(S)
1

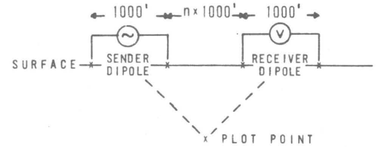
INDUCED POLARIZATION TRAVERSE SECTIONAL DATA SHEET
for

TIPPERARY RESOURCES CORPORATION

RELATIVE ANOMALY STRENGTH



DIPOLE DIPOLE ELECTRODE ARRAY



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GEOEXPLORATION COMPANY
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Crows Nest, NSW
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U.S.A.
Post Office Box 5964
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HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Kearny 516
LINE 10E HALF S SP. 2 DATE 3-30

PAGE 1

SEND	5-6	6-7	SP only		3-4	4-5	5-6	6-7	CAL	
RECEIVE	20-25	5 →	25-30 5'	→	30-35	5 →	→	→	↓	
RANGE					10	1.0	1.0	1.0	previous	
DC 1					1.2	1.4	1.4	1.9	SPREAD	
DC 2 I_T					4	3	3	3	8 unit SP	
DC 3 n					1	2	3	4		
DC 4 K_n					1.5	6	15	30		
DC 5										
DC 6 ρ					12A	119	95	121	(0.985)	
DC 7 MEA					0.8	1.0	1.0	1.5	(0.35)	
DC 8 mA					6	8	11	12		
DC AVG.										
AC 1					333	59.7	19.0	12.1		
AC 2					0.0	0.0	0.0	0.0		
AC AVG.										
S.P.	0.4		6.9		-4.4	→	→	→		
AC NOISE										
POT RES.	1.9K		151K		4.7K	→	→	→		

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 516 Kearny
LINE 10E HALF 5 SP. 2 DATE 3-30

SEND	2-3	3-4	4-5	5-6	6-7					
RECEIVE	35-40 S	→	→	→	→					
RANGE	1.0	1.0	1.0	1.0	0.1					
DC 1	1.2	1.2	1.5	1.7	2.0					
DC 2 τ	3	4	3	3	3					
DC 3 n	1	2	3	4	5					
DC 4 K_n	1.5	6	15	30	52.5					
DC 5										
DC 6 f	46	77	125	117	181					
DC 7 PFE	0.8	0.8	1.1	1.3	1.6					
DC 8 MCF	17	10	9	11	9					
DC AVG.										
AC 1	95.8	51.5	25.0	11.7	10.33					
AC 2	0.0	0.0	0.0	0.0	0.0					
AC AVG.										
S.P.	-11.5	→	→	→	→					
AC NOISE										
POT RES.	2.8K	→	→	→	→					

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 516 Kearny
LINE 10E HALF S SP. 2 DATE 3-30

SEND	1-2	2-3	3-4	4-5	5-6	6-7				
RECEIVE	4 0 - 4 5	→	→	→	→	→				
RANGE	1.0	1.0	1.0	1.0	0.1	0.1				
DC 1	1.3	1.3	1.2	1.6	1.8	2.3				
DC 2 I	4	4	3	3	3	3				
DC 3 μ	1	2	3	4	5	6				
DC 4 K_a	1.5	6	15	30	52.5	84				
DC 5										
DC 6 ρ	56	82	122	184	173	258				
DC 7 PFE	0.9	0.9	0.8	1.2	1.4	1.9				
DC 8 MCE	10	11	7	7	8	7				
DC AVG.										
AC 1	150	55.0	24.5	18.5	9.87	9.17				
AC 2	0.0	0.0	0.0	0.0	0.0	0.0				
AC AVG.										
S.P.	-9.0	→	→	→	→	→				
AC NOISE										
POT RES.	20K	→	→	→	→	→				

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 516 Kearny
LINE 10E HALF S SP. 2 DATE 3-30

SEND	1-2	2-3	3-4	4-5	5-6	1-2	2-3	3-4	4-5	
RECEIVE	45-50S →				→	50-55S			→	
RANGE	1.0	1.0	1.0	1.0	0.1	1.0	1.0	0.1	0.1	
DC 1	1.5	1.3	1.4	1.8	1.9	1.4	1.3	1.3	1.8	
DC 2 I	4	4	4	3	3	4	4	4	3	
DC 3 n	2	3	4	5	6	3	4	5	6	
DC 4 K_n	6	15	30	52.5	84	15	30	52.5	84	
DC 5										
DC 6 ρ	89	95	134	191	176	76	74	111	157	
DC 7 PFE	1.1	0.9	1.0	1.4	1.6	1.0	0.9	0.9	1.4	
DC 8 MCF	12	9	7	7	9	13	12	8	9	
DC AVG.										
AC 1	59.5	25.6	18.0	10.9	6.29	20.4	9.9	8.50	5.61	
AC 2	0.0	0.0	0.0	0.1	-0.1	0.0	0.0	0.0	0.0	
AC AVG.										
S.P.	22.1 →				→	10.1 →			→	
AC NOISE										
POT RES.	5.6 →				→	5.1 →			→	

HEINRICHS GEOEXPLORATION CO.

I.P. RECEIVER NOTES

PROJECT Kearny 516

LINE 10E HALF 3 SP. 2 DATE 3-30

SEND	1-2	2-3	3-4							
RECEIVE	55-60	5 →	→							
RANGE	1.0	0.1	0.1							
DC 1	1.7	1.4	1.6							
DC 2 I	4	4	4							
DC 3 n	4	5	6							
DC 4 K	30	52.5	84							
DC 5										
DC 6 ρ	80	84	116							
DC 7 Aρ	1.3	1.1	1.2							
DC 8 MeA	16	13	10							
DC AVG.										
AC 1	10.7	6.44	5.54							
AC 2	0.0	0.0	0.0							
AC AVG.										
S.P.	7.0 →	→	→	10.1 →						
AC NOISE										
POT RES.	7.2 →		→	5.1						

HEINRICHS GEOEXPLORATION CO.

I.P. RECEIVER NOTES

PROJECT 516 Kearny

LINE 10E HALF N SP. 2 DATE 3-30

PAGE 1

SEND	2-3	1-2	3-4	2-3	1-2	4-5	3-4	2-3	1-2	
RECEIVE	20-15N	→	15-10N	→	→	10N-5N	→		→	
RANGE	1.0	1.0	1.0	1.0	1.0		1.0			
DC 1	1.3	1.3	1.5	1.4	1.4		2.0			
DC 2										
DC 3										
DC 4										
DC 5										
DC 6										
DC 7										
DC 8										
DC AVG.										
AC 1	174	80.9	250	39.0	23.6		80.7			
AC 2	0.0	0.0	0.0	0.0	0.0		0.0			
AC AVG.										
S.P.	12.8	→	2.0	→	→	7.2				
AC NOISE										
POT RES.	3.0K	→	2.4K	→	→	2.1K				

Has been Reviewed

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT_____

LINE____ HALF____ SP.____ DATE____

PAGE 1

SEND	1-2	2-3	3-4	1-2	2-3	3-4	4-5			
RECEIVE	55-605	→	→	50-555	→	→	→			
RANGE	10,400	10,400	10,400	10,400	10,400	10,400	10,300			
VOLTAGE	350	360	310	350	360	310	390			
CURRENT	4A	4A	4A	4A	4A	4A	3A			
SEND	1-2	2-3	3-4	4-5	5-6					
RECEIVE	455-505	→	→	→	→					
RANGE	10,400	10,400	10,400	10,300	10,300					
VOLTAGE	350	360	310	390	390					
CURRENT	4A	4A	4A	3A	3A					

FREQUENCIES 3.0 0.3

SENDER NO. 9662-S

OPERATOR KERN

RECEIVER NO.

OPERATOR Chaffin

COMMENTS:

PAGE 2

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT_____

LINE____ HALF____ SP.____ DATE____

SEND	1-2	2-3	3-4	4-5	5-6	6-7				
RECEIVE	40-45 S	←	←	←	←	→				
RANGE	10:400	10:400	10:300	10:300	10:300	10:300				
VOLTAGE	350	360	240	390	390	380				
CURRENT	4A	4A	3A	3A	3A	3A				
SEND	2-3	3-4	4-5	5-6	6-7	3-4	4-5	5-6	6-7	
RECEIVE	35-40S	←	←	←	→	30-35S	←	←	→	
RANGE	10:300	10:400	10:300	10:300	10:300	10:400	10:300	10:300	10:300	
VOLTAGE	260	310	400	390	380	310	400	390	380	
CURRENT	3A	4A	3A	3A	3A	4A	3A	3A	3A	

FREQUENCIES 3.0 0.3

SENDER NO. 9662-S

OPERATOR Kern

RECEIVER NO.

OPERATOR Chaffin

COMMENTS:

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT_____

LINE____ HALF____ SP.____ DATE____

SEND	2-3	1-2	3-4	2-3	1-2	4-5	3-4	2-3	1-2	
RECEIVE	15-20S	→	10-15S	→	→	5-10S	→	→	→	
RANGE	10:300	10:400	10:300	10:300	10:400	10.200	10:200	10:300	10.400	
VOLTAGE	340	370	300	340	360	280	300	340	360	
CURRENT	3A	4A	3A	3A	4A	2A	3A	3A	4A	
SEND										
RECEIVE										
RANGE										
VOLTAGE										
CURRENT										

FREQUENCIES 3.0 .03

SENDER NO. 9662-S

OPERATOR Kern

RECEIVER NO.

OPERATOR Chaffin

COMMENTS:

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 516 Kelvin
LINE 10E HALF N SP. 2 DATE 4-2

PAGE 1

SEND	2-3	1-2	3-4	2-3	1-2	4-5	3-4	2-3	1-2	1-2
RECEIVE	20-15 ⇩	→	15-10 ⇩	→	→	10-5 ⇩	→	→	→	cal
RANGE	10	10	10	10	10	10	10	10	10	10
DC 1	1.3	1.3	1.3	1.4	1.4	2.1	2.2	2.0	1.9	0.4
DC 2 I	3	3	3	3	3	2	3	3	3	2000
DC 3 n	1	2	1	2	3	1	2	3	4	
DC 4 K_n	1.5	6	1.5	6	15	1.5	6	15	30	
DC 5										
DC 6 ρ	103	128	137	82	102	198	171	109	148	(0.985)
DC 7 PFE	0.9	0.9	0.9	1.0	1.0	1.7	1.8	1.6	1.5	(0.35)
DC 8 MCF	9	7	7	12	10	9	11	15	10	
DC AVG.										
AC 1	207	64.5	276	41.3	20.5	264	45.3	21.8	14.8	203
AC 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
AC AVG.										
S.P.	17.5 →	→	13.9 →	→	→	-7.0 →	→	→	→	
AC NOISE										
POT RES.	2.7K →	→	3.3K →	→	→	2.8K →	→	→	→	

HEINRICHS GEOEXPLORATION CO.

I.P. RECEIVER NOTES

PROJECT 516 Kearny

LINE 10E HALF N SP. 2 DATE 3-30

SEND	5-6	4-5	3-4	2-3	1-2					
RECEIVE	5S - 0N S →				→					
RANGE	10	1.0	1.0	0.1	0.1					
DC 1	2.3	2.5	2.3	1.9	1.9					
DC 2 I	2	2	3	3	3					
DC 3 n	1	2	3	4	5					
DC 4 K_n	1.5	6	15	30	52.5					
DC 5										
DC 6 ρ	90	154	129	94	135					
DC 7 PFE	1.9	2.1	1.9	1.5	1.5					
DC 8 MFE	21	14	15	16	11					
DC AVG.										
AC 1	119	51.1	25.7	9.40	7.69					
AC 2	0.0	0.0	0.0	0.0	0.0					
AC AVG.										
S.P.	17.2 →				→					
AC NOISE										
POT RES.	1.4K →				→					

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 516 Kearny
LINE 10E HALF N SP. 2 DATE 3-30

SEND		6-7	5-6	4-5	3-4	2-3	1-2			
RECEIVE	ONS	5N				7				
RANGE	10	10	1.0	1.0	1.0	0.1	0.1			
DC 1		2.1	2.7	2.7	2.4	2.2	2.2			
DC 2 I		2	2	2	3	3	3			
DC 3 n		1	2	3	4	5	6			
DC 4 K_n		1.5	6	15	30	52.5	42			
DC 5										
DC 6 ρ		167	114	173	146	111	156			
DC 7 PFE		1.6	2.3	2.3	2.1	1.8	1.8			
DC 8 MCP		10	20	13	14	16	12			
DC AVG.										
AC 1	332	222	37.7	22.9	14.5	6.32	5.57			
AC 2	0.0	0.2	0.0	0.0	−0.1	0.0	0.0			
AC AVG.										
S.P.	2.7									
AC NOISE										
POT RES.	1.5K									

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 516 Kearny
LINE 10E HALF N SP. 2 DATE 3-30

SEND	6-7	5-6	4-5	3-4	2-3					
RECEIVE	5N-10N →				→					
RANGE	1.0	1.0	0.1	0.1	0.1					
DC 1	2.5	3.0	2.9	2.9	2.8					
DC 2 I	2	2	2	3	3					
DC 3 n	2	3	4	5	6					
DC 4 R_n	6	15	30	52.5	80					
DC 5										
DC 6 ρ	160	108	158	133	106					
DC 7 PFE	2.1	2.6	2.5	2.5	2.4					
DC 8 MCA	13	24	16	19	23					
DC AVG.										
AC 1	53.0	14.2	10.46	7.50	3.75					
AC 2	0.0	0.0	0.0	0.0	0.0					
AC AVG.										
S.P.	7.3 →				→					
AC NOISE										
POT RES.	1.115 →				→					

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT Tipperary 516

LINE 10E HALF N SP. S DATE 4-2-70

PAGE 1

SEND	2-3	1-2	3-4	2-3	1-2	4-5	3-4	2-3	1-2	5-6
RECEIVE	15-20S	→	10-15	—	→	5-10S	—	—	—	0-5S
RANGE	10-300	10-300	10-300	10-300	10-300	10-200	10-300	10-300	10-300	10-200
VOLTAGE	280	275	290	280	280	340	300	280	280	280
CURRENT	3 amp	3 amp	3 amp	3 amp	3 amp	2 amp	3 A	3 amp	3 amp	2
SEND	4-5	3-4	2-3	1-2	6-7	5-6	4-5	3-4	2-3	1-2
RECEIVE	0-5S	—	—	→	0-5N	—	—	—	—	→
RANGE	10-200	10300	10-300	10-300	10-200	10-200	10-200	10-300	10-300	10-300
VOLTAGE	320	300	280	280	280	300	320	300	280	280
CURRENT	2	3	3	3	2	2	2	3	3	3

FREQUENCIES 3 .3

SENDER NO. 9662-S

OPERATOR William Freeman

RECEIVER NO.

OPERATOR Chaffin - Podjo

COMMENTS: Sendins on time: 45 sec. - 1st A.C.
60 sec - D.C.
30 sec - 2nd A.C.

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT Tipperary 516

LINE 10E HALF N SP. S DATE 4-2-2

SEND	6-7	5-6	4-5	3-4	2-3	6-7	5-6	4-5	3-4	6-7
RECEIVE	5-10N	→	→	→	→	10-15N	→	→	→	15-20N
RANGE	10·200	10·200	10·200	10·300	10·300	10·200	10·200	10·200	10·300	
VOLTAGE	270	280	320	300	280	280	270	320	300	
CURRENT	2	2	2	3	3	2	2	2	3	
SEND	5-6	4-5								
RECEIVE										
RANGE										
VOLTAGE										
CURRENT										

FREQUENCIES 3 0.3

SENDER NO.

OPERATOR

RECEIVER NO.

OPERATOR

COMMENTS:

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Kelvin 516
LINE 10E HALF S SP. 3 DATE 10-25

SEND	5-6	6-7	4-5	5-6	6-7	3-4	4-5	5-6	6-7	
RECEIVE	20N-15N		15-10	N →	→	10-5N	→	→	→	
RANGE	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
DC 1	2.0	2.4	3.7	2.2	1.9	4.0	4.7	3.5	3.3	
DC 2 I_1	4	→	→	→	→	→	→	→	→	
DC 3 n	1	2	1	2	3	1	2	3	4	
DC 4 K_n	1.5	6	1.5	6	15	1.5	6	15	30	
DC 5										
DC 6 ρ	77	97	53	71	82	85	57	70	79	
DC 7 PFE	1.7	2.0	3.3	1.8	1.5	3.6	4.3	3.1	2.9	
DC 8 MCE	22	21	62	25	18	42	75	44	37	
DC AVG.										
AC 1	205	64.5	139	47.2	22.0	223	37.2	18.4	10.4	
AC 2	-0.2	0.1	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	
AC AVG.										
S.P.	12.2 →	→	-0.6 →	→	→	19.1 →	→	→	→	
AC NOISE										
POT RES.	1.1K →	→	1.5K →	→	→	1.1K →	→	→	→	

HEINRICHS GEOEXPLORATION CO.

I.P. RECEIVER NOTES

PROJECT Kelvin 516

LINE 10E HALF S SP. 3 DATE 3-25

SEND	2-3	3-4	4-5	5-6	6-7		1-2				
RECEIVE	5N —	ONS —			→		cal				
RANGE	10	1.0	1.0	0.1	0.1		10				
DC 1	3.2	3.8	4.1	3.1	3.2		0.4				
DC 2 I	4				→		2000				
DC 3 n	1	2	3	4	5						
DC 4 K_n	1.5	6	15	30	52.5						
DC 5											
DC 6 ρ	90	87	61	75	85		(0.985)				
DC 7 PFE	2.8	3.4	3.7	2.7	2.8		(0.4)				
DC 8 MCA	31	39	61	36	33						
DC AVG.											
AC 1	236	57.0	15.9	9.82	6.38		203				
AC 2	0.0	-0.1	0.0	0.0	0.0		0.0				
AC AVG.											
S.P.	24.3 —				→						
AC NOISE											
POT RES.	1.2K —				→						

HEINRICHS GEOEXPLORATION CO.

I.P. RECEIVER NOTES

PROJECT Kelvin 516

LINE 10E HALF 5 SP. 3 DATE 3-25

PAGE 3

SEND	1-2	2-3	3-4	4-5	5-6	6-7				
RECEIVE	ONS — 5S					→				
RANGE	1.0	1.0	1.0	0.1	0.1	0.1				
DC 1	1.8	3.1	3.6	3.8	3.2	3.2				
DC 2 I	4					→				
DC 3 n	1	2	3	4	5	6				
DC 4 K_n	1.5	6	15	30	52.5	84				
DC 5										
DC 6 ρ	114	98	94	68	84	94				
DC 7 AFE	1.4	2.7	3.2	3.4	2.9	2.8				
DC 8 MFP	12	27	34	50	34	30				
DC AVG.										
AC 1	385	64.7	24.7	8.88	6.34	4.42				
AC 2	-0.1	0.0	0.0	-0.1	-0.2	0.0				
AC AVG.										
S.P.	11.2 —	→	→	→	→	→				
AC NOISE										
POT RES.	2.0K —	→	→	→	→	→				

HEINRICHS GEOEXPLORATION CO.

I.P. RECEIVER NOTES

PROJECT Kelvin 516

LINE 10E HALF S SP. 3 DATE 10-25

SEND	1-2	2-3	3-4	4-5	5-6	1-2	2-3	3-4	4-5	
RECEIVE	5S —	10S —	→	→	→	10S —	15S —	→	→	
RANGE	1.0	1.0	1.0	0.1	0.1	1.0	1.0	0.1	0.1	
DC 1	2.4	3.5	4.0	4.3	3.8	3.0	3.9	4.3	4.7	
DC 2 I	4	→	→	→	→	→	→	→	→	
DC 3 n	2	3	4	5	6	3	4	5	6	
DC 4 K_n	6	15	30	52.5	84	15	30	52.5	84	
DC 5										
DC 6 ρ	164	128	122	89	111	107	88	87	65	
DC 7 PFE	2.0	3.1	3.6	3.9	3.4	2.6	3.5	3.9	4.3	
DC 8 mA	12	24	29	44	31	24	40	45	66	
DC AVG.										
AC 1										
AC 2	108.5	33.6	16.0	6.64	5.18	28.3	11.5	6.44	3.00	
AC AVG.	-0.1	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	
S.P.	13.8 —	→	→	→	→	6.2 —	→	→	→	
AC NOISE										
POT RES.	2.7K —	→	→	→	→	3.2K —	→	→	→	

HEINRICHS GEOEXPLORATION CO.

I.P. RECEIVER NOTES

PROJECT 516 Kelvin

LINE 10E HALF 5 SP. 3 DATE 3-25

PAGE 5

SEND	1-2	2-3	3-4							
RECEIVE	15S	20S	→ 7							
RANGE	1.0	1.0	0.1							
DC 1	3.0	3.7	4.3							
DC 2 I	4	→	→							
DC 3 n	~~4~~	5	6							
DC 4 K n	30	52.5	~~84~~							
DC 5										
DC 6 ℓ	161	138	136							
DC 7 PFE	2.6	3.3	3.9							
DC 8 MCF	16	24	29							
DC AVG.										
AC 1	21.2	10.3	6.31							
AC 2	0.0	0.0	0.0							
AC AVG.										
S.P.	120									
AC NOISE										
POT RES.	2.7									

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT 516 Kelvin

LINE 10E HALF 5 SP. 3 DATE 3-25

PAGE 1

SEND	5-6	6-7	4-5	5-6	6-7	3-4	4-5	5-6	6-7	
RECEIVE	20-15N	→	15-10N	—	→	10-5N	—	—	→	
RANGE	10·400	10·400	10·400	10·400	10·400	10·400	10·400	10·400	10·400	
VOLTAGE	260	300	180	260	300	150	180	260	300	
CURRENT	4A	4A	4A	4A	4A	4A	4A	4A	4A	
SEND	2-3	3-4	4-5	5-6	6-7		Cal			
RECEIVE	5-0N	—	—	—	→		1-2			
RANGE	10·400	10·400	10·400	10·400	10·400		10·200			
VOLTAGE	210	150	180	260	300		140			
CURRENT	4A	4A	4A	4A	4A		2A			

FREQUENCIES .3 3.0

SENDER NO. 9662-5

OPERATOR Kern

RECEIVER NO.

OPERATOR Chaffin

COMMENTS:

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT 516 KELVIN

LINE 10E HALF S SP. 3 DATE 3-25

SEND	1-2	2-3	3-4	4-5	5-6	6-7	1-2	2-3	3-4	4-5
RECEIVE	0-5S	—	—	—	—	→	5-10S	—	—	→
RANGE	10:400	10:400	10:400	10:400	10:400	10:400	10:400	10:400	10:400	10:400
VOLTAGE	220	210	150	180	260	300	220	210	150	180
CURRENT	4A	4A	4A	4A	4A	4A	4A	4A	4A	4A
SEND	5-6	1-2	2-3	3-4	4-5	1-2	2-3	3-4		
RECEIVE	5-10S	10-15S	—	—	→	15-20S	—	→		
RANGE	10:400	10:400	10:400	10:400	10:400	10:400	10:400	10:400		
VOLTAGE	260	220	210	150	180	225	210	150		
CURRENT	4A	4A	4A	4A	4A	4A	4A	4A		

FREQUENCIES 3.0 0.3

SENDER NO. 9662-S

OPERATOR Kern

RECEIVER NO.

OPERATOR Chaffin

COMMENTS:

HEINRICHS GEOEXPLORATION CO.

I.P. RECEIVER NOTES

PROJECT 516 KELVIN

LINE 10E HALF N SP. 3 DATE 3-26

PAGE 1

SEND	SP only	SP only	4-5	3-4	2-3	1-2				
RECEIVE	20-25N	25-30N	30-35N	→	→	→				
RANGE			10	1.0	1.0	1.0				
DC 1			1.5	2.3	2.1	3.2				
DC 2 I			4	→	→	→				
DC 3 n			1	2	3	4				
DC 4 K_4			1.5	6	15	30				
DC 5										
DC 6 ρ			86	99	82	81				
DC 7 MEF			1.1	2.0	1.7	2.9				
DC 8 MCF			13	20	21	35				
DC AVG.										
AC 1			231	65.7	21.7	10.6				
AC 2			0.0	-0.1	0.0	0.0				
AC AVG.										
S.P.	17.9	7.0	20.1	→	→	→				
AC NOISE										
POT RES.	3.1K	1.5K	1.3K	→	→	→				

HEINRICHS GEOEXPLORATION CO.

I.P. RECEIVER NOTES

PROJECT 516 KELVIN

LINE 10E HALF N SP. 3 DATE 3-26

SEND	5-6	4-5	3-4	2-3	1-2		6-7			
RECEIVE	35-40N	→	→	→	→		CAL			
RANGE	10	1.0	1.0	1.0	0.1		10			
DC 1	1.2	1.7	2.2	2.0	3.3		0.4			
DC 2 I	4	→	→	→	→		2000			
DC 3 I_4	1	2	3	4	5					
DC 4 K_4	1.5	6	15	30	52.5					
DC 5										
DC 6 ρ	102	86	102	87	85		(0.985)			
DC 7 PFE	0.8	1.3	1.8	1.6	2.9		(0.35)			
DC 8 MCF	8	15	18	18	34					
DC AVG.										
AC 1	27.3	57.3	27.0	11.6	6.41		203			
AC 2	0.0	0.0	→	→	→		0.1			
AC AVG.										
S.P.	6.4	→	5	→	3.0					
AC NOISE										
POT RES.	1.4K	→	→	→	1.3K					

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 516 KELVIN
LINE 10E HALF N SP. 3 DATE 3-26

SEND	6-7	5-6	4-5	3-4	2-3	1-2				
RECEIVE	40-45N	→	→	→	→	→				
RANGE	10	1.0	→	→	0.1	0.1				
DC 1	1.2	1.0	1.6	2.0	1.9	3.2				
DC 2 I	4	→	→	→	→	→				
DC 3 M	1	2	3	4	5	6				
DC 4 K_n	1.5	6	15	30	52.5	84				
DC 5										
DC 6 ρ	128	122	104	127	111	107				
DC 7 PFE	0.8	0.6	1.2	1.6	1.5	2.8				
DC 8 MCF	6	5	12	13	14	26				
DC AVG.	37									
AC 1	34.4	82.3	27.7	16.9	8.44	5.05				
AC 2	0.0	→	→	→	→	→				
AC AVG.										
S.P.	16.4	→	→	→	→	→				
AC NOISE										
POT RES.	1.5K	→	→	→	→	→				

HEINRICHS GEOEXPLORATION CO.

I.P. RECEIVER NOTES

PROJECT 516 Kelvin

LINE 10E HALF N SP. 3 DATE 3-26

SEND	6-7	5-6	4-5	3-4	2-3					
RECEIVE	45-5	N →			→					
RANGE	1.0	1.0	1.0	1.0	0.1					
DC 1	1.3	1.3	1.7	2.1	2.2					
DC 2 I	4 →				→					
DC 3 n	2	3	4	5	6					
DC 4 K_n	6	15	30	52.5	84					
DC 5										
DC 6 ρ	143	137	120	151	132					
DC 7 PFE	0.9	0.9	1.3	1.7	1.8					
DC 8 MCH	6	7	11	11	14					
DC AVG.										
AC 1	96.1	36.7	16.0	11.5	6.25					
AC 2	0.0	0.0	0.0	0.0	0.0					
AC AVG.										
S.P.	16.8 →				→					
AC NOISE										
POT RES.	3.2 →				→					

HEINRICHS GEOEXPLORATION CO.

I.P. RECEIVER NOTES

PROJECT 516 Kelvin

LINE 10E HALF N SP. 3 DATE 3-26

SEND	6-7	5-6	4-5	3-4	6-7	5-6	4-5			
RECEIVE	50-55 N →				55-60 N →					
RANGE	1.0	1.0	0.1	0.1	0.1	0.1	0.1			
DC 1	1.4	1.4	1.7	2.2	1.5	1.1	1.7			
DC 2 I	4 →									
DC 3 n	3	4	5	6	4	5	6			
DC 4 K_n	15	30	52.5	84	30	52.5	84			
DC 5										
DC 6 ρ	127	126.	111	141	91	93	84			
DC 7 PFE	1.0	1.0	1.3	1.8	1.1	0.7	1.3			
DC 8 MCA	8	8	12	13	12	8	15			
DC AVG.										
AC 1	34.0	16.9	8.47	6.70	12.2	7.11	4.02			
AC 2	0.0	0.0	0.0	0.0	0.1	0.0	0.0			
AC AVG.										
S.P.	15.1 →				14.9 →					
AC NOISE										
POT RES.	7.2K →				2.9K →					

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT 516 KELVIN

LINE 10E HALF N SP. 3 DATE 3-26

SEND	4-5	3-4	2-3	1-2	5-6	4-5	3-4	2-3	1-2	
RECEIVE	30-35N	→	→	→	35-40N	→	→	→	→	
RANGE	10×400	→	→	→	→	→	→	→	→	
VOLTAGE	175	150	200	220	250	175	150	200	220	
CURRENT	4A	→	→	→	→	→	→	→	→	
SEND	6-7	5-6	4-5	3-4	2-3	1-2			6-7	
RECEIVE	40-45N	→	→	→	→	→			CAL	
RANGE	10×400	→	→	→	→	→			10×200	
VOLTAGE	300	250	175	150	200	220			150	
CURRENT	4A	→	→	→	→	→			2A	

FREQUENCIES _____ _____

SENDER NO.

OPERATOR

RECEIVER NO.

OPERATOR

COMMENTS:

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT 516 KELVIN

LINE 10E HALF N SP. 3 DATE 3-26

SEND	6-7	5-6	4-5	3-4	2-3	6-7	5-6	4-5	3-4	
RECEIVE	45-50 N	→	→	→	→	50-55 N	→	→	→	
RANGE	10×400	→	→	→	→	→	→	→	→	
VOLTAGE	300	260	175	160	210	300	260	175	160	
CURRENT	4A	→	→	→	→	→	→	→	→	
SEND	6-7	5-6	4-5							
RECEIVE	55-60 N	→	→							
RANGE	10×400	→	→							
VOLTAGE	300	260	175							
CURRENT	4A	→	→							

FREQUENCIES _____ _____

SENDER NO.

OPERATOR

RECEIVER NO.

OPERATOR

COMMENTS:

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 506 Tip. Kearney
LINE 0 HALF N SP. 1 DATE 3-9

PAGE 1

SEND	2-3	1-2	3-4	2-3	1-2	4-5	3-4	2-3	1-2	
RECEIVE	0-10N →		10-20N →			20-30N →				
RANGE	10	1.0	10	1.0	1.0	10	1.0	1.0	0.1	
DC 1 PFE	2.5	2.3	2.0	3.1	3.1	3.0	3.5	4.2	3.9	
~~DC 2 I~~	3.5 A	→								
DC 3 n	1	2	1	2	3	1	2	3	4	
DC 4 K_n	3	12	3	12	30	3	12	30	60	
DC 5										
DC 6 $\rho_a \pi$	158	164	121	134	132	115	111	117	119	
DC 7 Corr PFE	2.2	2.0	1.7	2.8	2.8	2.7	3.2	4.0	3.5	
DC 8 MCF	14	12	14	21	21	24	29	34	29	
DC AVG.										
AC 1	18A.	47.8	141	38.8	15.3	133	31.9	13.4	6.85	
AC 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.2	0.2	
AC AVG.									→	
S.P.	248	~~+15~~	2.2 →			10.7 →				
AC NOISE										
POT RES.	4K →		20K →			13K →				

5.8K

	3-4	4-5	5-6	6-7
Rng	10	1.0	1.0	0.1
A	165	55.1	14.9	5.89
A	0.0	0.0	0.0	−0.1
D	1.9	2.4	3.1	3.7

3.6K

	2-3	3-4	4-5	5-6	6-7
Rng	10	1.0	1.0	0.1	0.1
A	129	36.6	18.2	6.31	2.91
A	0.0	0.0	0.0	0.0	0.0
D	1.1	2.1	2.2	3.2	4.0

13K

	1-2	2-3	3-4	4-5	5-6	6-7
Rng	10	1.0	1.0	1.0	0.1	0.1
A	165	52.1	24.2	14.8	5.74	2.97
A	0.0	0.0	0.0	0.0	0.0	0.0
D	1.0	1.5	2.3	2.4	3.6	1.7

Rng 10 1.0 1.0 0.1
A 0.0 0.0 0.0 0.0
D 1.0 1.5 2.3 3.6

1.5K

1-2	2-3	3-4	4-5	5-6
1.0	1.0	1.0	0.1	0.1
30.1	25.5	14.3	9.32	3.94
0.0	0.0	0.0	0.0	0.0
1.3	2.7	2.7	2.7	4.2

5.5K

1-2	2-3	3-4	4-5
1.0	1.0	0.1	0.1
18.1	11.6	7.15	5.03
-0.1	0.0	0.0	0.0
1.2	1.9	2.9	3.5

5.5K

1-2	2-3	3-4
1.0	0.1	0.6
12.5	8.26	5.7
-0.1	0.0	0.1
1.4	2.2	2.9

Dave reads

Grayback maps

~~Z - Z of Swiss Eastern~~

straps on receiver

magnetic switches

~~bananas~~

~~[illegible] resistor holder~~

good notebooks

per diem-expenses

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 516 Tipperary
LINE 0 HALF N SP. / DATE 3-9

SEND	5-6	4-5	3-4	2-3	1-2					
RECEIVE	30-40	N →	→	→	→					
RANGE	10	1.0	1.0	0.1	0.1					
DC 1	2.8	2.4	3.0	3.5	3.0					
DC 2 I	3.5	→	→	→	→					
DC 3 n	1	2	3	4	5					
DC 4	3	12	30	60	105					
DC 5										
DC 6 E/T	89	97	99	106	113					
DC 7 CPFE	2.5	2.1	2.7	3.2	2.7					
DC 8 MCH	28	22	27	30	24					
DC AVG.										
AC 1	10.3	28.3	11.5	6.11	3.73					
AC 2	0.0	0.0	0.0	0.0	0.0					
AC AVG.										
S.P.	-3.8 →	→	→	→	→					
AC NOISE										
POT RES.	4K →	→	→	→	→	5K				

HEINRICHS GEOEXPLORATION CO.

I.P. RECEIVER NOTES

PROJECT Tioperagy 516

LINE O HALF NW SP. 1 DATE 2-9

PAGE 3

SEND	6-7	5-6	4-5	3-4	2-3	1-2				
RECEIVE	40-50	N →				→				
RANGE	1.0	1.0	1.0	0.1	0.1	0.1				
DC 1	1.1	0.8	2.6	3.5	3.2	4.0				
DC 2 I	3	3.5 →				→				
DC 3 n	1	2	3	4	5	6				
DC 4	3	12	30	60	105	168				
DC 5										
DC 6 Pot	115	105	122	126	134	141				
DC 7 Corr Pot	0.8	0.5	2.3	3.2	2.9	3.7				
DC 8 MCH	7	5	19	25	22	26				
DC AVG.										
AC 1	116	31.0	14.2	7.24	4.42	2.88				
AC 2	0.1	0.0	0.0	0.0	0.0	0.1				
AC AVG.										
S.P.	10-0 →					→				
AC NOISE										
POT RES.	5K →					→				

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Tipperary 516
LINE 0 HALF N SP. 1 DATE 3-9

	6-7	5-6	4-5	3-4	2-3	6-7	5-6	4-5	3-4	4-5
RECEIVE	50-60 N	→	→	→	→	60-0 N	→	→	→	cal
RANGE	1.0	1.0	0.1	0.1	0.1	1.0	0.1	0.1	0.1	10
DC 1	1.0	3.1	3.0	3.9	4.2	1.4	3.2	3.0	3.4	0.3
DC 2 I	3	3	3.5	3.5	3.5	3	3	3.5	3.5	2.0
DC 3 n	2	3	4	5	6	3	4	5	6	—
DC 4	12	30	60	105	168	30	60	105	168	
DC 5										
DC 6 Hz	136	127	165	167	175	131	122	163	163	
DC 7	0.7	2.8	2.7	3.6	3.9	1.1	2.9	2.7	3.1	(0.3)
DC 8 MA	5	22	16	22	22	8	24	17	19	
DC AVG.										
AC 1	40.2	14.7	9.58	5.49	3.57	15.4	7.07	5.38	3.35	20.4
AC 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 ?
AC AVG.										
S.P.	13.6	→	→	→	→	4.7	→	→	→	
AC NOISE										
POT RES.	4.5K	→	→	→	→	3K	→	→	→	

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT 516

LINE 0 HALF N SP. 1 DATE 3/ /80

SEND	2-3	1-2	3-4	2-3	1-2	4-5	3-4	2-3	1-2	5-6
RECEIVE	0-10 N	→	10-20N	→	→	20-30 N	→	→	→	30-40 N
RANGE	10:350	10:350	10:350	10:350	10:350	10:350	10:350	10:350	10:350	10:350
VOLTAGE	420	400	290	420	400	420	280	420	400	680
CURRENT	3.5A	3.5A	3.5A	3.5A	3.5A	3.5A	3.5A	3.5A	3.5A	3.5A
SEND	4-5	3-4	2-3	1-2	6-7	5-6	4-5	3-4	2-3	1-2
RECEIVE	30-40 N	→	→	→	40-50N	→	→	→	→	→
RANGE	10:350	10:350	10:350	10:350	10:350	10:350	10:350	10:350	10:350	10:350
VOLTAGE	420	280	420	400	720	680	420	280	420	400
CURRENT	3.5A	3.5A	3.5A	3.5	3A	3.5A	3.5A	3.5	3.5	3.5

FREQUENCIES 3.0 0.3

SENDER NO. 9662-S

OPERATOR Kern

RECEIVER NO.

OPERATOR

COMMENTS: Cal.
4-5
10·200
360
2A

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT_____

LINE 0 HALF N SP. 1 DATE 3/ /70

SEND	6-7	5-6	4-5	3-4	2-3	6-7	5-6	4-5	3-4	
RECEIVE	50-60N	———	———	———	——→	60-70N	———	———	——→	
RANGE	10·300	10·300	10·350	10·350	10·350	10·300	10·300	10·350	10·350	
VOLTAGE	720	600	420	280	410	700	580	420	280	
CURRENT	3 A	3A	3.5A	3.5A	3.5A	3A	3A	3.5A	3.5A	
SEND										
RECEIVE										
RANGE										
VOLTAGE										
CURRENT										

FREQUENCIES 3.0 0.3

SENDER NO. 9662-S

OPERATOR KERN

RECEIVER NO.

OPERATOR

COMMENTS: Divide All voltages by 2 on N½ we read wrong scale

HEINRICHS GEOEXPLORATION CO.

I.P. RECEIVER NOTES

PROJECT Tipperary 516

LINE 0 HALF S SP. 1 DATE 3-10

PAGE 1

SEND	3-4	4-5	5-6	6-7	2-3	3-4	4-5	5-6	6-7	
RECEIVE	20-30 S	→	→	→	30-40 S	→	→	→	→	
RANGE	1.0	1.0	1.0	0.1	1.0	1.0	1.0	0.1	0.1	
DC 1	1.9	2.4	3.1	3.7	1.1	2.1	2.2	3.2	4.0	
DC 2 T	4	4	3.5	3	4	4	4	3.5	3	
DC 3 n	1	2	3	4	1	2	3	4	5	
DC 4	3	12	30	60	3	12	30	60	105	
DC 5										
DC 6 Rho	125	168	131	121	97	111	138	111	105	
DC 7 C.P.	1.6	2.1	2.6	3.5	0.8	1.8	1.9	2.9	2.7	
DC 8 mC	13	13	21	29	8	16	14	26	35	
DC AVG.										
AC 1	165	55.1	14.9	5.89	129	36.6	18.2	6.31	2.91	
AC 2	0.0	0.0	0.0	-0.1	0.0	→	→	→	→	
AC AVG.										
S.P.										
AC NOISE										
POT RES.	5.8K				3.6K					

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Tipperary 516
LINE 0 HALF S SP. L DATE 3-10

PAGE 2

SEND	1-2	2-3	3-4	4-5	5-6	6-7				
RECEIVE	40-50	5 —				→				
RANGE	10	10	1.0	1.0	0.1	0.1				
DC 1	1.0	1.5	2.3	2.4	3.6	1.7				
DC 2 I	4	4	4	4	3.5	3				
DC 3 n	1	2	3	4	5	6				
DC 4	3	12	30	60	105	168				
DC 5										
DC 6 ρ_a	124	157	184	226	177	168				
DC 7 C.P.	0.7	1.2	2.0	2.1	3.3	1.4				
DC 8 M.C.A.	6	8	11	9	19	8				
DC AVG.										
AC 1	165	52.1	24.2	14.8	5.74	2.97				
AC 2	0.0 —					→				
AC AVG.										
S.P.										
AC NOISE										
POT RES.										

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Tipperary 516
LINE 0 HALF S SP. 1 DATE 3-10

SEND	1-2	2-3	3-4	4-5	5-6	1-2	2-3	3-4	4-5	
RECEIVE	50-60 S →					60-70 S →				
RANGE	1.0	1.0	1.0	0.1	0.1	1.0	1.0	0.1	0.1	
DC 1	1.3	2.7	2.7	2.7	4.2	1.2	1.9	2.9	3.5	
DC 2 I	4	4	4	4	3.5	4	4	4	4	
DC 3 n	2	3	4	5	6	3	4	5	6	
DC 4 K_n	12	30	60	105	168	30	60	105	168	
DC 5										
DC 6 e_{sp}	151	195	219	249	196	136	176	192	217	
DC 7 e_n	1.0	2.4	2.4	2.4	3.9	1.0	1.6	2.6	3.2	
DC 8 MV	7	12	11	10	20	7	9	14	15	
DC AVG.										
AC 1	50.1	25.5	14.3	9.32	3.94	18.1	11.6	7.15	3.03	
AC 2	0.0 →					→ -0.1	0.0 →			
AC AVG.										
S.P.										
AC NOISE										
POT RES.	15K					5.5K				

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Tipperary 5 16
LINE 0 HALF S SP. 1 DATE 3-10

SEND	1-2	2-3	3-4			1-2				
RECEIVE	70-80	S →				col				
RANGE	1.0	0.1	0.1			10				
DC 1	1.4	2.2	2.9			0.3				
DC 2 I	4	4	4			2000				
DC 3 n	4	5	6							
DC 4 K_m	60	105	168							
DC 5										
DC 6 ρ_a	189	220	244							
DC 7 P.	1.2	1.9	2.6			(0.25)				
DC 8 AVG	6	9	11							
DC AVG.										
AC 1	12.5	8.26	5.7			20				
AC 2	-0.1	0.10	0.1			0.1				
AC AVG.										
S.P.										
AC NOISE										
POT RES.	5.5K									

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT_____

LINE 0 HALF S SP. 1 DATE____

SEND	3-4	4-5	5-6	6-7	2-3	3-4	4-5	5-6	6-7	1-2
RECEIVE	20-30 S	—	—	→	30-40S	—	—	—	→	40-50S
RANGE	10:400	10:400	10:350	10:300	10:400	10:400	10:400	10:350	10:300	10:400
VOLTAGE	160	250	350	350	230	160	250	350	350	230
CURRENT	4A	4A	3.5A	3A	4A	4A	4A	3.5A	3A	4A
SEND	~~4-5~~ 2-3	3-4	4-5	5-6	6-7	1-2	2-3	3-4	4-5	5-6
RECEIVE	40-50S	—	—	—	→	50-60S	—	—	—	→
RANGE	10:400	10:400	10:400	10:350	10:300	10:400	10:400	10:400	10:400	10:350
VOLTAGE	240	160	250	350	350	230	230	160	250	350
CURRENT	4A	4A	4A	3.5A	3A	4A	4A	4A	4A	3.5A

FREQUENCIES 3.0 0.3

SENDER NO. 9662-S

OPERATOR Kern

RECEIVER NO.

OPERATOR

COMMENTS: CAI

1-2

10:200

130

2A

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT_____

LINE____ HALF____ SP.____ DATE____

PAGE

SEND	3-4	4-5	5-6	6-7	2-3	3-4	4-5	5-6	6-7	1-2
RECEIVE	30-30S				30-40S					40-50S
RANGE	10:400	10:400	10:350	10:300	10:400	10:400	10:400	10:350	10:300	10:400
VOLTAGE	160	250	350	350	230	160	250	350	350	230
CURRENT	4A	4A	3.5A	3A	4A	4A	4A	3.5A	3A	4A
SEND	2-3	3-4	4-5	5-6	6-7	1-2	2-3	3-4	4-5	5-6
RECEIVE	40-50S					50-60S				
RANGE	10:400	10:400	10:400	10:350	10:300	10:400	10:400	10:400	10:400	10:350
VOLTAGE	230	160	250	350	350	230	230	160	250	350
CURRENT	4A	4A	4A	3.5A	3A	4A	4A	4A	4A	3.5A

FREQUENCIES____ ____

SENDER NO.

OPERATOR

RECEIVER NO.

OPERATOR

COMMENTS:

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT_____

LINE 0 HALF S SP. 1 DATE____

SEND	1-2	2-3	3-4	4-5	1-2	2-3	3-4			
RECEIVE	60-70S	→	→	→	70-80S	→	→			
RANGE	10:400	10:400	10:400	10:400	10:400	10:400	10:400			
VOLTAGE	230	240	160	250	230	240				
CURRENT	4A	4A	4A	4A	4A	4A	4A			
SEND										
RECEIVE										
RANGE										
VOLTAGE										
CURRENT										

FREQUENCIES 3.0 0.3

SENDER NO. 9662-5

OPERATOR Kern

RECEIVER NO.

OPERATOR

COMMENTS:

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT_____

LINE____ HALF____ SP.____ DATE____

PAGE

SEND	1-2	2-3	3-4	4-5	1-2	2-3	3-4			
RECEIVE	60-70S	→	→	→	70-80S	→	→			
RANGE	10:400	10:400	10:400	10:400	10:400	10:400	10:400			
VOLTAGE	230	240	150	250	230	240				
CURRENT	4A	4A	4A	4A	4A	4A	4A			
SEND										
RECEIVE										
RANGE										
VOLTAGE										
CURRENT										

FREQUENCIES .30 .03

SENDER NO. 9442-S

OPERATOR Ken

RECEIVER NO.

OPERATOR

COMMENTS :

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Tipperary 506
LINE 0 HALF S SP. 2 DATE 3-11

SEND	5-6	6-7	4-5	5-6	6-7	3-4	4-5	5-6	6-7	
RECEIVE	20-15	N →	15-10	N →	→	10-5	N →	→	→	
RANGE	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.1	
DC 1	3.9	3.3	3.7	3.2	2.6	2.0	3.2	2.6	2.2	
DC 2 I	3	3	4	3	3	4	4	3	3	
DC 3 n	1	2	1	2	3	1	2	3	4	
DC 4 K_n	1.5	6	1.5	6	15	1.5	6	15	30	
DC 5										
DC 6 ρ	138	102	89	97	81	150	113	123	99	
DC 7 PFE	3.7	3.1	3.5	3.0	2.4	1.8	3.0	2.4	2.0	
DC 8 MCF	27	30	39	31	30	12	27	20	20	
DC AVG.										
AC 1	264	49.8	232	47.4	16.0	398	737	24.2	9.76	
AC 2	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	
AC AVG.										
S.P.	6.4 ←	→	16.2 →	→	→	3.95 →	→	→	→	
AC NOISE										
POT RES.	5.7K →	→	3.6K →	→	→	4.7K →	→	→	→	

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Tipperary 506
LINE 0 HALF S SP. 2 DATE 3-11

SEND	2-3	3-4	4-5	5-6	6-7		1-2			
RECEIVE	5N-0 NS →						cal			
RANGE	10	1.0	1.0	1.0	0.1		10			
DC 1	1.2	2.4	3.2	2.6	2.4		0.2			
DC 2 I	4	4	4	3	3		2000			
DC 3 n	1	2	3	4	5		(0.990) cal Factor			
DC 4 K	1.5	6	15	30	52.5					
DC 5										
DC 6 ρ	104	118	104	120	100					
DC 7 Apparent	1.0	2.2	3.0	2.4	2.2		(0.2)	cal Apparent		
DC 8 m/ρ	10	19	29	20	22					
DC AVG.										
AC 1	27.8	77.8	27.2	11.8	5.65		202			
AC 2	0.0	0.0	0.0	0.0	0.0		0.0			
AC AVG.										
S.P.	+1.6 →									
AC NOISE										
POT RES.	3.0K →									

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Tipperary 506
LINE 0 HALF S SP. 2 DATE 3-11

SEND	1-2	2-3	3-4	4-5	5-6	6-7				
RECEIVE	ONS	-5S	→	→	→	→				
RANGE	1.0	1.0	1.0	1.0	0.1	0.1				
DC 1	1.3	1.5	2.7	3.4	2.8	2.6				
DC 2 I	3	4	4	4	3	3				
DC 3 n	1	2	3	4	5	6				
DC 4 K_n	1.5	6	15	30	52.5	84				
DC 5										
DC 6 ρ	105	117	128	112	126	107				
DC 7 PFE	1.1	1.3	2.5	3.2	2.6	2.4				
DC 8 MCF	10	11	20	29	21	22				
DC AVG.										
AC 1	210	77.5	33.6	14.6	7.07	3.78				
AC 2	0.0	0.0	0.0	0.0	0.0	-0.1				
AC AVG.										
S.P.	9.6	→	→	→	→	→				
AC NOISE										
POT RES.	2.8K	→	→	→	→	→				

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Tipperary 506
LINE 0 HALF S SP. 2 DATE 3-11

SEND	1-2	2-3	3-4	4-5	5-6	1-2	2-3	3-4	4-5	
RECEIVE	5S-	10S-	→	→	→	10S-	15S	→	→	
RANGE	1.0	1.0	1.0	0.1	0.1	1.0	1.0	0.1	0.1	
DC 1	2.2	2.3	3.6	4.1	3.6	2.5	2.6	4.0	4.6	
DC 2 I	3	4	4	4	3	3	4	4	4	
DC 3 n	2	3	4	5	6	3	4	5	6	
DC 4 K_n	6	15	30	52.5	84	15	30	52.5	84	
DC 5										
DC 6 C	117	113	116	97	109	134	127	124	105	
DC 7 PE	2.0	2.1	3.4	3.9	3.4	2.3	2.4	3.8	4.4	
DC 8 MCF	17	19	29	40	31	17	19	31	42	
DC AVG.										
AC 1	57.7	29.8	15.1	7.20	3.81	26.5	16.7	9.17	4.83	
AC 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
AC AVG.										
S.P.	5.8	→	→	→	→	-3.3	→	→	→	
AC NOISE										
POT RES.	3K	→	→	→	→	2.8K	→	→	→	

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Tipperary 506
LINE 0 HALF 3 SP. 2 DATE 3-11

SEND	1-2	2-3	3-4							
RECEIVE	15S	20S	→							
RANGE	1.0	0.1	0.1							
DC 1	2.2	2.5	3.9							
DC 2 I	3	4	4							
DC 3 n	4	5	6							
DC 4 K_n	30	52.5	84							
DC 5										
DC 6 ρ	162	142	140							
DC 7 PFE	2.0	2.3	3.7							
DC 8 MCF	12	16	26							
DC AVG.										
AC 1	16.0	10.66	6.48							
AC 2	0.0	0.0	0.0							
AC AVG.										
S.P.	9.6	→	→							
AC NOISE										
POT RES.	2.8K	→	→							

HEINRICHS GEOEXPLORATION CO.

I.P. RECEIVER NOTES

PROJECT Tipperary 506

LINE 0 HALF N SP. 2 DATE 3-11

SEND	20-25	25-30	4-5	3-4	2-3	1-2	5-6	4-5	3-4	2-3	1-2
RECEIVE	South	South	30-35 N →			→	35-40 N →				→
RANGE			10	1.0	1.0	0.1	10	1.0	1.0	1.0	0.1
DC 1			1.5	3.2	2.5	2.1	0.6	1.5	2.9	2.3	2.2
DC 2 I			4	4	4	~~4~~ 3	3	4	4	4	3
DC 3 n			1	2	3	4	1	2	3	4	5
DC 4 K_n			1.5	6	15	30	1.5	6	15	30	52.5
DC 5											
DC 6 ρ			108	98	82	~~74~~ 98	87	85	86	77	89
DC 7 PFE			1.3	3.0	2.3	1.9	0.4	1.3	2.7	2.1	2.0
DC 8 MCF			12	31	28	~~26~~ 19	5	15	31	27	22
DC AVG.											
AC 1			28.0	64.1	21.6	9.76	17.5	56.5	22.5	10.1	5.0
AC 2			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AC AVG.											
S.P.	15.6	12.5	5.6 →			→	12.8 →				→
AC NOISE											
POT RES.	5.3K	4K	6K →			→	3.6K				→

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Tipperary 506
LINE 0 HALF N SP. 2 DATE 3-11

PAGE 7

SEND	6-7	5-6	4-5	3-4	2-3	1-2	6-7	5-6	4-5	3-4	2-3
RECEIVE	40-45 N →						45-50 N →				
RANGE	1.0	1.0	1.0	1.0	0.1	0.1	1.0	1.0	1.0	0.1	0.1
DC 1	0.8	0.8	1.4	2.5	2.4	2.2	1.7	1.6	2.4	3.4	3.3
DC 2											
DC 3 I	3	3	4	4	4	3	3	3	4	4	4
DC 4 n	1	2	3	4	5	6	2	3	4	5	6
DC 5 K	1.5	6	15	30	52.5	84	6	15	30	52.5	84
DC 6 ρ	95	113	108	108	95	112	109	129	124	123	110
DC 7 PFE	0.6	0.6	1.2	2.3	2.2	2.0	1.5	1.4	2.2	3.2	3.1
DC 8 MFE	6	5	11	21	23	18	14	11	18	26	28
DC AVG.											
AC 1	191	56.5	28.7	14.2	7.18	3.96	54.1	25.7	16.3	9.17	5.11
AC 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AC AVG.											
S.P.	8.8 →					→	7.3 →				→
AC NOISE											
POT RES.	5K →					→	1K →				→

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Tipperary 506
LINE 0 HALF N SP. 2 DATE 3-11

SEND	6-7	5-6	4-5	3-4	6-7	5-6	4-5			
RECEIVE	50-55 N →				55-60 N →					
RANGE	1.0	1.0	1.0	0.1	1.0	0.1	0.1			
DC 1	1.1	0.9	1.6	2.8	1.1	0.8	1.7			
DC 2										
DC 3 I.	3	3	4	4	3	3	4	Use Coil		
DC 4 n	3	4	5	6	4	5 | 4 5	6			
DC 5 K_n	15	30	52.5	84	30	8 | 52.5	84			
DC 6 ρ	145	174	166	166	122	148	141			
DC 7 PFE	0.9	0.7	1.4	2.6	0.9	at 0+35 10 N 1.5				
DC 8 MCA	6	4	8	16	7	4	11			
DC AVG.										
AC 1	29.1	17.5	12.6	7.79	12.2	8.50	6.68			
AC 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
AC AVG.										
S.P.	-1.1 →				10.1 →					
AC NOISE										
POT RES.	6.3K →				6.7K →					

PAGE 1

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT Tipperary 506

LINE 0 HALF S SP. 2 DATE 3-11

SEND	5-6	6-7	4-5	5-6	6-7	3-4	4-5	5-6	6-7	
RECEIVE	20-15	N →	15N —	10	N →	10-5N	—	—	→	
RANGE										
VOLTAGE	360	360	200	360	360	170	200	360	350	
CURRENT	3	3	4	3	3	4	4	3	3	
SEND	2-3	3-4	4-5	5-6	6-7		Cal			
RECEIVE	5N-	ONS-	—	—	→		1-2			
RANGE										
VOLTAGE	270	170	200	360	350		250			
CURRENT	4	4	4	3	3		2			

FREQUENCIES 3.0 0.3

SENDER NO.

OPERATOR DK

RECEIVER NO.

OPERATOR DC

COMMENTS:

1st Spread 500' dipole

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT Tipperary SO6

LINE ____ HALF ____ SP. 2 DATE ____

PAGE

SEND	5-6	6-7	4-5	5-6	6-7	3-4	4-5	5-6	6-7	
RECEIVE	20-15 N →	15N —	10 N →	10 -	N —				→	
RANGE										
VOLTAGE	360	360	240		360					
CURRENT										
SEND	2-3	3-4	4-5	5-6	6-7		Cal			
RECEIVE	5N -	ONS			→		1-2			
RANGE										
VOLTAGE							25e			
CURRENT										

FREQUENCIES 2.0 0.3

SENDER NO.

OPERATOR

RECEIVER NO.

OPERATOR

COMMENTS:

1st Spread 500' dipole

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT Tipperary 506

LINE 0 HALF 8' SP. 2 DATE 3-11

SEND	1-2	2-3	3-4	4-5	5-6	6-7				
RECEIVE	ONS -	5S	→	→	→	→				
RANGE										
VOLTAGE	370	270	170	200	360	350				
CURRENT	3	4	4	4	3	3				
SEND	1-2	2-3	3-4	4-5	5-6	1-2	2-3	3-4	4-5	
RECEIVE	5S -	10S	→	→	→	10S -	15S	→	→	
RANGE										
VOLTAGE	370	270	170	200	360	370	270	170	206	
CURRENT	3	4	4	4	3					

FREQUENCIES _____ _____

SENDER NO.

OPERATOR

RECEIVER NO.

OPERATOR

COMMENTS:

PAGE

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT_____

LINE____ HALF____ SP.____ DATE____

SEND	1-2	2-3	3-4	4-5	5-6	6-7				
RECEIVE	ONS-55					→				
RANGE										
VOLTAGE	370					370				
CURRENT										
SEND	1-2	2-3	3-4	4-5	5-6	1-2	2-3	3-4	4-5	
RECEIVE	55-105				→	105-265			→	
RANGE										
VOLTAGE						370	170	170	205	
CURRENT										

FREQUENCIES____ ____

SENDER NO.

OPERATOR

RECEIVER NO.

OPERATOR

COMMENTS:

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT _____

LINE 0 HALF S SP. 2 DATE 3-11

SEND	1-2	2-3	3-4			1-2				
RECEIVE	155	205	→			cal				
RANGE										
VOLTAGE	370	270	170							
CURRENT	3	4	4A							
SEND										
RECEIVE										
RANGE										
VOLTAGE										
CURRENT										

FREQUENCIES _____ _____

SENDER NO.

OPERATOR

RECEIVER NO.

OPERATOR

COMMENTS :

PAGE

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT_____

LINE____ HALF____ SP.____ DATE____

SEND	1-2	2-3	3-4			1-2				
RECEIVE	65-205	→				cal				
RANGE										
VOLTAGE										
CURRENT			4A							
SEND										
RECEIVE										
RANGE										
VOLTAGE										
CURRENT										

FREQUENCIES____ ____

SENDER NO.

OPERATOR

RECEIVER NO.

OPERATOR

COMMENTS:

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT Tipperary

LINE 0 HALF N SP. 2 DATE 3-11

SEND	4-5	3-4	2-3	1-2	5-6	4-5	3-4	2-3	1-2	
RECEIVE	~~30-35N 40-50N~~			→	35-40N 50-60N				→	
RANGE	10,400	10,400	10,400	10,400	10,300	10,400	10,400	10,400	10,300	
VOLTAGE	200	170	270	360	240	200	170	270	360	
CURRENT	4A.	4A	4A	~~3A~~ 4A	3A	4A	4A	4A	3A	
SEND	6-7	5-6	4-5	3-4	2-3	1-2				
RECEIVE	~~40-45N 60-70N~~					→				
RANGE	10,300	10,300	10,400	10,400	10,400	10,300				
VOLTAGE	250	240	200	170	270	360				
CURRENT	3A	3A	4A	4A	4A	3A				

FREQUENCIES 3.0 0.3

SENDER NO. 9662-5

OPERATOR Kern

RECEIVER NO.

OPERATOR Chaffin

COMMENTS:

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT TIPPERARY

LINE 0 HALF N SP. 2 DATE 3-11

PAGE

SEND	11-5	3-4	2-3	1-2	5-6	4-5	3-4	2-3	1-2	
RECEIVE	40-50N	→	→	→	50-60N	→	→	→	→	
RANGE	10:400	10:400	10:400	10:400	10:300	10:400	10:400	10:400	10:300	
VOLTAGE	300	170	270	360	240	200	170	270	360	
CURRENT	4A	4A	4A	4A	3A	4A	4A	4A	3A	
SEND	6-7	5-6	4-5	3-4	2-3	1-2				
RECEIVE	40-50N	→	→	→	→	→				
RANGE	10:300	10:300	10:400	10:400	10:400	10:300				
VOLTAGE	250	240	200	170	270	360				
CURRENT	3A	3A	4A	4A	4A	3A				

FREQUENCIES 3.0 0.3

SENDER NO. 9662-S

OPERATOR KERN

RECEIVER NO.

OPERATOR CHALLEN

COMMENTS:

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT Tipperary

LINE 0 HALF N SP. 2 DATE 3-11

SEND	6-7	5-6	4-5	3-4	2-3	6-7	5-6	4-5	3-4	
RECEIVE	~~45-50N~~ 50N	———				~~50-55N~~ 55N	———		→	
RANGE	10·300	10·300	10·400	10·400	10·400	10·300	10·300	10·400	10·400	
VOLTAGE	250	240	200	170	270	250	240	200	170	
CURRENT	3A	3A	4A	4A	4A	3A	3A	4A	4A	
SEND	6-7	5-6	4-5							
RECEIVE	~~55-60N~~ 60N	———	→							
RANGE	10·300	10·300	10·400							
VOLTAGE	240	240	200							
CURRENT	3A	3A	4A							

FREQUENCIES 9.0 0.3

SENDER NO. 9662-5

OPERATOR KERN

RECEIVER NO.

OPERATOR Chaffin

COMMENTS:

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT TIPPERARY

LINE 0 HALF N SP. 2 DATE 3-11

PAGE

SEND	6-7	5-6	4-5	3-4	2-3	6-7	5-6	4-5	3-4	
RECEIVE	20-30N					20-30N			→	
RANGE	10:300	10:300	10:400	10:400	10:400	10:300	10:300	10:400	10:400	
VOLTAGE	280	240	200	170	270	250	240	200	170	
CURRENT	3A	3A	4A	4A	4A	3A	3A	4A	4A	
SEND	6-7	5-6	4-5							
RECEIVE	40-50N		→							
RANGE	10:300	10:300	10:400							
VOLTAGE	240	240	200							
CURRENT	3A	3A	4A							

FREQUENCIES 3.0 0.5

SENDER NO. 9662-5

OPERATOR KERN

RECEIVER NO.

OPERATOR Chaffin

COMMENTS:

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 506 Tipperary
LINE 0 HALF N SP. 3 DATE 3-13

PAGE 1

SEND	SP	SP	4-5	3-4	2-3	1-2				
RECEIVE	20-15S	15-10S	10S-	5S →	→	→				
RANGE			10	1.0	1.0	1.0				
DC 1			1.8	1.9	2.0	2.1				
DC 2 I			4	→	→	→				
DC 3 n			1	2	3	4				
DC 4 K_n			1.5	6	15	30				
DC 5										
DC 6 ρ			130	119	96	91				
DC 7 MFE			1.6	1.7	1.8	1.9				
DC 8 MCF			12	14	19	21				
DC AVG.										
AC 1			35.1	79.7	25.9	12.2				
AC 2			0.0	0.0	0.0	0.0				
AC AVG.										
S.P.	-12.2	8.3	1.9 →	→	→	→				
AC NOISE										
POT RES.			5.3K →	→	→	→				

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Tipperary 506
LINE 0 HALF N SP. 3 DATE 3-13

SEND	5-6	4-5	3-4	2-3	1-2					
RECEIVE	55-0	NS →								
RANGE	10	10	10	1.0	0.1					
DC 1	2.5	2.2	2.1	2.1	0.9					
DC 2 I	4 →									
DC 3 n	1	2	3	4	5					
DC 4 K_n	1.5	6	15	30	52.5					
DC 5										
DC 6 C	112	161	166	134	125					
DC 7 MS	2.3	2.0	1.9	1.9	0.7					
DC 8 MA	20	12	11	14	6					
DC AVG.										
AC 1	330	108	44.5	18.0	9.66					
AC 2	0.0	0.0	0.0	0.0	0.0					
AC AVG.										
S.P.	3.1 →									
AC NOISE										
POT RES.	4.0K →									

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Tipperary 506
LINE 0 HALF N SP. 3 DATE 3-13

SEND	6-7	5-6	4-5	3-4	2-3	1-2				
RECEIVE	ONS-	5N	→	→	→	→				
RANGE	10	10	1.0	1.0	1.0	0.1				
DC 1	2.3	2.7	2.4	2.3	2.3	2.1				
DC 2 I	4	→	→	→	→	→				
DC 3 n	1	2	3	4	5	6				
DC 4 K_n	1.5	6	15	30	52.5	84				
DC 5										
DC 6 ρ	123	157	191	192	150	134				
DC 7 PFE	2.1	2.5	2.2	2.1	2.1	1.9				
DC 8 MCF	17	16	12	11	14	14				
DC AVG.										
AC 1	330	105	51.1	25.7	11.5	6.43				
AC 2	0.0	0.0	0.0	0.0	0.0	0.0				
AC AVG.										
S.P.	19.8	→	→	→	→	→				
AC NOISE										
POT RES.	9.7K	→	→	→	→	→				

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Tipperary 506
LINE 0 HALF N SP. 3 DATE 3-13

SEND	6-7	5-6	4-5	3-4	2-3					
RECEIVE	5N -	10N	→	→	→					
RANGE	1.0	1.0	1.0	1.0	0.1					
DC 1	2.1	2.4	2.3	2.3	2.1					
DC 2 I	4	→	→	→	→					
DC 3 n	2	3	4	5	6					
DC 4 K_n	6	15	30	52.5	84					
DC 5										
DC 6	108	129	153	154	119					
DC 7 PFE	1.9	2.2	2.1	2.1	1.9					
DC 8 MFP	18	17	14	14	16					
DC AVG.										
AC 1	72.4	34.4	20.5	11.8	5.69					
AC 2	0.0	0.0	0.0	0.0	0.0					
AC AVG.										
S.P.	21.6	→	→	→	→					
AC NOISE										
POT RES.	5.6K	→	→	→	→					

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Tipperary 506
LINE 0 HALF S SP. 3 DATE 3-13

SEND	5-6	6-7	4-5	5-6	6-7	3-4	4-5	5-6	6-7	1-2
RECEIVE	20-25	S	25-30	S	→	30-35	S	→	→	cal
RANGE	10	10	10	10	10	10	10	10	10	10
DC 1	1.2	1.9	0.8	1.2	1.8	0.9	1.0	1.3	2.0	0.2
DC 2 I	9	→	→	→	→	→	→	→	→	2000
DC 3 n	1	2	1	2	3	1	2	3	4	
DC 4 K_n	1.5	6	1.5	6	15	1.5	6	15	30	
DC 5										
DC 6 ρ	105	110	84	101	104	106	90	91	88	(0.96)
DC 7 PFE	1.0	1.7	0.7	1.0	1.6	0.7	0.8	1.1	1.8	(0.15)
DC 8 MCA	10	15	8	10	15	7	9	12	20	
DC AVG.										
AC 1	284	74.1	227	68.4	28.0	288	61.1	24.6	11.8	205
AC 2	0.0	0.0	-0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1
AC AVG.										
S.P.	7.5	→	3.8	→	→	-0.4	→	→	→	
AC NOISE										
POT RES.	5.3K	→	2.7K	→	→	2.3K	→	→	→	

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Tipperary 506
LINE 0 HALF S SP. 3 DATE 3-13

SEND	2-3	3-4	45	5-6	6-7					
RECEIVE	35-40S	→	→	→	→					
RANGE	10	1.0	1.0	1.0	0.1					
DC 1	1.2	1.1	1.0	1.5	1.8					
DC 2 I	4	→	→	→	→					
DC 3 n	1	2	3	4	5					
DC 4 K_n	1.5	6	15	30	52.5					
DC 5										
DC 6 ρ	83	128	111	110	105					
DC 7 PFE	1.0	0.9	0.8	1.3	1.6					
DC 8 Mx A	12	7	7	12	15					
DC AVG.										
AC 1	225	86.4	30.1	14.9	4.09					
AC 2	0.0	0.0	0.0	0.0	0.0					
AC AVG.										
S.P.	12.1	→	→	→	→					
AC NOISE										
POT RES.	6.4K	→	→	→	→					

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Tipperary 506
LINE 0 HALF S SP. 3 DATE 3-13

PAGE 7

SEND	1-2	2-3	3-4	4-5	5-6	6-7				
RECEIVE	40-45	5 →								
RANGE	10	1.0	1.0	1.0	1.0	0.1				
DC 1	0.9	1.0	0.9	1.0	1.3	1.9				
DC 2 I_n	4 →									
DC 3 n	1	2	3	4	5	6				
DC 4 K_n	1.5	6	15	30	52.5	84				
DC 5										
DC 6 e	91	102	154	140	145	140				
DC 7 ΔE	0.8	0.8	0.7	0.8	1.1	1.7				
DC 8 ΔI_n	9	8	5	6	8	12				
DC AVG.										
AC 1	247	69.4	41.8	19.0	11.2	6.74				
AC 2	-0.1	0.0	0.0	0.0	0.0	0.0				
AC AVG.										
S.P.	5.4 →									
AC NOISE										
POT RES.	15K →									

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Tipperary 306
LINE 0 HALF S SP. 3 DATE 3-13

SEND	1-2	2-3	3-4	4-5	5-6					
RECEIVE	45-50	5 →								
RANGE	1.0	1.0	1.0	1.0	0.1					
DC 1	1.2	1.1	1.1	1.2	1.5					
DC 2 I	4 →									
DC 3 n	2	3	4	5	6					
DC 4 K_n	6	15	30	52.5	84					
DC 5										
DC 6 ρ	103	117	177	177	179					
DC 7 ΔV	1.0	0.9	0.9	1.0	1.3					
DC 8 MCA	10	8	5	6	7					
DC AVG.										
AC 1	69.7	31.6	24.0	13.7	8.61					
AC 2	0.0	0.0	0.0	0.0	0.01					
AC AVG.										
S.P.	16.4 →									
AC NOISE										
POT RES.	3.2K →									

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Tipperary 506
LINE 0 HALF S SP. 3 DATE 3-13

SEND	1-2	2-3	3-4	4-5	1-2	2-3	3-4			
RECEIVE	50-55	55 →	→	→	55-60	60 →	→			
RANGE	1.0	1.0	1.0	1.0	1.0	0.1	0.1			
DC 1	1.0	1.2	1.1	1.3	0.7	0.9	0.3			
DC 2 I	4	→	→	→	→	→	→			
DC 3 n	3	4	5	6	4	5	6			
DC 4 k_n	15	30	52.5	84	30	52.5	84			
DC 5										
DC 6 ρ	123	139	210	211	107	113	167			
DC 7 PFE	0.8	1.0	1.0	1.1	0.5	0.7	0.1			
DC 8 MC	6	7	5	5	5	6	1			
DC AVG.										
AC 1	33.4	14.8	16.2	10.2	14.5	8.73	8.13			
AC 2	0.0	0.0	-0.1	0.0	0.0	0.0	0.0			
AC AVG.										
S.P.	+12.7 →	→	→	→	12.8 →	→	→			
AC NOISE										
POT RES.	5.0 →	→	→	→	2.0K →	→	→			

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT Tipperary 506

LINE 0 HALF N SP. 3 DATE 3-13

SEND			4-5	3-4	2-3	1-2				
RECEIVE	20-15S	15-10S	10S-5S →							
RANGE	SP ONLY		10:400	10:400	10:400	10:400				
VOLTAGE			250	270	250	260				
CURRENT			4A	4A	4A	4A				
SEND	5-6	4-5	3-4	2-3	1-2					
RECEIVE	5S-0NS →									
RANGE	10:400	10:400	10:400	10:400	10:400					
VOLTAGE	240	250	270	250	260					
CURRENT	4A	4A	4A	4A	4A					

FREQUENCIES 3.0 0.3

SENDER NO. 9662-S

OPERATOR KERN

RECEIVER NO.

OPERATOR Chaffin

COMMENTS:

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT Tipperary 506

LINE 0 HALF N SP. 3 DATE 3-13

SEND	6-7	5-6	4-5	3-4	2-3	1-2				
RECEIVE	0 N S	5 N	→	→	→	→				
RANGE	10:400	10:400	10:400	10:400	10:400	10:400				
VOLTAGE	210	240	250	270	250	260				
CURRENT	4A	4A	4A	4A	4A	4A				
SEND	6-7	5-6	4-5	3-4	2-3					
RECEIVE	5 N	10 N	→	→	→					
RANGE	10:400	10:400	10:400	10:400	10:400					
VOLTAGE	210	240	250	270	250					
CURRENT	4A	4A	4A	4A	4A					

FREQUENCIES 3.0 0.3

SENDER NO. 9662-5

OPERATOR KERIN

RECEIVER NO.

OPERATOR Chaffin

COMMENTS:

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT 506 Tipperary

LINE 0 HALF S SP. 3 DATE 3-13

SEND	5-6	6-7	4-5	5-6	6-7	3-4	4-5	5-6	6-7	1-2
RECEIVE	20-25 S →		25S-	30 S	→	30-35 S			→	cal
RANGE	10.400	10.400	10.400	10.400	10.400	10.400	10.400	10.400	10.400	10.200
VOLTAGE	240	210	250	240	210	270	250	240	210	150
CURRENT	4A	4A	4A	4A	4A	4A	4A	4A	4A	2A
SEND	2-3	3-4	4-5	5-6	6-7					
RECEIVE	35-40 S				→					
RANGE	10.400	10.400	10.400	10.400	10.400					
VOLTAGE	250	270	250	240	210					
CURRENT	4A	4A	4A	4A	4A					

FREQUENCIES 3.0 0.3

SENDER NO. 9662-5

OPERATOR KERN

RECEIVER NO.

OPERATOR Chaffin

COMMENTS:

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT Tipperary 506
LINE 0 HALF S SP. 3 DATE 3-13

SEND	1-2	2-3	3-4	4-5	5-6	6-7				
RECEIVE	40-45S →					→				
RANGE	10·400	10·400	10·400	10·400	10·400	10·400				
VOLTAGE	260	250	270	250	240	210				
CURRENT	4A	4A	4A	4A	4A	4A				
SEND	1-2	2-3	3-4	4-5	5-6					
RECEIVE	45-50S →				→					
RANGE	10·400	10·400	10·400	10·400	10·400					
VOLTAGE	260	250	260	250	240					
CURRENT	4A	4A	4A	4A	4A					

FREQUENCIES 3.0 0.3
SENDER NO. 9662-S
OPERATOR Kern
RECEIVER NO.
OPERATOR Chaffin

COMMENTS:

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT 506 Tipperary
LINE 0 HALF 3 SP. 3 DATE 3-13

SEND	1-2	2-3	3-4	4-5	1-2	2-3	3-4			
RECEIVE	50 -	55	←	→	55-	60 S	→			
RANGE	10·400	10·400	10·400	10·400	10·400	10·400	10·400			
VOLTAGE	260	250	270	250	260	250	270			
CURRENT	4A	4A	4A	4A	4A	4A	4A			
SEND										
RECEIVE										
RANGE										
VOLTAGE										
CURRENT										

FREQUENCIES 3.0 0.3
SENDER NO. 9662-S
OPERATOR KERN
RECEIVER NO.
OPERATOR Chaffin

COMMENTS:

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Tipperary 516
LINE 10W HALF N SP. 1 DATE 3-18

PAGE 1

SEND	4-5	3-4	2-3	1-2	5-6	4-5	3-4	2-3	1-2	6-7
RECEIVE	35-45 N →			→	45-55 N →				→	cal
RANGE	10	1.0	1.0	0.1	10	1.0	1.0	1.0	0.1	10
DC 1	1.4	2.5	2.7	3.3	1.2	1.8	2.6	2.9	3.6	0.3
DC 2 PFE	1.1	2.0	2.4	3.0	0.9	1.5	2.3	2.6	3.3	(0.2)
DC 3 I	Surv. stake 4		4	3	4	4	4	4	3	2000
DC 4 n	RRR' 5 A+ 2		3	4	1	2	3	4	5	
DC 5 K	Appl 3 300-1400 12 N		30	60	3	12	30	60	105	
DC 6 P	Mid of center 125		124	140	198	184	160	174	192	(0.985)
DC 7 MCA	RRR 6	A 18 1700	19	21	5	8	14	15	17	
DC 8	N of center									
DC AVG.										
AC 1	188	41.3	16.4	6.91	265	61.2	21.6	11.5	5.40	203
AC 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0
AC AVG.										
S.P.	12.9 →			→	-8.1 →				→	
AC NOISE										
POT RES.	3K →			→	3K →				→	

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Tipperary 516
LINE 10W HALF N SP. 1 DATE 3-18

SEND	6-7	5-6	4-5	3-4	2-3	1-2				
RECEIVE	55-65 N →					→				
RANGE	10	1.0	1.0	1.0	0.1	0.1				
DC 1	1.2	1.2	2.0	2.8	3.1	3.9				
DC 2 PFE	0.9	0.9	1.7	2.5	2.8	3.6				
DC 3 I	4	4	4	4	4	3				
DC 4 n	1	2	3	4	5	6				
DC 5 K_n	3	12	30	60	105	168				
DC 6 ρ	116	136	177	164	173	191				
DC 7 MeP	8	7	10	15	16	19				
DC 8										
DC AVG.										
AC 1	155	45.7	23.5	10.8	6.52	3.35				
AC 2	0.0	0.0	0.0	0.0	−0.1	0.0				
AC AVG.										
S.P.	18K →					→				
AC NOISE										
POT RES.	8K →					→				

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Tipperary 516
LINE 10N HALF N SP. 1 DATE 3-18

SEND	6-7	5-6	4-5	3-4	2-3					
RECEIVE	65-75N	←	←	←	→					
RANGE	1.0	1.0	1.0	0.1						
DC 1	1.5	1.4	2.2	3.0	3.6					
DC 2 PFE	1.2	1.1	1.9	2.7	3.3					
DC 3 I	4	4	4	4	4					
DC 4 n	2	3	4	5	6					
DC 5 K_n	12	30	60	105	168					
DC 6 ρ	129	164	208	188	198					
DC 7 MCR	9	7	9	14	17					
DC 8										
DC AVG.										
AC 1	43.0	22.0	13.8	7.07	4.64					
AC 2	0.0	0.0	0.0	0.0	0.0					
AC AVG.										
S.P.	-1.6									
AC NOISE										
POT RES.	3.7K									

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT 516 TIPPERARY

LINE 10W HALF N SP. 1 DATE 3-18

SEND	4-5	3-4	2-3	1-2	5-6	4-5	3-4	2-3	1-2	6-7
RECEIVE	35N-45N ←				→ 45N-55N ←				→	CAL
RANGE	10x400	10x400	10x400	10x300	10x400	10x400	10x400	10x400	10x400	10x200
VOLTAGE	325	275	290	315	300	325	275	290	315	160
CURRENT	4A	4A	4A	3A	4A	4A	4A	4A	3A	2A
SEND	6-7	5-6	4-5	3-4	2-3	1-2	6-7	5-6	4-5	3-4
RECEIVE	55N-65N ←					→	65N-75N ←			→
RANGE	10x400	10x400	10x400	10x400	10x400	10x300	10x400	10x400	10x400	10x400
VOLTAGE	315	300	325	275	290	315	315	300	315	215
CURRENT	4A	4A	4A	4A	4A	3A	4A	4A	4A	4A

FREQUENCIES 3.0 0.3

SENDER NO.

OPERATOR

RECEIVER NO.

OPERATOR

COMMENTS:

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT 516 TIPPERARY

LINE ____ HALF ____ SP. ____ DATE ____

SEND	2-3									
RECEIVE	65_N-75_N									
RANGE	10x400									
VOLTAGE	290									
CURRENT	4A									
SEND										
RECEIVE										
RANGE										
VOLTAGE										
CURRENT										

FREQUENCIES ____ ____

SENDER NO.

OPERATOR

RECEIVER NO.

OPERATOR

COMMENTS:

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Tipperary 516
LINE 10W HALF S SP. 1 DATE 3-17

PAGE 1

SEND	5-6	6-7	4-5	5-6	6-7	3-4	4-5	5-6	6-7	
RECEIVE	15N-5N	→	5N-5S	→	→	5S-15S	→	→	→	
RANGE	10	1.0	10	1.0	1.0	10	1.0	1.0	0.1	
DC 1	2.6	2.5	2.7	2.8	2.7	2.1	3.3	3.3	3.2	
DC 2 I	4								→	
DC 3 PFE	2.4	2.3	2.5	2.6	2.5	1.9	3.1	3.1	3.0	
DC 4 n	1	2	1	2	3	1	2	3	4	
DC 5 K_n	3	12	3	12	30	3	12	30	60	
DC 6 ρ	148	123	150	149	127	157	163	169	145	
DC 7 MCA	16	19	17	17	20	12	19	18	21	
DC 8										
DC AVG.										
AC 1	196	40.8	198	49.3	16.8	208	53.4	22.2	9.53	
AC 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	
AC AVG.										
S.P.	6.8	→	11.3	→	→	-1.7	→	→	→	
AC NOISE										
POT RES.	7.1K	→	3.6K	→	→	2.5K	→	→	→	

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Tipperary 516
LINE 10W HALF S SP. 1 DATE 3-17

SEND	2-3	3-4	4-5	5-6	6-7					
RECEIVE	1S3	2S5	→	→	→					
RANGE	1.0	1.0	1.0	0.1	0.1					
DC 1	2.0	2.2	3.4	3.5	3.3					
DC 2 PFE	1.8	2.0	3.2	3.3	3.1					
DC 3 I	4	→	→	→	→					
DC 4 n	1	2	3	4	5					
DC 5 K_n	3	12	30	60	105					
DC 6 ρ	136	143	136	133	116					
DC 7 MCF	13	14	23	25	27					
DC 8										
DC AVG.										
AC 1	1.81	47.3	17.9	8.71	4.34					
AC 2	0.0	0.0	0.0	0.0	0.0					
AC AVG.										
S.P.	4.5	→	→	→	→					
AC NOISE										
POT RES.	2.6K	→	→	→	→					

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Tipperary 516
LINE 10W HALF S SP. 1 DATE 3-17

SEND	1-2	2-3	3-4	4-5	5-6	6-7						
RECEIVE	25S-	35S-	—	—	—	→						
RANGE	10	1.0	1.0	0.1	0.1	0.1						
DC 1	1.4	2.1	2.7	3.6	3.2	2.0 .AA	2.8	2.4	1.7	3.0	4.5	4.0	3.4 3.6
DC 2 I	3.5	4	—	—	—	-.9 4.2	3.7	3.2	2.1	4.8	3.5	3.0	
DC 3 PFE	1.2	1.9	2.5	3.4	3.0	-2.0 4.3	3.9	6.4	2.7	5.0	3.0	1.8	3.2 3.4
DC 4 n	1	2	3	4	5	-1.9 4.5	3.4	7.2	2.4	4.9	4.8	1.4	6
DC 5 K_1	7	12	30	60	105	0.6 168 5.3	3.0	6.0	2.3	4.3	5.5	2.6	168
DC 6 ρ	96	114	107	98	103	1.7 5.7	1.8	4.6	3.6	4.2	4.7	3.7	94
DC 7 MEF	13	17	23	35	29	3.2 4.4	1.0	3.0	4.7	4.2	4.9	4.1	36
DC 8						4.2 2.7	1.4	2.3	4.2	4.4	4.5	5.0	
DC AVG.													
AC 1	112	37.7	14.1	6.42	3.86	2.20							
AC 2	0.0	0.0	0.0	0.0	0.0	0.0?							
AC AVG.													
S.P.													
AC NOISE													
POT RES.													

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Tipperary 516
LINE 10W HALF S SP. 1 DATE 3-17

SEND	1-2	2-3	3-4	4-5	5-6	1-2	2-3	3-4	4-5	
RECEIVE	35S	45S	→	→	→	45S	55S	→	→	
RANGE	1.0	1.0	1.0	0.1	0.1	1.0	1.0	0.1	0.1	
DC 1	1.8	2.3	2.5	4.0	3.4	1.9	2.4	2.8	4.4	
DC 2 I	3.5	4	→	→	→	3.5	4	→	→	
DC 3 PFE	1.6	2.1	2.3	3.8	3.2	1.7	2.2	2.6	4.2	
DC 4 n	2	3	4	5	6	3	4	5	6	
DC 5 K_n	12	30	60	105	168	30	60	105	168	
DC 6										
DC 7 ρ	149	176	168	159	162	156	184	168	157	
DC 8 MCA	11	12	14	24	20	11	12	16	27	
DC AVG.										
AC 1	43.4	23.3	11.1	5.93	3.80	18.2	12.2	6.32	3.64	
AC 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
AC AVG.										
S.P.	8.5	→	→	→	→	4.4	→	→	→	
AC NOISE										
POT RES.	6.3K	→	→	→	→	2.8K	→	→	→	

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Tipperary 516
LINE 10W HALF S SP. 1 DATE 3-17

SEND	1-2	2-3	3-4			1-2				
RECEIVE	55-6	55 →	→			cal				
RANGE	0.1	0.1	0.1			10				
DC 1	2.2	2.7	3.0			0.2				
DC 2 I	3.5	4	→			2000				
DC 3 PFE	2.0	2.5	2.8			(0.2)				
DC 4 n	4	5	6							
DC 5 K_n	60	105	168							
DC 6 P	145	170	154			(0.985)				
DC 7 MCA	14	15	18							
DC 8										
DC AVG.										
AC 1	8.44	6.42	3.62			203				
AC 2	0.0	0.0	0.0			0.0				
AC AVG.										
S.P.	8.7 →	→	→							
AC NOISE										
POT RES.	2K →	→	→							

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT 516 TIPPERARY

LINE 10W HALF S SP. 1 DATE 3-17

SEND	5-6	6-7	4-5	5-6	6-7	3-4	4-5	5-6	6-7	2-3
RECEIVE	15N-5N	15N-5N	5N-5S	5N-5S	5N-5S	5S-15S	←		→	15S-25S
RANGE	10x400	10x400	10x400	10x400	10x400	10x400	10x400	10x400	10x400	10x400
VOLTAGE	350	370	330	350	375	280	330	350	375	290
CURRENT	4A	4A	4A	4A	4A	4A	4A	4A	4A	4A
SEND	3-4	4-5	5-6	6-7	1-2	1-2	2-3	3-4	4-5	5-6
RECEIVE	15S-25S	←		→	CAL	25S-35S	←			→
RANGE	10x400	10x400	10x400	10x400	10x200	10x300	10x400	10x400	10x400	10x400
VOLTAGE	275	325	350	375	250	375	300	275	325	350
CURRENT	4A	4A	4A	4A	2A	3½A	4A	4A	4A	4A

FREQUENCIES _____ _____

SENDER NO.

OPERATOR

RECEIVER NO.

OPERATOR

COMMENTS:

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT 516 TIPPERARY

LINE 10W HALF S SP. 1 DATE 3-12

SEND	6-7	1-2	2-3	3-4	4-5	5-6	1-2	2-3	3-4	4-5
RECEIVE	25s-35s	35s-45s	←			→	45s-55s	←		→
RANGE	10x400	10x3.50	10x400	10x400	10x400	10x400	37	10x400	10x400	10x400
VOLTAGE	375	375	290	275	325	350	375	290	275	325
CURRENT	4A	3½A	4A	4A	4A	4A	3½A	4A	4A	4A
SEND	1-2	2-3	3-4							
RECEIVE	55s-65s	55s-65s	55s-65s							
RANGE	10x350	10x400	10x400							
VOLTAGE	375	290	275							
CURRENT	3½A	4A	4A							

FREQUENCIES _____ _____

SENDER NO.

OPERATOR

RECEIVER NO.

OPERATOR

COMMENTS:

HEINRICHS GEOEXPLORATION CO.

I.P. RECEIVER NOTES

PROJECT 516 Kelvin

LINE 50E HALF N SP. 1 DATE 4-20

PAGE 1

SEND	SP only	SP only	4-5	3-4	2-3	1-2				
RECEIVE	0-10N	10-20N	20-30N	←	←	→				
RANGE			10	1.0	1.0	0.1				
DC 1			1.8	2.0	2.8	3.0				
DC 2 I			4	4	3	2				
DC 3 K_{10}			3	12	30	60				
DC 4										
DC 5 ρ			143	129	153	152				
DC 6 PFE			1.7	1.9	2.7	2.9				
DC 7 MCF			12	15	18	19				
DC 8										
DC AVG.										
AC 1			188	42.3	15.0	4.96				
AC 2			0.0	0.0	0.0	0.0				
AC AVG.										
S.P.	5.2	16.1	12.3	←	←	→				
AC NOISE										
POT RES.	3.4K	1.2K	3.4K	←	←	→				

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 516 Kelvin
LINE 50E HALF N SP. T DATE 4-20

SEND	5-6	4-5	3-4	2-3	1-2					
RECEIVE	30-40	N →								
RANGE	1.0	1.0	1.0	0.1	0.1					
DC 1	1.7	2.0	2.2	2.9	3.5					
DC 2 I	4	4	4	3	2					
DC 3 K_n	3	12	30	60	105					
DC 4										
DC 5 ρ	119	124	108	114	124					
DC 6		Grounded fence at 35N								
DC 7 PFE	1.6	1.9	2.1	2.8	3.4					
DC 8 MFF	13	15	21	25	27					
DC AVG.										
AC 1	157	40.9	13.1	5.57	2.29					
AC 2	0.0	0.0	0.0	0.0	0.0					
AC AVG.										
S.P.	11.3									
AC NOISE										
POT RES.	2.9K									

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT 516 Kelvin

LINE 50E HALF N SP. 1 DATE 4-20

PAGE 1

SEND	4-5	3-4	2-3	1-2	5-6	4-5	3-4	2-3	1-2	
RECEIVE	20-30	N →	→	→	30-40	N →	→	→	→	
RANGE	10.400	10.400	10.300	10.200	10.400	10.400	10.400	10.300	10.200	
VOLTAGE	160	320	390	280	200	160	320	390	280	
CURRENT	4A	4A	3A	2A	4A	4A	4A	3A	2A	
SEND										
RECEIVE										
RANGE										
VOLTAGE										
CURRENT										

FREQUENCIES 0.3 3.0

SENDER NO.

OPERATOR

RECEIVER NO.

OPERATOR

COMMENTS:

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 516 Kelvin
LINE 50E HALF S SP. 1 DATE 4-20

PAGE 1

SEND	5-6	6-7	4-5	5-6	6-7	3-4	4-5	5-6	6-7	
RECEIVE	ONS-10S		10S-20S	→		20S-30S	→		→	
RANGE	10	1.0	10	1.0	1.0	10	1.0	1.0	0.1	
DC 1	1.8	2.2	2.3	2.5	2.8	2.2	2.4	2.7	3.1	
DC 2 I	4	3	4	4	~~4~~ 3?	4	4	4	3	
DC 3 K_n	3	12	3	12	30	3	12	30	60	
DC 4										
DC 5 ρ	102	128	169	145	156	131	173	145	154	
DC 6 PFE	1.7	2.1	2.2	2.4	2.7	2.1	2.3	2.6	3.0	
DC 7 MCF	17	16	13	16	17	16	13	18	19	
DC 8										
DC AVG.										
AC 1	134	31.4	22.1	47.6	15.3	172	56.8	18.9	7.52	
AC 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
AC AVG.										
S.P.	4.6	→	10.4	→	→	39.0	→	→	→	
AC NOISE										
POT RES.	4.6K	→	3.3K	→	→	5.12K	→	→	→	

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 516 Kelvin
LINE 50E HALF S SP. 1 DATE 7-20

SEND	2-3	3-4	4-5	5-6	6-7		1-2			
RECEIVE	30S→40S				→		cal			
RANGE	10	1.0	1.0	0.1	0.1		10			
DC 1	2.4	2.5	3.0	3.3	3.7		0.1			
DC 2 I	3	4	4	4	3		2000			
DC 3 K_m	3	12	30	60	105					
DC 4										
DC 5 ρ	129	93	121	99	114		(0995?)	Use on Both Lines		
DC 6 MF	2.3	2.4	2.9	3.2	3.6		(0.1)			
DC 7 MCF	18	26	24	32	31					
DC 8										
DC AVG.										
AC 1	127	30.4	15.7	6.45	3.17		201			
AC 2	0.0	0.0	0.0	0.0	0.0		0.0			
AC AVG.										
S.P.	-1.2									
AC NOISE										
POT RES.	2.3K									

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 516 Kelvin
LINE 50E HALF 5 SP. 1 DATE 7-20

SEND	1-2	2-3	3-4	4-5	5-6	6-7				
RECEIVE	40-5	05 →				→				
RANGE	1.0	1.0	1.0	0.1	0.1	0.1				
DC 1	2.3	2.4	2.4	2.8	3.3	4.0				
DC 2 I	2	3	4	4	4	3				
DC 3 K_m	3	12	30	60	105	168				
DC 4			Power line at 465							
DC 5 F	140	126	92	115	103	121				
DC 6 PFE	2.2	2.3	2.3	2.7	3.2	3.9				
DC 7 MCA	16	18	25	24	31	32				
DC 8										
DC AVG.										
AC 1	91.6	31.0	12.0	7.48	3.83	2.09				
AC 2	0.0	0.0	0.0	0.0	0.0	0.0				
AC AVG.										
S.P.	12.2 →					→				
AC NOISE										
POT RES.	1.85 →					→	1.			

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 516 Kelvin
LINE 50E HALF S SP. 1 DATE 1-20

PAGE 4

SEND	1-2	2-3	3-4	4-5	5-6	1-2	2-3	3-4	4-5	
RECEIVE	50-60S	→	→	→	→	60-70S	→	→	→	
RANGE	1.0	1.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
DC 1	1.8	2.1	2.3	2.8	3.6	1.8	2.3	2.5	3.2	
DC 2 I	2	3	4	4	4	2	3	4	4	
DC 3 K_m	12	30	60	105	168	30	60	105	168	
DC 4										
DC 5 ρ	124	107	77	97	86	155	128	91	115	
DC 6 PFE	1.7	2.0	2.2	2.7	3.5	1.7	2.2	2.4	3.2	
DC 7 MCF	14	19	28	28	41	11	17	26	28	
DC 8										
DC AVG.										
AC 1	20.5	10.5	5.07	3.61	1.98	10.18	6.28	3.42	2.66	
AC 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.2	
AC AVG.										
S.P.	26.0	→	→	→	→	13.6	→	→	→	
AC NOISE										
POT RES.	1.8K	→	→	→	→	1.9K	→	→	→	

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 516 Kelvin
LINE 50E HALF S SP. 1 DATE 4-20

PAGE 5

SEND	1-2	2-3	3-4							
RECEIVE	70-90 S →									
RANGE	0.1	0.1	0.1							
DC 1	2.2	2.5	3.1							
DC 2 I	2	3	4							
DC 3 K_m	60	105	168							
DC 4										
DC 5 ρ	144	129	92							
DC 6 PFE	2.1	2.4	3.0							
DC 7 MCF	15	19	33							
DC 8										
DC AVG.										
AC 1	4.74	3.63	2.13							
AC 2	0.1	0.0	0.0							
AC AVG.										
S.P.	7.0 →									
AC NOISE										
POT RES.	1.4K →									

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT 5/6 KELVIN

LINE 50E HALF S SP. 1 DATE 4-20

PAGE 1

SEND	5-6	6-7	4-5	5-6	6-7	3-4	4-5	5-6	6-7	
RECEIVE	0-10s	→	10-20s	→	→	20-30s	→	→	→	
RANGE	10·400	10·300	10·400	10·400	10·400	10·400	10·400	10·400	10·300	
VOLTAGE	190	350	160	190	350	320	160	200	350	
CURRENT	4A	3A	4A	4A	4A	4A	4A	4A	3A	
SEND	2-3	3-4	4-5	3-6	6-7			1-2		
RECEIVE	30-40s	→	→	→				CAL		
RANGE	10·300	10·400	10·400	10·400	10·400			10·200		
VOLTAGE	380	320	160	200	350			280		
CURRENT	3A	4A	4A	4A	3A			2A		

FREQUENCIES 0.3 3.0

SENDER NO.

OPERATOR

RECEIVER NO.

OPERATOR

COMMENTS:

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT 516 KELVIN

LINE 50E HALF S SP. 1 DATE 4-20

SEND	1-7	2-3	3-4	4-5	5-6	6-7		1-2	2-3	3-4
RECEIVE	40-50S →					→		70-80 →		
RANGE	10·200	10·300	10·400	10·400	10·400	10·400		10·200	10·300	10·400
VOLTAGE	280	280.	320	160	200	350		275	380	320
CURRENT	2A	3A	4A	4A	4A	3A		2A	3A	4A
SEND	1-2	2-3	3-4	4-5	5-6	1-7	2-3	3-4	4-5	↑
RECEIVE	50-60S →				→	60-70S →			→	
RANGE	10·300	10·300	10·400	10·400	10·400	10·200	10·300	10·400	10·400	
VOLTAGE	280	380	320	160	200	275	380	320	160	
CURRENT	2A	3A	4A	4A	4A	2A	3A	4A	4A	

FREQUENCIES ____ ____

SENDER NO.

OPERATOR

RECEIVER NO.

OPERATOR

COMMENTS:

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Tipperary 516
LINE 10W HALF N SP. 2 DATE 3-18

PAGE 1

SEND	SP	SP	4-5	3-4	2-3	1-2				
RECEIVE	5S-0	0-5N	5N - 10N	→	→	→				
RANGE			10	1.0	1.0	1.0				
DC 1			1.7	2.0	2.2	2.0				
DC 2 I			4	3.5	3	2.5				
DC 3 n			1	2	3	4				
DC 4 PFE			1.4	1.7	1.9	1.7				
DC 5 K_n			1.5	6	15	30				
DC 6 ρ			117	127	174	148				
DC 7 MCE			12	13	11	11				
DC 8										
DC AVG.										
AC 1			313	74.1	34.6	12.3				
AC 2			0.0	0.0	0.0	0.0				
AC AVG.										
S.P.	4.6	5.8	26.4	→	→	→				
AC NOISE										
POT RES.	3.4 K	4.0K	5.5K	→	→	→	4.01			

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Tipperary 5:6
LINE 10W HALF N SP. 2 DATE 3-18

SEND	5-6	4-5	3-4	2-3	1-2		6-7			
RECEIVE	10N – 15N				→		CAL			
RANGE	10	10	1.0	1.0	0.1		10			
DC 1	1.8	1.8	2.2	2.4	2.3		0.3			
DC 2 I	4	4	4 (3.5?)	2.5	2.5		2000			
DC 3 n	1	2	3	4	5					
DC 4 FFE	1.5	1.5	1.9	2.1	2.0		(0.3)			
DC 5 K_n	1.5	6	15	30	52.5					
DC 6 ρ	162	156	138 (157)	208	141		(0.985)			
DC 7 MCA	9	10	14 (12?)	10	14					
DC 8										
DC AVG.										
AC 1	433	104.	36.6	17.2	6.68		203			
AC 2	0.0	0.0	0.0	0.0	0.0		0.0			
AC AVG.										
S.P.	17.4	→	→	→	→					
AC NOISE										
POT RES.	4.0K	→	→	→	→					

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Tipperary 516
LINE 10W HALF N SP. 2 DATE 3-18

SEND	6-7	5-6	4-5	3-4	2-3	1-2				
RECEIVE	15N	20N	→	→	→	→				
RANGE	10	10	1.0	1.0	0.1	0.1				
DC 1	2.2	2.4	2.7	3.1	3.3	3.2				
DC 2 I	4	4	4	4	2.5	2.5				
DC 3 n	1	2	3	4	5	6				
DC 4 MFE	1.9	2.1	2.4	2.8	3.0	2.9				
DC 5 K_n	1.5	6	15	30	52.5	84				
DC 6 ℓ	146	163	153	152	200	135				
DC 7 MCR	13	13	16	18	15	22				
DC 8										
DC AVG.										
AC 1	389.	108.	40.4	20.0	9.38	3.95				
AC 2	0.0	0.0	0.0	0.0	0.0	0.0				
AC AVG.										
S.P.	-7.6	→	→	→	→	→				
AC NOISE										
POT RES.	4.5K	→	→	→	→	→				

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 516 Tipperary
LINE 10W HALF N SP. 2 DATE 3-18

SEND	6-7	5-6	4-5	3-4	2-3					
RECEIVE	20-25N									
RANGE	10	1.0	1.0	1.0	0.1					
DC 1	2.6	2.9	3.1	3.3	3.7					
DC 2 I	4	4	4	4	2.5					
DC 3 "	2	3	4	5	6					
DC 4 MΩ	2.3	2.6	2.8	3.0	3.4					
DC 5 K Ω	6	15	30	52.5	84					
DC 6 Ω	159	161	157	157	203					
DC 7 MCΩ	14	16	18	19	17					
DC 8										
DC AVG.										
AC 1	105	42.6	20.7	11.8	5.93					
AC 2	0.0	0.0	0.0	0.0	0.0					
AC AVG.										
S.P.	10.6	→	→	→	→					
AC NOISE										
POT RES.	5.0K	→	→	→	→					

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT Tipperary 516
LINE 10W HALF N SP. 2 DATE 3-18

SEND	4-5	3-4	2-3	1-2	5-6	4-5	3-4	2-3	1-2	Cal
RECEIVE	5N-10N	→	→	→	10N-15N	→	→	→	→	
RANGE	10.400	10.350	10.300		10.400	10.400	10.400	10.250	10.250	10.200
VOLTAGE	265	320	340	360	250	265	320	280	310	110
CURRENT	4A	3.5A	3A	2.5A	4A	4A	4A 2.5	2.5A	2.5A	2A
SEND	6-7	5-6	4-5	3-4	2-3	1-2				
RECEIVE	15N-20N	→	→	→	→	→				
RANGE	10.400	10.400	10.400	10.400	10.250	10.250				
VOLTAGE	220	250	260	370	280	310				
CURRENT	4A	4A	4A	4A	2.5A	2.5A				

FREQUENCIES 3.0 0.3
SENDER NO.
OPERATOR
RECEIVER NO.
OPERATOR 20693-R

COMMENTS:

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT Tipperary 516

LINE 10W HALF N SP. 2 DATE 3-18

SEND	6-7	5-6	4-5	3-4	2-3	~~6-7~~	~~5-6~~	~~4-5~~	~~3-4~~	
RECEIVE	20N	25	N		7					
RANGE	10,400	10,400	10,400	10,400	10,250					
VOLTAGE	220	250	230	320	280					
CURRENT	4A	4A	8A	4A	2.5A					
SEND										
RECEIVE										
RANGE										
VOLTAGE										
CURRENT										

FREQUENCIES _____ _____

SENDER NO.

OPERATOR

RECEIVER NO.

OPERATOR

COMMENTS:

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Tipperary 516
LINE 10W HALF S SP. 2 DATE 3-19

SEND	5-6	6-7	4-5	5-6	6-7	3-4	4-5	5-6	6-7	
RECEIVE	5-10s	→	10-15s	→	→	15-20s	→	→	→	
RANGE	10	1.0	10	10	1.0	10	1.0	1.0	1.0	
DC 1	2.5	2.2	2.5	3.2	2.3	1.9	2.3	2.2	2.0	
DC 2 I	4	→	→	→	→	→	→	→	→	
DC 3 n	1	2	1	2	3	1	2	3	4	
DC 4 K_n	1.5	6	1.5	6	15	1.5	6	15	30	
DC 5										
DC 6 P	168	131	175	237	182	110	121	166	128	
DC 7 PF	2.2	1.9	2.2	2.8	2.0	1.6	2.0	1.9	1.7	
DC 8 MFF	13	15	13	12	11	15	17	11	13	
DC AVG.										
AC 1	444	86.7	464	156	48.2	292	80.2	44.1	17.0	
AC 2	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	
AC AVG.										
S.P.	-19.4	→	9.3	→	→	-9.2	→	→	→	
AC NOISE										
POT RES.	5 K	→	5 K	→	→	.5 K	→	→	→	

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Tipperary 516
LINE 10W HALF S SP. 2 DATE 3-19

SEND	2-3	3-4	4-5	5-6	6-7	CAL				
RECEIVE	20-25s	→	→	→	→	1-2				
RANGE	10	1.0	1.0	1.0	1.0	10				
DC 1	2.0	2.0	2.3	2.4	1.8	0.3				
DC 2 I	3	4	→	→	→	2000				
DC 3 n	1	2	3	4	5					
DC 4 K_n	1.5	6	15	30	52.5					
DC 5										
DC 6 ρ	142	114	131	170	136	(0.985)				
DC 7 PFE	1.5	1.7	2.0	2.1	1.5	(0.3)				
DC 8 AMP	11	15	15	12	11					
DC AVG.										
AC 1	285	76.0	34.7	22.5	1.04	203				
AC 2	0.4	0.0	0.0	0.0	0.0	0.0				
AC AVG.										
S.P.	-22.4	→	→	→	→					
AC NOISE										
POT RES.	5K	→	→	→	→					

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Tipperary 516
LINE 10W HALF S SP. 2 DATE 3-19-70

SEND	1-2	2-3	3-4	4-5	5-6	6-7				
RECEIVE	25-30s	→	→	→	→	→				
RANGE	1.0	1.0	1.0	1.0	0.1	0.1				
DC 1	1.1	1.5	1.7	2.1	2.0	1.8				
DC 2 I	2	3	4	→	→	→				
DC 3 n	1	2	3	4	5	6				
DC 4 K_n	1.5	6	15	30	52.5	84				
DC 5										
DC 6 ρ	46	93	81	93	131	90				
DC 7 PFE	0.8	1.2	1.4	1.8	1.7	1.5				
DC 8 MFE	17	13	17	19	13	17				
DC AVG.										
AC 1	61.9	46.5	21.7	12.4	9.94	4.29				
AC 2	0.0	0.0	0.0	0.0	0.0	0.0				
AC AVG.										
S.P.	-5.1	→	→	→	→	→				
AC NOISE										
POT RES.	3K	→	→	→	→	→				

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Tipperary
LINE 10W HALF S SP. 2 DATE 3-19-76

SEND	1-2	2-3	3-4	4-5	5-6	1-2	2-3	3-4	4-5	
RECEIVE	30-35s	→	→	→	→	35-40s	→	→	→	
RANGE	1.0	1.0	1.0	0.1	0.1	1.0	1.0	0.1	0.1	
DC 1	1.1	1.9	1.7	2.0	1.9	1.2	1.8	1.8	2.2	
DC 2 I	2	3	4	4	4	2	3	4	4	
DC 3 n	2	3	4	5	6	3	4	5	6	
DC 4 K_n	6	15	30	52.5	84	15	30	52.5	84	
DC 5										
DC 6 C	70	114	94	108	140	88	149	122	141	
DC 7 PFE	0.8	1.6	1.4	1.7	1.6	0.9	1.5	1.5	1.9	
DC 8 MCF	11	14	15	16	11	10	10	12	13	
DC AVG.										
AC 1	23.5	22.7	12.5	8.24	6.64	11.8	14.9	9.32	6.71	
AC 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
AC AVG.										
S.P.	10.1	→	→	→	→	-4.1	→	→	→	
AC NOISE										
POT RES.	4K	→	→	→	→	4.5K	→	→	→	

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Tipperary 516
LINE 10W HALF S SP. 2 DATE 3-19-79

SEND	1-2	2-3	3-4							
RECEIVE	40-45s	→	→							
RANGE	0.1	0.1	0.1							
DC 1	1.2	1.6	2.0							
DC 2 I	2	3	4							
DC 3 n	4	5	6							
DC 4 K_n	30	52.5	84							
DC 5										
DC 6 ρ	109	173	145							
DC 7 MΩ	0.9	1.3	1.7							
DC 8 mA	8	8	12							
DC AVG.										
AC 1	7.31	9.92	6.87							
AC 2	0.0	0.0	0.0							
AC AVG.										
S.P.	-8,6	→	→							
AC NOISE										
POT RES.	3 K	→	→							

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT Tipperary 516

LINE 10W HALF S SP. 2 DATE 3-19

PAGE 1

SEND	5-6	6-7	4-5	5-6	6-7	3-4	4-5	5-6	6-7	
RECEIVE	5S-10	S →	10S-	15S	→	15S-	20S	→	→	
RANGE	10x400	10x400	10x400			10x400				
VOLTAGE				270	230	380	280	270	230	
CURRENT	4A	4A	4A	4A	4A	4A	4?	4?	4?	
SEND	2-3	3-4	4-5	5-6	6-7					
RECEIVE	20-25	S →			→					
RANGE	10x300	10x400	10x400	10x400	10x400					
VOLTAGE	305	385	280	265	230					
CURRENT	3A	4A	4A	4A	4A					

FREQUENCIES 3.0 0.3

SENDER NO. 9662-5

OPERATOR JC

RECEIVER NO. 20

OPERATOR WJF

COMMENTS:

Dual Ac

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT Tipperary 516

LINE 10W HALF S SP. 2 DATE 3-19

PAGE 2

SEND	1-2	2-3	3-4	4-5	5-6	6-7				
RECEIVE	25-30	S →				→				
RANGE	10x100	10x300	10x400	10x400	10x400	10x400				
VOLTAGE	270	355	380	280	270	230				
CURRENT	2A	3A	4A	4A	4A	4A				
SEND	1-2	2-3	3-4	4-5	5-6	1-2	2-3	3-4	4-5	
RECEIVE	30-35	S →			→	35-40	S →		→	
RANGE	10x200	10x300	10x400	10x400	10x400	10x200	10x300	10x400	10x400	
VOLTAGE	280	360	380	380	270	270	355	380	270	
CURRENT	2A	3A	4A	4A	4A	2A	3A	4A	4A	

FREQUENCIES 3.0 0.3

SENDER NO.

OPERATOR

RECEIVER NO.

OPERATOR

COMMENTS:

Dual Ac

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT Tipperary 516

LINE 10W HALF S SP. 2 DATE 3-19

SEND	1-2	2-3	3-4							
RECEIVE	40-45 S	→	→							
RANGE	10X200	10X300	10X400							
VOLTAGE	275	355	380							
CURRENT	2A	3A	4A							
SEND										
RECEIVE										
RANGE										
VOLTAGE										
CURRENT										

FREQUENCIES 3.0 0.3

SENDER NO.

OPERATOR

RECEIVER NO.

OPERATOR

COMMENTS:

Dual Ac

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Tipperary 516
LINE 1000W HALF N SP. 3 DATE 3-20

PAGE 1

SEND	SP ONLY		2-3	1-2	3-4	2-3	1-2			
RECEIVE	30-35 N →		35-40 N →		40-45 N →		→			
RANGE			10	1.0	10	10	1.0			
DC 1			1.3	1.7	1.0	1.2	1.3			
DC 2 I			4	—	—	—	→			
DC 3 n			1	2	1	2	3			
DC 4 K_n			1.5	6	1.5	6	15			
DC 5										
DC 6 P			16.4	115	233	307	202			
DC 7 PFE			0.9	1.3	0.6	0.8	0.9			
DC 8 MFE			5	11	3	3	4			
DC AVG.										
AC 1			44.2	77.2	630	207	54.4			
AC 2			0.0	0.0	0.0	0.0	0.0			
AC AVG.										
S.P.	2.9		3.1	→	14.2					
AC NOISE										
POT RES.	4K		5K	→	1K					

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Tipperary 516
LINE 10W HALF N SP. 3 DATE 3-20

SEND	4-5	3-4	2-3	1-2	5-6	4-5	3-4	2-3	1-2	6-7
RECEIVE	45-50N	→	→	→	50-55N	→	→	→	→	cal
RANGE	10	10	1.0	1.0	10	1.0	1.0	1.0	1.0	10
DC 1	1.2	1.3	1.6	1.6	1.3	1.5	1.3	1.5	1.6	0.4
DC 2 I	4	→	→	→	→	→	→	→	→	2000
DC 3 n	1	2	3	4	1	2	3	4	5	
DC 4 K_n	1.5	6	15	30	1.5	6	15	30	52.5	
DC 5										
DC 6 ρ	157	221	215	198	208	110	146	158	163	(0.480)
DC 7 PFE	0.8	0.9	1.2	1.2	0.9	1.1	0.9	1.1	1.2	(0.4)
DC 8 MCE	5	4	6	6	4	10	6	7	7	
DC AVG.										
AC 1	425	149	57.7	26.6	561	73.8	39.3	21.2	12.5	204
AC 2	-0.1	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0
AC AVG.										
S.P.	-11.7	→	→	→	20.0	→	→	→	→	
AC NOISE										
POT RES.	2.9K	→	→	→	8.5K	→	→	→	→	

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Tipperary 516
LINE 10W HALF N SP. 3 DATE 3-2

SEND	6-7	5-6	4-5	3-4	2-3	1-2				
RECEIVE	55-60 N	→	→	→	→	→				
RANGE	10	1.0	1.0	1.0	1.0	0.1				
DC 1	1.2	1.3	1.2	1.2	1.2	1.4				
DC 2 I	4	→	→	→	→	→				
DC 3 n	1	2	3	4	5	6				
DC 4 K_n	1.5	6	15	30	52.5	84				
DC 5										
DC 6 ρ	128	129	79	120	147	164				
DC 7 PFE	0.8	0.9	0.8	0.8	0.8	1.0				
DC 8 MCA	6	7	10	7	5	6				
DC AVG.										
AC 1	345	87.1	21.4	16.2	11.3	7.87				
AC 2	0.0	0.0	0.0	0.0	0.0	0.0				
AC AVG.										
S.P.	-1.3	→	→	→	→	→				
AC NOISE										
POT RES.	13K	→	→	→	→	→				

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Tipperary 516
LINE 10W HALF N SP. 3 DATE 3-20

SEND	6-7	5-6	4-5	3-4	2-3	6-7	5-6	4-5	3-4	
RECEIVE	60-64 N	→	→	→	→	65-70 N	→	→	→	
RANGE	1.0	1.0	1.0	0.1	0.1	1.0	1.0	0.1	0.1	
DC 1	1.6	1.4	1.3	1.0	1.2	1.8	1.6	1.2	1.1	
DC 2 I	4	→	→	→	→	→	→	→	→	
DC 3 n	2	3	4	5	6	3	4	5	6	
DC 4 K_a	6	15	30	52.5	84	15	30	52.5	84	
DC 5										
DC 6 ρ	140	137	85	130	163	165	178	112	178	
DC 7 PFE	1.2	1.0	0.9	0.6	0.8	1.4	1.2	0.8	0.7	
DC 8 MCE	9	7	11	5	5	8	7	7	4	
DC AVG.										
AC 1	93.8	37.0	11.4	10.05	7.85	44.3	23.9	8.61	8.57	
AC 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
AC AVG.										
S.P.	14.7	→	→	→	→	7.8	→	→	→	
AC NOISE										
POT RES.	3.7K	→	→	→	→	3.6	→	→	→	

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Tipperary 5.6
LINE 10W HALF N SP. 3 DATE 3-20

SEND	6-7	5-6	4-5							
RECEIVE	7-8	→	→							
RANGE	1.0	0.1	0.1							
DC 1	1.6	1.2	1.2							
DC 2 I	4	→	→							
DC 3 n	4	5	6							
DC 4 K	30	2.5	84							
DC 5										
DC 6 ρ	108	117	72							
DC 7 MFE	1.2	0.8	0.8							
DC 8 MFE	11	7	11							
DC AVG.										
AC 1	14.5	9.00	3.47							
AC 2	0.0	0.0	0.0							
AC AVG.										
S.P.	14.5	→	→							
AC NOISE										
POT RES.	37K	→	→							

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT 516 TIPPERARY

LINE 10W HALF N SP. 3 DATE 3-20

SEND	2-3	1-2	3-4	2-3	1-2	4-5	3-4	2-3	1-2	
RECEIVE	35N-40N	35N-40N	40-45N	←	→	45-50	N ←	→		
RANGE	10x400	10x400	10x400	10x400	10x400	10x400	10x400	15x400	10x400	
VOLTAGE	350	280	330	345	290	260	340	390	300	
CURRENT	4A	4A	4A	4A	4A	4A	4A	4A	4A	
SEND	5-6	4-5	3-4	2-3	1-2					6-7
RECEIVE	50-55 N	←			→					CAL
RANGE	10x400	10x400	10x400	10x400	10x400					10x400
VOLTAGE	325	260	350	390	300					190
CURRENT	4A	4A	4A	4A	4A					2A

FREQUENCIES .3 3.0

SENDER NO.

OPERATOR

RECEIVER NO.

OPERATOR

COMMENTS:

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT 5/6 TIPPERARY

LINE 10W HALF N SP. 3 DATE 3-20

SEND	6-7	5-6	4-5	3-4	2-3	1-2				
RECEIVE	55-60 N →									
RANGE	10x400	10x400	10x400	10x400	10x400	10x400				
VOLTAGE	375	325	260	340	390	300				
CURRENT	4A	4A	4A	4A	4A	4A				
SEND	6-7	5-6	4-5	3-4	2-3	6-7	5-6	4-5	3-4	
RECEIVE	60-65 →					65-70 →				
RANGE	10x400	10x400	10x400	10x400	10x400	10x400	10x400	10x400	10x400	
VOLTAGE	375	325	260	340	385	375	325	260	340	
CURRENT	4A	4A	4A	4A	4A	4A	4A	4A	4A	

FREQUENCIES _____ _____

SENDER NO.

OPERATOR

RECEIVER NO.

OPERATOR

COMMENTS:

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT Tipperary 516
LINE 10W HALF N SP. 3 DATE 10-23

SEND	6-7	5-6	4-5							
RECEIVE	70-75 N →									
RANGE	10x400	10x400	10x400							
VOLTAGE	375	325	260							
CURRENT	4A	4A	4A							
SEND										
RECEIVE										
RANGE										
VOLTAGE										
CURRENT										

FREQUENCIES _____ _____
SENDER NO.
OPERATOR
RECEIVER NO.
OPERATOR

COMMENTS:

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 516 Tipperary
LINE 10W HALF S SP. 3 DATE 3-20

PAGE 1

SEND	SP ONLY		3-4	4-5	5-6	6-7				
RECEIVE	30-25N		25-20N	→	→	→				
RANGE			10	1.0	1.0	1.0				
DC 1			1.6	0.8	0.6	0.8				
DC 2 I			4							
DC 3 n			1	2	3	4				
DC 4 K_n			1.5	6	15	30				
DC 5				11A		191				
DC 6 ρ			162	0.7→0.4	197	0.4→1.0				
DC 7 PFE			1.2	0.5	0.2	0.7				
DC 8 MCA			7	4	1	4				
DC AVG.										
AC 1			43.5	77.4	53.4	25.8				
AC 2			0.0	-0.3	0.0	-0.6				
AC AVG.										
S.P.	-0.7		1.5<	→	→	→				
AC NOISE										
POT RES.	150K		6K	→	→	→				

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Tipperary 516
LINE 10W HALF S SP. 3 DATE 3-20

SEND	2-3	3-4	4-5	5-6	6-7					
RECEIVE	20-15N	→	→	→	→					
RANGE	10	10	1.0	1.0	1.0					
DC 1	2.4	2.2	2.2	2.3	2.5					
DC 2 I	4	→	→	→	→					
DC 3 n	1	2	3	4	5					
DC 4 K_n	1.5	6	15	30	52.5					
DC 5										
DC 6 ρ	175	171	119	210	204					
DC 7 PFE	2.0	1.8	1.8	1.9	2.1					
DC 8 MCA	11	11	15	9	10					
DC AVG.										
AC 1	467	114	31.7	28.0	15.5					
AC 2	0.0	0.0	0.0	0.0	0.0					
AC AVG.										
S.P.	20.4	→	→	→	→					
AC NOISE										
POT RES.	6.415	→	→	→	→					

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Tipperary 516
LINE 10W HALF S SP. 3 DATE 3-23

SEND	1-2	2-3	3-4	4-5	5-6	6-7				
RECEIVE	15N	10N	→	→	→	→				
RANGE	10	10	1.0	1.0	1.0	0.1				
DC 1	2.6	2.8	2.7	2.5	2.7	2.5				
DC 2 I	4	→	→	→	→	→				
DC 3 n	1	2	3	4	5	6				
DC 4 K_n	1.5	6	15	30	52.5	84				
DC 5										
DC 6 ρ	147	164	154	103	188	182				
DC 7 PFE	2.2	2.4	2.3	2.1	2.3	2.1				
DC 8 MCF	15	15	15	20	12	12				
DC AVG.										
AC 1	390	109	41.0	13.7	14.3	8.65				
AC 2	0.0	0.0	0.0	0.0	0.0	0.0				
AC AVG.										
S.P.	-13.5	→	→	→	→	→				
AC NOISE										
POT RES.	6.5K	→	→	→	→	→				

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Tipperary 516
LINE 10W HALF S SP. 3 DATE 10-23

SEND	1-2	2-3	3-4	4-5	5-6					
RECEIVE	10-5W →				→					
RANGE	1.0	1.0	1.0	0.1	0.1					
DC 1	2.9	3.0	2.6	2.4	2.4					
DC 2 I	1 →				→					
DC 3 n	2	3	4	5	6					
DC 4 K_n	6	15	30	52.5	84					
DC 5										
DC 6 ρ	149	147	130	84	156					
DC 7 PFE	2.5	2.6	2.2	2.0	2.0					
DC 8 M/A	17	18	17	24	13					
DC AVG.										
AC 1	99.1	39.0	17.3	6.42	7.41					
AC 2	0.0	0.0	0.0	0.0	0.0					
AC AVG.										
S.P.	-20.9 →				→					
AC NOISE										
POT RES.	15K →				→					

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Tipperary 516
LINE 10W HALF S SP. 3 DATE

SEND	1-2	2-3	3-4	4-5	1-2	2-3	3-4			
RECEIVE	5N-0	→	→	→	0-5S	→	→			
RANGE	1.0	1.0	0.1	0.1	1.0	1.0	0.1			
DC 1	3.1	2.9	2.7	2.5	3.1	3.1	2.8			
DC 2 I	4	3.5	4	→	→	3.5	4			
DC 3 n	3	4	5	6	4	5	6			
DC 4 K_n	15	30	52.5	84	30	52.5	89			
DC 5										
DC 6 ρ	147	143	124	84	157	163	141			
DC 7 PFE	2.7	2.5	2.3	2.1	2.7	2.7	2.5			
DC 8 MCA	18	17	19	25	17	17	18			
DC AVG.										
AC 1	39.0	16.6	9.42	3.98	20.8	10.4	6.70			
AC 2	0.0	0.0	0.0	0.0	0.0	0.0	-0.2			
AC AVG.										
S.P.	8.5	→	→	→	16.3	→	→			
AC NOISE										
POT RES.	2.1K	→	→	→	1.5K	→	→			

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT 516 TIPPERARY

LINE 10W HALF S SP. 3 DATE 3-22

SEND	3-4	4-5	5-6	6-7	2-3	3-4	4-5	5-6	6-7	
RECEIVE	25-20N	→	→	→	20-15N	→	→	→	→	
RANGE	10x400	10x400	10x400	10x400	10x400	10x400	10x400	10x400	10x400	
VOLTAGE	330	260	325	370	370	330	260	325	370	
CURRENT	4A	4A	4A	4A	4A	4A	4A	4A	4A	
SEND	1-2	2-3	3-4	4-5	5-6	6-7				
RECEIVE	15N	-10N	→	→	→	→				
RANGE	10x400	10x400	10x400	10x400	10x400	10x400				
VOLTAGE	270	370	325	260	325	360				
CURRENT	4A	4A	4A	4A	4A	4A				

FREQUENCIES _____ _____

SENDER NO.

OPERATOR

RECEIVER NO.

OPERATOR

COMMENTS:

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT Tipperary 516

LINE 10W HALF S SP. 3 DATE 3-23

PAGE 2

SEND	1-2	2-3	3-4	4-5	5-6					
RECEIVE	10N - 3N →									
RANGE	10x400	10x400	10x400	10x400	10x400					
VOLTAGE	280	375	325	260	325					
CURRENT	4A	4A	4A	4A	4A					
SEND	1-2	2-3	3-4	4-5						
RECEIVE	5N - 0N →									
RANGE	10x400	10x350	10x400	10x400						
VOLTAGE	300	340	350	260						
CURRENT	4A	3½A	4A	4A						

FREQUENCIES _____ _____

SENDER NO.

OPERATOR

RECEIVER NO.

OPERATOR

COMMENTS:

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT Tipperary 516

LINE 10W HALF S SP. 3 DATE 3-23

PAGE 3

SEND	1-2	2-3	3-4							
RECEIVE	ON-	5s	→							
RANGE	10x400	10x350	10x 350							
VOLTAGE	300	340	350							
CURRENT	4A	3½A	4A							
SEND										
RECEIVE										
RANGE										
VOLTAGE										
CURRENT										

FREQUENCIES _____ _____

SENDER NO.

OPERATOR

RECEIVER NO.

OPERATOR

COMMENTS:

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 516 Kelvin
LINE 20W HALF N SP. 1 DATE 4-23

PAGE 1

SEND	2-3	1-2	3-4	2-3	1-2	4-5	3-4	2-3	1-2	
RECEIVE	5-15N →		15-25N →			25-35N →				
RANGE	10	1.0	10	1.0	0.1	10	1.0	1.0	0.1	
DC 1	1.7	1.7	2.6	2.6	2.7	2.2	2.4	2.4	2.2	
DC 2 I	4	2	3	4	2	3	3	4	2	
DC 3 Km	3	12	3	12	30	3	12	30	60	
DC 4										
DC 5 ρ	164	90	245	146	90	124	233	134	77	
DC 6 PFE	1.7	1.7	2.6	2.6	2.7	2.2	2.4	2.4	2.2	
DC 7 MeF	10	19	11	18	30	18	10	18	28	
DC 8										
DC AVG.										
AC 1	2.19	15.0	245	48.7	(6.01	124	58.2	17.8	2.58	
AC 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
AC AVG.										
S.P.	7.0 →		-1.0 →			15.5 →				
AC NOISE										
POT RES.	3.4K →		2.3K →			3.5K →				

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 516 Kelvin
LINE 20W HALF N SP. 1 DATE 7-23

SEND	5-6	4-5	3-4	2-3	1-2					
RECEIVE	35-45N →									
RANGE	10	1.0	1.0	1.0	0.1					
DC 1	1.5	2.3	2.7	2.4	2.5					
DC 2 I	3	3	3	4	2					
DC 3 K	3	12	30	60	105					
DC 4										
DC 5 ρ	190	188	315	171	102					
DC 6 PFE	1.5	2.3	2.7	2.4	2.5					
DC 7	Broken Pot →				24					
DC 8 MCA	8	12	9	14						
DC AVG.										
AC 1	190	47.0	31.5	11.4	1.95					
AC 2	0.0	0.0	0.0	0.0	0.0					
AC AVG.										
S.P.	-54.6 →					-56.8				
AC NOISE										
POT RES.	3.2K →					2.9K				

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 516 Kelvin
LINE 20W HALF N SP. I DATE 4-23

SEND	6-7	5-6	4-5	3-4	2-3	1-2				
RECEIVE	45-55N →					→				
RANGE	10	1.0	1.0	1.0	0.1	0.1				
DC 1	0.8	1.7	2.4	2.7	2.7	2.7				
DC 2 I	2	3	3	3	4	2.5				
DC 3 K_n	3	12	30	60	105	168				
DC 4										
DC 5 ρ	156	277	245	394	210	123				
DC 6 PFE	0.8	1.7	2.4	2.7	2.7	2.7				
DC 7 MCA	5	6	10	7	13	22				
DC 8										
DC AVG.										
AC 1	104	49.3	24.5	19.7	8.01	1.83				
AC 2	0.0	0.0	0.0	0.0	0.0	0.0				
AC AVG.										
S.P.	-568 →					→				
AC NOISE										
POT RES.	2.9K →					→				

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 516 Kelvin
LINE 20W HALF N SP. 1 DATE 4-23

PAGE 4

SEND	6-7	5-6	4-5	3-4	2-3	6-7	5-6	4-5	3-4	
RECEIVE	55-65N →				→	65-75N →			→	
RANGE	1.0	1.0	1.0	0.1	0.1	1.0	1.0	0.1	0.1	
DC 1	1.0	1.9	2.5	2.7	2.7	1.4	2.3	2.5	3.1	
DC 2 I	2	3	3	3	4	2	3	3	3	
DC 3 K"	12	30	60	105	168	30	60	105	168	
DC 4										
DC 5 ρ	156	260	230	373	202	173	282	248	404	
DC 6 MFE	1.0	1.9	2.5	2.7	2.7	1.4	2.3	2.5	3.1	
DC 7 MCA	6	7	11	7	13	8	8	10	8	
DC 8										
DC AVG.										
AC 1	26.0	26.0	11.5	10.66	4.81	11.5	14.1	7.08	7.21	
AC 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
AC AVG.										
S.P.	-150 →				→	-120 →			→	
AC NOISE						0.0				
POT RES.	1.9K →				→	5K →			→	

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT 516 KELVIN

LINE 20N HALF N SP. 1 DATE 4-23

PAGE 1

SEND	2-3	1-2	3-4	2-3	1-2	4-3	3-4	2-3	1-2	
RECEIVE	5-15N	→	15-2	5N	→	25-35N	→	→	→	
RANGE	10·400	10·200	10·300	10·400	10·200	10·300	10·300	10·400	10·200	
VOLTAGE	270	290	310	270	290	300	310	270	290	
CURRENT	4A	2A	3A	4A	2A	3A	3A	4A	2A	
SEND	5-6	4-5	3-4	2-3	1-2					
RECEIVE	35-45N	→	→	→	→					
RANGE	10·300	10·300	10·300	10·400	10·200					
VOLTAGE	350	306	310	270	290					
CURRENT	3A	3A	3A	4A	2A					

FREQUENCIES 0.5 3.0

SENDER NO.

OPERATOR

RECEIVER NO.

OPERATOR

COMMENTS:

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT 516 KELVIN

LINE 20 W HALF N SP. 1 DATE 4-23

SEND	6-7	5-6	4-5	3-4	2-3	1-2				
RECEIVE	45-55N →									
RANGE	10·200	10·300	10·300	10·300	10·400	10·250				
VOLTAGE	390	350	300	310	270	360				
CURRENT	2A	3A	3A	3A	4A	2½A				
SEND	6-7	5-6	4-5	3-4	2-3	6-7	5-6	4-5	3-4	
RECEIVE	55-65N →					65-75N →				
RANGE	10·200	10·300	10·300	10·300	10·400	10·200	10·300	10·300	10-360	
VOLTAGE	400	340	300	310	270	390	340	300	310	
CURRENT	2A	3A	3A	3A	4A	2A	3A	3A	3A	

FREQUENCIES 0.3 3.0

SENDER NO.

OPERATOR

RECEIVER NO.

OPERATOR

COMMENTS:

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT 516 KEEVIN

LINE 20W HALF S SP. 1 DATE 4-23

SEND	3-4	4-5	5-6	6-7	2-3	3-4	4-5	5-6	6-7	
RECEIVE	15S -	25S →			25S -	35S →				
RANGE	10·300	10·300	10·300	10·200	10·400	10·300	10·300	10·300	10·200	
VOLTAGE	310	300	350	390	280	310	300	350	400	
CURRENT	3A	3A	3A	2A	4A	3A	3A	3A	2A	
SEND	1-2	2-3	3-4	4-5	5-6	6-7		1-2		
RECEIVE	35 -	45S →				→		CAL		
RANGE	10·200	10·400	10·900	10·300	10·300	10·200		10·200		
VOLTAGE	290	270	310	300	350	400		290		
CURRENT	2A	4A	3A	3A	3A	2A		2A		

FREQUENCIES 0.3 3.0

SENDER NO.

OPERATOR

RECEIVER NO.

OPERATOR

COMMENTS:

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT 516 KELVIN

LINE 20W HALF S SP. 1 DATE 4-23

SEND	1-2	2-3	3-4	4-5	5-6	1-2	2-3	3-4	4-5	
RECEIVE	45-	55s →			→	55-	65s →		→	
RANGE	10·200	10·400	10·300	10·300	10·300	200'10	10·400	10·300	10·300	
VOLTAGE	290	270	310	300	350	270	200	310	300	
CURRENT	2A	4A	3A	3A	3A	2A	4A	3A	3A	
SEND	1-2	2-3	3-4							
RECEIVE	65-75s →		→							
RANGE	10·200	10·400	10·300							
VOLTAGE	290	270	310							
CURRENT	2A	4A	3A							

FREQUENCIES 0.3 3.0

SENDER NO.

OPERATOR

RECEIVER NO.

OPERATOR

COMMENTS:

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 516 Kelvin
LINE 20W HALF S SP. I DATE 4-23

SEND	SP only	Sp only	3-4	4-5	5-6	6-7				
RECEIVE	5-5s	5s-15s	15-25s	→	→	→				
RANGE	1.0		10	1.0	0.1	0.1				
DC 1			1.5	1.7	2.1	2.2				
DC 2 I			3	3	3	2				
DC 3 K_n			3	12	30	60				
DC 4										
DC 5 ρ			155	91	93	78				
DC 6 PFE			1.5	1.7	2.1	2.2				
DC 7 MCB			10	19	23	28				
DC 8										
DC AVG.										
AC 1			155	22.7	9.28	2.60				
AC 2			0.0	0.0	0.0	0.0				
AC AVG.										
S.P.	-888.9	10.6	7.2	→	→	→				
AC NOISE										
POT RES.	1.1K	7.7K	5.7K	→	→	→				

HEINRICHS GEOEXPLORATION CO.

I.P. RECEIVER NOTES

PROJECT 516 Kelvin

LINE 20W HALF S SP. 1 DATE 4-23

PAGE 2

SEND	2-3	3-4	4-5	5-6	6-7		1-2			
RECEIVE	25-35	5 →			→		cal			
RANGE	1.0	1.0	1.0	0.1	0.1		10			
DC 1	1.0	1.8	1.9	2.9	2.8		0.1			
DC 2 I	4	3	3	3	2		2000			
DC 3 K_n	3	12	30	60	105					
DC 4										
DC 5 θ	133	228	127	133	110		(1.000)			
DC 6 PFE	1.0	1.8	1.9	2.9	2.8		(0.05)			
DC 7 MCF	8	8	15	22	25					
DC 8										
DC AVG.										
AC 1	177	57.0	12.7	6.64	2.10		200			
AC 2	0.0	0.0	0.0	0.0	0.0		0.1			
AC AVG.										
S.P.	-3.0 →				→					
AC NOISE										
POT RES.	4.0K →				→					

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 516 Kelvin
LINE 20W HALF S SP. I DATE 4-23

SEND	1-2	2-3	3-4	4-5	5-6	6-7				
RECEIVE	35-45	S →								
RANGE	1.0	1.0	1.0	0.1	0.1	0.1				
DC 1	0.9	1.4	2.1	2.2	3.5	3.3				
DC 2 I	2	4	3	3	3	2				
DC 3 K_n	3	12	30	60	105	168				
DC 4										
DC 5 ρ	86	139	240	140	153	129				
DC 6 PFE	0.9	1.4	2.1	2.2	3.5	3.3				
DC 7 MCA	10	10	8	16	23	26				
DC 8										
DC AVG.										
AC 1	57.4	46.3	24.8	7.01	4.37	1.53				
AC 2	0.0	0.0	0.0	0.0	0.0	0.0				
AC AVG.										
S.P.	1.6 →									
AC NOISE										
POT RES.	3.0K →									

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 516 Kelvin
LINE 20W HALF S SP. L DATE 4-23

SEND	1-2	2-3	3-4	4-5	5-6	1-2	2-3	3-4	4-5	
RECEIVE	45-55	5 →			→	55-6	55 →		→	
RANGE	1.0	1.0	1.0	0.1	0.1	0.1	0.1	0.1	0.1	
DC 1	1.0	1.4	2.3	2.5	3.6	1.3	1.8	2.8	2.8	
DC 2 I	2	4	3	3	3	2	4	3	3	
DC 3 Km	12	30	60	105	168	30	60	105	168	
DC 4										
DC 5 ρ	112	191	338	190	201	78	109	264	153	
DC 6 PFE	0.9	1.4	2.3	2.5	3.6	1.3	1.8	2.7	2.8	
DC 7 MH	8	7	7	13	18	17	16	10	18	
DC 8										
DC AVG.										
AC 1	18.6	25.4	16.9	5.43	3.59	5.20	7.29	7.53	2.73	
AC 2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	
AC AVG.										
S.P.	12.4 →				→	-8.0 →			→	
AC NOISE										
POT RES.	4.1K →				→	3.4K →			→	

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 516 Kelvin
LINE 20W HALF 5 SP. 1 DATE 4-23

PAGE 5

SEND	1-2	2-3	3-4							
RECEIVE	6S-7S	→	→							
RANGE	0.1	0.1	0.1							
DC 1	1.1	2.2	3.0							
DC 2 I	2	4	3							
DC 3 K_n	60	105	168							
DC 4										
DC 5 ρ	96	175	304							
DC 6 PFE	1.1	2.2	2.9							
DC 7 MCK	11	13	10							
DC 8										
DC AVG.										
AC 1	3.20	6.66	5.47							
AC 2	0.0	0.0	0.1							
AC AVG.										
S.P.	-1.1	→	→							
AC NOISE										
POT RES.	25K	→	→							

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT Kelvin 5.6
LINE 30W HALF N SP. I DATE 1-27

PAGE 1

SEND	2-3	1-2	3-4	2-3	1-2	4-5	3-4	2-3	1-2	
RECEIVE	5N-	1SN	1.5N-	2.5N-	→	2.5-3.5N	→	→	→	
RANGE	10	1.0	10	1.0	1.0	10	1.0	1.0	0.1	
DC 1	2.0	2.0	2.1	2.6	2.7	2.3	2.4	2.6	2.5	
DC 2 I	3	→	→	→	→	→	→	→	→	
DC 3 K_n	3	12	3	12	30	3	12	30	60	
DC 4										
DC 5 ρ	216	243	198	133	136	368	277	200	188	
DC 6 DFE	2.0	2.0	2.1	2.6	2.7	2.3	2.4	2.6	2.5	
DC 7 MUL	9	8	11	20	20	6	9	13	13	
DC 8										
DC AVG.										
AC 1	213	59.8	195	32.6	13.3	362	68.0	19.6	9.20	
AC 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
AC AVG.										
S.P.	18.2	→	-12.9	→	→	7.1	→	→	→	
AC NOISE										
POT RES.	8.6K	→	7.7K	→	→	20K	→	→	→	

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 516 Kelvin
LINE 30W HALF N SP. L DATE 4-27

SEND	5-6	4-5	3-4	2-3	1-2			6-7		
RECEIVE	35-45N →				→			Cal		
RANGE	1.0	1.0	1.0	1.0	0.1			1.0		
DC 1	1.9	2.3	2.5	2.7	2.6			0.0		
DC 2 I	2	3	→	→	→			2000		
DC 3 K_n	3	12	30	60	105					
DC 4										
DC 5 C	260	377	361	260	239			(0.995)		
DC 6 PFE	1.9	2.3	2.5	2.7	2.6			(0.0)		
DC 7 MCE	7	6	7	10	11					
DC 8										
DC AVG.										
AC 1	171	92.7	35.4	12.7	6.70			201		
AC 2	0.0	0.0	0.0	0.0	0.0			0.0		
AC AVG.										
S.P.	11.5 →				→					
AC NOISE										
POT RES.	9.2K →				→					

HEINRICHS GEOEXPLORATION CO.

I.P. RECEIVER NOTES

PROJECT 516 Kelvin

LINE 30 W HALF N SP. I DATE 4-27

SEND	6-7	5-6	4-5	3-4	2-3	1-2				
RECEIVE	45-55N →									
RANGE	1.0	1.0	1.0	1.0	0.0	0.1				
DC 1	1.5	1.8	2.0	2.2	2.5	2.4				
DC 2 I	2	2	3	→						
DC 3 K_a	03	12	30	60	105	168				
DC 4	Broken Pot									
DC 5 ρ	133	176	279	281	182	168				
DC 6 Phase	1.5	1.8	2.0	2.2	2.5	2.4				
DC 7 mA	11	10	7	8	14	14				
DC 8										
DC AVG.										
AC 1	88.0	29.0	27.5	13.2	5.11	2.96				
AC 2	0.0	0.0	0.0	0.0	0.0	0.0				
AC AVG.										
S.P.	-23.7 →									
AC NOISE										
POT RES.	12K →									

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 516 Kelvin
LINE 30W HALF N SP. 1 DATE 4-27

SEND	6-7	5-6	4-5	3-4	2-3	6-7	5-6	4-5	3-4	
RECEIVE	55-65 N →				→	65-75 N →				
RANGE	1.0	1.0	1.0	1.0	0.1	1.0	0.1			
DC 1	1.6	1.6	1.8	2.1	2.0	1.5	1.9?			
DC 2 I	2	2	3	3	3	2	2			
DC 3 K	12	30	60	105	168	30	Too noisy 60			
DC 4										
DC 5 F	210	252	395	395	264	171	159			
DC 6 PFE	1.6	1.6	1.8	2.1	2.0	1.5	1.9			
DC 7 MIP	8	6	5	5	8	9	12			
DC 8										
DC AVG.										
AC 1	34.6	16.6	19.5	11.1	4.64	11.3	5.24			
AC 2	0.0	0.0	0.0	0.0	0.0	0.0?	0.0?			
AC AVG.										
S.P.	-449 →				→	-120?				
AC NOISE										
POT RES.	16K →				→	14K				

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT Kelvin 5 & 6

LINE 30W HALF N SP. 1 DATE 4-17

PAGE 1

SEND	2-3	1-2	3-4	2-3	1-2	4-5	3-4	2-3	1-2	
RECEIVE	5N	15N	15N	—	25N	25N	—	—	35N	
RANGE	10X300	10X300	10X300	10X300	10X300	10X300	10X300	10X300	10X300	
VOLTAGE	340	340	220	340	340	320	220	340	340	
CURRENT	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
SEND	5-6	4-5	3-4	2-3	1-2		6-7			
RECEIVE	35N	—	—	—	45N		Cal 45N			
RANGE	10X200	10X300	10X300	10X300	10X300		10X200			
VOLTAGE	320	320	220	340	340		275			
CURRENT	2.0	3.0	3.0	3.0	3.0		2.0			

FREQUENCIES 3.0 0.3

SENDER NO. 9662-S

OPERATOR #23 OB Coons

RECEIVER NO. Chaffin

OPERATOR

COMMENTS:

PAGE 2

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT Kelvin 516

LINE 30W HALF No SP. 1 DATE 4-27

SEND	6-7	5-6	4-5	3-4	2-3	1-2				
RECEIVE	45 N					55N				
RANGE	10X200	10X200	10X300	10X300	10X300	10X300				
VOLTAGE	275	320	320	220	340	340				
CURRENT	2.0	2.0	3.0	3.0	3.0	3.0				
SEND	6-7	5-6	45	3-4	2-3	6-7	5-6	4-5	3-4	
RECEIVE	55 N				65N	65N			75N	
RANGE	10X200	10X200	10X300	10X300	10X300	10X200	10X200			
VOLTAGE	275	320	320	220	340	275	310			
CURRENT	2.0	2.0	3.0	3.0	3.0	2.0	2.0			

FREQUENCIES 3.0 0.3

SENDER NO. 9862-5

OPERATOR #23 CB Coons

RECEIVER NO.

OPERATOR Choffin

COMMENTS:

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 516 Kelvin
LINE 30W HALF S SP. I DATE 4-28

PAGE 1

SEND	5N-5S	5S-15S	3-4	4-5	5-6	6-7				
RECEIVE	SP	SP	15S-25	S →	→	→				
RANGE			10	1.0						
DC 1			1.4	1.9	2.6	2.4				
DC 2 I			3	3	2	2				
DC 3 K_n			3	12	30	60				
DC 4										
DC 5 C			155	238	133	188				
DC 6 PFE			1.4	1.9	2.6	2.4				
DC 7 MCE			9	8	20	13				
DC 8										
DC AVG.										
AC 1			154	58.8	8.62	6.11				
AC 2			0.0	0.0	0.0	0.0				
AC AVG.						→				
S.P.	10.8	30.7	29.2	→	→	→				
AC NOISE										
POT RES.	5.4K	43K	6.4K	→	→	→				

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 516 Kelvin
LINE 30W HALF S SP. / DATE 4-28

SEND	2-3	3-4	4-5	5-6	6-7			2-3		
RECEIVE	25-35	S →			→			cal		
RANGE	10	1.0	1.0	0.1	0.1			10		
DC 1	1.4	1.7	2.0	3.0	2.2			0.0		
DC 2 I	3	3	3	2	2			2000		
DC 3 K_n	3	12	30	60	105					
DC 4										
DC 5 P	141	206	276	151	211			(1,000)		
DC 6 PFE	1.4	1.7	2.0	3.0	2.2			(0.0)		
DC 7 MCF	10	8	7	20	10					
DC 8										
DC AVG.										
AC 1	140	50.8	27.2	4.90	3.93			200		
AC 2	0.0	0.0	0.0	0.0	0.0			0.0		
AC AVG.										
S.P.	37.3 →				→					
AC NOISE										
POT RES.	11K →				→					

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 516 Kelvin
LINE 30W HALF S SP. 1 DATE 4-22

SEND	1-2	2-3	3-4	4-5	5-6	6-7				
RECEIVE	35-45	45 →				→				
RANGE	1.0	1.0	1.0	1.0	0.1	0.1				
DC 1	1.2	1.4	1.6	2.1	2.7	2.8				
DC 2 I	3	→	→	→	2	2				
DC 3 K	3	12	30	60	105	168				
DC 4										
DC 5 ρ	100	104	208	274	143	247				
DC 6 DIF	1.2	1.4	1.6	2.1	2.7	2.8				
DC 7 MCH	12	13	8	8	19	11				
DC 8										
DC AVG.										
AC 1	99.8	25.8	20.6	13.5	2.65	2.87				
AC 2	0.0	0.0	0.0	0.0	0.0	0.0				
AC AVG.										
S.P.	18.9 →	→	→	→	→	→				
AC NOISE										
POT RES.	20K →	→	→	→	→	→				

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 516 Kelvin
LINE 30W HALF S SP. 1 DATE 7-28

SEND	1-2	2-3	3-4	4-5	5-6	1-2	2-3	3-4	4-5	
RECEIVE	45-55	55 →	→	→	→	55-65	65 →	→	→	
RANGE	1.0	1.0	1.0	1.0	0.1	1.0	0.1	0.1	0.1	
DC 1	1.2	1.4	2.1	2.4	2.6	1.5	2.0	2.0	2.4	
DC 2 I	3	→	→	→	2	3	→	→	→	
DC 3 Km	12	30	60	105	168	30	60	105	168	
DC 4										
DC 5	151	156	307	364	218	105	114	224	260	
DC 6	1.2	1.4	2.1	2.4	2.6	1.4	1.9	2.0	2.4	
DC 7 M	8	9	7	7	12	13	17	9	9	
DC 8										
DC AVG.										
AC 1	37.6	15.5	15.1	10.2	2.53	10.4	5.64	6.30	4.55	
AC 2	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.0	
AC AVG.										
S.P.	41.5 →	→	→	→	→	27.0 →	→	→	→	
AC NOISE										
POT RES.	6.2K →	→	→	→	→	3.4K →	→	→	→	

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT 516 Kelvin

LINE 30W HALF S SP. L DATE 4-28-70

PAGE 1

SEND	3-4	4-5	5-6	6-7	2-3	3-4	4-5	5-6	6-7	Cal 2-3
RECEIVE	15-2	5 S		→	25-3	5 S			→	
RANGE	10X300	10X300	10X200	10X200	10X300	10X300	10X300	10X200	10X200	10X200
VOLTAGE	225	325	320	280	340	225	325	320	280	370
CURRENT	3.0	3.0	2.0	2.0	3.0	3.0	3.0	2.0	2.0	2.0

SEND	1-2	2-3	3-4	4-5	5-6	6-7				
RECEIVE	35-4	5 S				→				
RANGE	10X300	10X300	10X300	10X300	10X200	10X250				
VOLTAGE	340	340	225	320	320	350				
CURRENT	3.0	3.0	3.0	3.0	2.0	2.5				

FREQUENCIES 3.0 0.3

SENDER NO. 9662-5

OPERATOR 23 CBCoons

RECEIVER NO.

OPERATOR Chaffin

COMMENTS:

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT 516 Kelvin

LINE 30W HALF S SP. 1 DATE 4-28-70

PAGE 2

SEND	1-2	2-3	3-4	4-5	5-6	1-2	2-3	3-4	4-5	
RECEIVE	45 s				55-5	55-5			655	
RANGE	10X300	10X300	10X300	10X300	10X225	10X300	10X300	10X300	10X300	
VOLTAGE	340	340	225	320	360	340	340	220	320	
CURRENT	3.0	3.0	3.0	3.0	2.25	3.0	3.0	3.0	3.0	
SEND										
RECEIVE										
RANGE										
VOLTAGE										
CURRENT										

FREQUENCIES 3.0 0.3

SENDER NO. 966 Z-S

OPERATOR #23 CR Coons

RECEIVER NO.

OPERATOR Chaffin

COMMENTS:

HEINRICHS GEOEXPLORATION CO.

I.P. RECEIVER NOTES

PROJECT Tipperary 516 Kelvin

LINE 40W HALF N SP. ____ DATE 4/30/2

SEND	2-3	1-2	3-4	2-3	1-2	4-5	3-4	2-3	1-2	
RECEIVE	15-25N	→	25-35N	→	→	35-45N	→	→	→	
RANGE	10	10	10	1.0	1.0	10	10	1.0	1.0	
DC 1	1.7	1.8	1.7	2.0	2.1	1.7	1.8	2.1	2.3	
DC 2										
DC 3 I	3	3	3	3	3	1.5	3	3	3	
DC 4 K_n	3	12	3	12	30	3	12	30	60	
DC 5										
DC 6 e	192	949	325	270	880	369	580	400	1114	
DC 7 MA	9	2	5	7	2	5	3	5	2	
DC 8										
DC AVG.										
AC 1	194	239	328	67.8	88.3	186	146	40.2	55.8	
AC 2	0.0	0.0	+0.0	0.0	0.0	0.0	0.0	0.0	0.0	
AC AVG.										
S.P.	+0.0	→	+28.2	→	→	+7.1	→	→	→	
AC NOISE										
POT RES.	2K	→	2K	→	→	6K	→	→	→	

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 516 Kelvin
LINE 40W HALF N SP. ____ DATE 4/30/90

SEND	5-6	4-5	3-4	2-3	1-2					CAL
RECEIVE	45-55N	→	→	→	→					6-7
RANGE	10	1.0	1.0	1.0	1.0					10
DC 1	1.7	1.8	1.8	1.9	2.1					0.0
DC 2										
DC 3 I	2	2	3	3	3					2000
DC 4 K_n	3	12	30	60	105					
DC 5										
DC 6 P	333	311	614	398	1014					(0.976)
DC 7 MCF	5	6	3	5	2					
DC 8										
DC AVG.										
AC 1	224	52.2	61.8	20.0	29.1					205
AC 2	0.0	0.0	0.0	0.0	0.0					0.0
AC AVG.										
S.P.	+20.0	→	→	→	→					
AC NOISE										
POT RES.	4K	→	→	→	→					

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 516 Kelvin
LINE 40 W HALF N SP. ____ DATE 4/30/2

SEND	6-7	5-6	4-5	3-4	2-3	1-2				
RECEIVE	55-65N	→	→	→	→	→				
RANGE	10	1.0	1.0	1.0	1.0	1.0				
DC 1	1.4	1.4	1.7	1.8	1.8	2.0				
DC 2										
DC 3 I	2	2	2	3	3	3				
DC 4 K_n	3	12	30	60	105	168				
DC 5										
DC 6 ρ	224	280	308	729	455	1070				
DC 7 MA	6	5	6	2	4	2				
DC 8										
DC AVG.										
AC 1	151	47.2	20.7	36.7	13.1	19.2				
AC 2	0.0	0.0	0.0	0.0	0.0	0.0				
AC AVG.										
S.P.	+22.2	→	→	→	→	→				
AC NOISE										
POT RES.	3K	→	→	→	→	→				

BROKEN POT - NOISY!

ANOTHER BROKEN POT!

HEINRICHS GEOEXPLORATION CO.

I.P. RECEIVER NOTES

PROJECT 516 - Kelvin

LINE 40W HALF N SP. 1 DATE 4/30/20

PAGE 4

SEND	6-7	5-6	4-5	3-4	2-3	6-7	5-6	4-5	3-4	
RECEIVE	65-75	~	~	~	→	75-85	~	~	→	
RANGE	1.0	1.0	0.1	1.0	0.1	1.0	0.1	0.1	0.1	
DC 1	1.1	1.2	1.4	1.5 ?	1.6 ?	1.0	0.8	1.7	1.8	
DC 2										
DC 3 I	2	2	2	3	3	2	2	2	3	
DC 4 K_n	12	30	60	105	168	30	60	105	168	
DC 5										
DC 6 ρ	163	175	196	478	281	166	184	222	554	
DC 7 MCA	7	7	7	3	6	6	4	8	3	
DC 8										
DC AVG.										
AC 1	27.5	11.8	6.61	13.8	5.06	11.2	6.24	4.27	9.97	
AC 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
AC AVG.										
S.P.										
AC NOISE	-6.4	~	~	DRIFTED ↓	-21.4	-45.7				
POT RES.	0.8K					1K				

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 516 Kelvin - Tipperary
LINE 40W HALF S SP. 1 DATE 4/30/2

SEND	4-5	5-6	6-7	3-4	4-5	5-6	6-7			CAL
RECEIVE	5N-5S	———	———	5-15S	———	———	———			1-2
RANGE	10	1.0	1.0	10	1.0	1.0	1.0			10
DC 1	1.6	2.0	2.1	1.7	2.3	2.3	2.6			0.0
DC 2										
DC 3 I	2	2	2	3	2	2	2			2000
DC 4 K_m	3	12	30	3	12	30	60			
DC 5										
DC 6 ρ	190	274	405	131	177	210	318			
DC 7 MCH	8	7	5	13	13	11	8			
DC 8										
DC AVG.										
AC 1	128	45.9	27.1	132	29.6	14.0	10.6			205
AC 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0
AC AVG.										
S.P.	+12.2	———	———	+8.1	———	———	———			
AC NOISE										
POT RES.	2K	———	———	0.7K	———	———	———			

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT 5/6 Kelvin

LINE 40.W HALF No SP. 1 DATE 4-30

PAGE 1

SEND	2-3	1-2	3-4	2-3	1-2	4-5	3-4	2-3	1-2	
RECEIVE	15N	-25N	25N	—	35N	35N	—	—	45N	
RANGE	10X300	10X300	10X300	10X300	10X300	10X150	10X300	10X300	10X300	
VOLTAGE	250	360	320	250	360	330	320	250	360	
CURRENT	3.0 a	3.0 a	3.0 a	3.0 a	3.0 a	1.5 a	3.0 a	3.0 a	3.0 a	
SEND	5-6	4-5	3-4	2-3	1-2		Cal #7			
RECEIVE	45N	—			55N		45-N			
RANGE	10X200	10X200	10X300	10X300	10X300		10X200			
VOLTAGE	620	460	320	250	360		420			
CURRENT	2.0a	2.0 a	3.0 a	3.0 a	3.0 a		2.0 a			

FREQUENCIES 3.0 0.3

SENDER NO. 1870-5

OPERATOR #23 Loans

RECEIVER NO. 20693-R

OPERATOR Freeman #26

COMMENTS: Dipoles 1-2, 2-3, 3-4, 3-4 @ 400V @ 4a
Dipole 4-5, 5-6, 6-7; 2 @ 800V @ 2a

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT 516 Kelvin

LINE 40W HALF No SP. 1 DATE 4-30

SEND	6-7	5-6	4-5	3-4	2-3	1-2				
RECEIVE	55N					65N				
RANGE	10X200	10X200	10X200	10X300	10X300	10X300				
VOLTAGE	420	820	460	320	350	360				
CURRENT	2.0	2.0	2.0	3.0	3.0	3.0				
SEND	6-7	5-6	4-5	3-4	23	6-7	5-6	4-5	2-3	
RECEIVE	65N				75N	75N			90N	
RANGE	10X200	10X200	10X200	10X300	10X300	10X200	10X200	10X200	10X300	
VOLTAGE	420	620	460	320	350	420	620	460	320	
CURRENT	2.0	2.0	2.0	3.0	3.0	2.0	2.0	2.0	3.0	

FREQUENCIES 3.0 0.3

SENDER NO. 18701-S

OPERATOR #23 Coons

RECEIVER NO. 20693R

OPERATOR Freeman 26

COMMENTS:

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 516 Kelvin
LINE 40W HALF 5 SP. 1 DATE 4/23/2

SEND	2-3	3-4	4-5	5-6	6-7	1-2	2-3	3-4	4-5	5-6
RECEIVE	15-25s	—	—	—	>	25-35s	—	—	—	>
RANGE	10	1.0	1.0	0.1	0.1	1.0	1.0	1.0	0.1	0.1
DC 1	1.6	1.9	2.5	2.5	2.5	2.2	1.9	2.6	2.7 :	2.9
DC 2									NOISE	
DC 3 I	3	3	2	2	2	3	3	3	2	2
DC 4 K_n	3	12	30	60	105	3	12	30	60	105
DC 5										
DC 6 P	117	257	268	273	385	91	122	230	210	202
DC 7 MV	14	7	9	9	6	24	16	11	13	14
DC 8										
DC AVG.										
AC 1	118	64.6	17.9	9,10	7.34	91.3	30.8	23.0	7.00	3.83
AC 2	0.0	0.0	0.0	0.0	0,0	0.0	0.0	0.0	0.0	0.0
AC AVG.										
S.P.	+5.9	—	—	—	>	+16.9	—	—	—	>
AC NOISE										
POT RES.	1.5K	—	—	—	>	0.5K	—	—	—	>

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 516 - Kelvin
LINE 40W HALF S SP. 1 DATE 4/30/76

SEND	6-7	1-2	2-3	3-4	4-5	5-6	1-2	2-3	3-4	4-5
RECEIVE	25-35s	35-45	~	~	~	~	45-55s	~	~	~
RANGE	0.1	1.0	1.0	1.0	0.1	0.1	1.0	1.0	0.1	0.1
DC 1	2.4(?)	2.1	1.6	1.7	2.2	2.6	2.3	1.5	1.7	2.3
DC 2										
DC 3 I	2	3	3	3	2	2	3	3	3	2
DC 4 K_n	168	12	30	60	105	168	30	60	105	168
DC 5										
DC 6 ρ	270	137	179	292	243	224	199	255	379	303
DC 7 MCF	9	15	9	6	9	12	12	6	4	8
DC 8										
DC AVG.										
AC 1	3.22	34.3	18.1	14.7	4.65	2.66	19.9	12.9	10.9	3.61
AC 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AC AVG.										
S.P.	+16.9	+8.7	~	~	~	~	+6.2	~	~	-1.1
AC NOISE										
POT RES.	0.5K	0.8K	~	~	~	~	0.2K			

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 516 - Kelvin
LINE 40N HALF S SP. 1 DATE 4/30/80

SEND	1-2	2-3	3-4							
RECEIVE	55-65s	→	→							
RANGE	0.1	0.1	0.1							
DC 1	2.2	1.7	2.0							
DC 2										
DC 3 I	3	3	3							
DC 4 K_m	60	105	168							
DC 5										
DC 6 P	132	173	248							
DC 7 MOF	17	10	8							
DC 8										
DC AVG.										
AC 1	6.62	4.97	4.45							
AC 2	-0.1	0.0	0.0							
AC AVG.										
S.P.	+14.4									
AC NOISE										
POT RES.	3 K									

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT 516 Kelvin

LINE 400W HALF So SP. 1 DATE 4-30

SEND	4-5	5-6	6-7	3-4	4-5	5-6	6-7	*		
RECEIVE	5-N	~~5-S~~	5-S	5-S			15S			
RANGE	10X200	10X200	10X200	10X300	10X200	10X200	10X200			
VOLTAGE	460	600	420	290	460	600	420			
CURRENT	2.0	2.0	2.0	3.0	2.0	2.0	2.0			
SEND	2-3	3-4	4-5	5-6	6-7					
RECEIVE	15S				25S					
RANGE	10X300	10X300	10X200	10X200	10X200		10X200			
VOLTAGE	250	290	460	600	420		340			
CURRENT	3.0	3.0	2.0	2.0	2.0		2.0			

FREQUENCIES 3.0 0.3

SENDER NO. 1870I-S

OPERATOR #23 Bons

RECEIVER NO. 20693-R

OPERATOR #26 Freeman

COMMENTS:

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT 516 Kelvin

LINE 40W HALF So SP. 1 DATE 4-70

SEND	1-2	2-3	3-4	4-5	5-6	6-7				
RECEIVE	25-5					35-5				
RANGE	10X300	10X300	10X300	10X200	10X200	10X200				
VOLTAGE	380	250	290	460	610	420				
CURRENT	3,0	3,0	3,0	2,0	2,0	2,0				
SEND	1-2	2-3	3-4	4-5	5-6	1-2	2-3	3-4	4-5	
RECEIVE	35-5				45-5	45-5			55-5	
RANGE	10X300	10X300	10X300	10X200	10X200	10X300	10X300	10X300	10X200	
VOLTAGE	380	250	290	460	610	380	250	290	460	
CURRENT	3.0	3.0	3,0	2,0	2.0	3,0	3,0	3,0	2.0	

FREQUENCIES 3.0 0.3

SENDER NO. 1870 1-S

OPERATOR #23 Gans

RECEIVER NO. 20693-R

OPERATOR #26 Freeman

COMMENTS:

HEINRICHS GEOEXPLORATION CO.

I. P. SENDER NOTES

PROJECT 516 Kelvin

LINE 40W HALF So SP. / DATE 4-70

PAGE 3

SEND	1-2	2-3	3-4							
RECEIVE	55-5		655							
RANGE	10X300	10X300	10X300							
VOLTAGE	380	250	290							
CURRENT	3.0	3.0	3.0							
SEND										
RECEIVE										
RANGE										
VOLTAGE										
CURRENT										

FREQUENCIES 3.0 0.3

SENDER NO. 18705

OPERATOR #23 Coons

RECEIVER NO. 20598R

OPERATOR #26 Freeman

COMMENTS:

HEINRICHS GEOEXPLORATION CO.
I.P. RECEIVER NOTES

PROJECT 516 Kelvin
LINE 50W HALF N SP. 1 DATE 5/4/70

PAGE 1

SEND	2-3	1-2	3-4	2-3	1-2	4-5	3-4	2-3	1-2	
RECEIVE	15-25N	→	25-35N	→	→	35-45N	→	→	→	
RANGE	10	1.0	10	1.0	1.0	10	10	1.0	1.0	
DC 1	1.1	1.9	1.6	1.7	2.5	1.2	1.5	1.6	2.4	
DC 2 I.	3	3	4	3	3	3	4	3	3	
DC 3 K_n	3	12	3	12	30	3	12	30	60	
DC 4										
DC 5 ρ	135	234	215	117	200	236	381	186	280	
DC 6 PFE	1.3	2.1	1.8	1.9	2.7	1.4	1.7	1.8	2.6	
DC 7 MCF	10	9	8	16	13	6	4	10	9	
DC 8										
DC AVG.										
AC 1	137	58.8	288	29.5	20.0	239	128	18.7	14.0	
AC 2	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
AC AVG.										
S.P.	+17.8		+3.0	→	→	+2.5	→	→	-1.8	
AC NOISE										
POT RES.	0.5K		1.0K	→	→	0.3K	→	→	→	