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	ON A D POLARIZATION SURV	FILE NO: VEY	
Latitude: 49°	THE DUMAS PROPERTY 25'N Longitude:	127°05'W	
AUTHORS: Markus S	NTS: 82F/16 Seywerd B.Sc.,Geopl	nysicist	
DATE OF W	White B.Sc., P.Eng WORK: July 17-Aug	. 7, 1987	
DATE OF F	EPORT: Sept. 1, 1	1987	
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INTRODUCTION:

During the month of July 1987, White Geophysical Inc. was contracted by <u>Triune Resources Ltd.</u> to conduct an induced polarization survey on the Dumas Property near Nelson, B.C. The purpose of this program was to delineate the ore zone, a portion of which were drifted in 1898, and to attempt to locate the source of the geochemical anomalies.

1

PROPERTY:

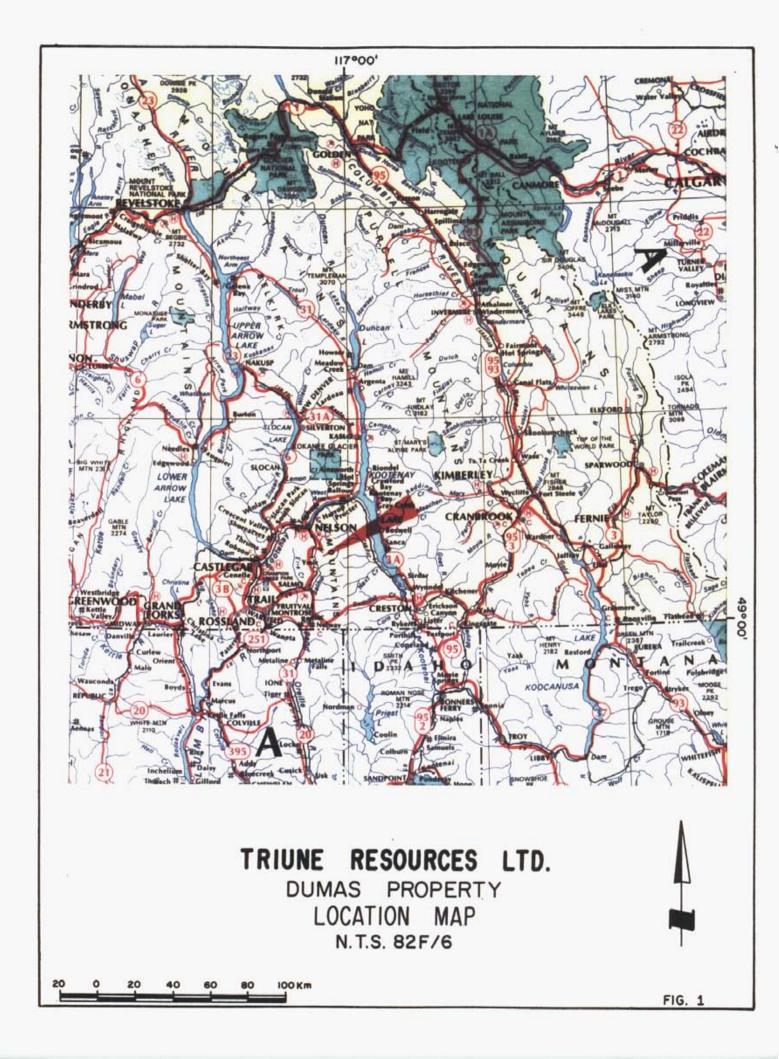
The Dumas property consists of seven claims and one Crown Grant. (Fig. 2) The states of these claims located in the Nelson mining division is summarized as follows:

NAME	<u>RECORD #</u>	# OF UNITS	DATE RECORDED	EXPIRY DATE
Dumas 1	1696	1	June 2, 1980	June 2, 1990
Dumas 2	2 1697	1	June 2, 1980	June 2, 1990
Dumas 3	3 1698	1	June 2, 1980	June 2, 1990
Dumas 4	1699	1	June 2, 1980	June 2, 1989
Dumas 5	5 1700	1	June 2, 1980	June 2, 1989
Dumas 9	1936	1	Sept 29,1980	Sept 29,1987
Dumas 1	0 2147	1	March 3, 1981	March 3,1988

and Crown Grant # 5727 located in the Nelson mining district, in the Kootenay Land District, Province of British Columbia on which the taxes have been paid to July 1988.

LOCATION AND ACCESS:

The Dumas property is located on the south side of Clearwater Creek in the Nelson Mining Division of B.C.



The Claims are at an elevation of 5450 feet to 5750 feet above sea level. Access is by 9.5 kilometres of logging road from the junction with Highway 6. It is 19-1/2 kilometers from Nelson, B.C. and 28-1/2 kilometres from Ymir, B.C. The Dumas property is located at Latitude 49°25'N Longitude 117°09'W.

2

GENERAL GEOLOGY:

The Dumas property is located in an area known as the Ymir Camp of B.C. in the Nelson mining Division with its geology akin to the Slocan mining Division.

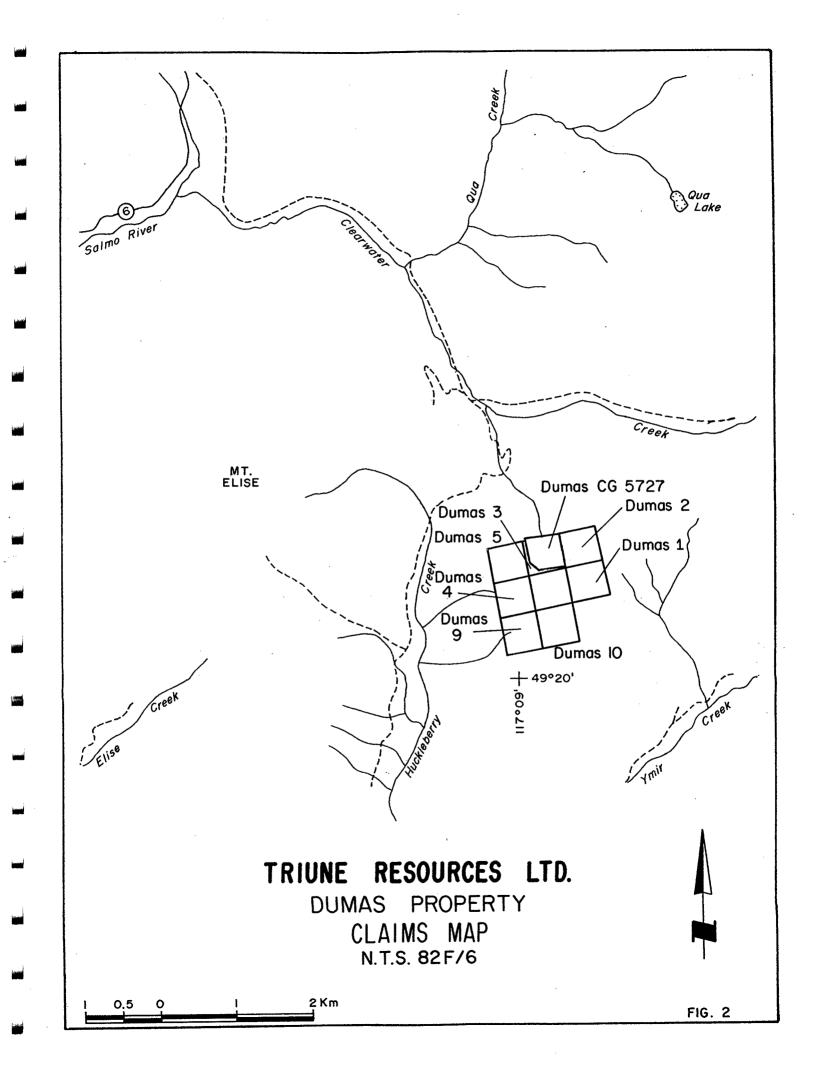
The area is underlain by two formations, the black argillites, slates and argillaceous quartzite of the Ymir Group and the volcanic rocks of the Rossland formation. Both of these formations are intruded by units of the Nelson Batholith.

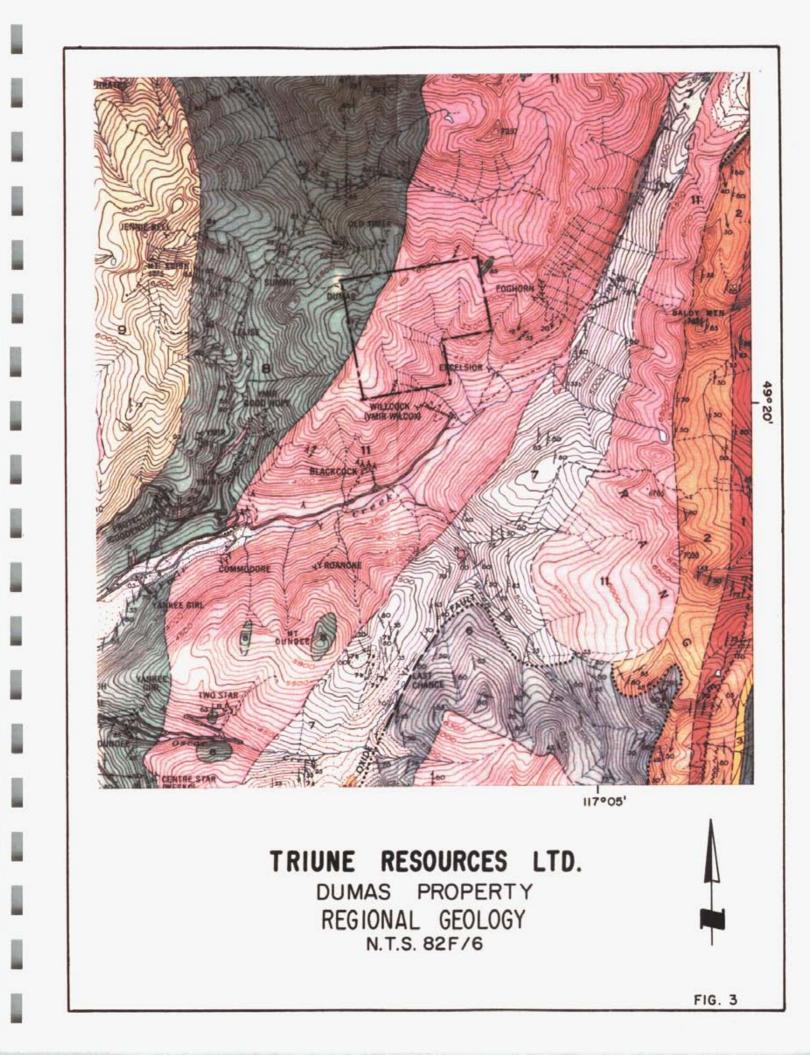
The granitic intrusives of the Nelson batholith are thought to be the source of the Au-Ag mineralization. The mineralization occurs in quartz veins that cut both the Ymir Group and the Rossland formation. Strong metamorphosis has taken place where the Nelson Batholith comes in contact with the Ymir Group.

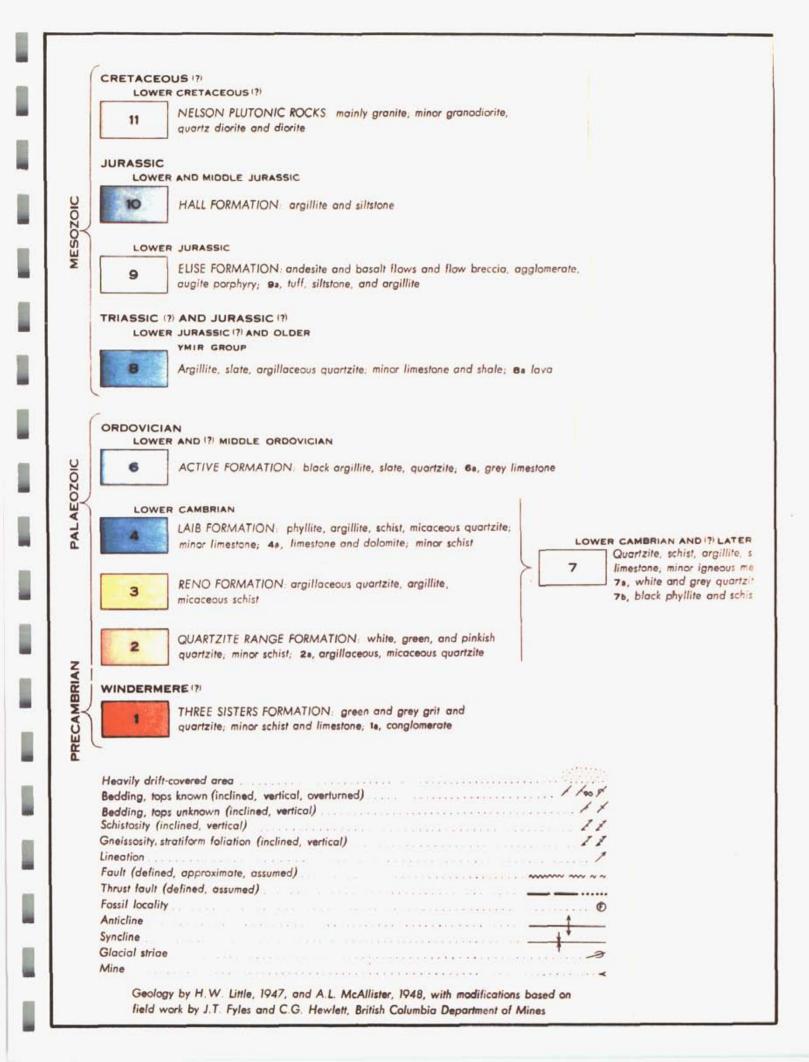
Local Geology from Report by P. Santos P.Eng. March, 1981

The Dumas property is largely overlain by dark-coloured argillites and schists that are intensely sheared. These rock units belong to the Ymir Group. Fairly thick white quartzites are interbedded with the argillites, particularly in the eastern part of the property.

Numerous quartz veins cut the argillites, generally in two







directions, N-S and E-W. Varying amounts of sulphides are associated with these quartz veins.

At the eastern part of the property, granites of the Nelson Batholith intrude the argillites. At the contacts, sericite schists are well developed.

Lamprophyre dykes and sills cut the argillites and schists.

The beds generally trend N-S and dip steeply to the west.

Mineralization

At the Dumas property, two drifts were driven following a mineralized quartz vein three to four feet wide. This quartz vein strikes N-S and dips 58 E and cuts black argillites and sericite schists.

The portals of the drifts are 100 meters apart horizontally and 31 meters apart vertically. Another drift was apparently collared midway between the lower and upper drifts, but this was not continued (Plate 3 & 9).

The lower drift followed a quartz vein for about 50 meters. At this point, a lamprophyre dyke cut off the quartz vein. It appears that this drift was extended past the lamprophyre, to serve as a haulage drift.

The quartz vein in the lower drift is highly pyritic. Assays of this material however showed negligible values in Au, Ag, Pb and Zn. Quartz vein material with pyrite stockpiled at the portal of the lower drift also assayed low.

Mineralization - cont'd

At the portal of the upper adit, several tons of quartz vein material are stockpiled. This material contains veinlets and disseminations of pyrite, galena, sphalerite and traces of tetrahedrite. Samples from this material had an average assay of 1.55% Pb, 1.29% Zn, 1.81 oz. Ag/ton, and .460 oz. Au/ton. At the time of the property investigation, the upper drift was in the process of being opened up by the owners. There was no opportunity to investigate this drift when it was eventually opened in late November, 1980.

On the western edge of the property, a six-foot thick quartz vein cut through highly shattered black argillite. Some pyrite was disseminated in the quartz vein. Oxidation of the pyrite caused the quartz vein to be rusty. This quartz vein is exposed in what appears to be a shallow shaft or winze that was dug at the start of this century. The vein has a strike of Az.060°, and dip 52° N.W. A sample from this material assayed less than .01% Pb, 0,01% Zn, .18 oz. Ag.ton and .005 oz. Au/ton.

On the eastern edge of the property are fairly thick quartzite beds and quartz veins. There was no opportunity to investigate this further during 1980. A silt sample taken from a small stream below the quartz veins assayed 131 ppm Pb, 150 ppm Zn, and .6 ppm Ag. These values are higher in magnitude than the mean values of the soil samples, indicating that the quartz veins should be checked further.

Further exploration work in the form of reconaissance soil sampling and prospecting was continued by Pete Beaulieu and his partners. Several anomalous areas were identified and follow-up prospecting resulted in the discovery of more old workings. Assays of samples taken from these workings are encouraging. A sample taken from a winze assayed 1.7% Zn, 2.3% Pb, 1.82 oz. Ag/ton, and 0.010 oz. Au/ton and a sample taken from a pit north of the winze assayed .63% Pb, .58 oz. Ag/ton and 0.42 oz. Au/ton. These mineralized areas are located south west of the Dumas adits, more or less near the contact of the argillites with the intrusives. Unfortunately, it was already too late in the season for P.J. Santos to check these areas.

The mineralization at the Dumas property essentially occurs at the contact of the argillites and the granitic intrusives. The mineralization consists of a network of quartz veins in the argillites containing sulphides, such as pyrite, galena, sphalerite, and tetrahedrite with some gold values.

PREVIOUS WORK:

The Dumas property was originally crown granted to E. Grooteavard G. Pellent. In 1898 they drove a 150 foot drift following a quartz vein. This drift was found impossible by 1914. A lower adit was driven, to serve as a haulage level but the work was never completed the property lay dormant until 1980. In 1980 P.J. Santos and Ken Bonde did geological mapping geochemical sampling and a VLF-EM survey. This was followed up by Beaulien, Maher, and Lundgren with a program of reconaissance geochemical sampling. In November of 1980 the drift was reopened.

The soil geochemical sampling showed three identifiable anomalous zones which coincided with known geology and mineral showing. The VLF-EM survey proved inconclusive.

INDUCED POLARIZATION SURVEY:

The survey was conducted utilizing a Huntec Loop transmitter along with a Huntec Mark IV receiver deployed in a dipole-dipole array with a=25 metres n=1, 2, 3 and 4. Approximately 10 km of line was surveyed. An 8 second cycle of time was used with a delay of 60 ms. The overvoltage read, integrated and is presented as discharge is chargeability in milliseconds. The physical parameters which govern the flow of the primary field are shown as apparent resistivity in ohm-metres.

6

DISCUSSION OF RESULTS:

The data is presented in pseudosection form in Fig 4-20 and the n=2 a=30 data is presented in plan map form in Figure 21 and 22.

The survey was very sucessfull in delineating a chargeable with the known mineralization and coincident zone The chargeable zone is coincident geochemical anomalies. with a low resistivity zone. The zone of low resistivity and high chargeability (zone A) stikes at approximately 10° and is centered at 0+00N, 0=00E. To the south of this point zone A is a narrow linear feature and is left open ended on line 15+00S, 1+20W. Zone B is intersected on lines 12+00S This is more apparent at 2+40W and on line 15+00S at 3+00W. in the chargeablility data then in the resistivity data and appears to be subparallel to zone A. On line 15+00S zone B is the at depth at approximately 50 meters while zone A is apparent in the near surface data. All of these zones appear to be steeply dipping. On line 12+00S zone A again appears as a near surface zone of limited depth extent while zone B appears as a strong deep zone. As one progresses north on the property zone A becomes stronger, broader and

of greater depth extent. On the east it appears to be bounded by a rock type change. The apparent resistivity increases sharply from the 1000 ohm-metre range associated with the zone to the 3000-5000 ohm-metre range. While the 20 apparent chargeability drops sharply to below milliseconds. This transition appears to be sourced in the contact between the Ymir Group and the Nelson intrusion which is an area of metamorphism and mineralization. To the west of the zone the chargeability drops gradually as the resistivity increases gradually. This is probably sourced in a slower transition from metamorphed Ymir Group to unmetamorphed Ymir Group.

The highest chargeablility valves are encountered on L0+00N at 2+00E and are in excess of 100 milliseconds. The zone at this point has broadened out and become very complex. Α near surface zone at 0+00E with zones at depth at 0+75E and 0+75E and to the east of these the Nelson Intrusive. The zone remains both broad and complex on lines 1+00N, 2+00N, 3+00N with a possible high resistivity, low chargeablility unit on the west being intersected on the western and on lines 3+00N, 4+00N, 5+00N on line 6+00N with greater coverage toward the west a rock type change becomes apparent at approximately 2+40W. The zone itself is complex, possibly comprised of three distinct subzones sandwiched between the two high resistivity units. Lines 7+00N and 8+00N appear very similar to 6+00N and both contacts become extremely distinct on line 9+00N. The eastern contact at 3+15E and the western contact 2+40W.

Line 12+00N intersects the high resistivity zone on the west and then re-enters a zone of low resisitivity high resisitivity. This is probably sourced in interfingering at the intrusive with the Ymir group. The zone itself being broad and complex. Line 15+00 fails to properly intersect the high resistivity zone on the west and appears to delineate the beginning of the third high chargeability zone in the west. It appears that the general boarder of the intrusive on the west is a westerly trending arc.

CONCLUSIONS AND RECOMMENDATIONS:

White Geophysical Inc. conducted approximately 10 kilometres of induced polarization surveying on Triune Resources Ltd.'s Dumas property. Several zones of low resisitivity and high chargeability were delineated and these zones coincided well with known mineralization and geochemical anomalies. The main zone Zone A has a delineated strike length of 900 metres open to the north and south and a width varying from The chargeability and resitivity anomalies 30-90 metres. may be due to conductive clays or graphite but with the positive geochemical results and the known mineralization are probably sourced in sulphides. The zones appear to be author recommends a program of The steeply dipping. trenching and diamond drilling. Two types of targets should be examined, the high chargeability low resistivity zones and the probable contacts between the Ymir Group and the Nelson Intrusion. Should the geological information support steeply dipping contacts and chargeable zones the following for diamond drill holes should adequately test the targets.

1)	Collar	Line	12+00N
		Station	2+40E
		Azimuth	90°
		Dip	45°
		Length	150 metres

(

Should test high chargeability zone and contact.

(2) Collar Line 0+00N
Station 2+30E
Azimuth 270°
Dip 45°
Length 200 metres

Should test two high chargeability zones and contact.

(3) Collar		Line	6+00N
		Station	0+00W
		Azimuth	90°
		Dip	45°
		Length	100 metres

Should test high chargeability zone.

(4)	Collar	Line	6+00S
		Station	0+90W
		Azimuth	90°
		Dip	45°
		Length	100 metres

Should test high chargeability zone.

Respectfully submitted

Marts Gent

Markus Seywerd, B.Sc. Geophysicist

White, GINNE Ε. в.

consulting Geophysicist

COST BREAKDOWN

 Personnel
 Wages per Diam

 G. Hemingsley July 17-24,26,27,30,31,Aug. 1,6,7/87 15 days 300.00 4500.00

 D. Thorn
 July 17-24,26,27,30,31,Aug. 1,6,7/87 15 days 225.00 3375.00

 D. Hrynyk
 July 17-24,26,27,30,31,Aug. 1,6,7/87 15 days 225.00 3375.00

 J. Redeker
 July 17-24,26,27,30,31,Aug. 1,6,7/87 15 days 225.00 3375.00

 J. Redeker
 July 17-24,26,27,30,31,Aug. 1,6,7/87 15 days 225.00 3375.00

 Accomagdations 60 man-days @ \$75/man-day
 4500.00

 Mobilization
 2000.00

 Reports and drafting
 3000.00

 Instrument rental 15 days @ \$200/day
 300.00

 TOTAL
 26125.00

REFERENCES: Cominco Engineering Report No CC0.000.R.040 P.J. Santos, P. Eng.

March, 1981

STATEMENT OF QUALIFICATIONS

NAME: SEYWERD, Markus B., B.Sc.

PROFESSION: Geophysicist

EDUCATION: University of British Columbia -B.Sc., Mathematics

EXPERIENCE: Three years of summer field work with Noranda Exploration Company Ltd. in British Columbia, Northwest Territories and Yukon Territories.

> Two year Geophysicist with White Geophysical Inc. with work in British Columbia, Saskatchewan and Yukon Territories.

STATEMENT OF QUALIFICATIONS

NAME: WHITE, Glen E., P.Eng.

PROFESSION: Geophysicist

EDUCATION: B.Sc. Geophysics - Geology University of British Columbia

PROFESSIONAL Registered Professional Engineer, ASSOCIATIONS: Province of British Columbia.

Associate Member of Society of Exploration Geophysicists.

Past President of B.C. Society of Mining Geophysicists.

EXPERIENCE: -Pre-Graduate experience in Geology -Geochemistry - Geophysics with Anaconda American Brass.

> -Two years Mining Geophysicist with Sulmac Exploration Ltd. and Airborne Geophysics with Spartan Air Services Ltd.

-One year Mining Geophysicist and Technical Sales Manager in the Pacific north-west for W.P. McGill and Associates.

-Two years Mining Geophysicist and supervisor airborne and ground geophysical divisions with Geo-X Surveys Ltd.

-Two years Chief Geophysicist Tri-Con Exploration Surveys Ltd.

-Seventeen years Consulting Geophysicist.

-Active experience in all Geologic provinces of Canada.

CERTIFICATE

I, GLEN E. WHITE, with a business address of 11751 Bridgeport Road, Richmond B.C. do hereby certify that:

- I am a consulting geophycisict registered with the Association of Professional Engineers of British Columbia since 1977.
- I am an Associate Member of the Society of Exploration Geophysicist.
- 3) I hold a B.Sc. degree (1966) in geology and geophysics from the University of British Columbia.
- 4) I have been practising my profession as a geophysicistgeologist for over 20 years.
- 5) I have no direct or indirect interest, nor do I expect to receive any interest directly or indirectly in the properties or securities of Truine Resources Ltd.
- 6) I have based this report on a review of available geological publications and exploration reports on the Dumas 1-5, Dumas 10 mineral claims and Crown Grant #5727 and on the data from an Induced polarization survey conducted by White Geophysical Inc.
- 7) I consent to the use of this report in whole or in part by Triune Resources Limited for publication or any filing statement or Statement of Material Facts as long as the context of the report is not violated.

WHITE GEOPHYBICAL INC.

GLEN E WHITE B.Sc. P.Eng. September 11, 1987 APPENDIX I INSTRUMENT SPECIFICATIONS - MARK IV RECEIVER

Inputs

SIGNAL CHANNEL

Range 5 x 10 to 10 volts. Automatic gain ranging. Overload indication above 10 volts. Resistance Greater than 10 Ohms differential (i.e. between + and - terminals). Capicatance Less than 3 x 10 Farads Bias Current Less than 10 Amperes Bandwidth Basic bandwidth is 100 Hz. A 12 Hz digital lowpass filter is selectable via a switch on the programming panel. SP Cancellation -5 to +5 volts (automatic) Range Protection Low leakage diode clamps, gas discharge surge arresters, field replaceable fuses. Terminals Two colour-coded (red and black) signal inputs plain chassis ground terminal. Push

posts: 120 volt insulation, accepts maximum 1.5 mm diameter wire.

REFERENCE CHANNEL

Maximum	5 volts peak
Overload	
Indication	Operates above approximately 5 volts peak '
Resistance	2 x 10 Ohms differential
Capacitance Input	Less than 3 x 10 Farads
Connector	Four pin female (includes battery and ground,
	for operating reference isolation amplifiers)

Battery

10 Nickel-Cadmium "F" cells in series. Nominal 12.5 volts. 8 hours continuous operation in RUN or STANDBY mode. LOW BATTERY indicator operates at a nominal 11.5 volts. Automatic shut-down occurs at approximately 10 volts to prevent battery damage and/or bad data. Battery voltage is available on digital display via keypad.

Functional Specifications Electrical

MEMORY Random Access Memory (RAM) 4k, expandable to 8k Erasable Programmable Read Only Memory (EPROM) 6k, expandable to 8k

WHITE GEOPHYSICAL INC.

SIGNAL CHANNEL Automatic Gain Ranging Amplifier x1 to 4096 in increments of 2n 100 hz low pass fourth order MURROMAF Filter Aliasing polynomial, 24 db/octave roll off Sample and Hold A/D Converter 12-bit, signal aperture 125 x 10 seconds Sampling Rate Frequency domain mode 512 Hz Time domain mode 256 Hz Synchronization Determined by phase locked loop. Frequency of input signal should be within 0.01% of frequency setting on sub-panel for minimum synchronication delay. Rejection filters Greater than 40 db at rejection frequency, auto tuned at start of reading. Self Calibration Compensates for drift in analogue circuitry to improve accuracy of amplitude and phase measurements. MECHANICAL M-4 Receiver with Battery Pack 45 cm x 33 cm x 14 cm, 9.1 kg M-4 Receiver (with battery pack and cassette DataLogger) Same dimensions, 10.1 kg

Replaceable

battery pack 3.3 cm x 11 cm x 45 cm, 3 kg

ENVIRONMENTAL

Temperature Operation: -20°C to +55°C Storage: -40°C to +70°C

Humidity Moisture proof, operable in light drizzle. Splash-proof switches, keypad protected by rubber boots, gasket seals on programming panel cover, main chassis and cassette loader

Altitude -1525 m to 4775 m

Shock and

Vibration Suitable for transport in bush vehicles

DISPLAYS AND INDICATORS

Analogue Meter Ohms scale for receiver electrode resistance measurements and indication of instrument activity, which facilitates qualitative judgments of signal and noise levels.

5

LCD, 3 1/2 digits Provides the operator with numeric indication of measurement results, and of instrument faults discovered during execution of diagnostic routines. An over-range arrow indicates that the display reading is to be multiplied by 1000.

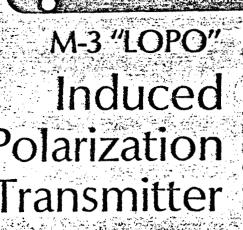
Signal Overload Blinks red when the peak signal at either input with respect to the ground terminal exceeds about 10 volts.

WHITE GEOPHYSICAL INC.

REF Overload Blinks red when the reference input level should be reduced (active only during the reference "ON" time).

Low Battery Blinks red when the battery voltage ' falls below 11.5 volts.

Power Steady red indicates power is on.



FEATURES One man portable: operates from rechargeable battery pack. Automatic regulation of output current, eliminates errors due to changing polarization potential, battery voltage and load resistance. Adjustable timing cycle to suit all geologic conditions. Precision control of timing by crystal clock. Precision calibrated signal output for receiver testing.

Operates into a short circuit without damage at 1.5 amps maximum. Maximum of 1800 volts output for high resistivity areas. Delivers full power in both arctic and tropical regions.

DESCRIPTION

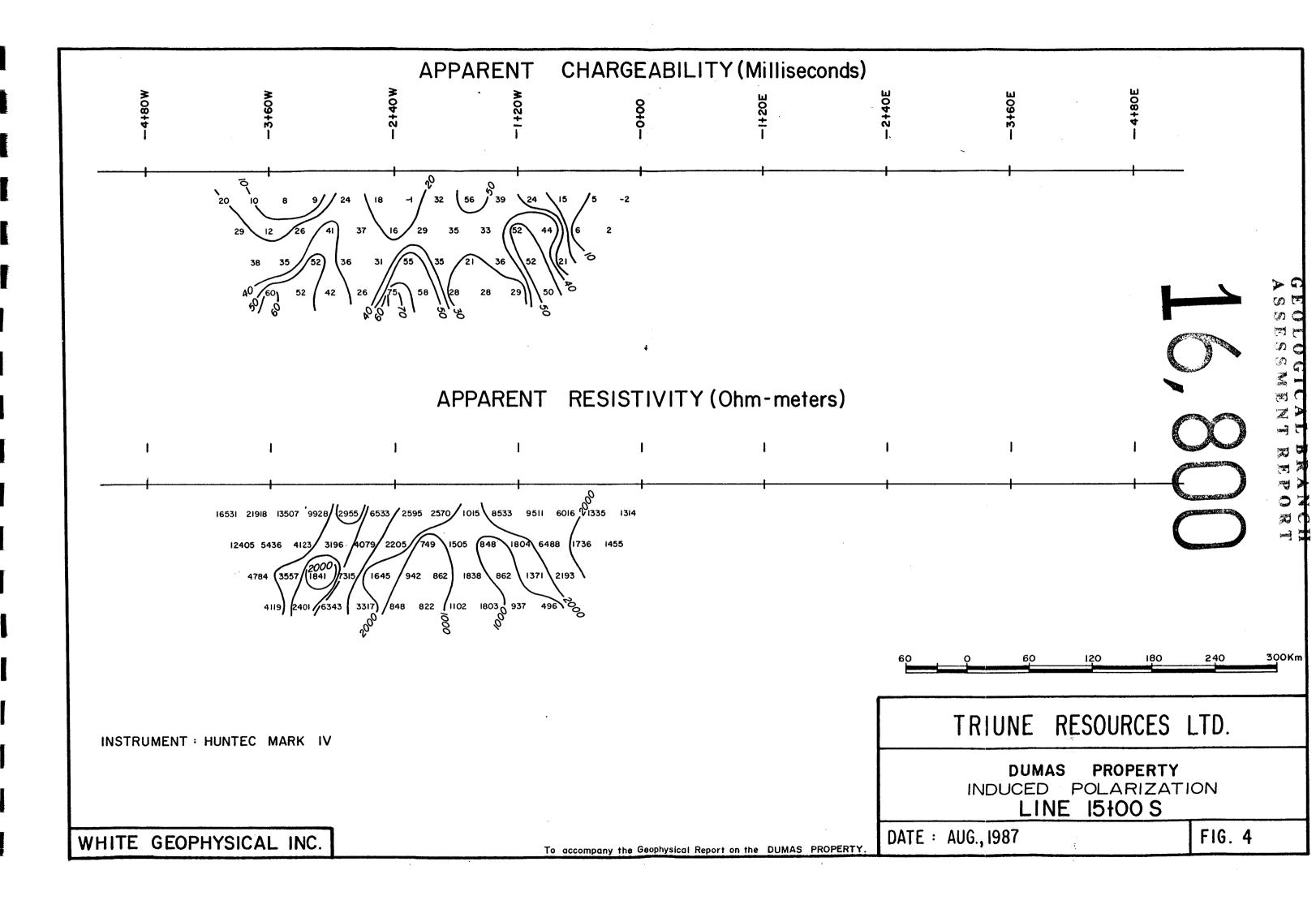
The Huntec M-3 LOPO Transmitter is a time domain, battery operated transmitter weighing 45 pounds with battery pack. It delivers over 160 watts of DC power into loads from 100 ohms to 6000 ohms. It operates at reduced power into all loads from a short circuit to an open circuit.

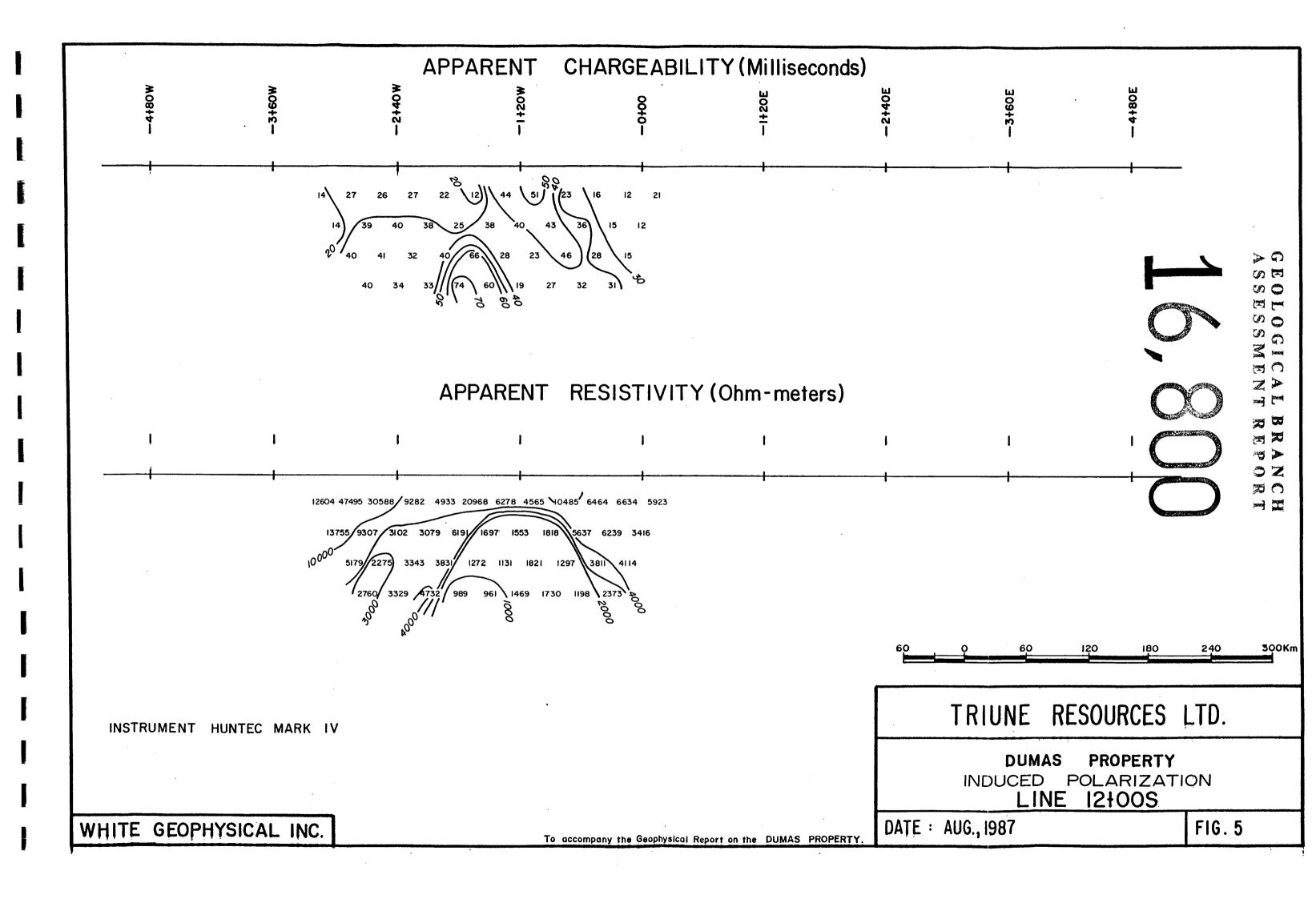
It may be used with any time domain receiver, and special timing options are available if the standard 16 combinations are insufficient.

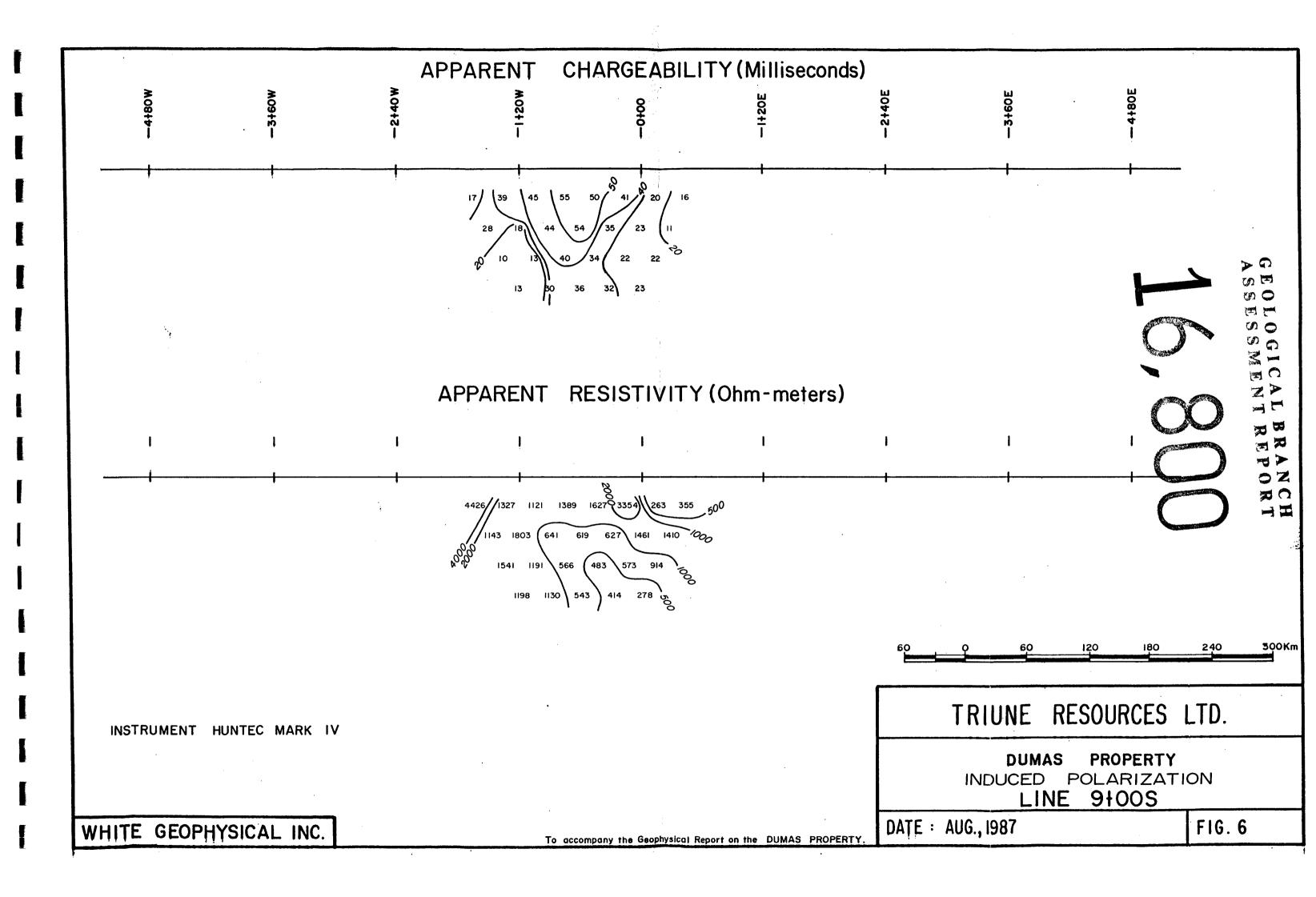
Output current is automatically controlled to within 1% of a current set point chosen by the operator, and is affected neither by battery voltage, nor by load variations.

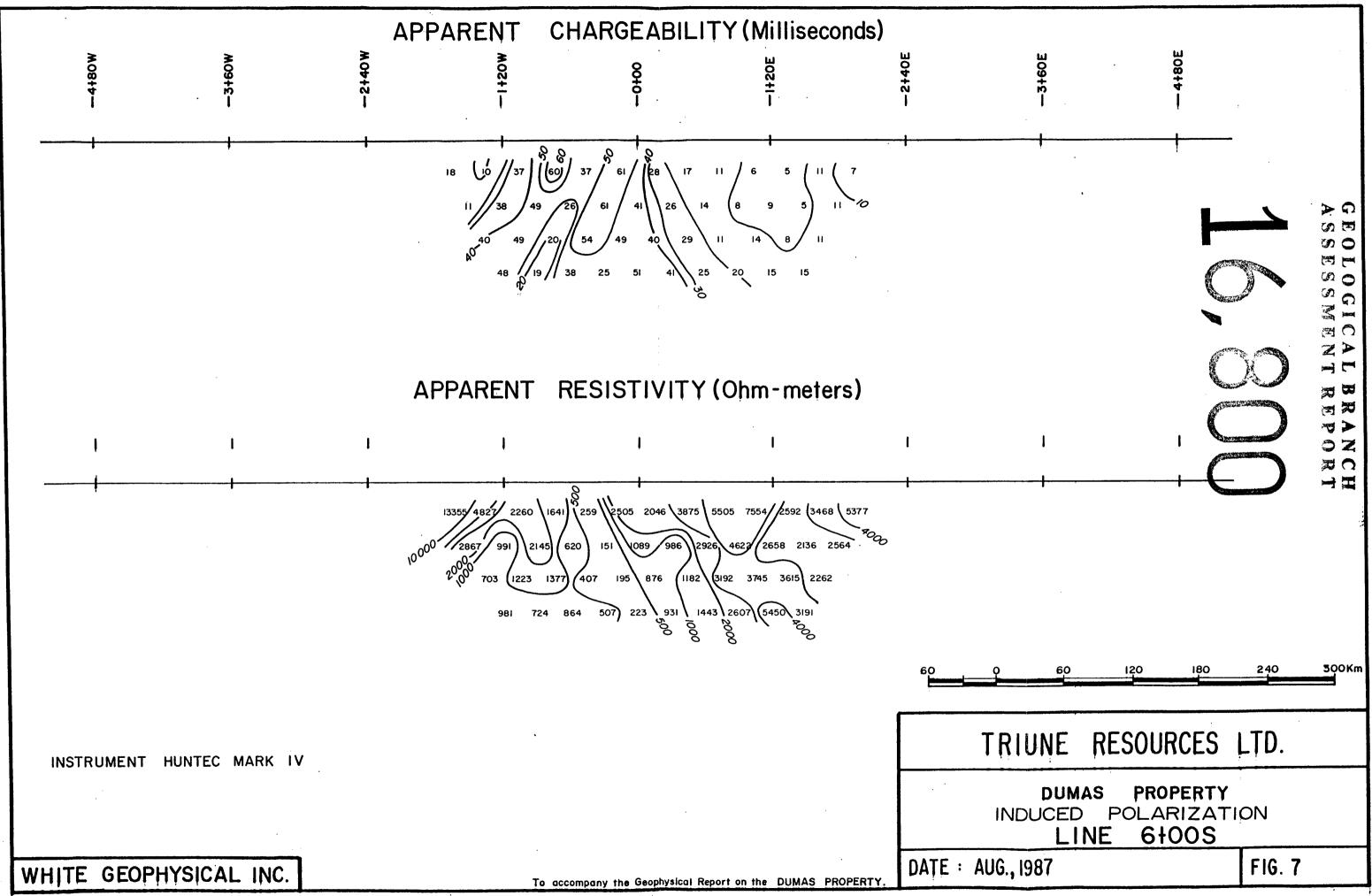
The battery pack is detachable and rechargeable. Typically, when used with the companion M-3 Receiver, a full day's operation may be obtained between charges.

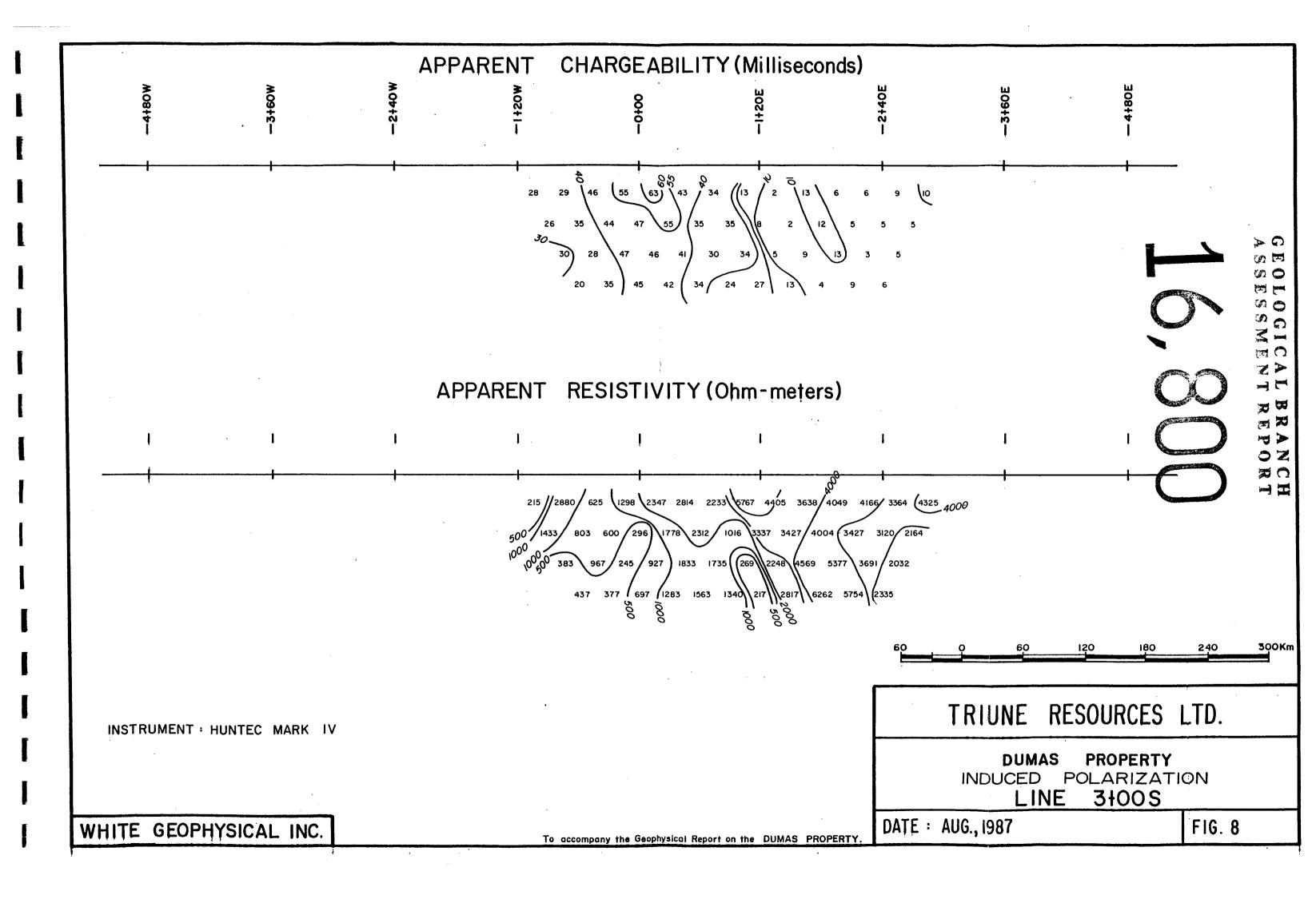
The high sensitivity and noise immunity of the Huntec M-3 Receiver makes the Huntec M-3 system, comprising the LOPO and Receiver together, a highly portable, rapid field system, comparable in performance to other systems of several times the weight and power.

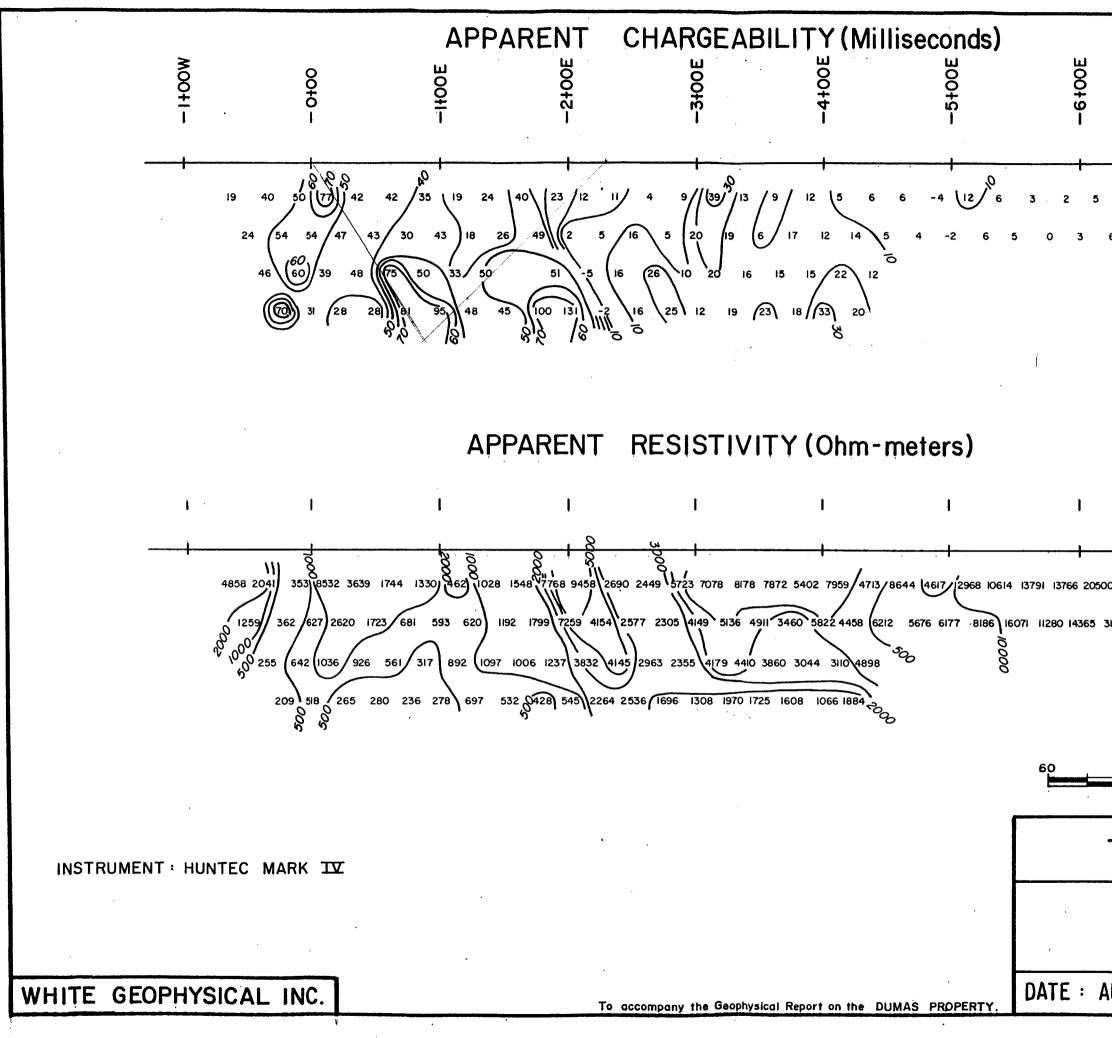




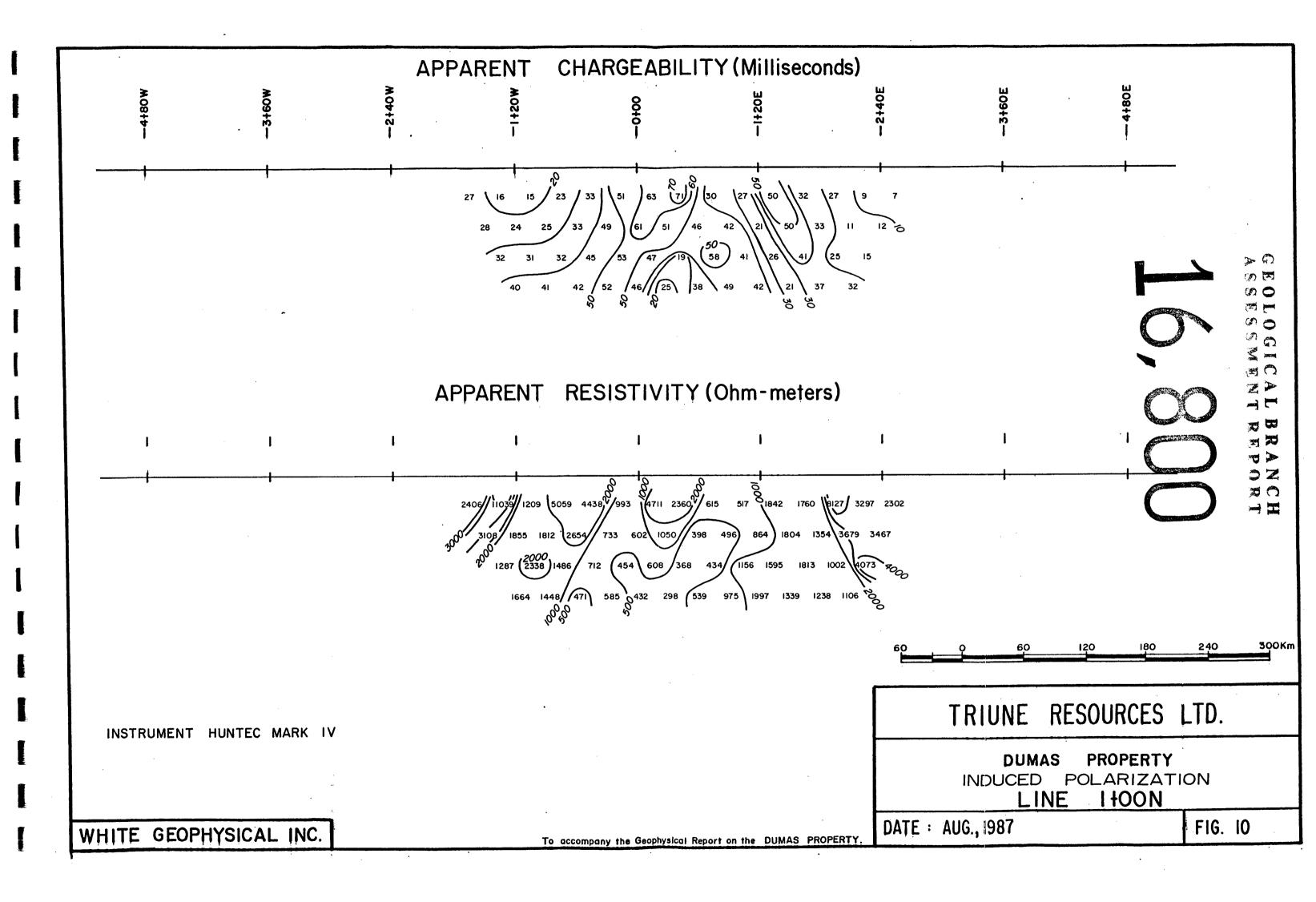


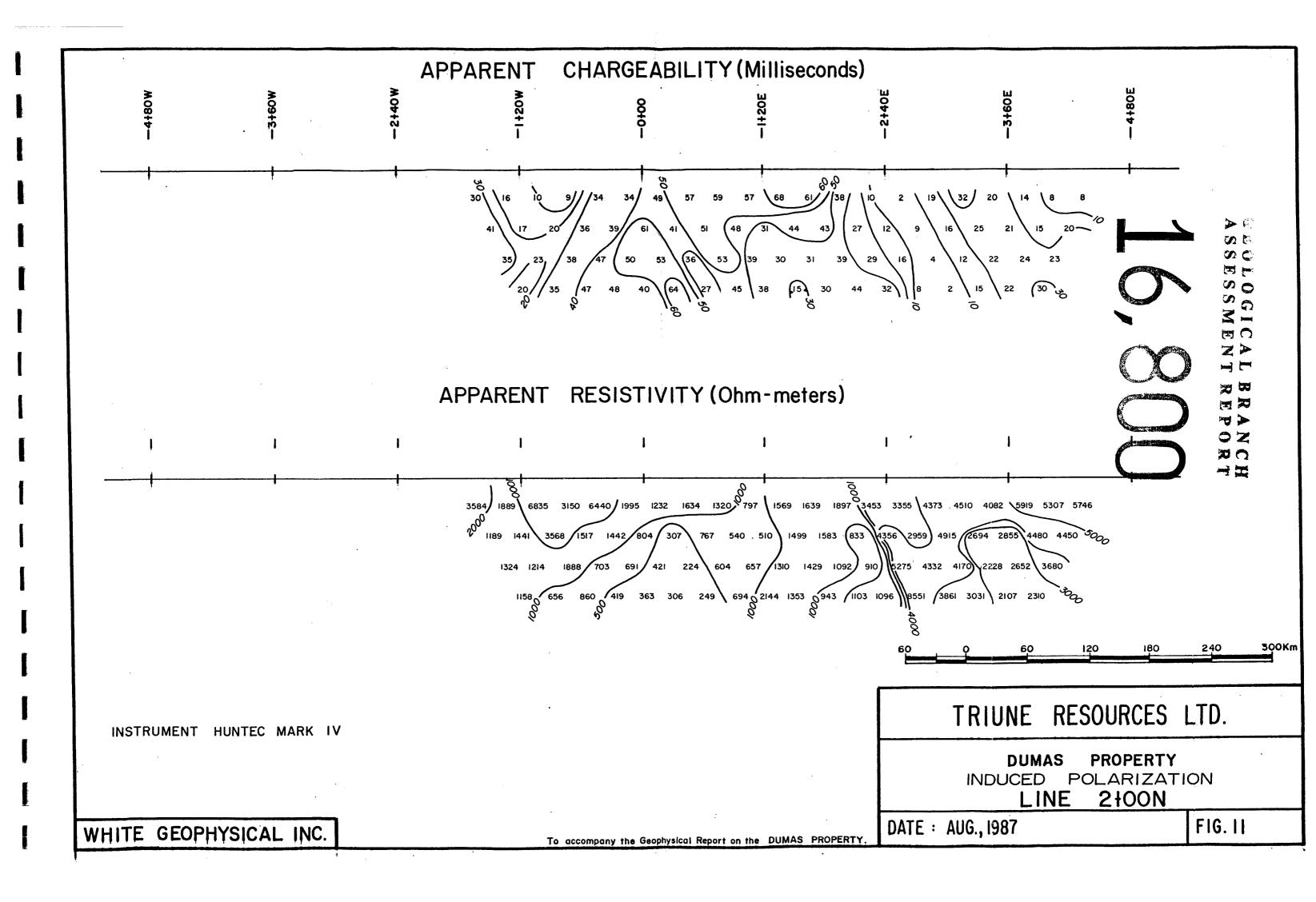


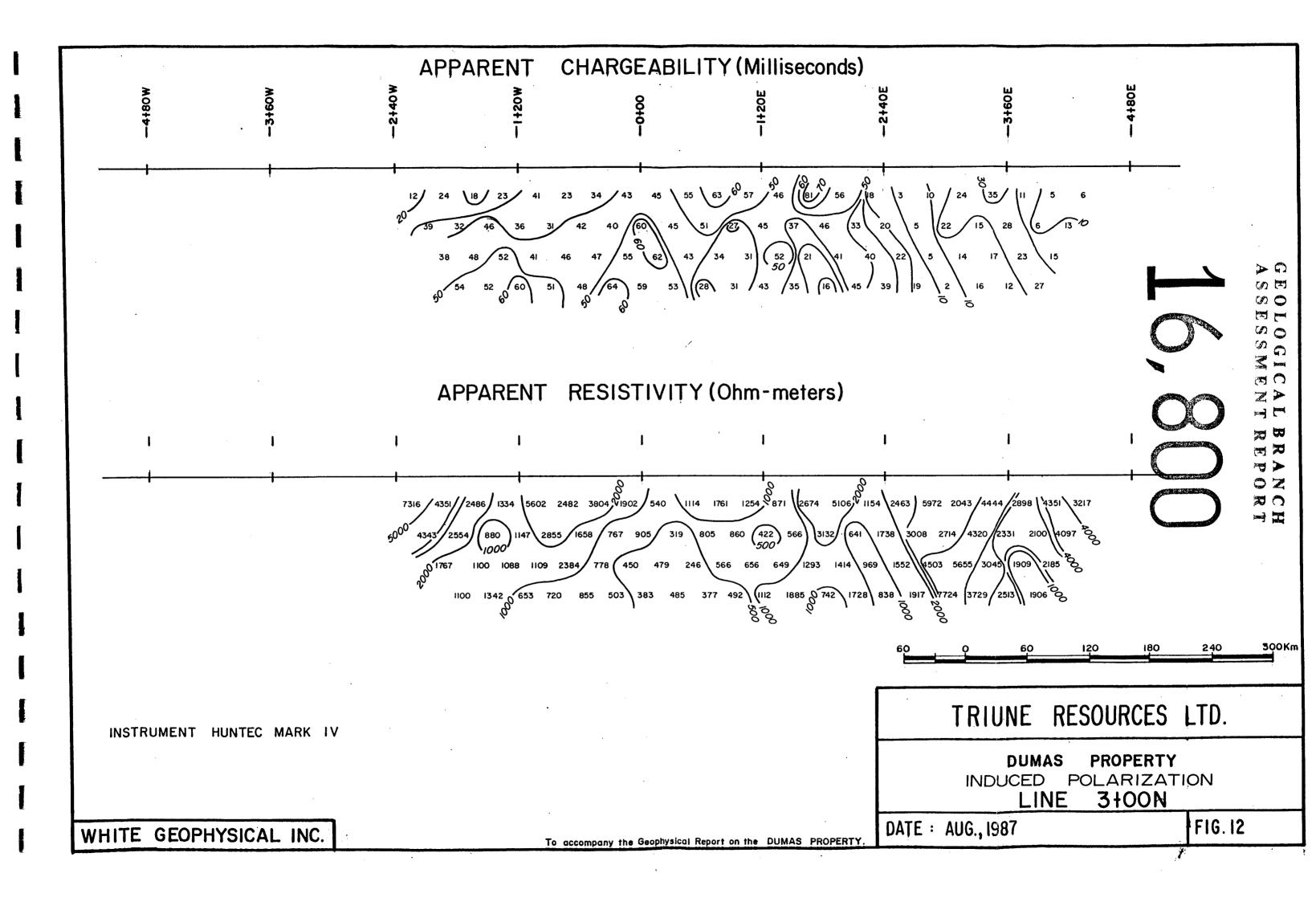


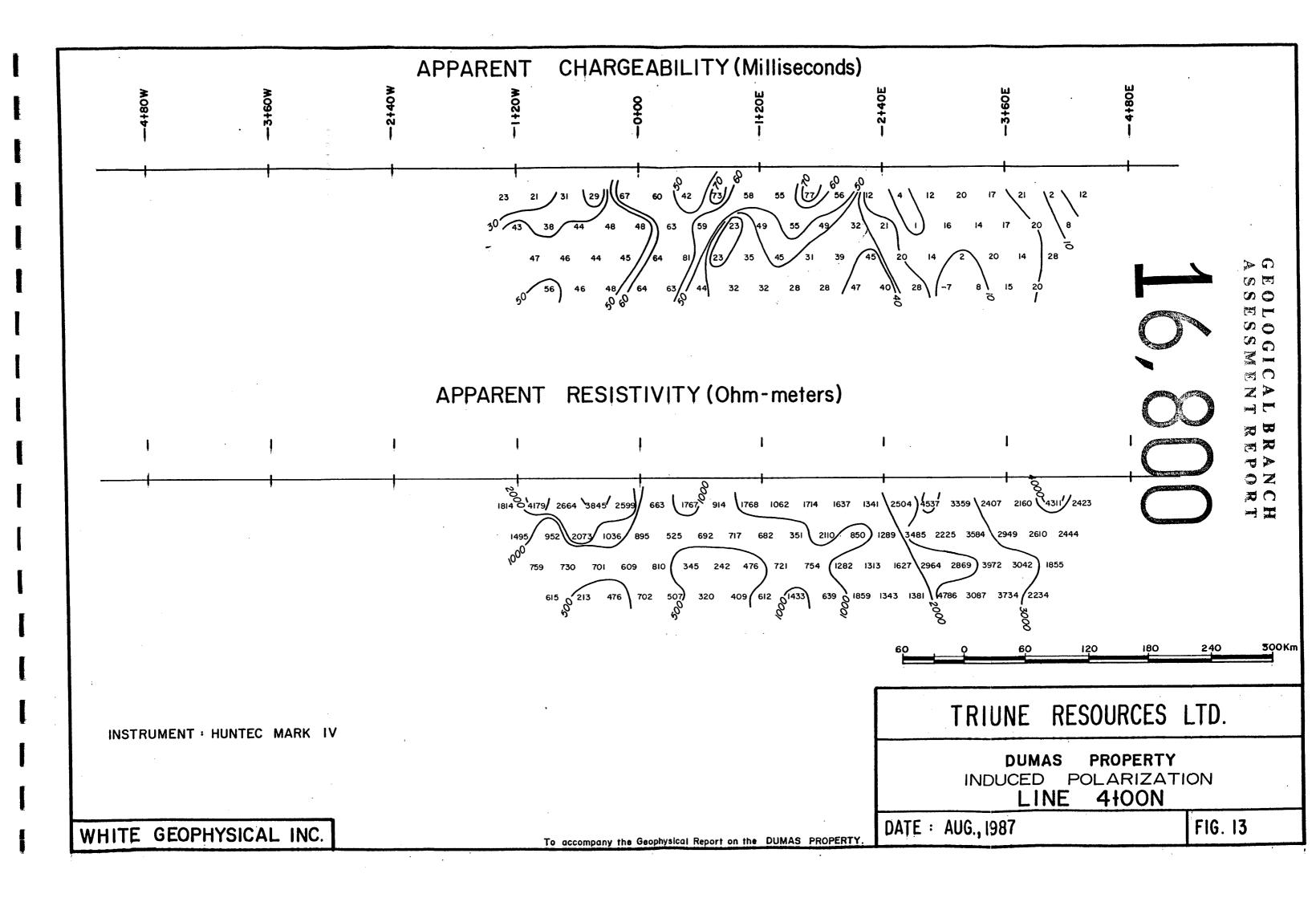


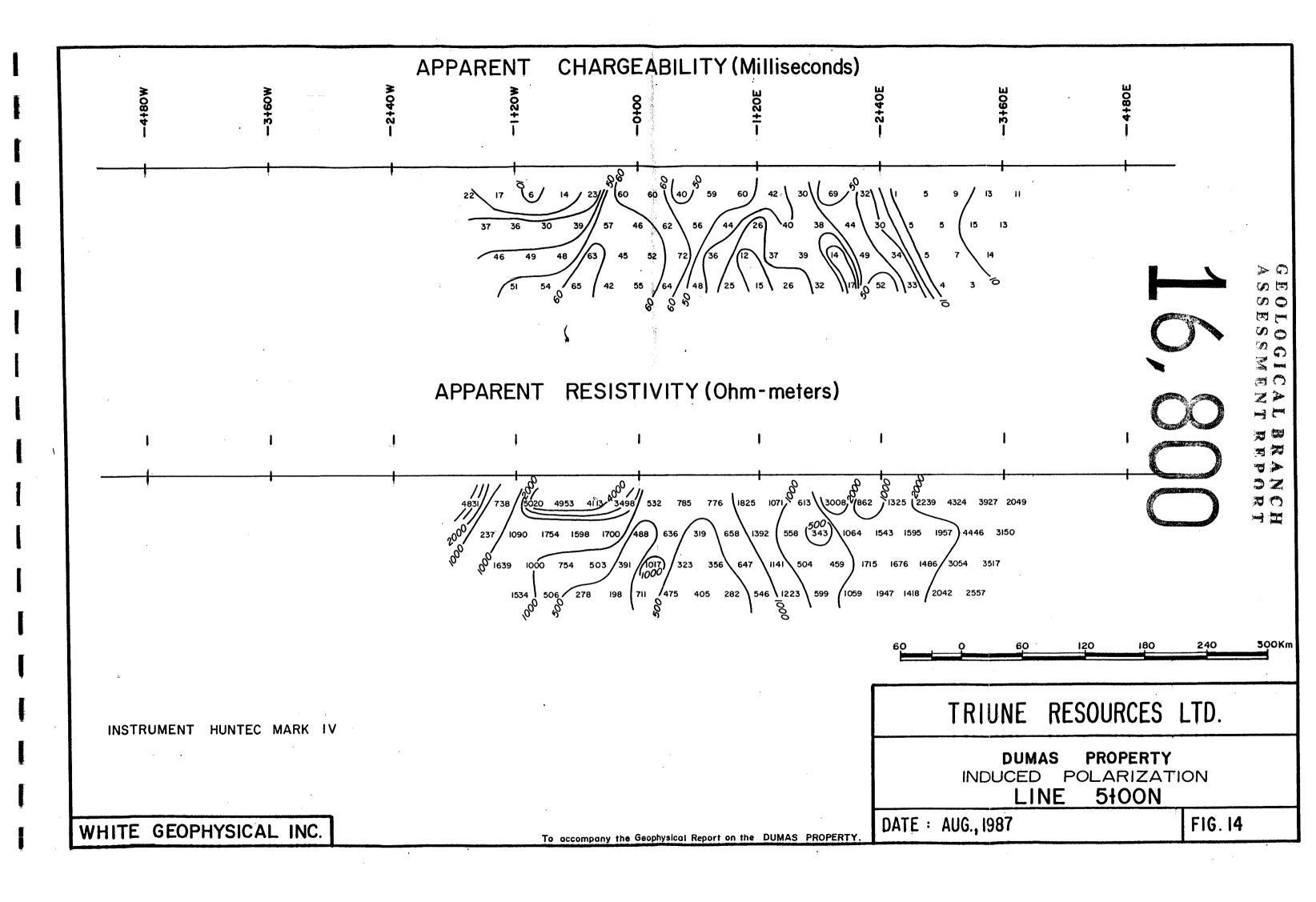
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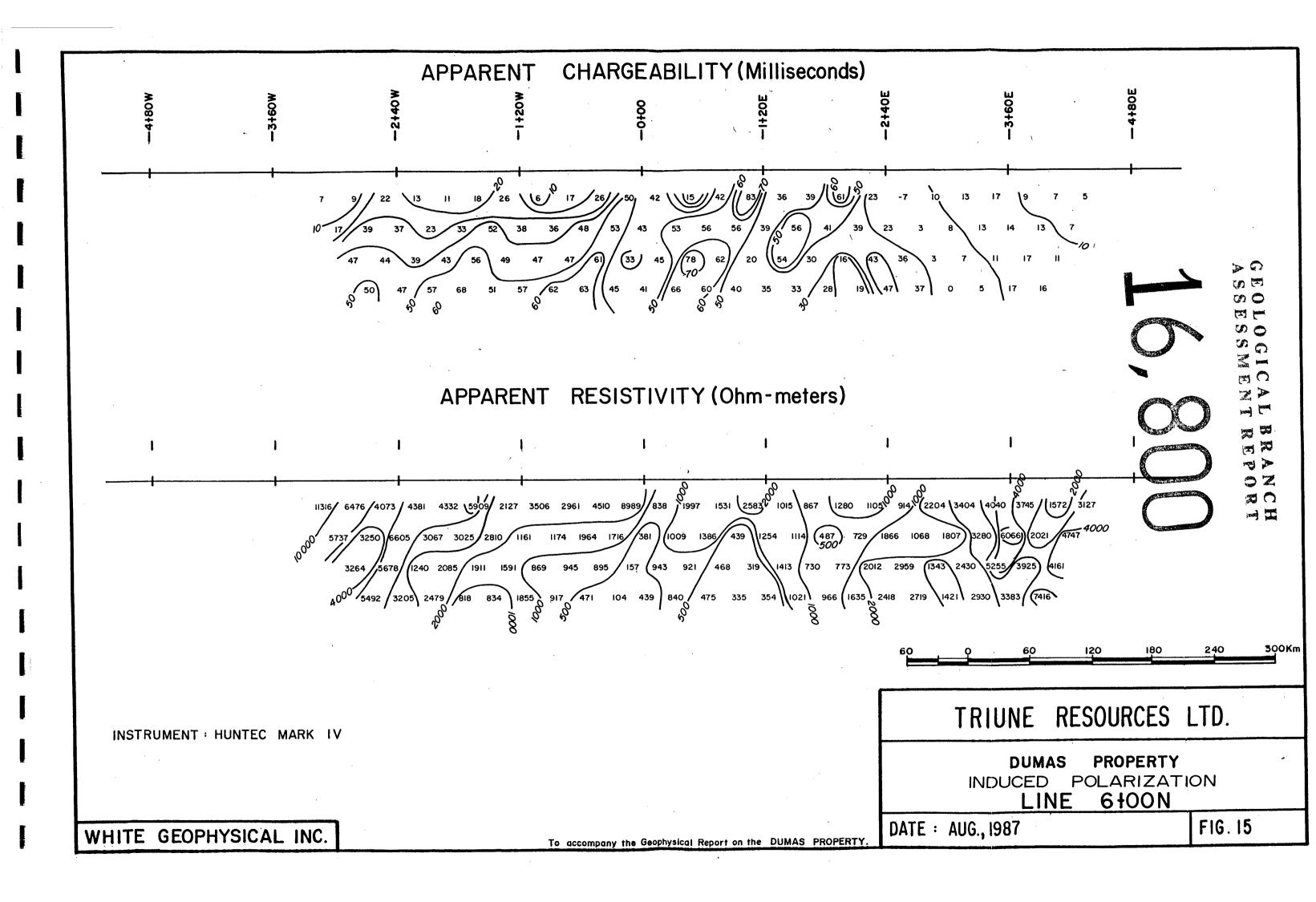


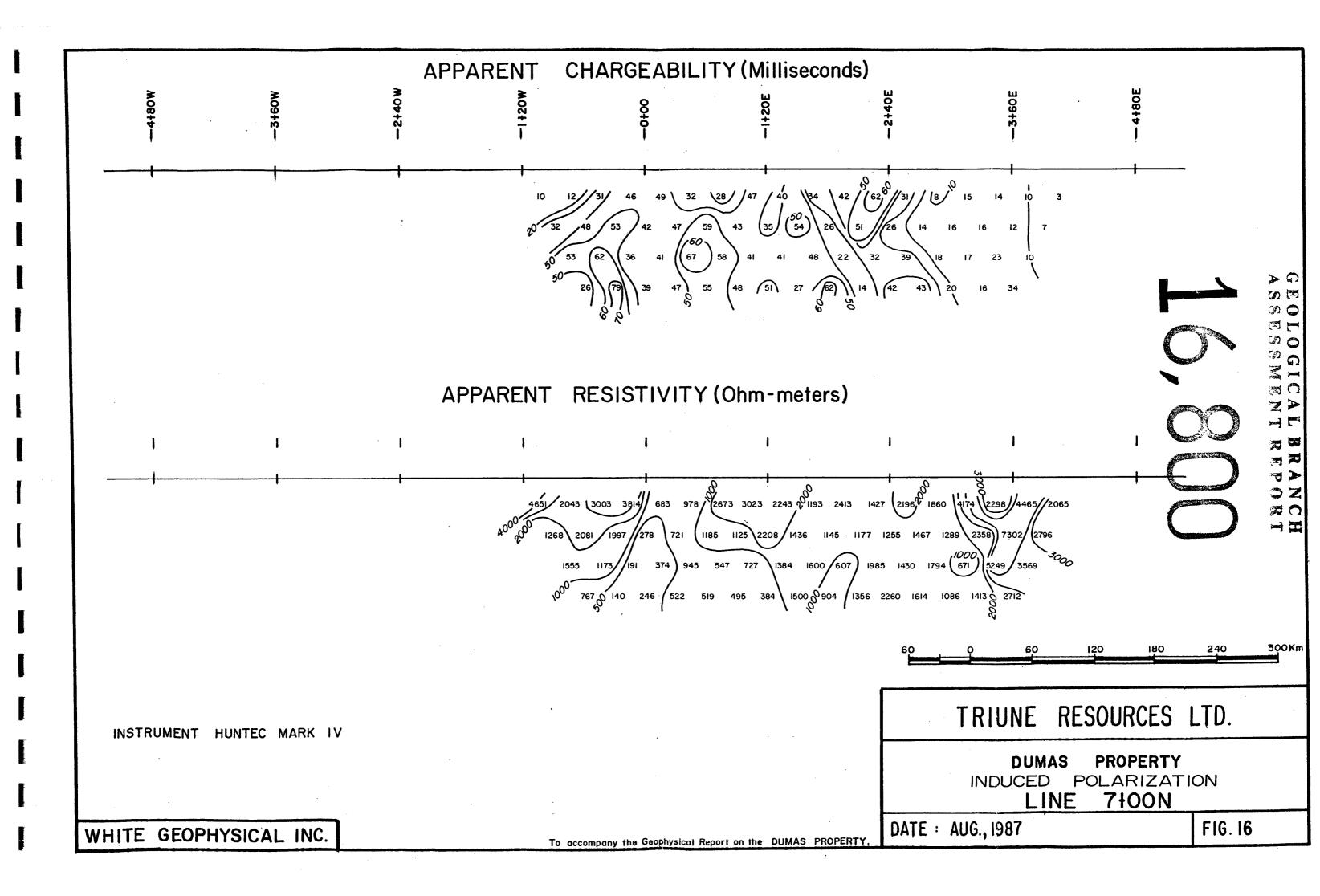


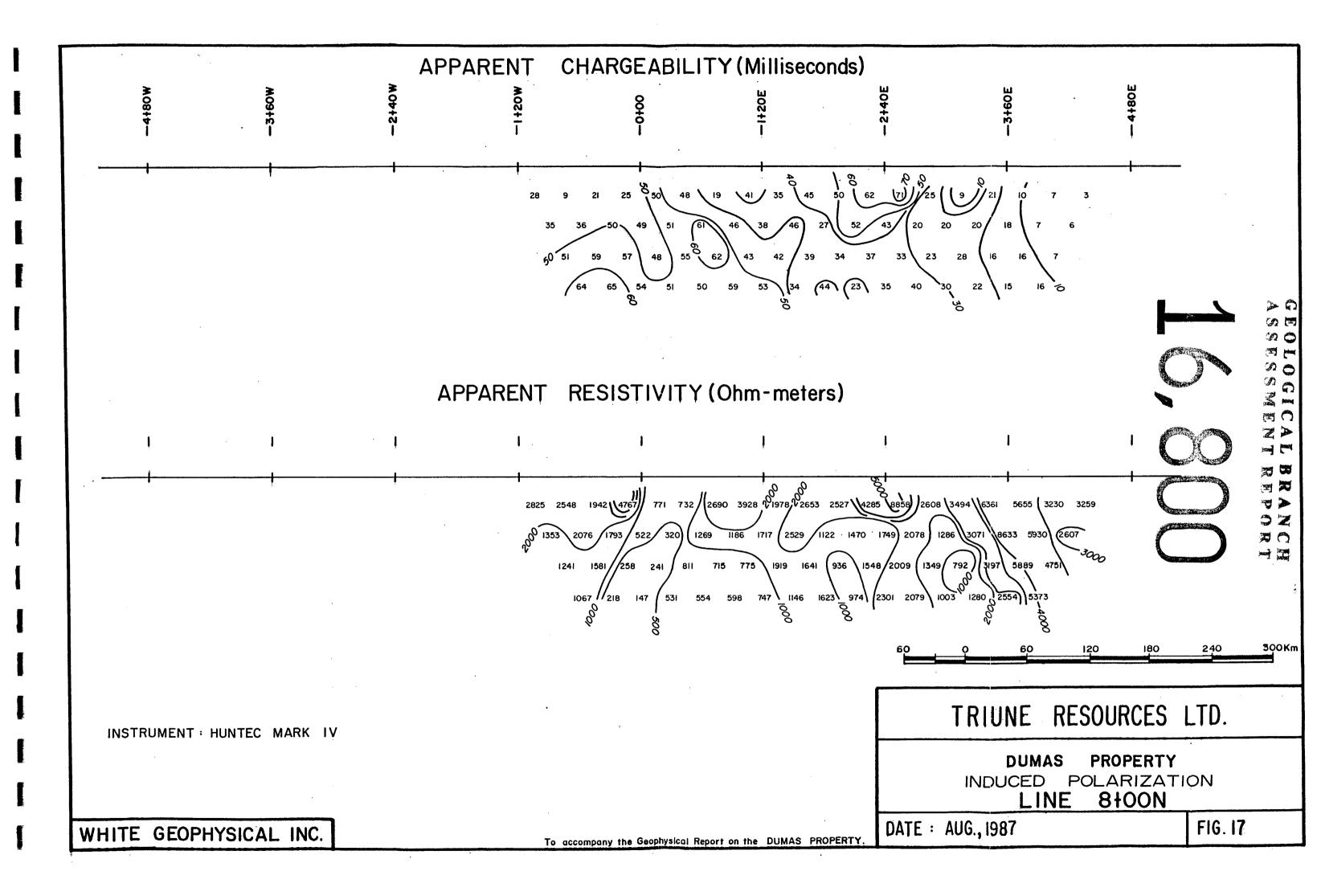


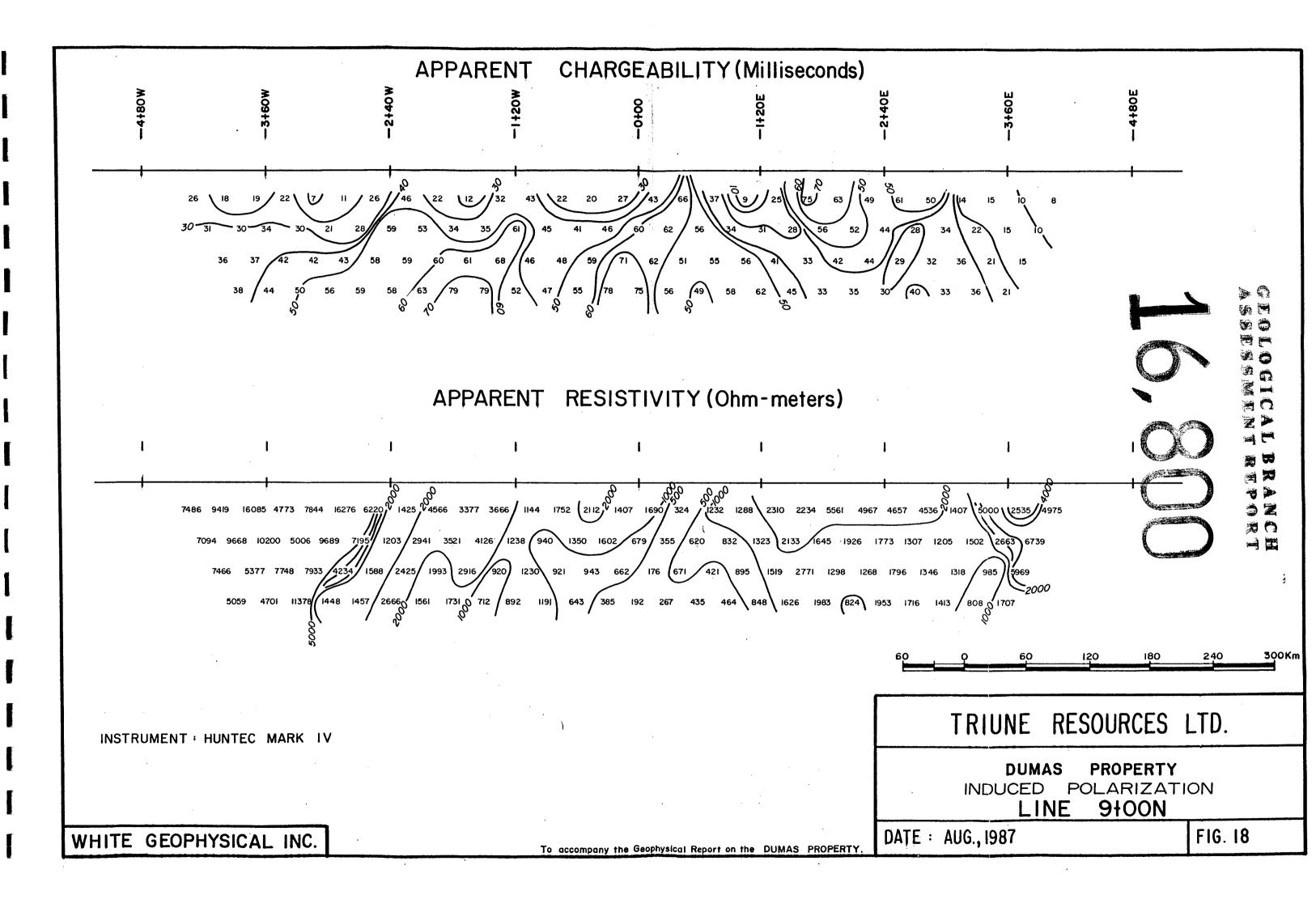


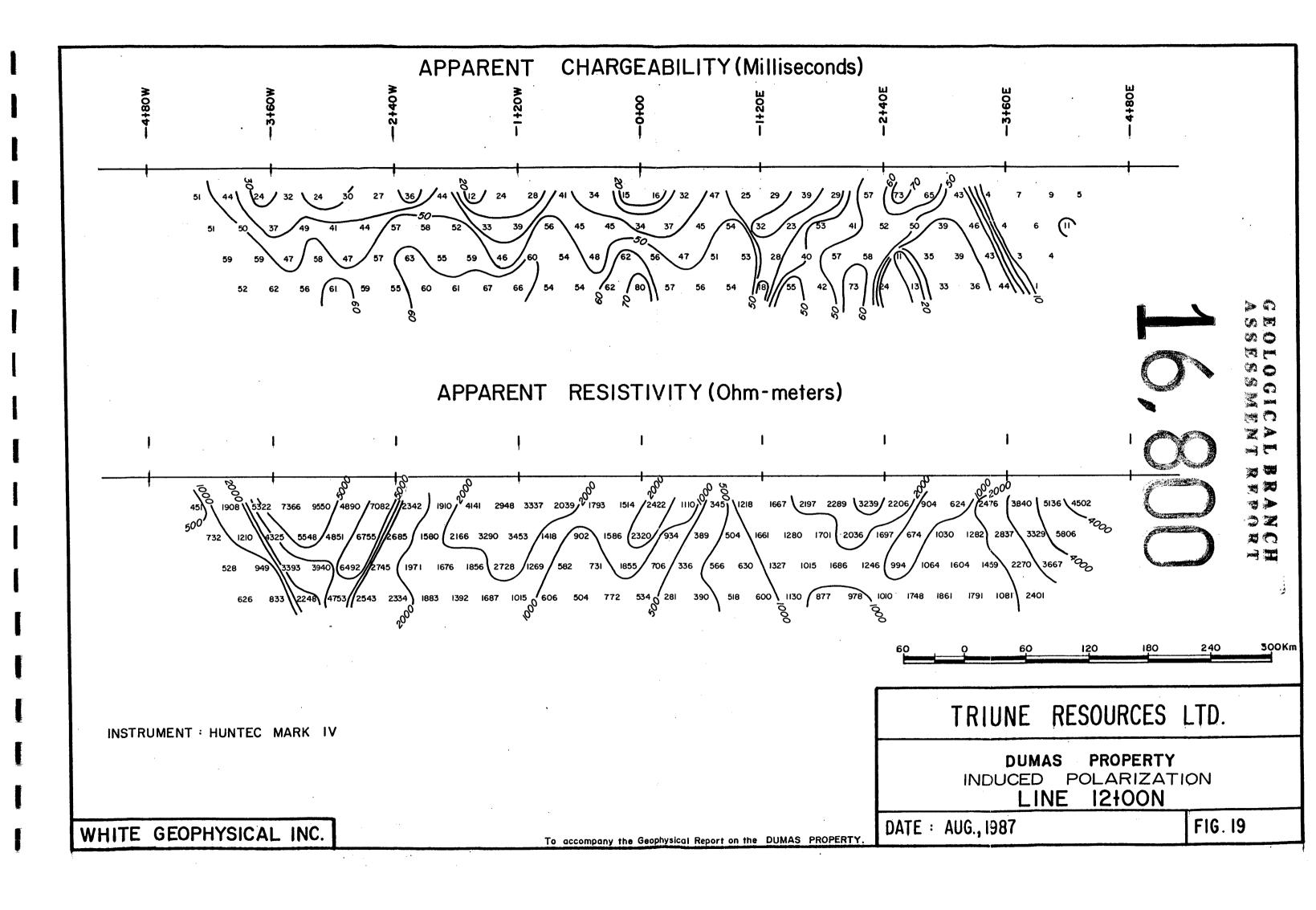


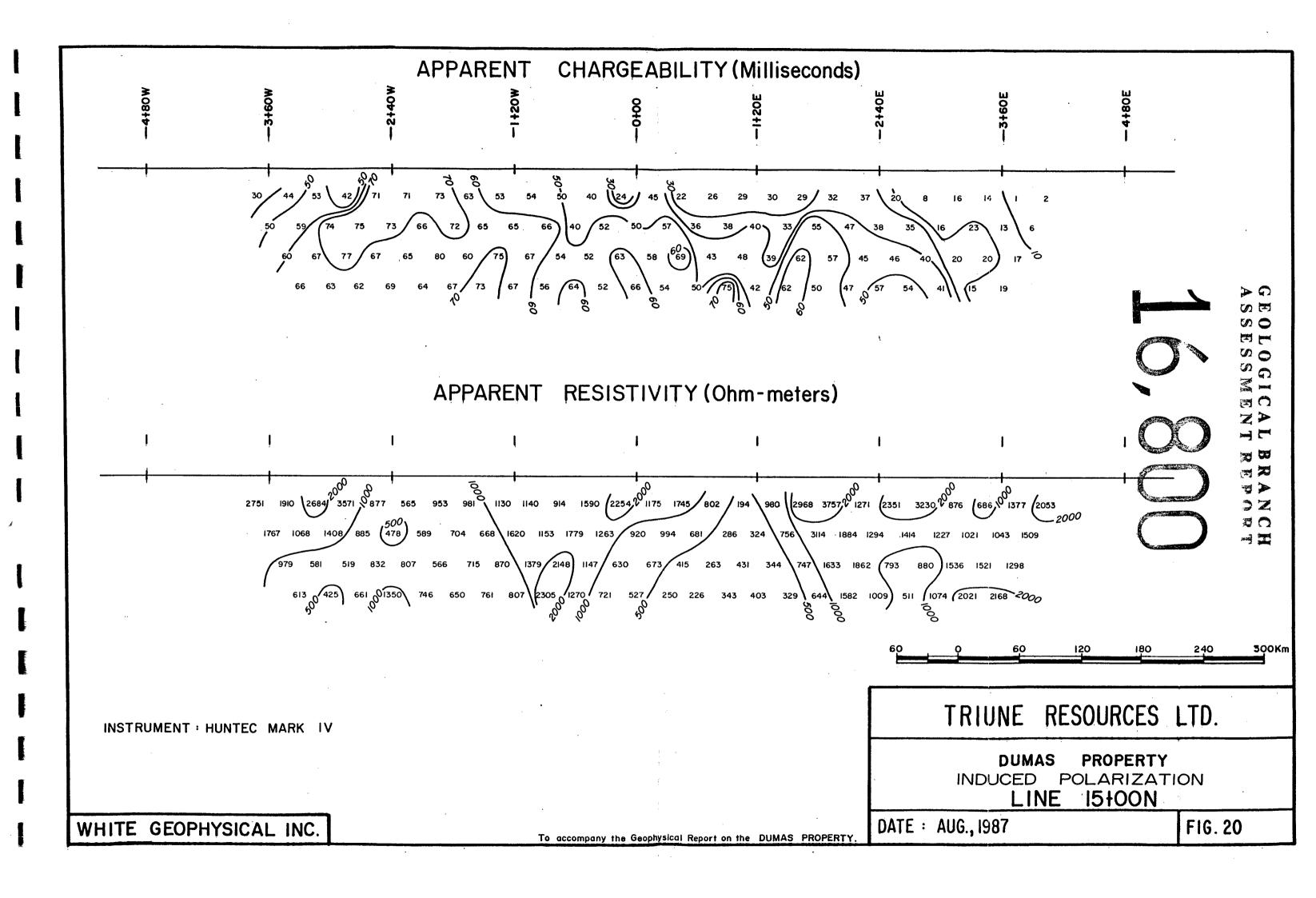


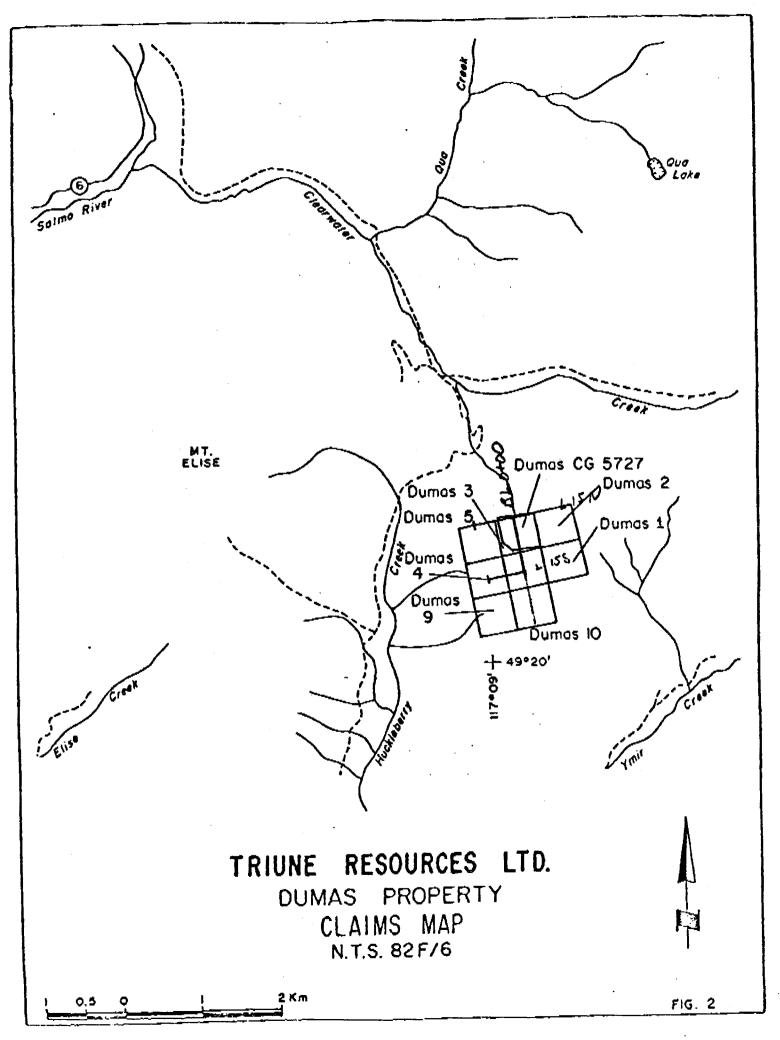






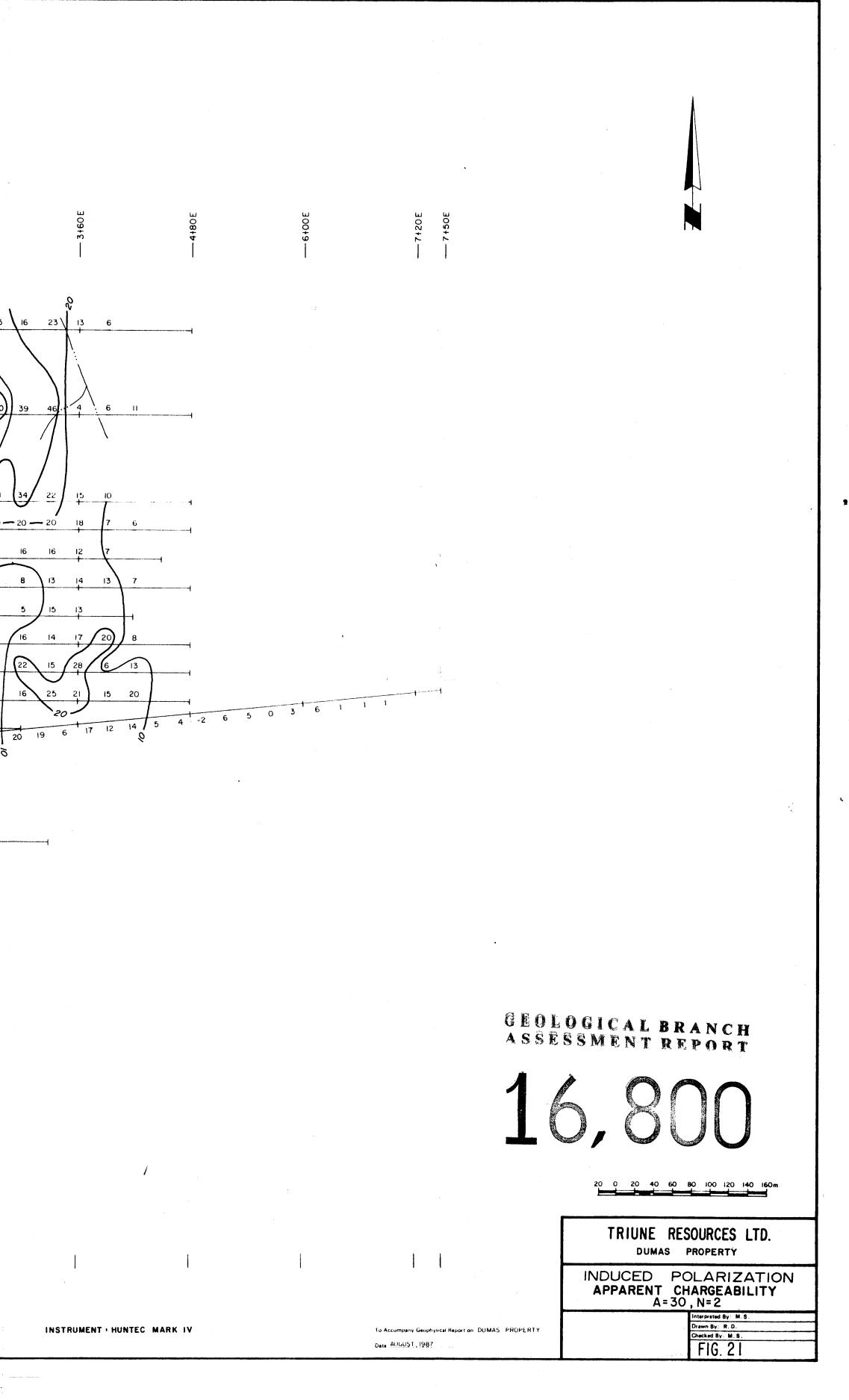


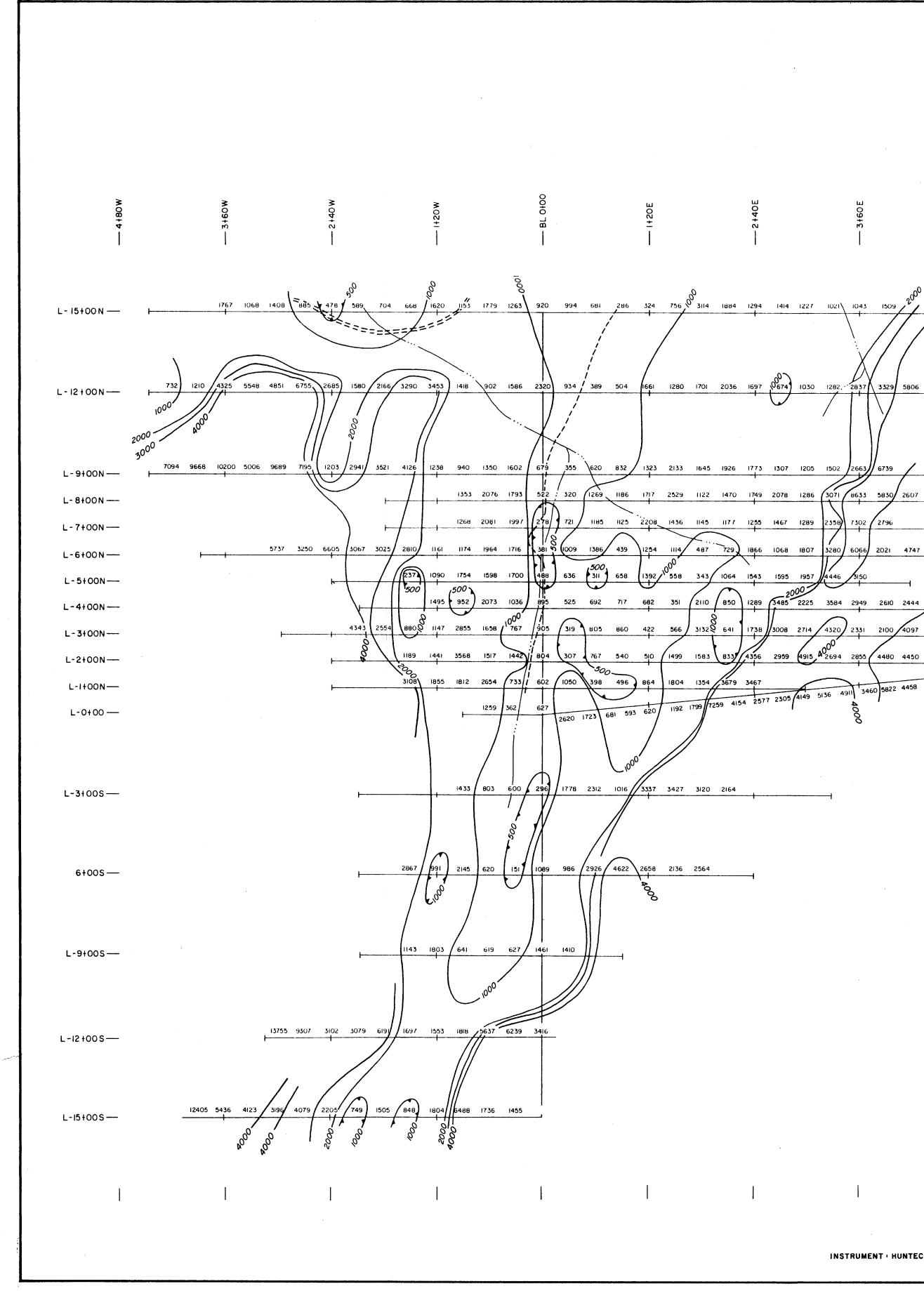




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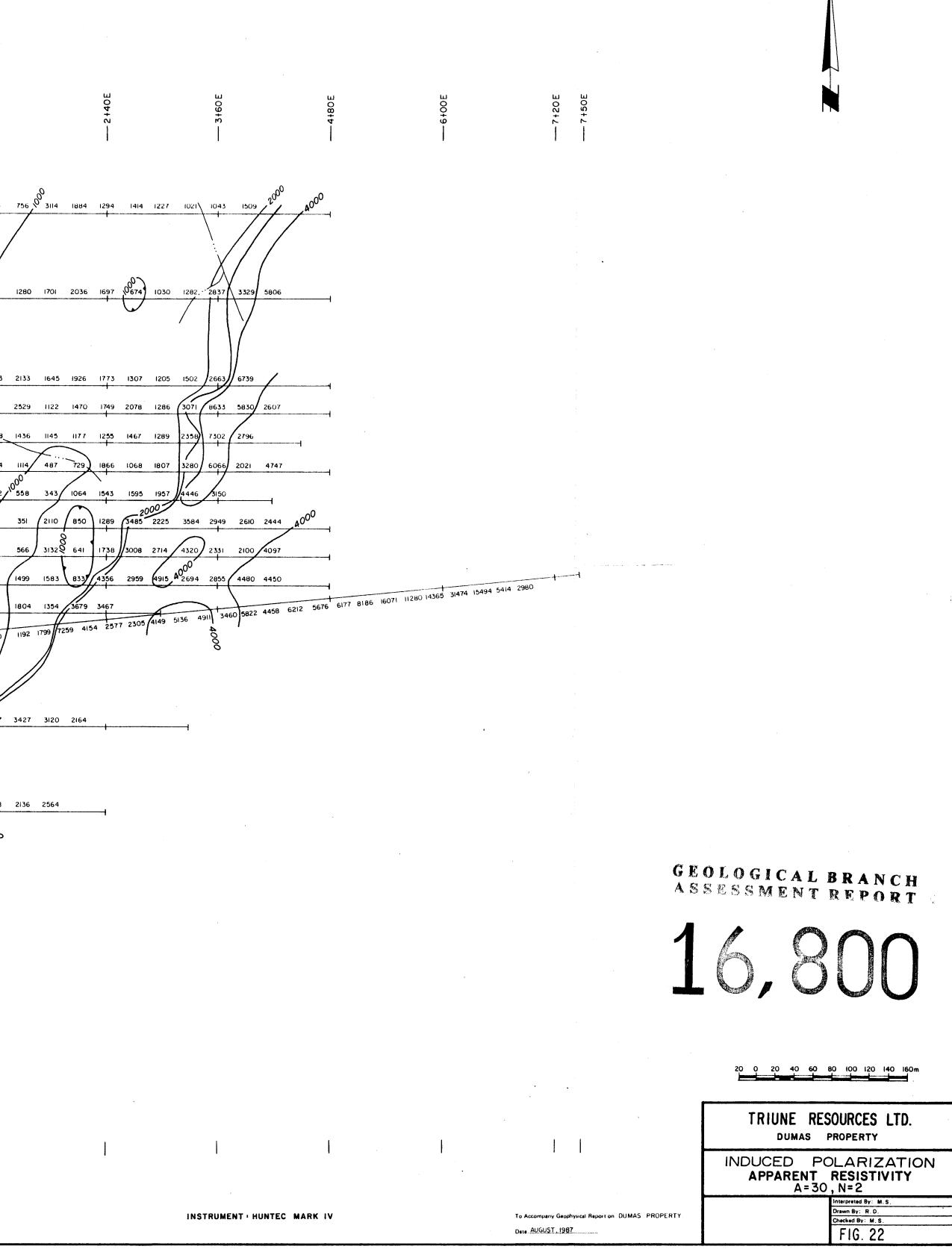
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