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REPORT ON

SEISMIC, GROUND MAGNETOMETER AND INDUCED POLARIZATION SURVEYS NEAR MERRITT, BRITISH COLUMBIA

for

TORMONT MINES LIMITED

by

HUNTING SURVEY CORPORATION LIMITED

Toronto, Canada

December, 1961

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INTRODUCTION

During the months of September and October, 1961, three types of geophysical surveys were carried out by Hunting Survey Corporation Limited on part of a property owned and operated by Tormont Mines Limited, Mr. Andrew Robertson, President and General Manager. The property is located six miles west of Merritt, British Columbia (50°, 121°, SE).

The claims surveyed are as follows:

Laron 1 to 6 inclusive

Laron 10 to 15 inclusive

Laron 24, 25, 26 FR

Tormont 7, 8 and 9 FR

The purpose of the geophysical survey was to detect mineralization and to locate suitable diamond drill targets. Due to the geological and geographical setting of the property, the mineralization, if any, could be in the form of disseminated sulphides undetectable on the basis of its conductivity. Thus the Induced Polarization (I.P.) method was chosen as the basic geophysical tool. As this survey progressed, it became apparent that additional data would be required to permit an accurate interpretation. Thus, a ground magnetometer survey was carried out over the area covered by the I.P. method and shallow refraction seismic depth determinations were made in key locations.

The field work was under the able supervision of E. L. Gregotski, project geophysicist, of Hunting Survey Corporation Limited who also carried out the required preliminary field interpretation. Drafting and

also the final interpretation by the writer were done at Hunting's head office in Toronto, Ontario.

In the following sections of this report, the field procedures and data, such as time, personnel employed, line mileage etc., for each method used are presented separately.

FIELD PROCEDURES AND DATA

The geophysical surveys were carried out along pre-cut and chained picket lines. Base Line No. 1 was run approximately N30°E along the northwestern boundary of claims Laron No. 5 and No. 6 and was extended in the same direction through the adjacent claims of the property. Lines were turned off at right angles at intervals of 400 feet and in a few instances at intervals of 200 feet. Footages on these lines are called east (actually southeast) with their zero at Base Line No. 1. Two other base lines, No. 2 and No. 3, tie the lines together at 25+00E and 50+00E respectively.

Shallow Refraction Seismic Depth Determinations

These determinations of depth to bedrock were carried out on October 29th. and 30th., 1961, by a two-man crew: the operator, F. Faulkner of Hunting Survey Corporation Limited, and the helper, M. Mathieu, provided by Tormont Mines Limited.

The seismograph used is the FS-2 produced by Ronka Geophysical Instruments Limited. Based on the use of dry electrosensitive (facsimile) paper, the FS-2 registers seismic events directly, permanently and without processing, on an accurate time base. Single recording channel operation allows geophone spacing to be varied as required. The distance between successive recordings on the chart is varied accordingly, producing a correctly scaled time-distance plot. An unique feature but standard on the FS-2 is the two complete input channels (geophones, amplifiers, filters, pulse shapers) and built-in coincidence circuitry. This feature makes the instrument directional and suppresses a good portion of the natural surface noises. The seismic energy is obtained by hitting a steel plate on the ground with a 10 lb. sledge hammer, or by detonating small quantities of dynamite and/or caps.

The field procedure consisted of setting up the geophones and equipment in a given spot and in obtaining time-distance plots for increasing distances from the geophone to the energy source. The maximum distance required will depend on the depth of overburden and/or the velocities encountered in the overburden and in the bedrock. In this survey, the maximum distance between energy source and geophone varied between 200 and 500 feet.

Seven depth to bedrock determinations were obtained in key locations on the property. These locations will be discussed at greater length in the section on the interpretation of this report.

Ground Magnetometer Survey

The ground magnetometer survey was carried out between

October 3rd. and 6th., 1961, by a two-man crew composed of E. L. Gregotski and F. Faulkner of Hunting Survey Corporation Limited. The survey consisted of eleven lines at 400-foot intervals, each 5,000 feet long, for a total of 55,000 feet of profile or approximately 560 stations. Three base stations were established along Base Line No. 2 and were used to correct for diurnal variations. All readings were referred to an arbitrary base level of approximately 1,500 gammas.

The instrument used is a Sharpe A-2 magnetometer with a sensitivity of approximately 20 gammas per scale division.

Induced Polarization (I.P.) Survey

The Induced Polarization (I.P.) survey was carried out between September 2nd. and October 8th., 1961. The survey consists of a basic coverage of the pre-cut and chained lines at intervals of 800 feet. This interval in some instances was decreased to 400 feet. In this manner, a total of 53,700 feet of profiles were obtained.

The data were obtained using the "three electrode" array. This array consists of one current electrode (C_1), two potential electrodes (P_1 and P_2), the second current electrode (C_2) being at "infinity". The data were obtained at intervals of 100 feet on all the lines, using basic electrode spacings of 200 and 400 feet. Additional data were obtained where required on all the lines with electrode spacings of 50, 100 and 800 feet.

The survey was performed by a five-man crew. The project geophysicist, the technician-operator and the line boss were E. L. Gregotski, G. Brand and J. Reeves, respectively, of Hunting Survey

Corporation Limited. From September 2nd. to September 17th., Hunting also supplied F. Faulkner for line duties. Tormont Mines Limited provided a pool of six helpers or line men from which the required help was drawn. This pool consisted of S. Semczuk, K. Hanna, L. Ovington, A. Suchel, A. Corsi and R. Mathieu.

The Hunting pulse-type instrument is similar in design and operation to those described by R. W. Baldwin in "A Decade of Development in Overvoltage Survey", A.I.M.E. Transactions, Volume 214, 1959. Power is obtained from a Volkswagen motor coupled to an 18 kw., 400 cycle generator which provides a maximum of 10,000 watts d.c. to the ground. The cycling rate is 1.5 seconds current on and 0.5 seconds current off, the pulses reversing continuously in polarity. The data collected in the field consists of careful measurement of the current (I) in amperes flowing through electrodes C_1 and C_2, and of the primary voltage (V_p) in volts appearing between P_1 and P_2 during the "current on" part of the cycle. Also the secondary voltage or overvoltage appearing between electrodes P_1 and P_2 during the "current off" part of the cycle is integrated electronically with respect to time, to provide a measurement of polarization (V_s) in millivolt-seconds. The "apparent chargeability" in milliseconds is calculated by dividing the polarization (V_s) by the primary voltage (V_p). The "apparent resistivity" in ohm-meters is proportional to the primary voltage (V_p) divided by the measured current (I), the proportionality factor depending on the geometry of the array used. The resistivity and chargeability obtained are called "apparent" as they are the values which that portion of the earth sampled by the array must have if it were homogeneous. As the

earth sampled is usually inhomogeneous, the caluclated "apparent resistivity" and "apparent chargeability" are functions of the "true" resistivities and chargeabilities of the various sections of the earth sampled and of the geometry of those sections.

DATA PRESENTATION

Shallow Refraction Depth Determinations

The results of these depth determinations are shown at their proper location, on the I.P. profiles in the Appendix at the end of this report. They are also shown to the left of the map presenting the interpretation of the I.P. survey; this map is located in the pocket at the end of this report.

Ground Magnetometer Survey

The results of the ground magnetometer survey are presented as a contoured map at the scale of 1 inch to 200 feet. This map is located in the pocket at the end of this report. The contour interval is 100 gammas. The map also shows the actual values obtained at each station along the lines, said values being referred to an arbitrary base level of 1,500 gammas.

Induced Polarization (I.P.) Survey

The results of the survey and their interpretation are shown on the individual profiles in the Appendix of this report, and on the

interpretation map in the pocket at the end of the report.

The profiles have a horizontal scale of 1 inch to 100 feet. The "apparent chargeability" is plotted at a scale of 1.0 milliseconds per inch. The resistivity data is plotted on a logarithmic scale of 1 logarithmic cycle per 2 inches. These profiles also show the results of depth calculations based on the I.P. and seismic results. The interpretation map is at a scale of 1 inch to 200 feet and shows the results of the qualitative and quantitative interpretation in plan form. This map also shows the lines which were surveyed by the I.P. method.

KNOWN GEOLOGY

That portion of the property which is surveyed is covered by overburden of unknown thickness. Observations of outcrops adjacent to the survey area indicate that the bedrock consists of granodiorite of the Guichon batholith.

Observations in the Stumbles Creek which flows through the property suggest that the sands in the overburden are slightly magnetic and that this magnetite appears to be somewhat concentrated in the creek bed.

The character of the overburden is better observed in a trench near Station 7+00N on Base Line No. 2. This trench is approximately 150 feet long, 20 feet wide and 20 feet deep and is orientated at approximately N70°W. This trench did not reach bedrock but showed some weak

malachite staining in well-rounded granodiorite boulders. Some bentonite was also observed in the trench walls.

Approximately 200 feet due south of Station 48+00E on Line 0+00 a large outcrop of granodiorite was examined. This diorite appears to be a contact phase of the batholith and contains very weak mineralization of chalcopyrite.

INTERPRETATION

The results of the shallow refraction seismic depth determinations and of the ground magnetometer survey will be discussed first. Although this is not their chronological order, these results are needed in the I.P. interpretation.

Shallow Refraction Seismic Depth Determinations

Seven seismic depths to bedrock were successfully obtained to determine whether certain key I.P. anomalies originated in the overburden or in the bedrock. Their significance in relation with the I.P. data will be discussed more fully in the section on the I.P. interpretation.

In general the seismic data showed four distinct layers: a first layer of dry overburden with a velocity of 1,000 to 1,450 feet per second; a second layer of dry overburden with a velocity of 1,750 to 2,600 feet per second; a third layer of wet overburden indicating the water-table,

with a velocity of 4,000 to 6,550 feet per second; and finally, a fourth layer consisting of the bedrock with a velocity of 11,000 to 16,000 feet per second. In the case of depth determinations Nos. 4 and 6, the second layer of dry overburden is not present. These results are shown in greater detail on the appropriate I.P. profiles in the Appendix of this report and on the interpretation map in the pocket at the end of this report.

The variations in the velocities within the various layers of dry and wet overburden and within the bedrock are not really significant. They may be due in part to laterial variations in that layer, and in part to irregular surface and subsurface topography. The resultant depth to bedrock at the various locations are as follows:

No. 1 Line 8+00 at 35+00E, 85 feet

No. 2 Line 16+00 at 51+00E, 135 feet

No. 3 Line 24+00 at 49+00E, 140 feet

No. 4 Line 32+00 at 25+00E, 86 feet

No. 5 Line 32+00 at 28+00E, 53 feet

No. 6 Line 32+00 at 32+40E, 47 feet

No. 7 Line 32+00 at 41+50E, 210 feet

Ground Magnetometer Survey

No interpretation map of the ground magnetometer survey is presented as the magnetic anomalies detected are not considered significant. The amplitude of these anomalies is less than 300 gammas and usually less than 200 gammas. Their low amplitude and their scattered distribution are typical of slightly inhomogeneous intrusive

masses. It is also possible that inhomogeneous distribution of the low magnetite content in the overburden may contribute to the magnetic picture of the area.

The one station anomaly at 28+00E on Line 16+00 is clearly due to a localized effect in the overburden such as a boulder of higher than usual magnetite content.

Induced Polarization Survey

Due to the geometry of the mineralized zones which are the target of I.P. surveys in British Columbia, the usual approach to quantitative interpretation assuming a horizontally layered earth can seldom be applied. The complex problem of the combined effects of depth of burial, width, dip and true chargeability of a vertically mineralized zone plus the physical characteristics of the overburden and country rock have not been solved practically. However, certain rule of thumb plus the experience gained from test surveys over known orebodies permit certain rough estimates to be made. Thus the maximum possible width of the causative bodies are indicated on the accompanying profiles, with the understanding that the body most probably is narrower than indicated. Rough depth estimates are possible in some cases, but it is necessary to know the electrode spacings at which the maximum response is obtained; thus a minimum of three electrode spacings across the anomaly is usually required.

In the present survey, the assumption of a horizontally layered earth was found to be valid over a short distance in at least three locations. Thus, the depth and depth extent of the causative body could

be calculated with a greater accuracy than is usually normal for this type of survey.

The combined chargeabilities and resistivities present the following physical picture of the area surveyed. The property is basically underlain by a fairly homogeneous mass "A" of relatively low chargeability (1 millisecond or less) and low resistivity (a few hundred ohm-meters). Body "A" is overlain over most of the surveyed area by a normal type of overburden with a slightly lower chargeability and resistivity. Immediately east of Stumbles Creek body "A" is overlain by a wedge shaped body "B" with a definitely limited downward extent. Body "B" has a chargeability of 2.0 to 3.0 milliseconds and a resistivity up to 5,000 ohm-meters. The wedge points to the creek and its eastern limit is located beyond the eastern boundary of the property. To the west of Stumbles Creek, body "A" is overlain by thin outliers (bodies "C") of the same material as body "B". The two bodies "C" are detectable on the basis of the electrode spacing used. Thus, these bodies must be at or very near surface, as the thin layer of normal overburden which may have been overlooked cannot be more than 10 or 20 feet thick.

On the basis of the known geology of the area, it is evident that body "A" is identifiable as the diorite of the Guichon batholith. As the overburden was expected to be fairly thick over the area surveyed, there was a good possibility that bodies "B" and "C" are actually located within the overburden and therefore of no economic significance. To verify this hypothesis, the downward extent of these bodies was calculated from the I.P. data assuming a layered earth. The lower boundaries

of bodies "B" and "C" are found to coincide with the bedrock surface as determined by the seismic investigations. This verifies the above hypothesis, indicating that these bodies are confined to the overburden. The results of these calculations are shown in detail on the I.P. profiles of Lines 8+00, 16+00 and 24+00 in the Appendix of this report and also on the interpretation map in the pocket at the end of the report.

Qualitatively, the thickness of the overburden reacting to the I.P. method could be estimated over areas where calculations were not possible. These are indicated on the accompanying profiles and maps and are divided into thin, fairly thick, thick and very thick overburden. With the help of the seismic depth determinations already quoted and a fourth one on Line 32+00, these qualitative estimates of thickness can be calibrated roughly. Thus, thin overburden is probably less than 100 feet thick; fairly thick overburden lies in the range of approximately 100 to 150 feet; thick overburden may reach a thickness of at least 200 feet; finally, very thick overburden is well over 200 feet thick.

The calculations on the I.P. data also indicate that the true chargeability of the overburden of bodies "B" and "C" is in the order of two to three milliseconds. Such chargeabilities for overburden are not unusual. It becomes so apparent on this property only because the overburden over the rest of the property has such a low chargeability. The rather sudden change in the electrical characteristics of the overburden may be related to differences in composition due to its glacial origin.

Two small features of possible interest are outlined on the profiles and maps. They are indicated by the fact that they are located

in the bedrock, that they are not associated with the resistivity high, and that their true chargeability could be quite a bit higher than any other chargeability observed in this survey. The main area of possible interest is observed best on Line 32+00 from approximately 23+50E to 33+50E. Over this area, three electrode spacings were used, namely 200, 400 and 800 feet. The 200 foot electrode spacing shows a peak reaching approximately 2.7 milliseconds over the centre of the area. The 400 foot electrode spacing shows two peaks over this area with a low coinciding with the high on the 200 foot spacing. The westernmost of the two peaks reaches an intensity of approximately 3.5 milliseconds. The 800 foot electrode spacing shows no significant deviation from the normal background level. A 100 foot electrode spacing was used over the eastern half of this area. Except for one station which shows a deviation of approximately 0.5 milliseconds coinciding with a resistivity high and therefore originating within the overburden, this small electrode spacing shows no significant anomalies. This anomalous condition could not be observed on Line 36+00. It is observed very weakly at the intersection of Base Line 2 with Line 32+00, where it is seen as a slight increase in the chargeability on the 400 foot electrode spacing and is not observed on the shorter spacings which show effects from the overburden only. On Line 28+00, only the 200 and 400 foot electrode spacings were used. There, the 200 foot spacing shows overburden effects only, whereas the 400 foot spacing shows somewhat higher chargeabilities coming from depth extending from approximately 36+00E to 38+00E. Whether this is a significant indication is rather doubtful and therefore is qualified with a question mark on the profile and on the map.

The rather weak and doubtful indications on Line 28+00 and on Base Line 2 may be attributed to the fact that the mass causing this anomaly just barely reaches these locations. Thus, only the data on Line 32+00 may be used to obtain information on the characteristics of this mass. The combination of double peaked and single peaked anomaly on the two spacings plus the stretched-out appearance of the anomalies suggest the possibility of a more or less horizontal, cyclindrical mass striking almost parallel to Line 32+00. The centre of its more or less circular cross-section is estimated to be located between 350 and 400 feet below surface. Seismic depth determinations on this line at 25+00E, 28+00E and 32+40E indicate a depth to bedrock of 86 feet, 53 feet and 47 feet respectively. Thus, the source of the I.P. anomaly is definitely located within the bedrock. The true chargeability of this mass cannot be estimated in the present state of the art. However, it can be stated that this chargeability must be higher than the highest anomalous chargeability observed over the area (higher than 3 milliseconds). If this true chargeability is only slightly higher than 3 milliseconds, it could represent a phase difference within the diorite or a very low content of disseminated sulphide (less than 1%). On the other hand, if the true chargeability of the mass is much higher than three milliseconds, it could be indicative of several percents disseminated sulphides. The sulphides could be all pyrite, or all chalcopyrite, or a mixture of both and therefore, their economic possibilities cannot be estimated on the basis of this method.

The second area of possible interest is observed mainly on Line 40+00. It is indicated weakly by the 800 foot electrode spacing whereas the 200 and 400 foot spacings show little or no effect. The resistivity data at all three spacings show no anomaly. Thus, the causative body is at a depth which is at least 400 feet and may be as much as 800 feet or more. This depth cannot be estimated more accurately because it is not known at which electrode spacing the maximum response is obtained. Its economic significance cannot be estimated but it can be stated that its true chargeability must increase with its depth. This body is also indicated on Line 48+00 between 15+50E and 19+00E. Here, the 400 foot electrode spacing shows a weak anomaly of approximately 1 millisecond above background, whereas the 200 foot electrode spacing shows no corresponding effect. No variation in the apparent resistivity is observed at the two electrode spacings. This extension of the area of possible interest is marked with a question mark on the profile and map due to its closeness to the overburden effect immediately east. However, if this interpretation is correct it would appear that the body is at a somewhat shallower depth on this line than on Line 40+00. Here again and for the same reason, a more definite depth estimate cannot be obtained. This area of possible interest is not observed on Line 36+00.

SUMMARY AND CONCLUSIONS

Geophysical surveys were carried out over part of the property of Tormont Mines Limited near Merritt, British Columbia. These geophysical surveys consist of shallow refraction seismic depth to bedrock determinations, a ground magnetometer survey, and an Induced Polarization survey.

These surveys plus the known geology of the area indicate that the property is underlain by the granodiorite of the Guichon batholith (body "A"). This intrusive is overlain by two types of overburden. The first or normal type of overburden shows resistivities of a few hundred ohm-meters and a chargeability of one millisecond or less. The second type of overburden shows a relatively high chargeability of 2 to 3 milliseconds and very high resistivities up to 5,000 ohm-meters. The latter is outlined as bodies "B" and "C" on the accompanying map. These bodies "B" and "C" are shown to extend down to bedrock wherever depth calculations on the I.P. data and seismic depth to bedrock determinations could be applied. Where measured, its thickness varies between 85 and 210 feet. These anomalous conditions in the overburden are not of economic significance.

Two areas of possible interest are outlined on the profiles and on the map. These are indicated on the basis of high apparent chargeabilities without resistivity contrast, their origin being definitely located in the bedrock. The main area or area No. 1 is observed mainly on Line 32+00 but is confirmed by the profile on Base Line No. 2. It may be weakly indicated on Line 28+00. This mass is believed

to be quasi-circular in cross-section with its centre at a depth of 350 to 400 feet below surface and elongated in a direction almost parallel to Line 32+00. Its economic significance cannot be estimated in the present state of the art of interpretation. However, it is possible that some disseminated sulphides in unknown quantity may be the cause of this anomaly.

The second zone of possible interest is observed on Lines 40+00 and 48+00. It is indicated on both lines by a more or less definite increase in the apparent chargeability at the largest electrode spacing used. Thus, it is located at a large depth, that depth being in the order to 400 feet at least or as much as 800 feet on Line 40+00. The indications are that on Line 48+00 its depth is somewhat shallower than on Line 40+00. Its economic significance cannot be estimated as the maximum possible response of this mass was not obtained with the electrode spacings used.

The ground magnetometer survey clearly indicates that the I.P. responses observed are not related to possible magnetite distribution in the overburden or in the bedrock.

RECOMMENDATIONS

As stated in the preliminary report, a drilling program is recommended to investigate the zone of possible interest No. 1 located on Line 32+00. This program consists of a hole collared at 27+75E on Line 32, drilled along the line (approximately southeastward) at an inclination of 75° for a minimum length of 500 feet. Such a hole is expected to encounter the centre of the causative body at a down-hole distance of 350 to 400 feet. The total length of 500 feet recommended is a safety factor for this estimated depth. This drill hole No. 1 is recommended on the basis of an interpreted causative body of quasi-circular cross-section. However, due to the complexity of the I.P. profiles, another possibility is present although more remote. Thus, if the first hole does not explain the I.P. anomaly, two more holes (No. 2A and 2B) are suggested, one at 27+00E and the other at 31+50E, both holes being vertical and with a minimum length of 500 feet. If hole No. 1 is successful in determining the cause of the I.P. anomaly, holes No. 2A and 2B may still be drilled in an attempt to determine the lateral extent of the body.

In the preliminary report, the area of possible interest No. 2 was not mentioned as its indications are very weak and incomplete. However, if it is felt that all possibilities, however remote, for mineralization are to be investigated, this area should also be drilled. For a full investigation of this possibility, two additional drill holes would be required. One is located at 16+00E on Line 40+00 and the second one at 17+50E on Line 48+00. Which of these two drill holes

should be drilled first is debatable as the body is located at a greater depth on Line 40+00, but is better indicated by the I.P. data. The minimum length of these vertical drill holes should be 1,200 and 800 feet for the holes on Line 40+00 and Line 48+00 respectively.

HUNTING SURVEY CORPORATION LIMITED

C. W. Faessler,
Senior Geophysicist.

E. L. Gregotski,
Project Geophysicist.

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DOMINION OF CANADA:

PROVINCE OF BRITISH COLUMBIA. } In the Matter of EXPENDITURE INCURRED BY TORMONT MINES LIMITED FOR A GEOPHYSICAL SURVEY

TO WIT:

I, HUNTING SURVEY CORPORATION LIMITED

of 1409 WEST PENDER STREET, VANCOUVER 5,

in the Province of British Columbia, do solemnly declare that

we conducted a combined seismic, ground magnetometer and Induced Polarization survey over the following claims:

Laron 1 to 6 inclusive
Laron 10 to 15 inclusive
Laron 24, 25 and 26 FR
Tormont 7, 9 and 9 FR.

for Tormont Mines Limited. The persons employed on this survey together with days worked and fees charged are as follows:

Personnel	Period (1961)	Days	Fee/per day	Total
E. L. Gregotski Field Geophysicist	Sept 3- Oct 7	29	$100.00	$2,900.00
G. Brand Tech. Operator	Sept 3- Oct 7	29	$ 75.00	$2,175.00
J. Reeves Line Boss	Sept 3- Oct 7	29	$ 25.00	$ 725.00
F. Faulkner Helper	Sept 3- Sept 17: Oct 3-6, 29, 30.	21	$ 25.00	$ 525.00
C. W. Faessler Interpreter	Oct 19- Dec 12.	12	$100.00	$1,200.00

And I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath and by virtue of the "Canada Evidence Act."

Declared before me at the City of Vancouver, in the Province of British Columbia, this Eighth day of February 1962, A.D.

Edward Barnes Nicholls.
Manager Ground Geophysical Surveys.
Hunting Survey Corp. Ltd.

R. G. Patterson

R G Patterson

~~A Commissioner for taking Affidavits within British Columbia or~~
A Notary Public in and for the Province of British Columbia.

GORDON ARTHUR NOTARY PUBLIC BRITISH COLUMBIA

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APPENDIX

I.P. Profiles - Line 0+00

Line 4+00

Line 8+00

Line 16+00

Line 24+00

Line 28+00

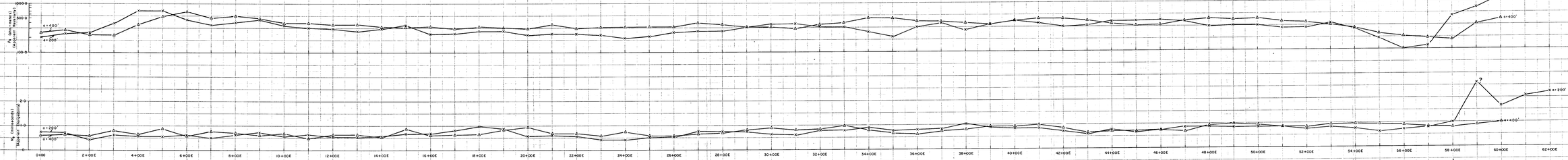
Line 32+00

Line 36+00

Line 40+00

Line 48+00

Line 0



TORMONT MINES LIMITED

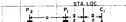
MERRITT, B.C.

I.P. PROFILE – LINE 0

NOVEMBER, 1961

3-ELECTRODE ARRAY

STA. LOC.



LEGEND

Overburden Effect

390 (M)

HUNTING SURVEY CORPORATION LIMITED · TORONTO, CANADA

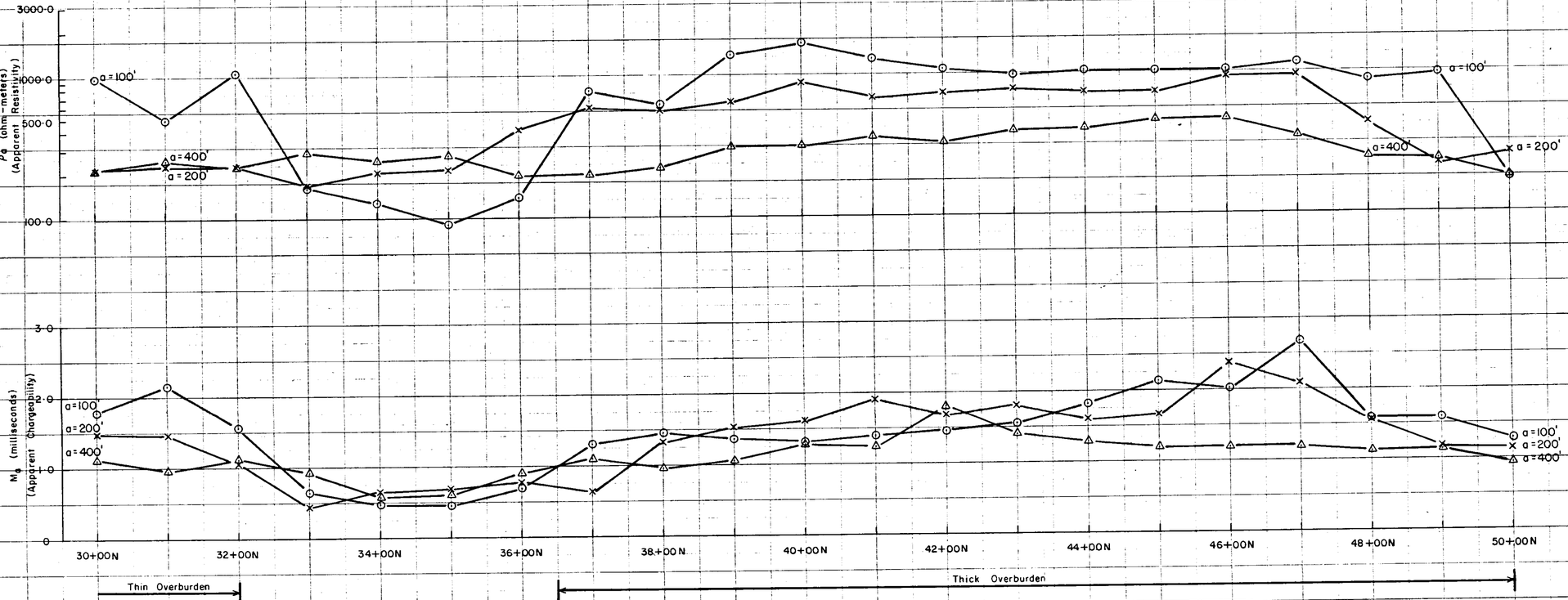
C.W. FASSLER, GEOPHYSICIST

TORMONT MINES, LIMITED

MERRITT, B.C.

I.P. PROFILE – BASE LINE 2

NOVEMBER, 1961



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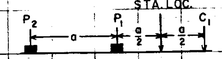


LEGEND

Overburden Effect

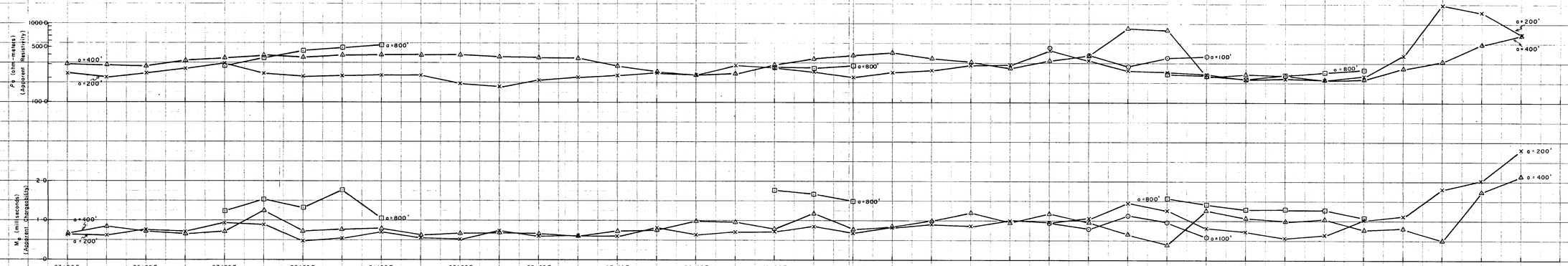
Area of possible interest

148

HUNTING SURVEY CORPORATION LIMITED – TORONTO, CANADA

C.W. FAESSLER, GEOPHYSICIST

Line 4



TORMONT MINES LIMITED

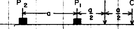
MERRITT, B.C.

I.P. PROFILE – LINE 4

NOVEMBER, 1961

3-ELECTRODE ARRAY

STA. LOC.



LEGEND

Overburden Effect

n3

HUNTING SURVEY CORPORATION LIMITED - TORONTO, CANADA

C.W. FAESSLER, GEOPHYSICIST

TORMONT MINES LIMITED

MERRITT, B.C.

I.P. PROFILE – LINE 8

NOVEMBER, 1961

3 – ELECTRODE ARRAY

STA. LOC.

P_2 — a — P_1 — $\frac{a}{2}$ — STA. LOC. — $\frac{a}{2}$ — C_1

LEGEND

Overburden Effect

Seismic and I.P. Depth Determinations

I.P.	#1 Seismic
	V_1
ρ_1	V_2
M_1	V_3
ρ_2 / M_2	V_4

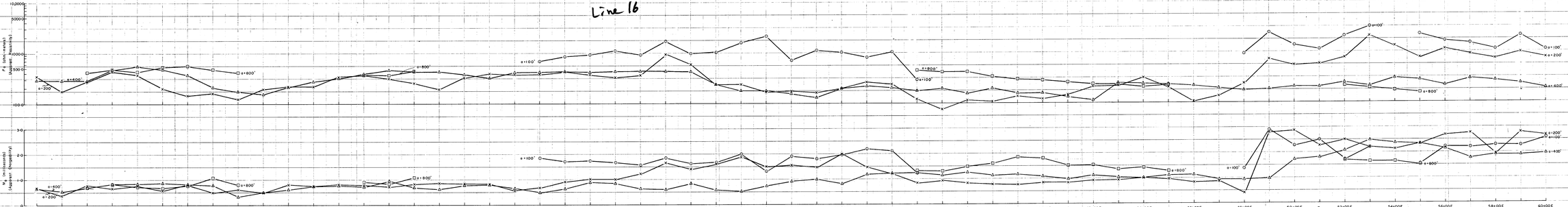
NOTE: Vertical Sections not to scale.

(M4)

HUNTING SURVEY CORPORATION LIMITED – TORONTO, CANADA

C.W. FAESSLER, GEOPHYSICIST

Line 16



TORMONT MINES LIMITED

MERRITT, B.C.

I.P. PROFILE – LINE 16

NOVEMBER, 1961

3-ELECTRODE ARRAY

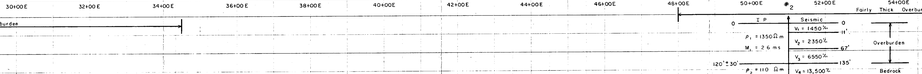
STA. LOC.

LEGEND

Overburden Effect

Seismic and T.P. Depth Determinations

NOTE: Vertical Sections not to scale.



HUNTING SURVEY CORPORATION LIMITED - TORONTO, CANADA

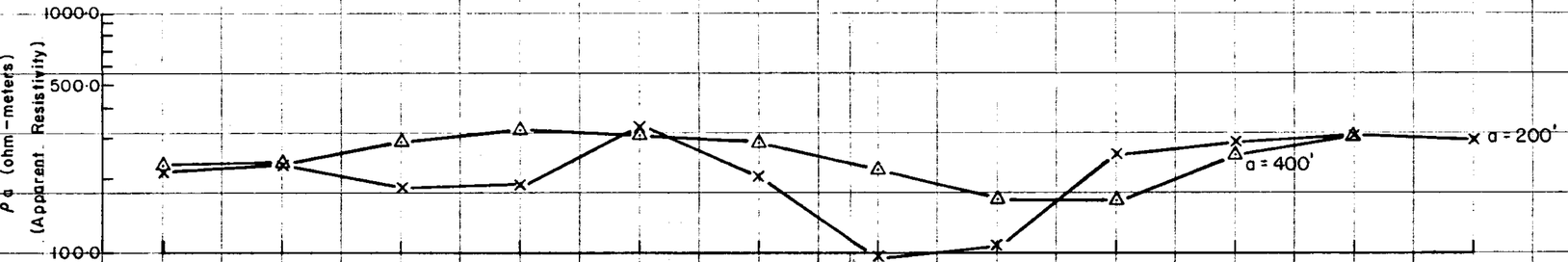
C.W. FASSLER, GEOPHYSICIST

TORMONT MINES LIMITED

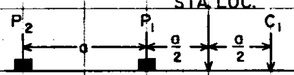
MERRITT, B.C.

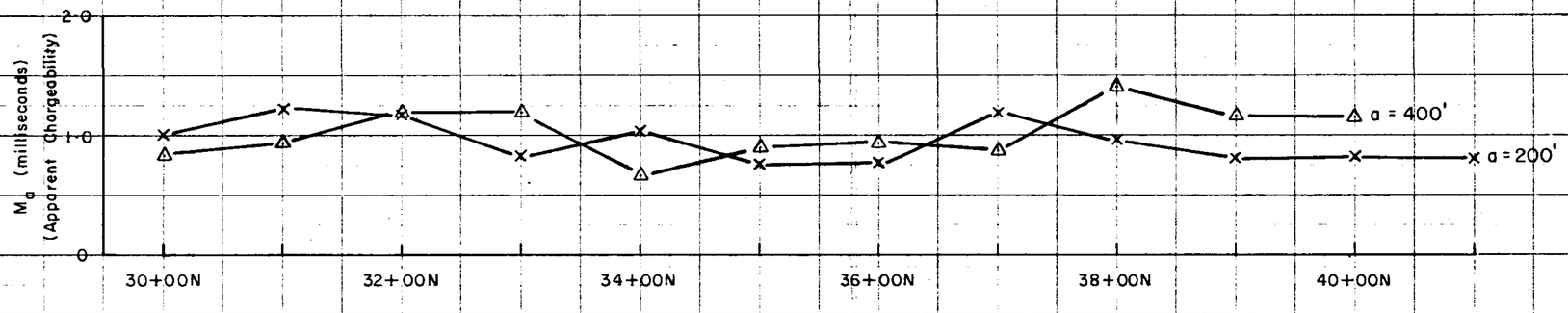
I.P. PROFILE — CROSS LINE 20

NOVEMBER, 1961



3-ELECTRODE ARRAY





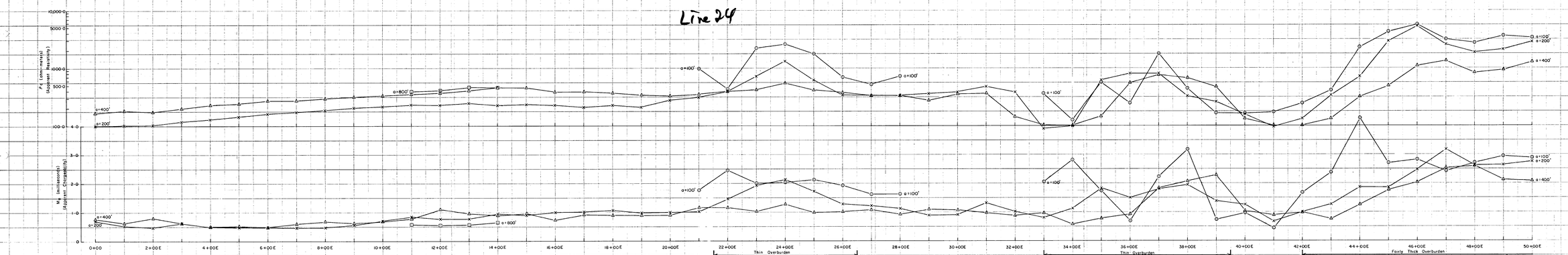
390

MB

HUNTING SURVEY CORPORATION LIMITED - TORONTO, CANADA

C.W. FAESSLER, GEOPHYSICIST

Line 24



TORMONT MINES LIMITED

MERRITT, B.C.

I.P. PROFILE - LINE 24

NOVEMBER, 1961

3-ELECTRODE ARRAY

STA. LOC.

LEGEND

Overburden Effect

Seismic and I.P. Depth Determinations

NOTE Vertical Sections not to scale.

HUNTING SURVEY CORPORATION LIMITED - TORONTO, CANADA

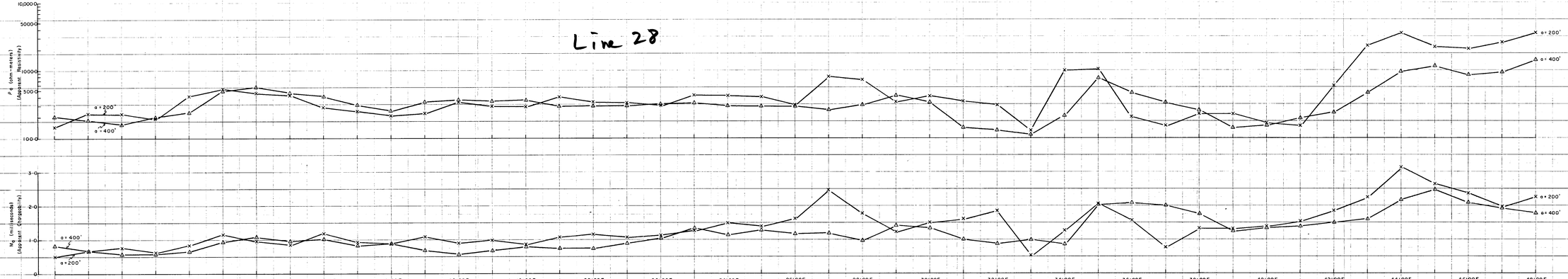
G.M. FARSELER, GEOPHYSICIST

I.P.	# 3 Seismic	
0'	V_1 = 1300 f/s	0'
P_1 = 4400 Ω m		23'
	V_2 = 2200 f/s	
M_1 = 3·0 ms		125'
110' ± 30'	V_3 = 6400 f/s	140'
P_2 = 780 Ω m		
M_2 = 0·7 ms	V_4 = 13,000 f/s	

Overburden

Bedrock

Line 28



TORMONT MINES LIMITED

MERRITT, B.C.

I.P. PROFILE – LINE 28

NOVEMBER, 1961

3 – ELECTRODE ARRAY

STA LOC

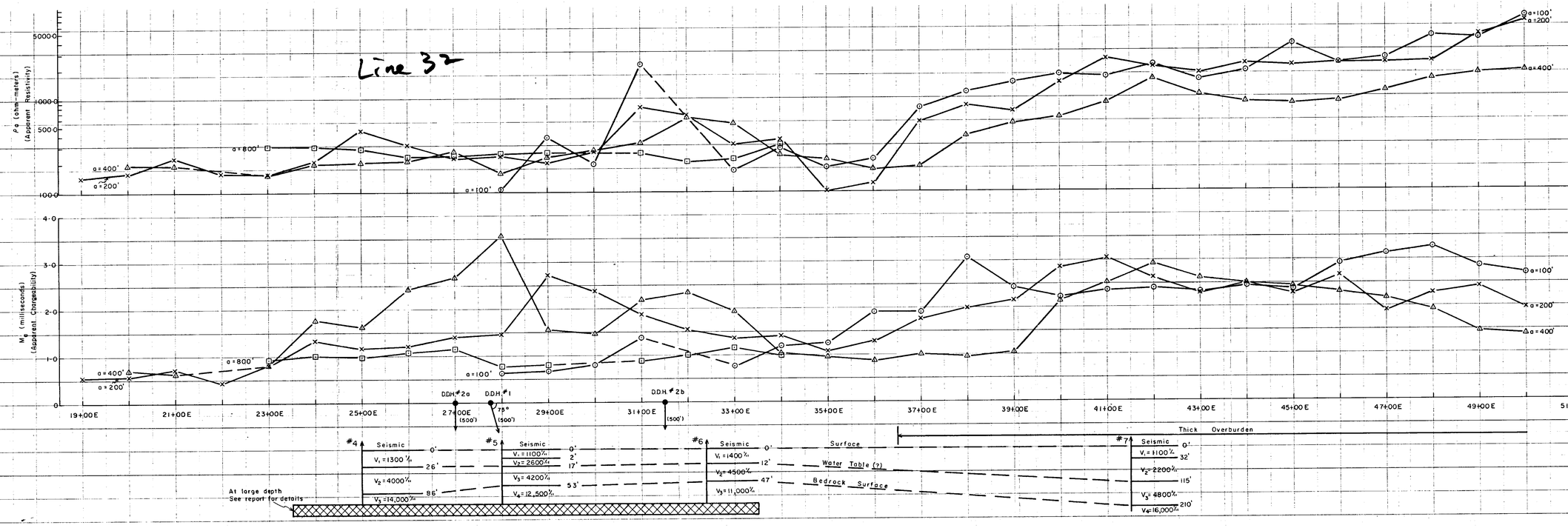
LEGEND

Overburden Effect

Area of possible interest

HUNTING SURVEY CORPORATION LIMITED – TORONTO, CANADA

C.W.A. FAESSLER, GEOPHYSICIST



TORMONT MINES LIMITED

MERRITT, B.C.

I.P. PROFILE – LINE 32

NOVEMBER, 1961

3-ELECTRODE ARRAY

STA. LOC.

LEGEND

Overburden Effect

Area of possible interest

Seismic Results (not to scale)

#6 Seismic V_1 V_2 V_3 V_4

Proposed Drill-Holes (Inclined, Vertical) with minimum length

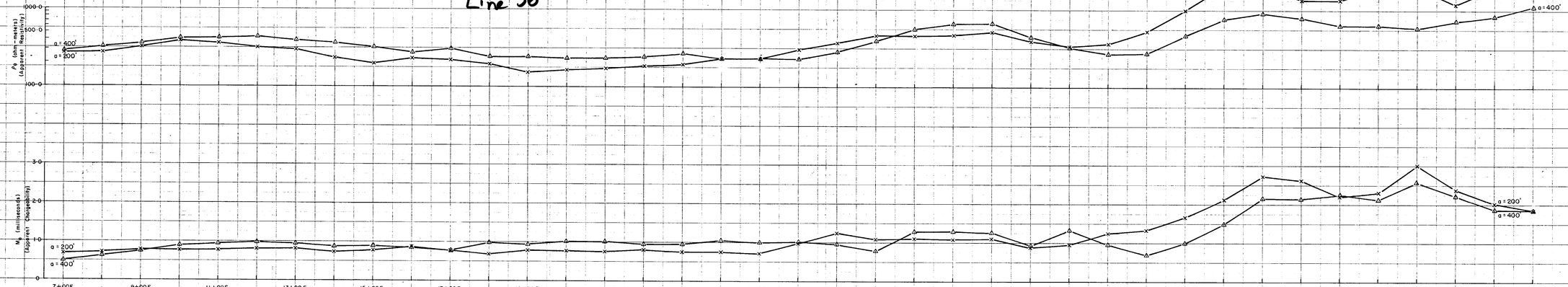
DDH #1 75° (500') DDH #2a (500')

NOTE: Vertical Sections not to scale.

HUNTING SURVEY CORPORATION LIMITED - TORONTO, CANADA

C.W. FAESSLER, GEOPHYSICIST

Line 36



TORMONT MINES LIMITED

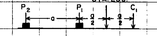
MERRITT, B.C.

I.P. PROFILE – LINE 36

NOVEMBER, 1961

3-ELECTRODE ARRAY

STA LOC.



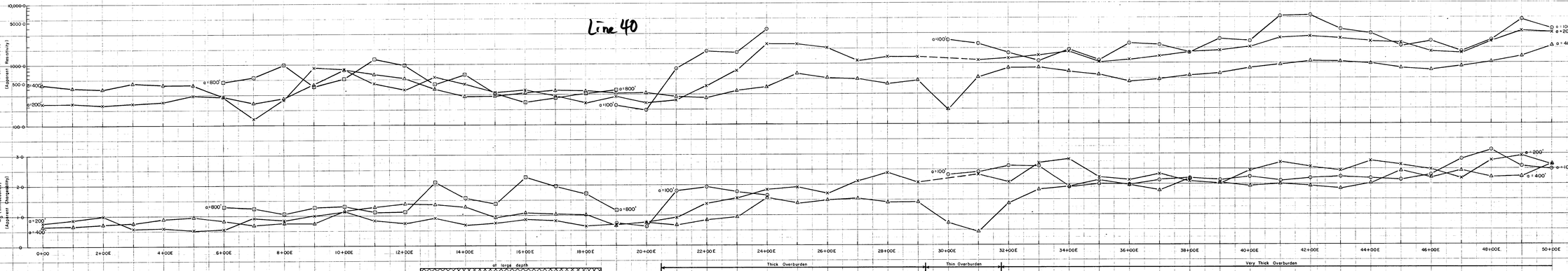
LEGEND

Overburden Effect

MAD

HUNTING SURVEY CORPORATION LIMITED – TORONTO, CANADA

C.W. FAESSLER, GEOPHYSICIST



TORMONT MINES LIMITED

MERRITT, B.C.

I.P. PROFILE - LINE 40

NOVEMBER, 1961

3-ELECTRODE ARRAY

STA. LOC.

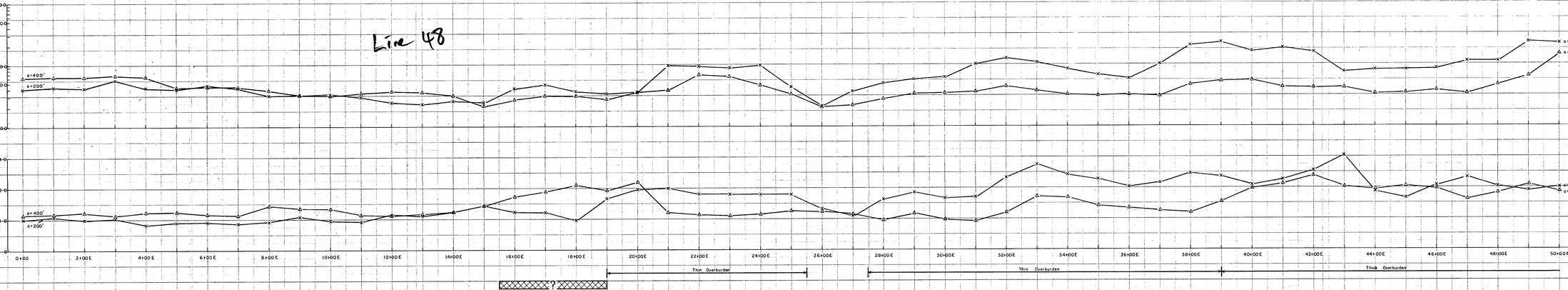
LEGEND

Overburden Effect

Area of possible interest

HUNTING SURVEY CORPORATION LIMITED - TORONTO, CANADA

G.W. FAESSLER, GEOPHYSICIST



TORMONT MINES LIMITED

MERRITT, B.C.

I.P. PROFILE – LINE 48

NOVEMBER, 1961

3-ELECTRODE ARRAY

STA. LOC.

P_2 P_1 C_1 C_2

LEGEND

Overburden Effect

Area of possible interest

HUNTING SURVEY CORPORATION LIMITED - TORONTO, CANADA

C.R. FAESSLER GEOPHYSICIST

L-8+00 L-12+00 L-16+00 L-20+00 L-24+00 L-28+00 L-32+00 L-36+00 L-40+00 L-44+00 L-48+00

BASELINE 1.

BASELINE 2.

BASELINE 3.

LARON 1 LARON 2 LARON 3 LARON 4 LARON 5 LARON 6 LARON 11 LARON 12 LARON 13 LARON 14 LARON 15 LARON 24 LARON 25 LARON 26 FR TORM 7 TORM 8 TORM 9 FR LARON 10

B.S. #1 B.S. #2 B.S. #3

TORMONT MINES LIMITED
MERRITT, B.C.
GROUND MAGNETOMETER SURVEY
SHARPE A-2 (VERTICAL)

CONTOUR INTERVAL: 100 GAMMAS

BASE: 1500 GAMMAS

SCALE: 1" = 200'

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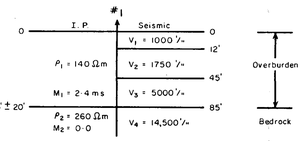
HUNTING SURVEY CORPORATION LIMITED – TORONTO, CANADA

C.W. FAESSLER, GEOPHYSICIST
NOVEMBER, 1961

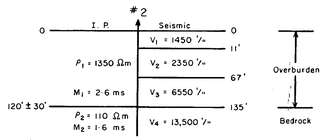
Report 390

SEISMIC AND I.P. DEPTH DETERMINATIONS

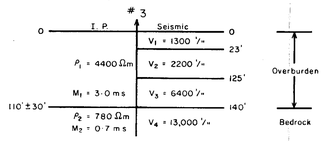
#1 – Line 8+00 at 35+00E



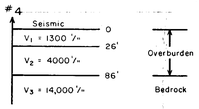
#2 – Line 16+00 at 51+00E



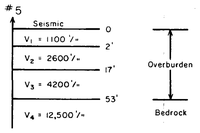
#3 – Line 24+00 at 49+00E



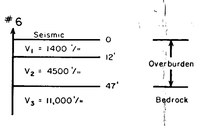
#4 – Line 32+00 at 25+00E



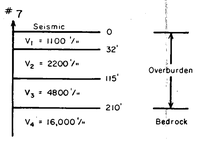
#5 – Line 32+00 at 28+00E



#6 – Line 32+00 at 32+40E



#7 – Line 32+00 at 41+50E



NOTE: Above Sections not to scale vertically

TORMONT MINES LIMITED
MERRITT, B.C.

INTERPRETATION

I.P. and SEISMIC SURVEY

SCALE: 1" = 200'

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HUNTING SURVEY CORPORATION LIMITED – TORONTO, CANADA

C.W. YAESSLER, GEOPHYSICIST
NOVEMBER, 1961