EXPLORATION PROGRAM

PICKLE CROW PROPERTY

HIGHLAND - CROW RESOURCES LTD.

PATENTED CLAIMS 757 AND 758

CONNEL TOWNSHIP

NORTHWESTERN ONTARIO

NTS 520/8E

KENORA MINING DIVISION

D.A. SILVERSIDES

MARCH, 1987

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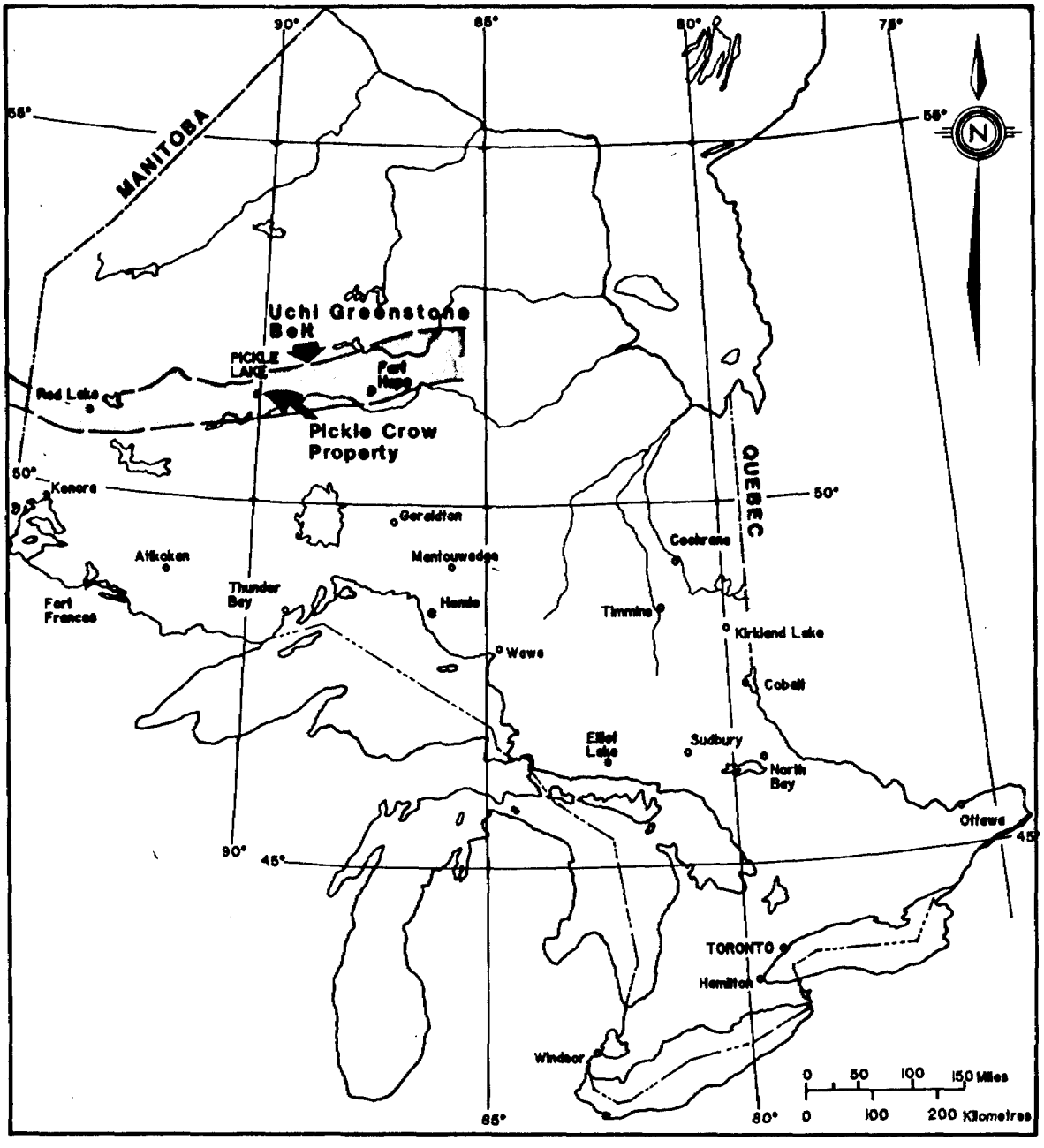
1.0 INTRODUCTION:

The Pickle Crow property of Highland - Crow Resources Ltd. is located in the Uchi greenstone belt of Northwestern Ontario, within Connel Township, Kenora Mining Division (figure 1). The property contains the former producer, Pickle Crow gold mine, which commenced operations in 1934 and up to shutdown in 1966 yielded 1,446,214 ounces of gold from 3,070,475 tons of ore for a recovered grade of 0.452 oz. Au/ton. Production was from quartz vein - shear zones which were mined down to a depth of 4000' below surface.

Highland - Crow started exploration of the property in late 1985, subsequent to optioning the claims from Teck Corporation. 1985 and early 1986 work concentrated on diamond drilling iron formation in the areas of the No. 1 and No.5 Veins.

A substantial property-wide surface exploration program was carried out from early June, 1986 to February 28, 1987, and included line cutting, overburden stripping, detailed geological mapping, geophysical surveys, outcrop sampling for Au assay, and diamond drilling. Emphasis was placed on evaluating areas of iron formation for viable gold mineralization. During the course of this work, sulphide - bearing iron formation was encountered on patented claims 757 and 758. This report describes exploration work carried out within these two claims.



HIGHLAND-CROW RESOURCES LTD.
PICKLE CROW PROPERTY
General Location Map
Fig 1

2.0 SUMMARY AND RECOMMENDATIONS:

Exploration work on patented claims 757 and 758 included 8.6 line miles of line cutting, overburden stripping using a D-8 bulldozer, Drott 50 backhoe, and Wajax high pressure water pump, detailed geological mapping, outcrop sampling for Au assay, 19.12 line miles of magnetometer surveying, and diamond drilling two holes totalling 1,114 feet.

Detailed mapping recognized two main lithologies; iron formation and mafic tuffs. Quartz - carbonate veinlets and lenses carrying pyrite, pyrrhotite and minor tourmaline are present in both rock types.

Outcrop sampling returned significant values ranging up to 0.829 oz Au/ton.

Magnetometer surveying indicates that a large, swamp-covered area within the claims is characterized by high readings likely representing iron formation.

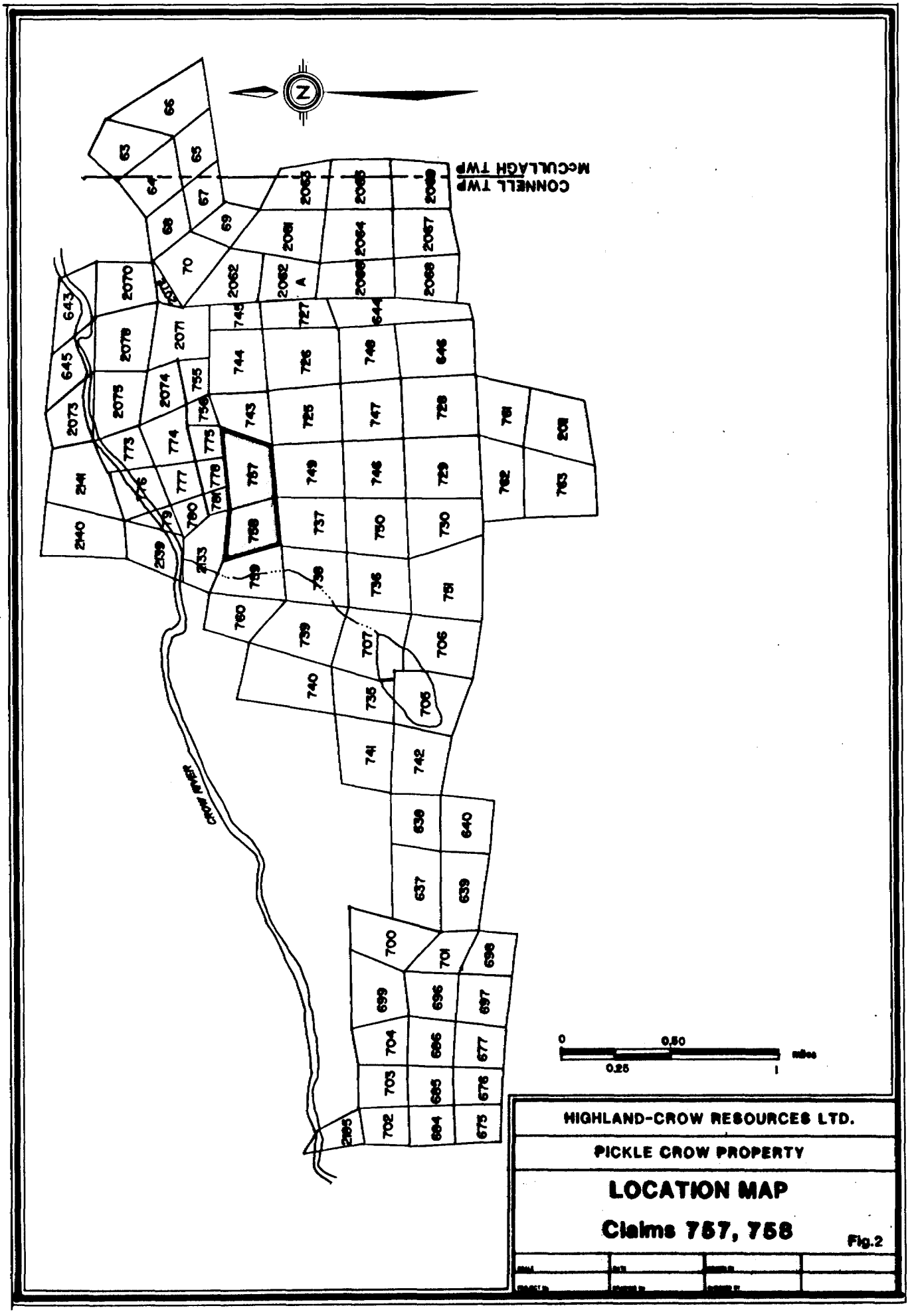
Diamond drilling failed to yield any significant Au values; however, a large part of the area of interest remains to be tested.

Results to date warrant further work in the form of overburden stripping, systematic outcrop sampling using a gas-powered rock drill and blasting, followed by diamond drilling.

3.0 PROPERTY, LOCATION AND ACCESS:

3.1 PROPERTY:

The entire property consists of 98 contiguous patented claims aggregating 3,912 acres in Connel and McCullagh townships, northwestern Ontario,, Kenora Mining Division. Claims 757 and 758 total approximately 94 acres and are situated in the central - north part of the claim block. -see figure 2.



HIGHLAND-CROW RESOURCES LTD.

PICKLE CROW PROPERTY

LOCATION MAP

Claims 757, 758

Fig.2

3.2 LOCATION:

The property is situated at 51°31' N. latitude, 90°04' W. Longitude, NTS map 52 0/8E, and lies approximately 250 air miles north of the city of Thunder Bay.

3.3 ACCESS:

Air access is provided on a scheduled daily basis from Thunder Bay to the town of Pickle Lake situated 6 miles west of the property. -see figure 3. Road access is via Highway 599 from Ignace on the TransCanada Highway, a distance of approximately 190 road miles, then by good gravel road leading eastward 4 miles from the village of Central Patricia. Pickle Lake is used as the staging area for property operations.

4.0 WORK DONE:

Work carried out within claims 757 and 758 included line cutting, overburden stripping, detailed geological mapping, outcrop sampling for assay, magnetometer surveying, and diamond drilling. This work is illustrated as figure 4.

4.1 LINE CUTTING:

Line cutting was carried out over most of the property at 200 foot line spacings under contract by MacDonnel Geophysics Inc. Spacing in some areas was 100 feet in order to provide more accurate survey points for magnetometer readings.

4.2 MAGNETOMETER SURVEY:

Magnetometer surveying was carried out by MacDonnel Geophysics employing a Scintrex MP-2 proton magnetometer with readings at 50 foot stations. Total field strength was measured. A base station with

a reading of 62,045 nt was established at L44W, BL 20S (see figure 4 for location). Surveying was conducted to standard industry procedures with corrections for diurnal drift established by comparing readings from a base magnetometer set up on MacDonnel Geophysics' camp situated on L38W, 33S.

Results of magnetometer surveying of claims 757 and 758 are given in figure 5. 60,000 nt has been subtracted from all magnetometer readings and the difference plotted and contoured. Coverage included in figure 5 is 19.12 line miles. Total line miles surveyed by McDonnel Geophysics during the period Oct. 20 to Nov. 10, 1986 was 72.67 and involved 22 man days. Prorating to the area of figure 5 is estimated to be 5.8 man days.

4.3 OVERBURDEN STRIPPING:

Overburden stripping was carried out using a D-8 bulldozer, a Drott 50 backhoe, and a Wajax high pressure water pump during the periods August 30 - 31, and Sept. 14 - 17, and Sept.25 - 28, 1986. Area stripped is approximately 5500 square yards to an average depth of 1.5 yards. This area is shown in figure 6.

Heavy equipment was operated under contract by Koval Bros. and occupied 6 man days. Wajax washing occupied 8 man days.

4.4 DETAILED GEOLOGICAL MAPPING:

Detailed geological mapping was confined to overburden-stripped areas. Results at a scale of 1" to 40' are given as figure 6. Work was carried out Sept. 29 - Oct. 2, 1987, and occupied 10 man days, including outcrop sampling.

4.5 OUTCROP SAMPLING:

Outcrop sampling for Au assay was conducted during geological mapping. A total of 41 samples were obtained and assayed by Bondar - Clegg and Company Ltd. Results are given in figure 6.

Samples were obtained using rock hammers and generally consisted of 10 lbs. of chips averaging 1" in size. All samples are "representative" of quartz veins, and sulphide - rich areas in iron formation and mafic tuffs.

4.6 DIAMOND DRILLING:

Two holes, HC-86-77 and -78 (see figure 6 for location, figures 7 and 8 for cross-section views, and appended drill logs) totalling 1,114 feet, were drilled by Longyear Canada Inc. using a BQ-equipped #38 Longyear unit during the period Oct. 27 - Nov. 1, 1986. Total man days for drill crew was 24. Core logging occupied 6 man days and splitting 2 man days.

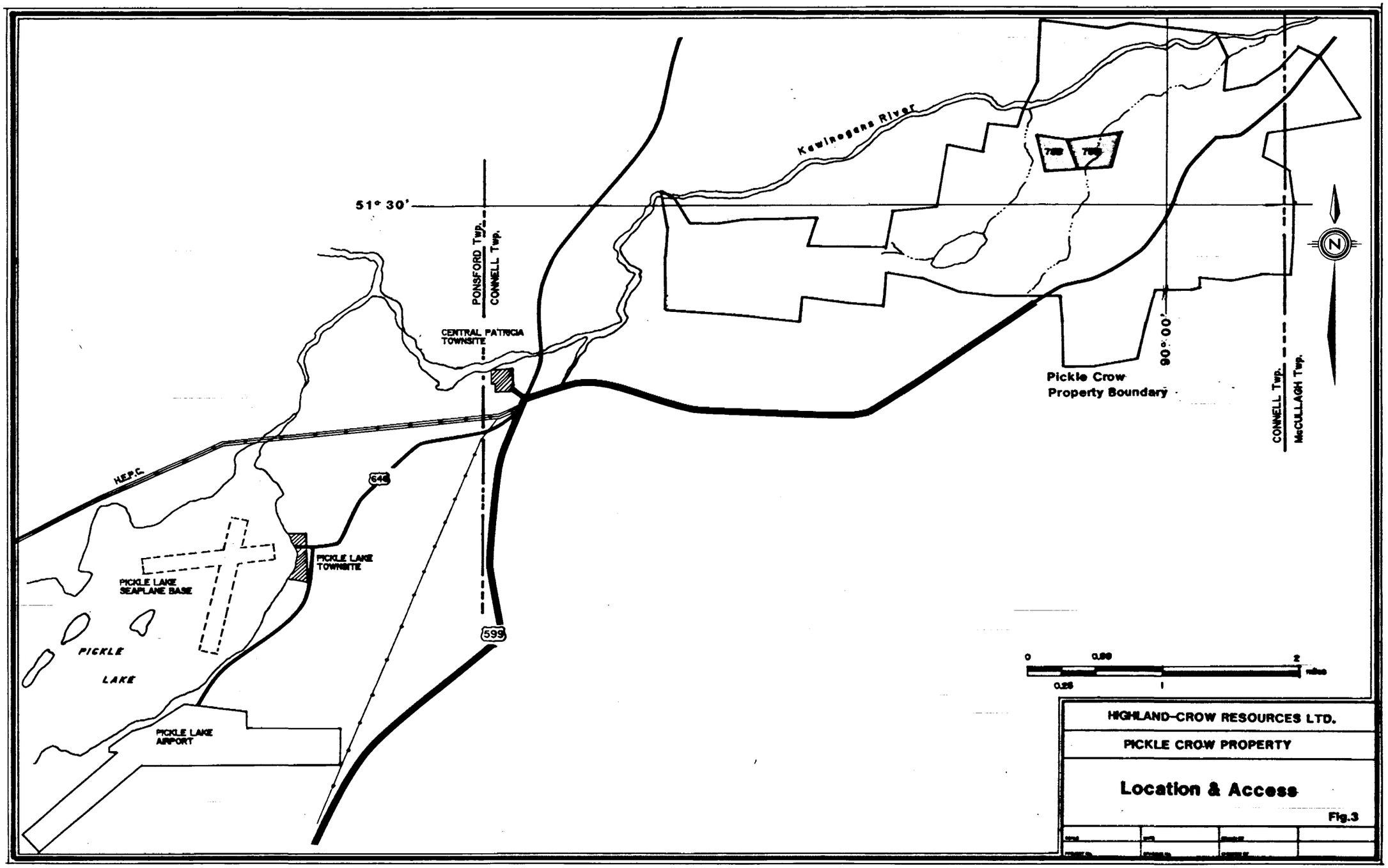
All core considered to have potential for gold values was split with 1/2 being sent to Bondar - Clegg, Ottawa for assay and the remaining 1/2 stored in racks on the Pickle Crow property.

5.0 RESULTS:

Results are summarized as follows:

5.1 MAGNETOMETER SURVEY:

The survey (figure 5) shows a large area of high magnetic susceptibility with values ranging up to 28,000 nT above the base of 60,000 nT. This anomalous area is largely swamp; however, overburden stripping has uncovered iron formation with abundant pyrrhotite and magnetite on the swamp's edge. The anomaly is therefore interpreted as indicating pyrrhotite-magnetite iron formation.

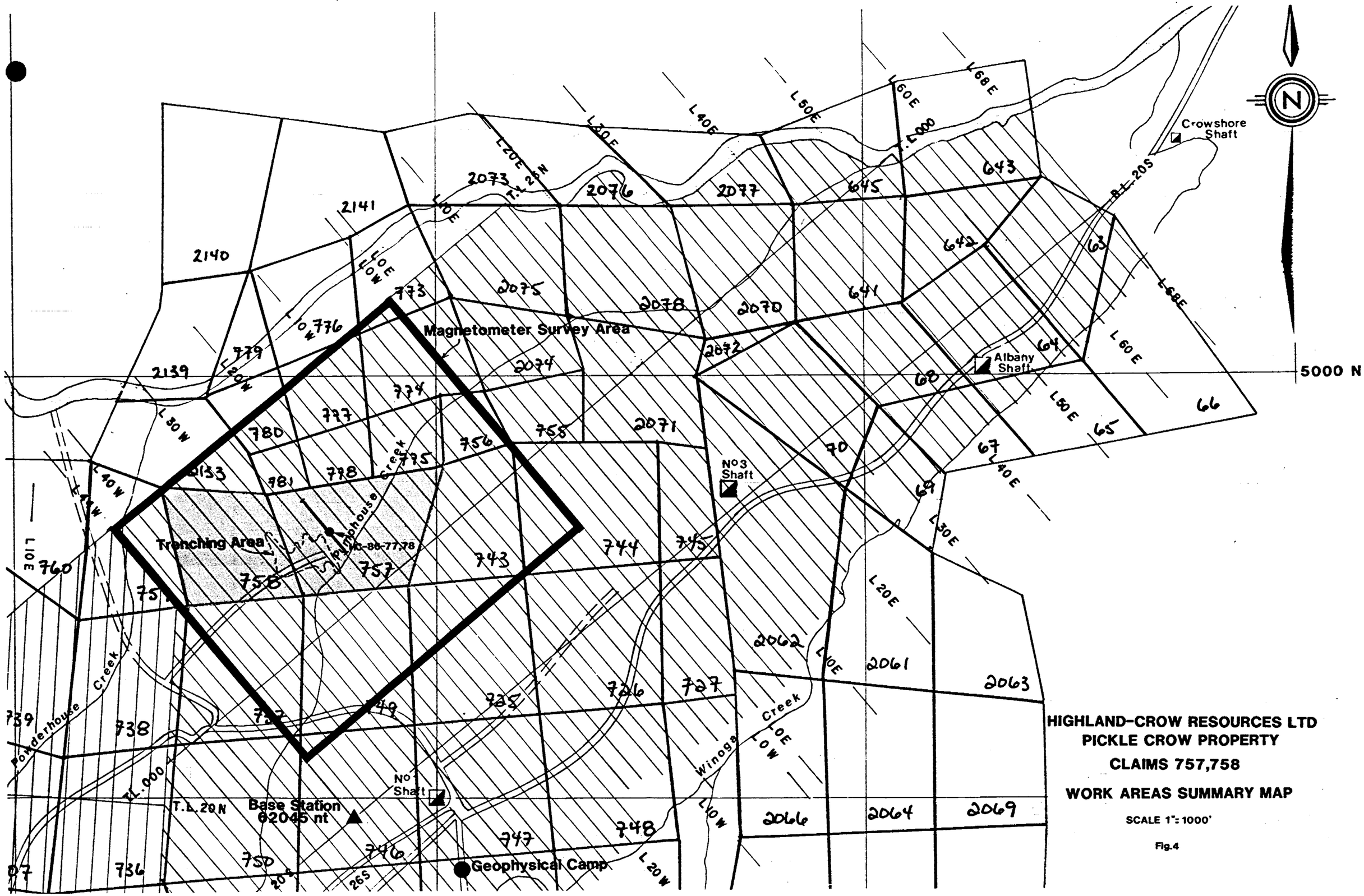


HIGHLAND-CROW RESOURCES LTD.

PICKLE CROW PROPERTY

Location & Access

Fig.3



HIGHLAND-CROW RESOURCES LTD
PICKLE CROW PROPERTY
CLAIMS 757,758
WORK AREAS SUMMARY MAP

SCALE 1": 1000'

Fig.4

5.2 DETAILED GEOLOGICAL MAPPING:

Detailed geological mapping (figure 6) recognized two main lithologies; iron formation and mafic tuffs.

Iron formation consists of banded chert-magnetite with sporadic layers and veinlets of pyrrhotite and pyrite. Bedding is generally 1/16" to 1/4" thick and consists of cream-colored chert and dark blue magnetite. Thin bands and wedges of mafic tuffs are common within the iron formation.

Mafic volcanics are fine-grained, dark green, chloritic and epidotized, schistose tuffs.

Iron formation occurs as highly contorted lenses which have a general attitude of 070°/60° - 80° N. Both iron formation and tuffs are highly sheared with a relatively persistant attitude of 050° / 70° - 80° N.

Quartz-carbonate veinlets and lenses carrying pyrite, pyrrhotite, and trace amounts of tourmaline are common in both rock types. Veins are also highly sheared and contorted. Abundant ankerite occurs in the more highly sheared and quartz-veined areas.

5.3 OUTCROP SAMPLING:

Five of the 41 samples taken returned values in excess of 0.10 oz Au/ton. These significant values range up to 0.829 oz Au/ton. Results are given in figure 6.

No pattern to grade distribution is evident. Systematic channel sampling, to include the use of a gas power rock drill and blasting is recommended.

5.4 DIAMOND DRILLING:

The objectives of diamond drilling were to test for Au values in iron formation and quartz-veined mafic tuffs, and to provide stratigraphic information. Detailed results are given in the appended drill logs and in figures 7 and 8 showing cross section views.

Both holes intersected sulphide - rich iron formation and quartz - pyrite - tourmaline veins cutting mafic volcanics; however no significant Au values were detected in assaying.

6.0 CONCLUSIONS:

Overburden stripping, detailed geological mapping, and outcrop sampling in claims 757 and 758 have revealed significant areas of sulphide - rich iron formation and quartz-sulphide-tourmaline veins in mafic tuffs with values of up to 0.829 oz Au/ton.

Magnetometer surveying indicated that a large swamp-covered area within the claims is charaterized by high values likely representing iron formation. Iron formation is known to be an important host to significant gold deposits elsewhere in the Pickle Lake region.

Diamond drilling failed to yield significant Au values; however, it is considered that gold mineralization is likely to be sporadic and several drill holes will be required to adequately test the area.

D.A.Silversides

B.Sc., M.Sc., F.G.A.C.

March 19, 1987

PERSONNEL

Line Cutting:	Period	Days
MacDonnel Geophyics P.O. Box 595 North Bay, Ontario 4 men x 27 days	Oct.5 - 31, 1987	13.8 man days (prorated from 108 man days for entire Pickle Crow Grid).

Geological Mapping / Outcrop Sampling:

J. Scott - Geologist 34 Lee Ave. North Bay, Ontario P1A 2J6	Sept.29 - Oct.2, 1987	10 man days
J. Janzen - Geologist 92 Norfolk Crt. Sudbury, Ontario 2 men x 5 days		

Magnetometer Surveying:

MacDonnel Geophysics Ltd. G. MacDonnel Geophysical Technician	Oct.20 - Nov.10, 1986	5.8 man days (prorated from 22 man days for entire Pickle Crow Grid job).

Overburden Stripping:

(a)	D-8 Bulldozer and Drott 50 backhoe Koval Bros. Pickle Lake, Ontario 1 man x 6 days	Aug. 30 - 31, Sept.14 - 17, 1987	6 man days
(b)	Wajax Washing J. Scott J. Janzen 2 men x 4 days	Sept.25 - 28, 1987	8 man days

Diamond Drilling:

(a)	Longyear Canada Inc. North Bay, Ontario 4 men x 6 days	Oct.27 - Nov.1, 1987	24 man days

(b) Core Logging — Oct.30 - Nov.3, 1986 — 5 man days
R. Fenlon
305 Van Horne
Thunder Bay, Ontario
P7A 3G2

(c) Core Splitting — Nov.3 - 4, 1986 — 2 man days
Ron Hill
c/o Noramco Explorations Inc.
P.O. Box 306
Pickle Lake, Ontario

Report Preparation:

(a) Writing — March 16 - 19, 1987 — 4 man days
D.A.Silversides - Geologist
581 Ellis St.
N. Vancouver, B.C.
V7H 2G8

(b) Drafting — March 16 - 19, 1987 — 4 man days
Al Wells
R.R. #1
Burford, Ontario

(c) Typing — March 18 - 19, 1987 — 2 man days
M. Sarzynski
c/o Normaco Explorations Inc.
P.O. Box 306
Pickle Lake, Ontario.

NORAMCO EXPLORATIONS INC. HC-86-77

03-18-1987 DIAMOND DRILL LOG

Property:	Pickle Crow (1422)	NTS:	52-O/8 E	Township:	Connell
Partner:	Highland Crow Res.	Claim #:	Pa. 757	Coordinates:	24+00 W , 8+75 N
Azimuth:	140 degrees	Dip:	-60 degrees	Length:	497 feet
Logged By:	R.D. Fenlon	Casing:	Out	Elevation:	Surface
Date Started:	Oct. 31 1986	Date Completed:	Nov. 1 1986	Date Logged:	Nov. 1-3 1986
Core Size:	BQ	Core Location:	On Site	Samples Shipped:	
Drill Company:	Canadian Longyear Ltd.	Overburden:	4 feet		

Acid Dip Tests

1. 307 ft -58 deg. # 2. 497 ft -50 deg.

Purpose

To test the subsurface extent of surface grab samples at the Pumphouse Creek zone which assayed 0.83 0.58 and 0.32 oz. Au./ton and to provide stratigraphic information.

Conclusions

A total of 35' of iron formation was encountered. Secondary pyrite and pyrrhotite characteristic of the surface grab samples was abundant in core. Assays in the ppm range.

Recommendations

Reassaying this core is recommended prior to further drilling

From(ft)	To(ft)	Description	Mineralization(s)	Alteration(s)
0.0	4.0	OVERBURDEN		
4.0	133.0	MAFIC VOLCANIC	Pyrite	
133.0	143.0	BANDED IRON FORMATION	Pyrite Pyrrhotite	
143.0	175.0	MAFIC VOLCANIC		
175.0	184.7	BANDED IRON FORMATION	Pyrite	
184.7	203.3	MAFIC VOLCANIC	Pyrite	
203.3	206.6	CHERTY IRON FORMATION	Pyrite Pyrrhotite	
206.6	246.6	MAFIC VOLCANIC	Pyrite	
246.6	248.6	BANDED IRON FORMATION		
248.6	298.0	MAFIC VOLCANIC	Pyrite Pyrrhotite	
298.0	304.0	LEAN IRON FORMATION		
304.0	334.6	MAFIC VOLCANIC		
334.6	347.0	GABBRO		
347.0	452.7	MAFIC VOLCANIC		
452.7	456.0	BANDED AND BRECCIATED IRON FROMATION		
456.0	497.0	MAFIC VOLCANIC		
	497.0	END OF HOLE.		

From (ft)	To (ft)	Description	Sample No.	From (ft)	To (ft)	Width (ft)	Au (oz/t)	Ag (oz/t)	Cu (ppm)	Zn (ppm)	Pb (ppm)
0.0	4.0	OVERBURDEN									
4.0	133.0	**MAFIC VOLCANIC** Dark Green Mafic Minerals: 90% Plagioclase: 10% Medium Grained Foliation at 45 Deg. Cax. 10% Quartz-Carbonate Veining Random Angles Avg. Width 1" Pyrite: 1% disseminated cubes ----------Details---------- Foliation development is variable over this interval Altered feldspar laths parallel the foliation Pyrite occurs adjacent to and within quartz veins Dense black chlorite borders most of the quartz veins Tourmaline occurs in quartz veins between 33.9' and 43.1'										
133.0	143.0	**BANDED IRON FORMATION** Banded Tan to Brown -: Chert 75% -: Magnetite 15% Ash: 10% Aphanitic Banding at 46 Deg. Cax. 5% Quartz Veining Random Angles									

From (ft)	To (ft)	Description	Sample No.	From (ft)	To (ft)	Width (ft)	Au (oz/t)	Ag (oz/t)	Cu (ppm)	Zn (ppm)	Pb (ppm)
		Avg. Width 1"									
		Pyrite: as a magnetite replacement localized along fractures Pyrrhotite: is associated with the pyrite									
		----------Details----------									
143.0	175.0	**MAFIC VOLCANIC**									
		Dark Green Mafic Minerals: 90%									
		Plagioclase: 10% Medium Grained Foliation at 52 Deg. Cax. 10% Quartz-Carbonate Veining Random Angles Avg. Width 1"									
		----------Details----------									
		@ 149.5-152.3' breccia with 25% mafic clasts 70% quartz matrix and 5% pyrite @ 169-175.3' fine grained and silicified mafic volcanic									
175.0	184.7	**BANDED IRON FORMATION**									
		Same as 133.3-143 Banded Tan to Black -: Chert 80% -: Magnetite 20%									
		Banding at 67 Deg. Cax.									

From (ft)	To (ft)	Description	Sample No.	From (ft)	To (ft)	Width (ft)	Au (oz/t)	Ag (oz/t)	Cu (ppm)	Zn (ppm)	Pb (ppm)
		Pyrite: occurs in trace amounts as magnetite replacement ----------Details----------									
184.7	203.3	**MAFIC VOLCANIC** Dark Green Mafic Minerals: 90% Plagioclase: 10% Medium Grained 3% Quartz Veining Avg. Width 0.3" Pyrite: trace amounts associated with shear and veins ----------Details---------- @ 188.8' pyrite occurs within a 1' shear Between 191.2' and 192.1' two quartz carbonate veins occur measuring 7" and 2" respectively; contain chert fragments pyrite is concentrated along the lower walls of these veins									
203.3	206.6	**CHERTY IRON FORMATION** Banded Tan to Grey -: Chert 90% -: Magnetite 7% Sulphides: 3% Banding at 45 Deg. Cax.									

From (ft)	To (ft)	Description	Sample No.	From (ft)	To (ft)	Width (ft)	Au (oz/t)	Ag (oz/t)	Cu (ppm)	Zn (ppm)	Pb (ppm)
		Pyrite: trace Pyrrhotite: trace ----------Details---------- Magnetite has been replaced by pyrite and pyrrhotite Remaining magnetite shows signs of digestion at its margins Brecciation was not observed									
206.5	246.5	MAFIC VOLCANIC Dark Green Mafic Minerals: 95% Medium Grained Foliation at 45 Deg. Cax. 5% Quartz Veining Random Angles Avg. Width 1" Pyrite: localized in or beside quartz veins									
		----------Details---------- Chloritic SHEAR at 227-227.5' contains 5% pyrite Between 234.8-246.5' fine stygmatic quartz tourmaline veins totalling 5% of this interval were observed									
246.5	248.5	BANDED IRON FORMATION Banded Black to Tan -: Chert 60% -: Magnetite 40% Aphanitic									

From (ft)	To (ft)	Description	Sample No.	From (ft)	To (ft)	Width (ft)	Au (oz/t)	Ag (oz/t)	Cu (ppm)	Zn (ppm)	Pb (ppm)
		Banding at 48 Deg. Cax.									
		----------Details----------									
		Only a small fraction of the magnetite has been replaced Chert layers appear yellowed and glassy									
248.6	298.0	**MAFIC VOLCANIC**									
		Light Green Mafic Minerals: 85% Quartz-Carbonate: 15% Medium Grained									
		Foliation at 47 Deg. Cax. 15% Quartz-Carbonate Veining Random Angles Avg. Width 0.5" Pyrite: trace Pyrrhotite: trace									
		----------Details----------									
298.0	304.0	**LEAN IRON FORMATION**									
		Banded Tan to Grey -: Chert 90% -: Magnetite 10% Banding at 48 Deg. Cax.									
		----------Details----------									
		Where brecciated the matrix is chlorite									

From (ft)	To (ft)	Description	Sample No.	From (ft)	To (ft)	Width (ft)	Au (oz/t)	Ag (oz/t)	Cu (ppm)	Zn (ppm)	Pb (ppm)
		Pyrite is confined to these chlorite rich areas									
304.0	334.6	**MAFIC VOLCANIC** Light Green Mafic Minerals: 90% Plagioclase: 10% Foliation at 52 Deg. Cax. ----------Details---------- Euhedral pyrite is disseminated throughout Quartz veining (<10%) occurs at high angles to the foliation									
334.6	347.0	**GABBRO** Dark Grey to Green Mafic Minerals: 80% Plagioclase: 20% Coarse Grained ----------Details---------- The phenocrysts are coarse composite grains of chlorite in a medium grained chloritic groundmass Between 339.5 and 347' the foliation is strongly developed									
347.0	452.7	**MAFIC VOLCANIC** Green									

From (ft)	To (ft)	Description	Sample No.	From (ft)	To (ft)	Width (ft)	Au (oz/t)	Ag (oz/t)	Cu (ppm)	Zn (ppm)	Pb (ppm)
		Mafic Minerals: 85% Quartz-Carbonate: 10% Sulphides: 5% Fine to Medium Grained Foliation at 55 Deg. Cax. ----------Details---------- Silicified with abundant quartz veins @ 347-375' & 381-395' Pyrite concentrations vary from 2 to 30% the latter occuring at 387-392' 403.4-408.4' is brecciated with quartz veining to 35% and local sulphide enrichments to 25%									
452.7	456.0	**BANDED AND BRECCIATED IRON FROMATION** Banded Black to Tan -: Chert 60% -: Magnetite 40% Aphanitic Banding at 60 Deg. Cax. ----------Details---------- Bleaching accompanies local brecciation The brecciated areas are also the sites of pyrite enrichment @ 453.3-453.7 pyrite is enriched to 40%									
456.0	497.0	**MAFIC VOLCANIC** Dark Green									

From (ft)	To (ft)	Description	Sample No.	From (ft)	To (ft)	Width (ft)	Au (oz/t)	Ag (oz/t)	Cu (ppm)	Zn (ppm)	Pb (ppm)
		Mafic Minerals: 80% Plagioclase: 20% Medium Grained ----------Details---------- Lenses and layers of felsic material 0.5" wide contain the only pyrite in this interval (<2%)									
497.0		END OF HOLE.									

ASSAY SAMPLES

Sample #	From(ft)	To(ft)	Length(ft)	Gold(oz/ton)	Remarks
13851	17.00	19.00	2.00	0.00	
13852	25.90	27.00	1.10	0.00	
13853	36.30	38.30	2.00	0.06	
13854	60.70	63.80	3.10	0.00	
13855	72.20	74.30	2.10	0.00	
13856	77.00	79.00	2.00	0.00	
13857	83.80	87.00	3.20	0.00	
13858	89.40	91.90	2.50	0.00	
13859	97.60	99.30	1.70	0.00	
13860	124.80	127.10	2.30	0.00	
13861	129.10	130.60	1.50	0.00	
13862	133.30	138.20	4.90	0.00	
13863	138.20	143.00	4.80	0.02	
13864	149.50	152.30	2.80	0.00	
13865	144.50	146.10	1.60	0.00	
13866	175.20	179.80	4.60	0.00	
13867	179.80	184.80	5.00	0.00	
13868	184.80	187.60	2.80	0.00	
13869	191.20	192.10	0.90	0.00	
13870	203.30	206.60	3.30	0.00	
13871	212.60	213.60	1.00	0.00	
13872	234.80	236.60	1.80	0.00	
13873	246.60	248.60	2.00	0.00	
13874	266.00	270.00	4.00	0.00	
13875	279.80	282.50	2.70	0.00	
13876	275.20	279.50	4.30	0.00	
13877	281.40	284.60	3.20	0.00	
13878	288.80	291.20	2.40	0.00	
13879	262.10	263.40	1.30	0.00	
13880	298.30	301.00	2.70	0.00	
13881	364.40	365.60	1.20	0.00	
13882	375.80	378.00	2.20	0.00	
13883	381.00	386.00	5.00	0.00	
13884	386.00	391.00	5.00	0.00	
13885	391.00	395.00	4.00	0.00	
13886	402.50	405.40	2.90	0.00	
13887	405.40	409.00	3.60	0.00	
13888	413.50	414.80	1.30	0.00	
13889	418.20	422.10	3.90	0.00	
13890	424.10	426.00	1.90	0.00	
13891	450.60	452.00	1.40	0.00	
13892	452.00	457.00	5.00	0.00	

Property:	Pickle Crow (1422)	NTS:	52-O/8 E	Township:	Connell
Partner:	Highland Crow Res.	Claim #:	757	Coordinates:	24+00 W , 8+75 N
~~Azimuth:~~	~~320 degrees~~	~~Dip:~~	~~-50 degrees~~	~~Length:~~	~~616 feet~~
Logged By:	R.D. Fenlon	Casing:	Out	Elevation:	Surface
Date Started:	Oct. 28 1986	Date Completed:	Oct. 30 1986	Date Logged:	Oct. 30 1986
~~Core Size:~~	~~BQ~~	~~Core Location:~~	~~On site~~	~~Samples Shipped:~~	
Drill Company:	Canadian Longyear Ltd.	Overburden:	4 feet		

Acid Dip Tests

1. 300 ft 30 deg. # 2. 617 ft 21 deg.

Purpose

To test for gold values in the iron formation and quartz veined mafic ~~volcanics at the Pumphouse Creek zone. Information regarding stratigraphy~~ and a significant magnetic high to the north were sought.

Conclusions

No significant gold values were encountered. Sulphide mineralization and tourmaline in pyrite veins were observed in several iron formation units. A total thickness of 92' of iron formation accounts for the mag high.

~~Recommendations~~

Since the gold values on surface appear patchy several drill holes would be needed to determine the extent of the mineralization.

From(ft)	To(ft)	Description	Mineralization(s)	Alteration(s)
0.0	4.0	OVERBURDEN		
4.0	150.3	MAFIC VOLCANIC		
150.3	156.0	BANDED IRON FORMATION		
156.0	253.8	MAFIC VOLCANIC		
253.8	300.0	LEAN IRON FORMATION	Pyrite	
300.0	309.9	MAFIC VOLCANIC		
309.9	310.9	IRON FORMATION	Pyrite	
310.9	319.7	MAFIC FLOW		
319.7	323.1	BANDED IRON FORMATION	Pyrite	
323.1	375.0	MAFIC VOLCANIC		
375.0	376.5	MAGNETITE RICH IRON FORMATION		
376.5	465.0	MAFIC VOLCANIC		
465.0	490.1	BANDED IRON FORMATION	Pyrite	
490.1	606.0	MAFIC VOLCANIC		
606.0	616.0	CHERT RICH IRON FORMATION		
	616.0	END OF HOLE.		

From (ft)	To (ft)	Description	Sample No.	From (ft)	To (ft)	Width (ft)	Au (oz/t)	Ag (oz/t)	Cu (ppm)	Zn (ppm)	Pb (ppm)
0.0	4.0	OVERBURDEN									
4.0	150.3	**MAFIC VOLCANIC** Light Green Mafic Minerals: 70% Plagioclase: 30% Medium Grained Foliation at 30 Deg. Cax. 10% Quartz-Carbonate Veining Avg. Width 1" ----------Details---------- @ 22.6' a calcite vein has 2% euhedral pyrite @ 26-42.2' an increase in grain size gives a tuffaceous appearance Silicified between 98.5-100.9' with quartz veining up to 50% @ 133-150.3' what appear to be pillow selvages occur at 0.5' intervals with occasional interlayers of interflow sediment or tuff.									
150.3	156.0	**BANDED IRON FORMATION** Banded Tan to Black -: Chert 70% -: Magnetite 30% Aphanitic Banding at 31 Deg. Cax. ----------Details---------- 20% of the interval is brecciated; matrix in the breccia									

From (ft)	To (ft)	Description	Sample No.	From (ft)	To (ft)	Width (ft)	Au (oz/t)	Ag (oz/t)	Cu (ppm)	Zn (ppm)	Pb (ppm)
		is jasperoidal Chlorite and pyrite occur along the foliation and fractures									
156.0	253.8	**MAFIC VOLCANIC**									
		Green Mafic Minerals: 95% Medium Grained Foliation at 45 Deg. Cax. ----------Details----------									
		156-164.3' PILLOW VOLCANIC with 5% quartz ankerite veins The veins contain up to 30% pyrite in chloritic vein margins 164.3-190' SILICIFIED FLOW with veins spaced at 0.5' 178.7-197' asymmetrically folded foliation planes 197.3-233 PILLOW VOLCANICS with local brecciation (20%) 233-239 MAFIC FLOW medium grained 239-253.8 PILLOW VOLCANICS silicified with foliation 50 DEG									
253.8	300.0	**LEAN IRON FORMATION**									
		Banded Tan to Yellow -: Chert 80% -: Magnetite 20% Pyrite: trace amounts in veins along fractures ----------Details----------									
		@ 255' a quartz vein with marginal and crosscutting pyrite									

From (ft)	To (ft)	Description	Sample No.	From (ft)	To (ft)	Width (ft)	Au (oz/t)	Ag (oz/t)	Cu (ppm)	Zn (ppm)	Pb (ppm)
		veins occurs Bed thickness variation in iron formation indicates tops and younging up hole 264.7-270.4' sheared and milled iron formation 272-276' quartz carbonate vein cut by pyrite and pyrrhotite 278-280 magnetite 40% and unaltered 292.4-300' brecciated and silicified chert layers cut by pyrite bounded quartz veins									
300.0	309.9	**MAFIC VOLCANIC** Light Grey Mafic Minerals: 90% Fine Grained Foliation at 35 Deg. Cax. - Alteration: Silicification 306-309.9' ----------Details---------- 300-302.5 massive fine grained pyrite bearing flow 302.5-309.9 PILLOW FLOW devoid of quartz veins									
309.9	310.9	**IRON FORMATION** Dark Grey -: Chert 80% -: Magnetite 20% Aphanitic Banding at 45 Deg. Cax. Pyrite: trace replacing magnetite ----------Details---------- Carbonate veins have been dissolved leaving vughes									

From (ft)	To (ft)	Description	Sample No.	From (ft)	To (ft)	Width (ft)	Au (oz/t)	Ag (oz/t)	Cu (ppm)	Zn (ppm)	Pb (ppm)
310.9	319.7	**MAFIC FLOW** Light Green Mafic Minerals: 95% Medium Grained Upper Contact at 47 Deg. Cax. ----------Details---------- Narrow irregularly spaced shear tend to be silicified and locally sericitized									
319.7	323.1	**BANDED IRON FORMATION** -: Chert 60% -: Magnetite 30% Quartz: 10% Banding at 38 Deg. Cax. 10% Quartz Veining Avg. Width Pyrite: replacing magnetite ----------Details----------									
323.1	375.0	**MAFIC VOLCANIC** Light Green Mafic Minerals: 95%									

From (ft)	To (ft)	Description	Sample No.	From (ft)	To (ft)	Width (ft)	Au (oz/t)	Ag (oz/t)	Cu (ppm)	Zn (ppm)	Pb (ppm)
		Quartz: 5% Fine Grained 5% Quartz Veining Random Angles Avg. Width 0.3"									
		----------Details---------- Quartz veins devoid of sulphides 331.5-332' bull quartz vein with patch of fuschite 332.6-359' silicified 333.6-359' darker green and increased grain size 359-369 porphyritic mafic flow; phenocrysts composite grains of chlorite in finer grained chlorite matrix 369-373.4 breccia with mafic and iron formation fragments The matrix of this breccia is quartz flooded									
375.0	376.5	**MAGNETITE RICH IRON FORMATION** Same as 319.7-323.1 Banding at 59 Deg. Cax. 30% Quartz-Carbonate Veining Avg. Width									
		----------Details----------									
376.5	465.0	**MAFIC VOLCANIC** Green Mafic Minerals: 90% Quartz-Carbonate: 8%									

From (ft)	To (ft)	Description	Sample No.	From (ft)	To (ft)	Width (ft)	Au (oz/t)	Ag (oz/t)	Cu (ppm)	Zn (ppm)	Pb (ppm)
		Medium Grained Foliation at 55 Deg. Cax. Upper Contact at 54 Deg. Cax. 8% Quartz-Carbonate Veining Random Angles Avg. Width 0.5" ----------Details---------- 376.5-388.1' PILLOW FLOW 0.2 to 0.7' wide Foliation strongly developed 406-427.5' 430-435.9' fine grained dark green flow 435-436.5 Quartz chlorite vein with 5% tourmaline 436.5-437.1' brecciated coarse mafic 449.5-465.9' fine grained flow 452.9-455' chlorite shear Lower contact brecciated and quartz carbonate flooded										
465.0	490.1	**BANDED IRON FORMATION** Banded Tan to Black -: Chert 70% -: Magnetite 20% -: Pyrite 10% Banding at 47 Deg. Cax. Pyrite: has replaced 40% of the magnetite ----------Details---------- 464.4-467.8' chert magnetite layers 0.5" thick 467' 2" pyrite vein with iron formation fragments 467.9-468.2' Chert breccia with SULPHIDE TOURMALINE matrix Tuffaceous layers occur especially at 468.2-468.5'										

From (ft)	To (ft)	Description	Sample No.	From (ft)	To (ft)	Width (ft)	Au (oz/t)	Ag (oz/t)	Cu (ppm)	Zn (ppm)	Pb (ppm)
		468.4-488.2' 10% pyrite veins with very little quartz or ankerite oriented 55 DEG to CAX With in quartz veins at 468.3' and 476' TOUMALINE fragments occur which are rimmed by pyrite									
490.1	606.0	**MAFIC VOLCANIC** Light Grey Mafic Minerals: 90% Quartz: 10% Medium Grained Upper Contact at 64 Deg. Cax. ----------Details---------- 492.5-537' grain size increases to gabbroic 537-606' coarse grained flow 554-606' colour darkens and grain size decreases 596.5-598' silicified Lower contact massive fine grained chlorite									
606.0	616.0	**CHERT RICH IRON FORMATION** -: Chert 80% -: Magnetite 15% Ash: 5% Banding at 60 Deg. Cax. ----------Details---------- 608.7' 5" 20% disseminated jasper or hematite									

From (ft)	To (ft)	Description	Sample No.	From (ft)	To (ft)	Width (ft)	Au (oz/t)	Ag (oz/t)	Cu (ppm)	Zn (ppm)	Pb (ppm)
		610' 4" quartz ankerite with 1% pyrite 610-614' chert rich; 614-615' brecciated;									
616.0		**END OF HOLE.**									

ASSAY SAMPLES

Sample #	From(ft)	To(ft)	Length(ft)	Gold(oz/ton)	Remarks
13801	22.00	24.00	2.00	0.00	
13802	63.20	67.00	3.80	0.00	
13804	69.70	72.20	2.50	0.00	
13805	98.10	101.00	2.90	0.00	
13806	134.90	137.00	2.10	0.00	
13807	140.20	144.10	3.90	0.00	
13808	144.80	148.10	3.30	0.00	
13809	149.20	152.80	3.60	0.00	
13810	152.80	156.00	3.20	0.00	
13811	162.10	165.00	2.90	0.00	
13812	177.80	180.90	3.10	0.00	
13813	207.70	210.50	2.80	0.00	
13814	219.30	220.60	1.30	0.00	
13815	246.60	248.30	1.70	0.00	
13816	250.00	253.40	3.40	0.00	
13817	254.40	257.40	3.00	0.00	
13818	257.40	262.40	5.00	0.00	
13819	262.40	267.30	4.90	0.00	
13820	267.30	272.30	5.00	0.00	
13821	272.40	277.20	4.80	0.00	
13822	277.20	282.00	4.80	0.00	
13823	282.00	287.00	5.00	0.00	
13824	287.00	292.00	5.00	0.00	
13826	292.00	296.60	4.60	0.00	
13827	309.10	310.80	1.70	0.00	
13829	342.80	344.80	2.00	0.00	
13830	352.80	356.60	3.80	0.00	
13831	319.50	323.20	3.70	0.00	
13832	323.20	327.00	3.80	0.00	
13833	329.60	333.40	3.80	0.00	
13834	368.40	373.20	4.80	0.00	
13835	374.80	376.70	1.90	0.00	
13836	435.50	438.10	2.60	0.00	
13837	453.00	455.40	2.40	0.00	
13838	464.40	469.20	4.80	0.00	
13839	469.20	474.40	5.20	0.00	
13840	474.40	479.40	5.00	0.00	
13841	479.40	484.40	5.00	0.00	
13842	484.40	487.00	2.60	0.00	
13843	487.00	490.30	3.30	0.00	
13844	493.70	496.70	3.00	0.00	
13845	526.60	529.50	2.90	0.00	
13846	557.40	558.30	0.90	0.00	
13847	580.50	583.60	3.10	0.00	
13848	605.80	610.50	4.70	0.00	
13849	610.50	614.50	4.00	0.00	
13850	614.50	616.00	1.50	0.00	

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Geochemical Lab Report

HOLE HC-86-77

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SAMPLE NUMBER	ELEMENT UNITS	Au-150 PPM	Au+150 PPM	Au AV PPM	TestWt gms	-150Wt gms	+150Wt gms
12867		0.02	0.01	0.02	20.00	211.00	7.91
12868		0.01	<0.01	<0.01	20.00	235.00	9.30
12869		0.06	<0.01	0.06	20.00	264.00	14.18
12870		0.02	<0.01	0.02	20.00	219.00	7.59
12871		0.01	<0.01	<0.01	20.00	244.00	8.17
12872		0.02	0.02	0.02	20.00	223.00	8.64
12873		0.02	<0.01	0.02	20.00	219.00	6.83
12874		0.26	0.56	0.27	20.00	219.00	9.86
12875		0.05	0.04	0.05	20.00	208.00	10.90
13851		0.01	<0.01	<0.01	20.00	206.00	8.07
13852		<0.01	<0.01	<0.01	20.00	219.00	9.07
13853		0.01	<0.01	<0.01	20.00	185.00	10.58
13854		0.01	<0.01	<0.01	20.00	267.00	9.92
13855		<0.01	0.01	<0.01	20.00	202.00	7.76
13856		<0.01	<0.01	<0.01	20.00	246.00	6.62
13857		<0.01	<0.01	<0.01	20.00	259.00	8.66
13858		<0.01	<0.01	<0.01	20.00	206.00	2.15
13859		0.01	<0.01	<0.01	20.00	195.00	10.96
13860		0.01	<0.01	<0.01	20.00	217.00	4.03
13861		<0.01	<0.01	<0.01	20.00	198.00	12.22
13862		0.02	0.01	0.02	20.00	264.00	4.81
13863		0.56	0.66	0.56	20.00	297.00	11.01
13864		0.02	0.03	0.02	20.00	280.00	7.69
13865		0.02	0.02	0.02	20.00	253.00	7.24
13866		0.04	0.03	0.04	20.00	264.00	3.47
13867		0.11	0.09	0.11	20.00	281.00	11.58
13868		0.03	0.01	0.03	20.00	253.00	2.52
13869		0.01	0.06	0.01	20.00	237.00	0.66
13870		0.03	0.02	0.03	20.00	263.00	5.41
13871		0.01	<0.01	<0.01	20.00	203.00	13.16
13872		<0.01	<0.01	<0.01	20.00	205.00	3.17
13873		0.01	<0.01	<0.01	20.00	212.00	2.96
13874		0.01	<0.01	<0.01	20.00	253.00	1.62
13875		0.01	<0.01	<0.01	20.00	228.00	10.53
13876		0.01	<0.01	<0.01	20.00	220.00	6.18
13877		0.01	<0.01	<0.01	20.00	203.00	22.41
13878		<0.01	<0.01	<0.01	20.00	237.00	6.29
13879		<0.01	<0.01	<0.01	20.00	174.00	15.13
13880		0.02	0.02	0.02	20.00	235.00	8.10
13881		0.01	<0.01	<0.01	20.00	180.00	10.36

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Geochemical Lab Report

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SAMPLE NUMBER	ELEMENT UNITS	Au-150 PPM	Au+150 PPM	Au AV PPM	TestWt gms	-150Wt gms	+150Wt gms
13168		<0.01	0.01	<0.01	20.00	251.00	7.44
13169		<0.01	<0.10	<0.01	20.00	243.00	13.16
13170		<0.01	<0.01	<0.01	20.00	267.00	4.03
13171		<0.01	<0.01	<0.01	20.00	220.00	13.26
13490		0.02	0.01	0.02	20.00	227.00	14.14
13491		0.05	0.12	0.05	20.00	253.00	4.53
13492		0.02	0.01	0.02	20.00	234.00	13.04
13493		0.03	0.04	0.03	20.00	256.00	10.81
13828		0.01	0.01	0.01	20.00	254.00	7.33
13829		0.01	<0.01	<0.01	20.00	300.00	9.47
13830		0.09	0.07	0.09	20.00	273.00	11.15
13831		0.04	0.03	0.04	20.00	255.00	4.82
13832		0.01	<0.01	<0.01	20.00	224.00	6.69
13833		<0.01	<0.01	<0.01	20.00	246.00	6.86
13834		<0.01	<0.01	<0.01	20.00	247.00	5.18
13835		<0.01	<0.01	<0.01	20.00	240.00	7.76
13836		<0.01	<0.01	<0.01	20.00	205.00	4.54
13837		<0.01	<0.01	<0.01	20.00	225.00	3.06
13838		0.08	0.03	0.08	20.00	272.00	9.32
13839		0.03	0.09	0.03	20.00	312.00	11.71
13840		0.11	0.21	0.11	20.00	289.00	7.62
13841		0.01	0.01	0.01	20.00	300.00	8.92
13842		<0.01	<0.01	<0.01	20.00	277.00	7.16
13843		0.01	0.02	0.01	20.00	304.00	9.57
13844		<0.01	<0.01	<0.01	20.00	246.00	6.60
13845		<0.01	<0.01	<0.01	20.00	206.00	5.10
13846		<0.01	<0.01	<0.01	20.00	209.00	6.88
13847		<0.01	<0.01	<0.01	20.00	226.00	6.83
13848		0.01	<0.01	<0.01	20.00	289.00	10.31
13849		<0.01	0.01	<0.01	20.00	291.00	9.90
13850		<0.01	<0.01	<0.01	20.00	296.00	6.19
13882		<0.01	<0.01	<0.01	20.00	223.00	7.27
13883		0.01	0.02	0.01	20.00	230.00	8.09
13884		0.01	<0.01	<0.01	20.00	240.00	11.28
13885		<0.01	0.01	<0.01	20.00	242.00	9.73
13886		0.01	0.01	0.01	20.00	267.00	7.62
13887		<0.01	<0.01	<0.01	20.00	254.00	10.63
13888		<0.01	<0.01	<0.01	20.00	204.00	5.97
13889		<0.01	<0.01	<0.01	20.00	237.00	8.67
13890		<0.01	<0.01	<0.01	20.00	255.00	7.79

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SAMPLE NUMBER	ELEMENT UNITS	Au-150 PPM	Au+150 PPM	Au AV PPM	TestWt gms	-150Wt gms	+150Wt gms
13450		0.04	0.02	0.04	20.00	195.00	18.53
13451		0.32	0.35	0.32	20.00	225.00	16.83
13452		0.04	0.01	0.04	20.00	190.00	21.08
13453		0.05	0.03	0.05	20.00	250.00	18.47
13891		0.07	0.05	0.07	20.00	190.00	11.74
13892		0.01	0.01	0.01	20.00	275.00	17.45
13901		0.04	0.06	0.04	20.00	200.00	26.02
13902		0.05	0.05	0.05	20.00	220.00	26.33
13903		0.09	0.12	0.09	20.00	200.00	21.83
13904		0.06	0.20	0.07	20.00	225.00	12.93
13905		0.12	0.12	0.12	20.00	210.00	12.72
13906		0.05	0.07	0.05	20.00	225.00	12.74
13907		0.03	0.02	0.03	20.00	210.00	10.77
13908		0.04	0.03	0.04	20.00	195.00	17.72
13909		0.01	<0.01	<0.01	20.00	205.00	12.71
13910		0.61	0.53	0.60	20.00	185.00	22.57
13911		0.12	0.25	0.13	20.00	205.00	9.39
13912		0.53	1.63	0.59	20.00	300.00	18.70
13913		0.12	0.17	0.12	20.00	290.00	18.73
13914		0.01	0.01	<0.01	20.00	210.00	14.53
13915		<0.01	0.01	<0.01	20.00	220.00	5.84
13916		0.01	<0.01	<0.01	20.00	200.00	12.19
13917		0.03	0.03	0.03	20.00	180.00	17.78
13918		0.49	0.21	0.46	20.00	210.00	25.30
13919		0.19	0.47	0.20	20.00	225.00	10.94
13920		0.25	0.28	0.25	20.00	215.00	18.63
13921		1.16	1.79	1.20	20.00	230.00	13.75
13922		0.68	1.64	0.72	20.00	250.00	11.63
13923		0.45	0.46	0.45	20.00	250.00	13.70
13924		0.48	0.27	0.47	20.00	210.00	7.73
13925		0.04	0.07	0.04	20.00	255.00	8.74
13926		0.50	1.39	0.55	20.00	210.00	12.96
13927		0.02	0.02	0.02	20.00	245.00	14.53
13928		0.07	0.05	0.07	20.00	230.00	8.41
13929		0.12	0.14	0.12	20.00	185.00	6.20
13930		0.28	0.42	0.29	20.00	185.00	9.17
13931		0.01	0.01	0.01	20.00	190.00	7.37
13932		0.01	0.02	0.01	20.00	195.00	9.07
13933		0.01	0.02	0.01	20.00	215.00	10.64
13934		0.02	0.01	0.02	20.00	205.00	8.57

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Geochemical Lab Report

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SAMPLE NUMBER	ELEMENT UNITS	Au-150 PPM	Au+150 PPM	Au AV PPM	TestWt gms	-150Wt gms	+150Wt gms
13168		<0.01	0.01	<0.01	20.00	251.00	7.44
13169		<0.01	<0.10	<0.01	20.00	243.00	13.16
13170		<0.01	<0.01	<0.01	20.00	267.00	4.03
13171		<0.01	<0.01	<0.01	20.00	220.00	13.26
13490		0.02	0.01	0.02	20.00	227.00	14.14
13491		0.05	0.12	0.05	20.00	253.00	4.53
13492		0.02	0.01	0.02	20.00	234.00	13.04
13493		0.03	0.04	0.03	20.00	256.00	10.81
13828	- 78	0.01	0.01	0.01	20.00	254.00	7.33
13829		0.01	<0.01	<0.01	20.00	300.00	9.47
13830		0.09	0.07	0.09	20.00	273.00	11.15
13831		0.04	0.03	0.04	20.00	255.00	4.82
13832		0.01	<0.01	<0.01	20.00	224.00	6.69
13833		<0.01	<0.01	<0.01	20.00	246.00	6.86
13834		<0.01	<0.01	<0.01	20.00	247.00	5.18
13835		<0.01	<0.01	<0.01	20.00	240.00	7.76
13836		<0.01	<0.01	<0.01	20.00	205.00	4.54
13837		<0.01	<0.01	<0.01	20.00	225.00	3.06
13838		0.08	0.03	0.08	20.00	272.00	9.32
13839		0.03	0.09	0.03	20.00	312.00	11.71
13840		0.11	0.21	0.11	20.00	289.00	7.62
13841		0.01	0.01	0.01	20.00	300.00	8.92
13842		<0.01	<0.01	<0.01	20.00	277.00	7.16
13843		0.01	0.02	0.01	20.00	304.00	9.57
13844		<0.01	<0.01	<0.01	20.00	246.00	6.60
13845		<0.01	<0.01	<0.01	20.00	206.00	5.10
13846		<0.01	<0.01	<0.01	20.00	209.00	6.88
13847		<0.01	<0.01	<0.01	20.00	226.00	6.83
13848		0.01	<0.01	<0.01	20.00	289.00	10.31
13849		<0.01	0.01	<0.01	20.00	291.00	9.90
13850	- 78	<0.01	<0.01	<0.01	20.00	296.00	6.19
13882		<0.01	<0.01	<0.01	20.00	223.00	7.27
13883		0.01	0.02	0.01	20.00	230.00	8.09
13884		0.01	<0.01	<0.01	20.00	240.00	11.28
13885	77	<0.01	0.01	<0.01	20.00	242.00	9.73
13886		0.01	0.01	0.01	20.00	267.00	7.62
13887		<0.01	<0.01	<0.01	20.00	254.00	10.63
13888		<0.01	<0.01	<0.01	20.00	204.00	5.97
13889		<0.01	<0.01	<0.01	20.00	237.00	8.67
13890		<0.01	<0.01	<0.01	20.00	255.00	7.79

Sample ID	Au-150	Au+150	Au AV	Au(Oz/Ton)	TestWt	-150Wt	+150Wt
13503	0.09	0.11	0.09	0.0029	20.00	235.00	6.80
13504	0.15	0.22	0.15	0.0048	20.00	230.00	5.90
13505	0.03	0.02	0.03	0.0010	20.00	235.00	1.77
13506	0.02	0.01	0.02	0.0006	20.00	225.00	7.43
13507	0.03	0.03	0.03	0.0010	20.00	235.00	5.23
13508	0.01	0.01	0.01	0.0003	20.00	210.00	1.89
13509	0.03	0.04	0.03	0.0010	20.00	205.00	1.95
13510	0.03	0.01	0.03	0.0010	20.00	200.00	5.04
13511	0.32	0.12	0.31	0.0099	20.00	230.00	7.65
13512	0.01	0.01	0.01	0.0003	20.00	210.00	3.16
13513	0.01	0.01	0.01	0.0003	20.00	210.00	7.19
13514	0.01	0.01	0.01	0.0003	20.00	225.00	4.56
13515	0.02	0.01	0.02	0.0006	20.00	210.00	9.25
13516	0.01	0.01	0.01	0.0003	20.00	205.00	6.58
13517	0.01	0.02	0.01	0.0003	20.00	220.00	1.62
13518	0.01	0.01	0.01	0.0003	20.00	220.00	2.63
13519	0.01	0.01	0.01	0.0003	20.00	190.00	5.29
13520	0.01	0.01	0.01	0.0003	20.00	255.00	8.38
13521	0.02	0.01	0.02	0.0006	20.00	305.00	4.16
13528	0.01	0.01	0.01	0.0003	20.00	275.00	3.88
13529	0.01	0.01	0.01	0.0003	20.00	285.00	3.76
13530	0.02	0.01	0.02	0.0006	20.00	220.00	8.00
13801	-0.01	0.01	-0.01	nil	20.00	230.00	5.61
13802	0.01	0.01	0.01	0.0003	20.00	265.00	4.26
13803	0.01	0.12	0.01	0.0003	20.00	235.00	0.65
12804	0.01	0.03	0.01	0.0003	20.00	225.00	2.43
13805	-0.01	-0.01	-0.01	nil	20.00	265.00	10.22
13806	0.01	0.01	0.01	0.0003	20.00	185.00	4.76
13807	-0.01	0.01	-0.01	nil	20.00	270.00	13.84
13808	-0.01	-0.01	-0.01	nil	20.00	265.00	10.61
13809	-0.01	0.01	-0.01	nil	20.00	275.00	12.38
13810	-0.01	0.02	-0.01	nil	20.00	270.00	3.84
13811	-0.01	0.01	-0.01	nil	20.00	200.00	15.74
13812	-0.01	0.02	-0.01	nil	20.00	235.00	6.48
13813	-0.01	0.03	-0.01	nil	20.00	235.00	7.85
13814	-0.01	0.02	-0.01	nil	20.00	255.00	9.92
13815	-0.01	0.02	-0.01	nil	20.00	165.00	10.15
13816	-0.01	0.01	-0.01	nil	20.00	245.00	14.58

Sample ID	Au-150	Au+150	Au AV	Au(Oz/Ton)	TestWt	-150Wt	+150Wt
13817	0.14	0.19	0.14	0.0045	20.00	265.00	5.57
13818	0.02	0.02	0.02	0.0006	20.00	285.00	8.62
13819	0.05	0.04	0.05	0.0016	20.00	265.00	0.17
13820	0.04	0.06	0.04	0.0013	20.00	285.00	6.46
13821	0.09	0.75	0.11	0.0035	20.00	280.00	9.81
13822	0.04	0.05	0.04	0.0013	20.00	260.00	2.93
13823	0.04	0.04	0.04	0.0013	20.00	305.00	4.83
13824	0.02	0.03	0.02	0.0006	20.00	290.00	8.47
13825	0.03	0.07	0.03	0.0010	20.00	300.00	3.02
13826	0.04	0.12	0.04	0.0013	20.00	275.00	7.74
13827	0.03	0.05	0.03	0.0010	20.00	205.00	2.07

REPORT ON THE DIPOLE-DIPOLE I.P. SURVEY over the PICKLE CROW CLAIMS # 757 & # 758 in the PICKLE LAKE AREA OF THE PATRICIA MINING DIVISION for NORAMCO EXPLORATIONS INC.

TORONTO, CANADA
MAY, 1987

D.C. ANDERSON, B.SC.
QUANTECH CONSULTING INC.

QCI Project: C-18

1.0 INTRODUCTION

In October of 1986 Quantech Consulting Incorporated was asked by Noramco Explorations Inc. to conduct a dipole-dipole I.P. survey of the Central Patricia and Pickle Crow claim group. Part of this survey included 6.72 miles of coverage over claims 757 and 758 of the Pickle Crow group. This report deals with the data collected over these claims.

2.0 LOCATION AND ACCESS

Claims 757 and 758 are located in the Pickle Crow claim group 200 kilometers northeast of Sioux Lookout, in northwestern Ontario. The claims are approximately 10 kilometers east of Pickle Lake on the south side of the Pickle Crow river in Connel Township.

Access to Pickle Lake is via Highway 599. During the I.P. survey access from Pickle Lake to the claims was via bush road to the old old Pickle Crow Mine site and from there via skidoo trail.

3.0 SURVEY DATA

3.1 Personnel

Craig Pawluk, B.Sc.
Toronto, Ontario
Geophysicist/Party Chief, Quantech Consulting Inc.

Bruce Bishop
Sudbury, Ontario
Transmitter Operator

Martin Jaques
Notre Dame du Nord, Province de Quebec
Field Assistant

Dave Howlett
St. John's, Newfoundland
Field Assistant

3.2 Instrumentation

The dipole-dipole survey was conducted with an IP-2, time domain I.P.receiver manufactured by EDA instruments and an IPT-1 transmitter manufactured by Phoenix Geophysics Limited. The IP-2 receiver is microprocessor controlled with solid-state memory storage. The IPT-1 transmitter is powered by an MG-2, 2 Kilowatt motor generator. The transmitted waveform consisted of a 2 second on period followed by a 2 second off period. Instrument specifications can be found in Appendix I. Data was processed on a Compaq II microcomputer and plotted on a Fujitsu DL2400 dot matrix printer.

3.3 Method

The IP survey of claims 757 and 758 was completed using a dipole - dipole array. The dipole-dipole method is one in which one dipole transmits current into the ground while the second is used to measure the resulting potential. The primary advantage of this method is that it provides a symmetrical response, good resolution and good penetration. The "a" spacing (eletrode separation) was 100 feet and the dipole separation (distance between receiving and transmitting dipoles) was expanded from 100 to four hundred feet, (N=1 to 4). Lines surveyed were 400 feet apart.

4.0 DATA PRESENTATION

4.1 Pseudosections

The data collected is presented in two, contoured pseudosections, one each for the chargeability and the apparent resistivity. Anomalies of interest are indicated on the psuedosections. The pseudosections have been prepared at a scale of 1:2400.

4.2 Plan Map

In addition to the pseudosections a plan map is included showing the axes of the zones of interest. The survey lines indicated on the map are the actual lines surveyed. The map has been produced at a scale of 1:2400.

5.0 INTERPRETATION

5.1 Interpretation Method

The anomalies of interest are divided into four categories. The following is a description of the parameters used to assign a response to an appropriate category.

A) Questionable Source: A slight increase in chargeability without any associated variation in resistivity.

B) Weak Response: An increased chargeability response with or without an associated decrease in resistivity.

C) Moderate Response: An increased chargeability response with the familiar "pant leg" pattern, generally associated with a decrease in resistivity.

D) Strong Response: A strong chargeability response with a well developed "pant leg" pattern, in association with a resistivity low.

In many cases the anomalies are marked with a star indicating the anomaly should be detailed. This designation is assigned when we are dealing with the following situations.

A) A one line response.

B) The "a" spacing is not ideal for proper resolution of the target. As an example, the source may be narrow and shallow and therefore poorly resolved by the 100 foot "a" spacing. This in turn makes it difficult to determine the exact location of the source for drilling purposes.

C) The line separation is too large, making it difficult to correlate responses from line to line.

5.2 Survey Results

Numerous anomalies were detected in the survey area. The discussion in this section deals with the predominate responses only. The reader should consult the accompanying plan map to determine the location and relative strength of the anomalies not covered in this section. These weaker zones may rate a higher priority if they are coincident with areas of favourable geology. Several of these weaker geophysical anomalies have been marked for further detailing.

The predominant response in the survey area strikes grid east-west from line 42W at approximately 12N to line 14W at 10N. Line 30W is a typical example of the type of response associated with this zone. The chargeability anomaly spans 1000 feet from 5N to 15N and reaches a peak amplitude of 35 msec. The response is evident on N=1 to 4 indicating the source of the anomaly is within 100 feet of surface. Resistivity lows are coincident with the edge of the chargeability anomaly suggesting two zones of interest as indicated on the

accompanying plan map. These zones coincide with the flanks of a mag high. On lines 22W through 14W the anomaly changes in character. It becomes much narrower, centering at approximately 13N on line 22W, and decreases significantly in amplitude. This drop in amplitude is possibly related to a decrease in the percentage of chargeable sulphides. It could also be a function of increased depth as the resistivity response indicates a thickening of the overburden in this area. The break in strike of this zone between lines 22W and 18W appears to be caused by a north south striking fault. The anomaly remains open to the west.

A second anomaly of interest was traced from line 22W at 2+50S to line 14W at 3+50S. The best response originates on line 14W where there is a decrease in the resistivity coincident with the chargeability high. Further detailing of this anomaly is recommended as both lines 18W and 14W have insufficient coverage to adequately resolve the response. The zone borders on the south flank of a mag high.

Finally, a third zone of interest was traced from line 6W at 2+50N to line 2W at 1+50N. The anomaly is increasing in strength to the east. It remains open to the east and is within 100 feet of surface. This response is also associated with a mag high.

6.0 CONCLUSIONS AND RECOMMENDATIONS

The IP survey of claims 757, 758 and the immediate surrounding area has delineated numerous zones of interest. In general the predominant responses are coincident with magnetic highs. Given the nature of the Pickle Crow geology the source of these mag highs is probably iron formation. Drilling of these anomalies is recommended pending a review of the geology. The areas marked for detailing should be resurveyed prior to drilling.

Respectfully Submitted,

D. Anderson, B.Sc.
Geophysicist

STATEMENT OF QUALIFICATIONS

I, David Anderson, hereby declare that:

1. I am a geophysicist with residence in Waterdown, Ontario and am presently employed in this capacity and as a director with Quantech Consulting Incorporated of Toronto, Ontario.

2. I am a graduate of Cambrian College, Sudbury, Ontario, in 1974, with an Honours Diploma of Geophysical Engineering Technology and the University of Calgary, Calgary, Alberta in 1979, with an Honours Bachelor of Science Degree in Geophysics.

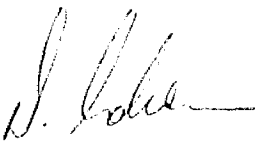
3. I have practiced my profession in North America, South America, and Europe continuously since graduation.

4. I am a member of the Canadian Exploration Geophysicists Society (KEGS), the Society of Exploration Geophysicists (SEG) and the Prospectors and Developers Association (PDA).

5. I have no interest nor do I expect to receive any interest, direct or indirect, in the properties or securities of Noramco Explorations Inc.

6. The statements made by me in this report represent my best opinion and judgement based on the information available to me at the time of writing of this report.

Toronto, Canada
May, 1987



David C. Anderson B.Sc.
Geophysicist

APPENDIX I

IP-2
Two Dipole Time Domain IP Receiver

TDA

Major Benefits

- Two Dipoles Simultaneously Measured
- Solid State Memory
- Automatic Primary Voltage Ranging
- Automatically Calculates Apparent Resistivity
- Computer Compatible
- Software Packages Available

Specifications

Dipoles	Two simultaneous input dipoles.
Input Voltage (Vp) Range	40 microvolts to 4 volts, with automatic ranging and overvoltage protection.
Vp Resolution	10 microvolts.
Vp Accuracy	0.3% typical; maximum 1% over temperature range.
Chargeability Resolution	1 %.
Chargeability Accuracy	0.3% typical; maximum 1% over temperature range for Vp > 10 mV.
Automatic SP Compensation	± 1 V with linear drift correction up to 1 mV/s.
Input Impedance	1 Megohm.
Sample Rate	10 milliseconds.
Automatic Stacking	3 to 99 cycles.
Synchronization	Minimum primary voltage level of 40 microvolts.
Rejection Filters	50 and 60 Hz power line rejection greater than 100 dB.
Grounding Resistance Check	100 ohm to 128 kilo-ohm.
Compatible Transmitters	Any time domain waveform transmitter with a pulse duration of 1 or 2 seconds and a crystal timing stability of 100 ppm.
Programmable Parameters	Geometric parameters, time parameter, intensity of current, type of array and station number.
Display	Two line, 32-character alphanumeric liquid crystal display protected by an internal heater for low temperature conditions.
Memory Capacity	600 sets of readings.
RS-232C Serial I/O Interface	1200 baud, 8 data bits, 1 stop bit, no parity.
Console Power Supply	Six- 1.5V "D" cell disposable batteries with a maximum supply current of 70 mA and auto power save.
Operating Environmental Range	−25°C to +55°C; 0–100% relative humidity; weatherproof.
Storage Temperature Range	−40°C to +60°C.
Weight and Dimensions	5.5 kg, 310x230x210 mm.
Standard System Complement	Instrument console with carrying strap, batteries and operations manual.
Available Options	Stainless steel transmitting electrodes, copper sulphate receiving electrodes, alligator clips, bridge leads, wire spools, interface cables, rechargeable batteries, charger and software programs.

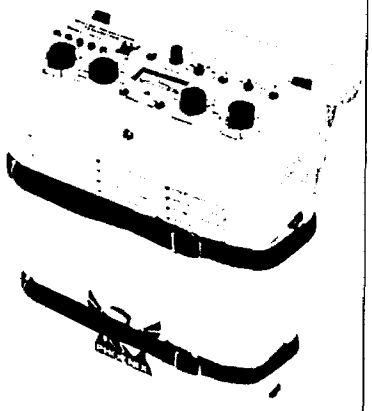
E D A Instruments Inc
4 Thorncliffe Park Drive
Toronto Ontario
Canada M4H 1H1
Telex 06 23222 EDA TOR
Cable Instruments Toronto
(416) 425 7800

In U S A
E D A Instruments Inc
5151 Ward Road
Wheat Ridge Colorado
U S A 80033
(303) 422 9112

IPT-1

Variable Frequency, Time Domain and Phase IP Transmitter

- **Reliable: Backed by twenty years experience in the design and worldwide operation of induced polarization and resistivity equipment**
- **Versatile: Can be used for resistivity, variable frequency IP, time domain IP or phase angle IP measurements**
- **Stable: Excellent current regulation**
- **Lightweight, portable**
- **Wide selection of power sources**
- **Low cost**



Specifications

Power Sources : Internal DC power module containing 8 45V dry cell batteries, or internal AC power module with external 1 KVA, 2 KVA or 3 KVA *motor generator*.

Ammeter Ranges : 30 mA, 100 mA, 300 mA, 1A, 3A and 10A full scale.

Meter Display : A meter function switch selects the display of current level, regulation status, input frequency, output voltage, control battery voltage or line voltage.

Current Regulation : The change in output current is less than 0.2% for a 10% change in input voltage or electrode impedance.

Output Waveform : Either DC, single frequency, two frequencies simultaneously, or time domain (50% duty cycle). Frequencies of 0.078, 0.156, 0.313, 1.25, 2.5, and 5.0 Hz are standard, whereas 0.062, 0.125, 0.25, 1.0, 2.0, and 4.0 Hz are optionally available. The simultaneous transmission mode has 0.313 and 5.0 Hz as standard, whereas 0.156 and 2.5 Hz are optional.

Frequency Stability : ± 1% from -40° to +60°C is standard. A precision time base is optionally available for coherent detection and phase IP measurements.

Protection : *Current is turned off automatically if it exceeds 150% full scale or is less than 5% full scale.*

Case : Non-conductive, high impact resistant plastic.

Dimensions : 20 x 40 x 55 cm (9 x 16 x 22 inches).

Weight : 14 kg (31 lb) with DC power module. 16 kg (35 lb) with AC power module.

Standard Accessories : Pack frame, manual. At least one of the two possible power modules is required. The AC power module in turn requires one of the external 1KVA, 2KVA or 3KVA motor generators and a connecting cable.

DC POWER MODULE (BPS-1)

Output Voltage : 8 x 45V dry cell batteries (Eveready 482, Mallory 202 or equivalent) are switched in series or parallel to provide output voltages of 90V, 180V, and 360V.

Output Power : Recommended maximum output power is 30 watts. Absolute maximum output power is 100 watts.

Battery Life : Normal field operation, with low output power results in an average battery life expectancy of one month. Operation with the absolute maximum output power results in much shorter battery life.

Control Supply : 4 x 6V lantern batteries (Eveready 409, Mallory 908 or equivalent) connected in series/parallel are used to provide the 40 to 70 mA required for the control circuitry. Average battery life expectancy is six months.

Operating Temperature : 0°C to +60°C.

AC POWER MODULE (AC-3)

Output Voltage : 0V, 75V, 150V, 300V, 600V and 1200V.

Output Power : Maximum continuous output power is 3 kw. This requires the 3KVA motor generator.

Input Power : 350 to 1000 Hz, 60V (45V to 78V) 3 phase is standard. 120V (90V to 156V) and/or single phase may be link selected inside the module.

Current Regulation : Achieved by feedback to the alternator of the motor generator unit.

Operating Temperature : -40°C to +60°C.

Thermal Protection : Thermostat turns off at 65°C and turns back on at 55°C internal temperature.

PHOENIX

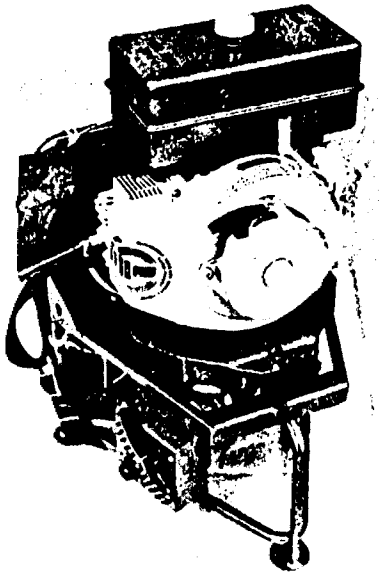
PHOENIX GEOPHYSICS LIMITED

Geophysical Consulting and Contracting, Instrument Manufacture, Sale and Lease.

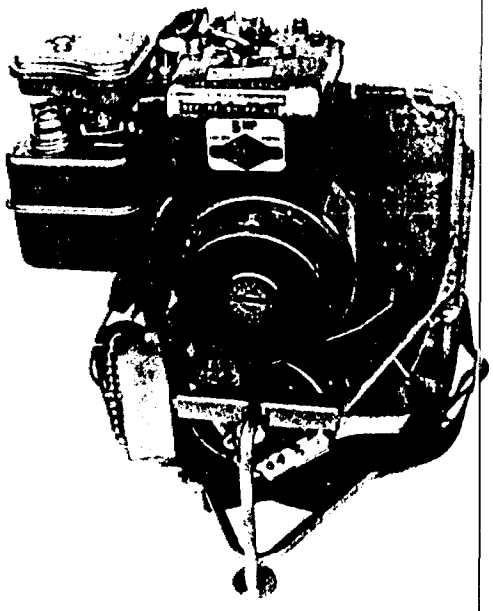
Head Office: 200 Yorkland Blvd. Willowdale, Ont., Canada, M2J 1R6. Tel: (416) 493-6350
1424 - 355 Burrard St. Vancouver, B.C., Canada, V6C 2G8. Tel: (604) 684-2285
2430 N. Huachuca Dr., Tucson, Arizona, U.S.A. 85705. Tel: (602) 884-8542

Motor Generators

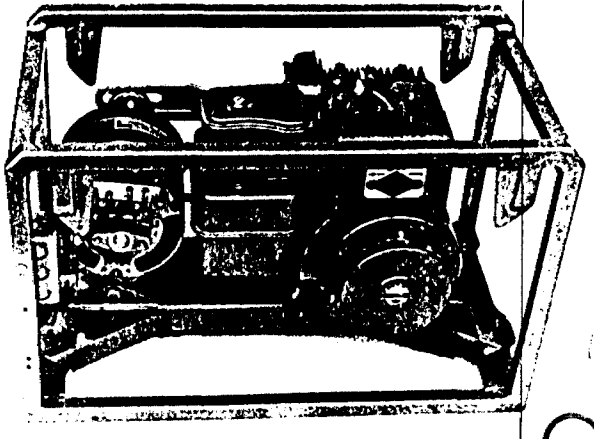
MG-1A&B : 1 KVA motor generator. This lightweight unit is designed for easy portability in areas of moderately high resistivity. It is well suited for massive sulfide exploration in northern Canada, Europe and Asia, as well as general IP and resistivity surveys in rugged, mountainous areas around the world. There are two choices of motor: either a 2-cycle Tecumseh or a 4-cycle Briggs and Stratton. Both engines produce 3 Hp at 3600 rpm, are mounted on a packframe, and have approximate dimensions 40 x 45 x 60 cm (16 x 18 x 24 in). The total weight of the 2-cycle motor generator unit (MG-1A) is 20 kg (45 lb), whereas that of the 4-cycle unit (MG-1B) is 25 kg (55 lb).



MG-2 : 2KVA motor generator. This versatile unit is adequate for the vast majority of IP and resistivity surveys conducted worldwide. It is light enough to be carried by one man, yet powerful enough for most survey requirements. The motor is a 4-cycle Briggs and Stratton which produces 5 HP at 3600 rpm. The dimensions of the unit, including packframe, are 40 x 45 x 60 cm (16 x 18 x 24 in). Total weight is 34 kg (75 lb).



MG-3 : 3KVA motor generator. This two-man portable unit is designed for surveys in areas which require additional power. The motor is a 4-cycle Briggs and Stratton which produces 8 HP at 3600 rpm. The unit is mounted in a square frame with dimensions 40 x 48 x 75 cm (16 x 19 x 29 in). Total weight is 55 kg (120 lb).



APPENDIX II

SURVEY AND REPORTING COST

6.72 miles IP at $1400.00/mile	$9,408.00
Report including drafting etc.	850.00
Total Cost	$10,258.00

D. Anderson,
Quantech Consulting Incorporated

APPENDIX III

I.P. INTERPRETATION LEGEND

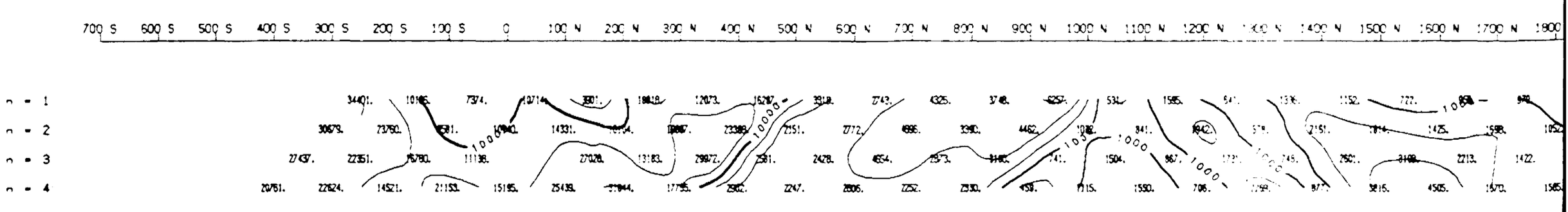
A) Strong Response 

B) Moderate Response 

C) Weak Response 

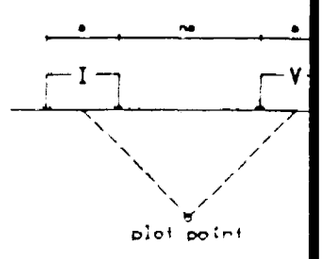
D) Questionable Response ???????

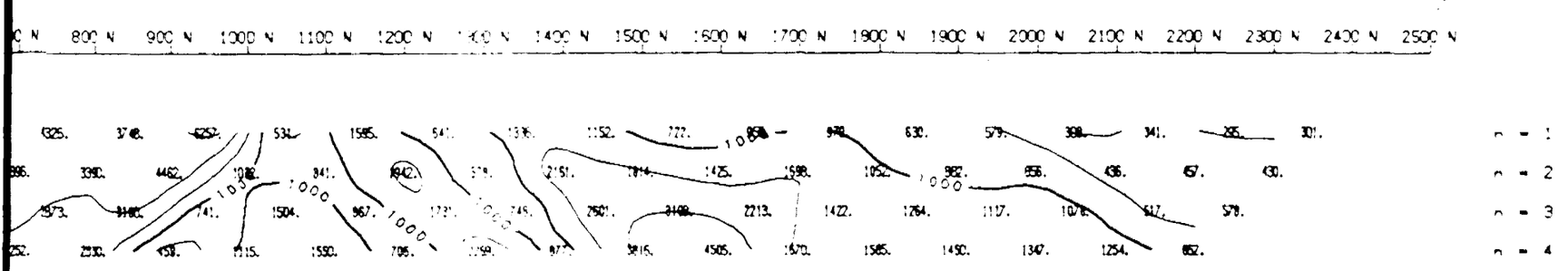
E) Detail Work Recommended ★



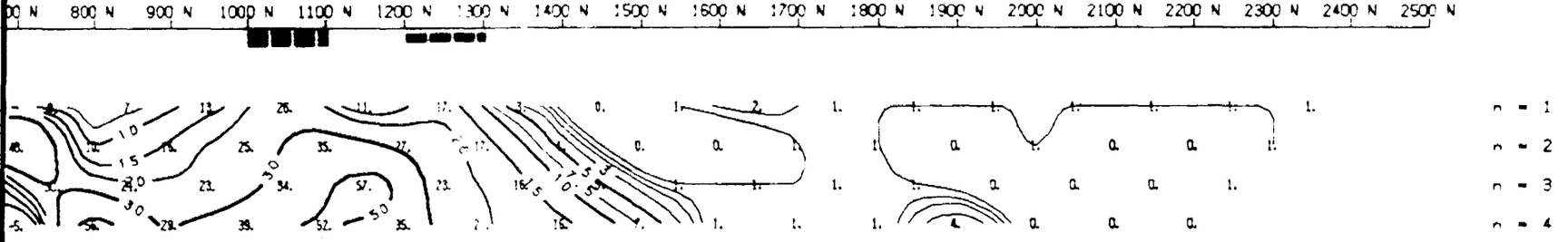
APPARENT RESISTIVITY (ohm-m)

CHARGEABILITY (msec)

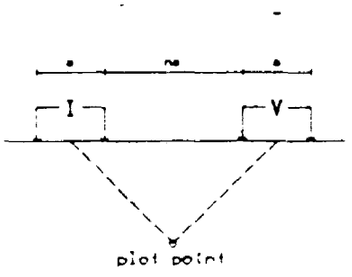




RESISTIVITY (ohm-m)



RGEABILITY (msec)



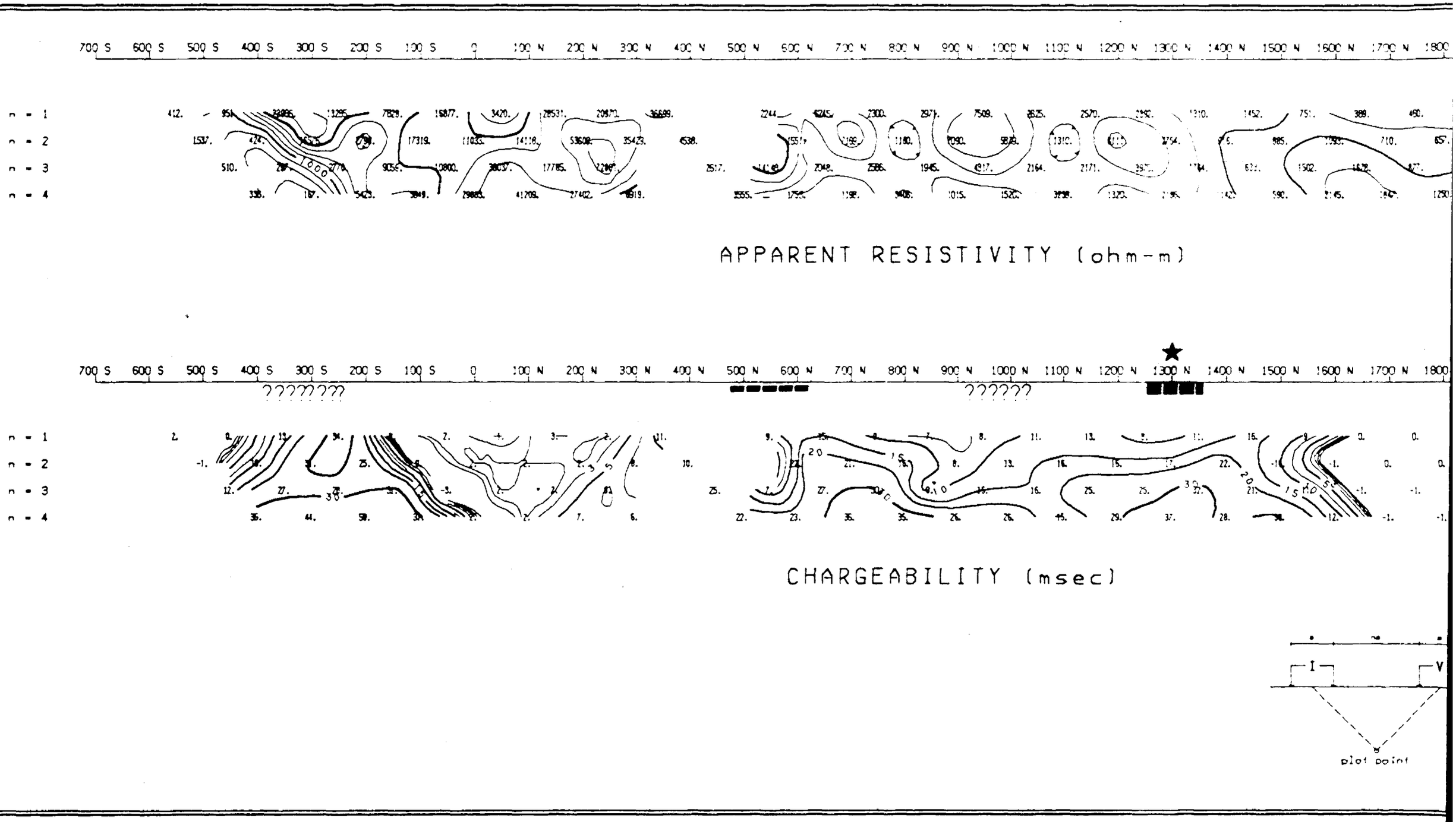
NORAMCO EXPLORATIONS INC
PICKLE CROW PROPERTY

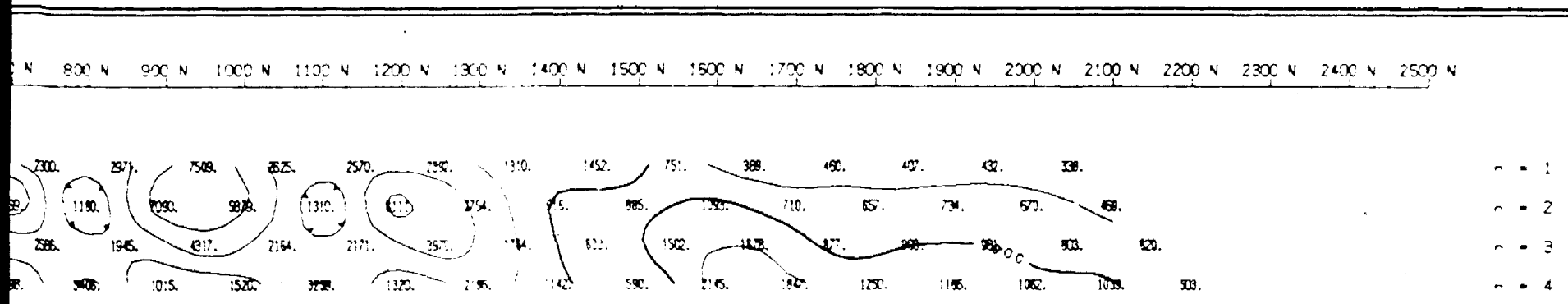
DIPOLE-DIPOLE IP SURVEY
a = 100ft N = 1,2,3,4

ABC/PICKLE CROW Grid - L42W

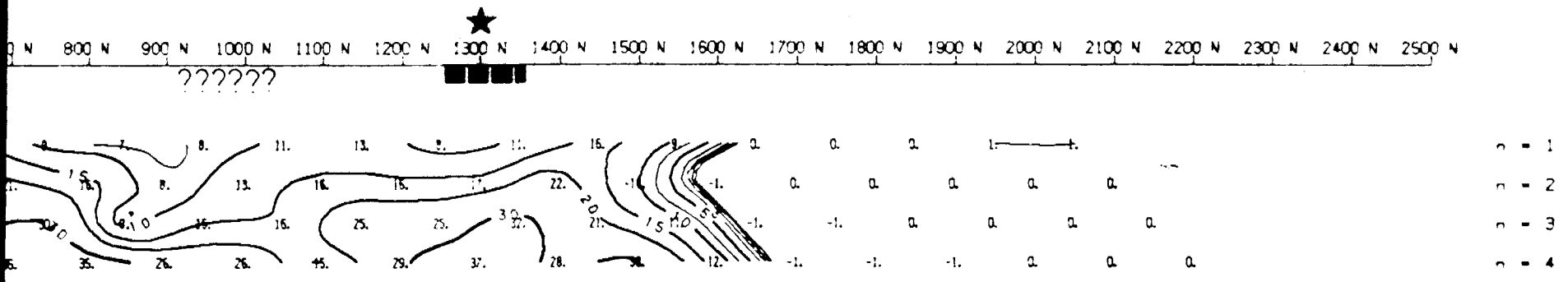
Scale 1:2400 Dec. 1985

QUANTECH CONSULTING INC.

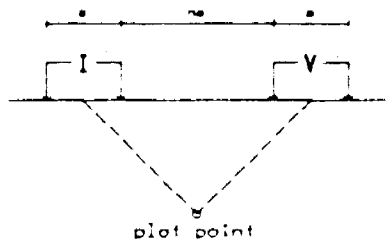

700 S 600 S 500 S 400 S 300 S 200 S 100 S 0 100 N 200 N 300 N 400 N 500 N 600 N 700 N 800 N 900 N 1000 N 1100 N 1200 N 1300 N 1400 N 1500 N 1600 N 1700 N 1800
n = 1
n = 2
n = 3
n = 4
APPARENT RESISTIVITY (ohm-m)
CHARGEABILITY (msec)
I
V
plot point



RESISTIVITY (ohm-m)



RGEABILITY (msec)



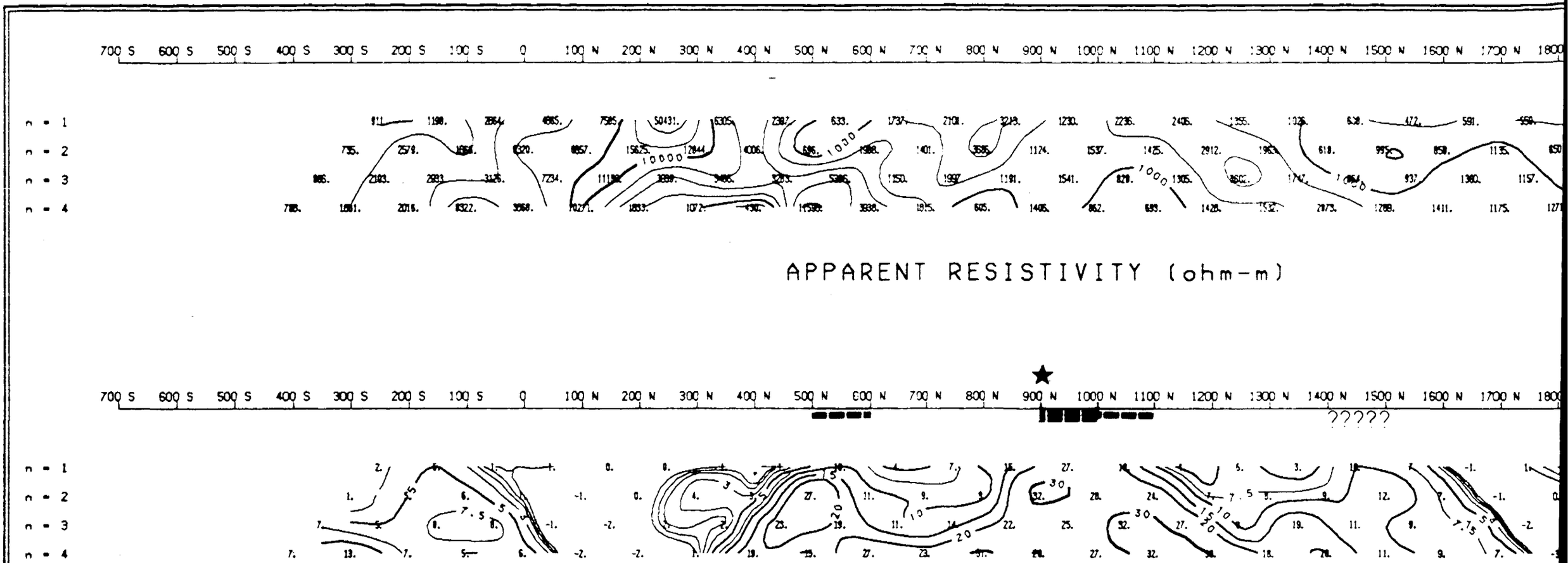
NORAMCO EXPLORATIONS INC
PICKLE CROW PROPERTY

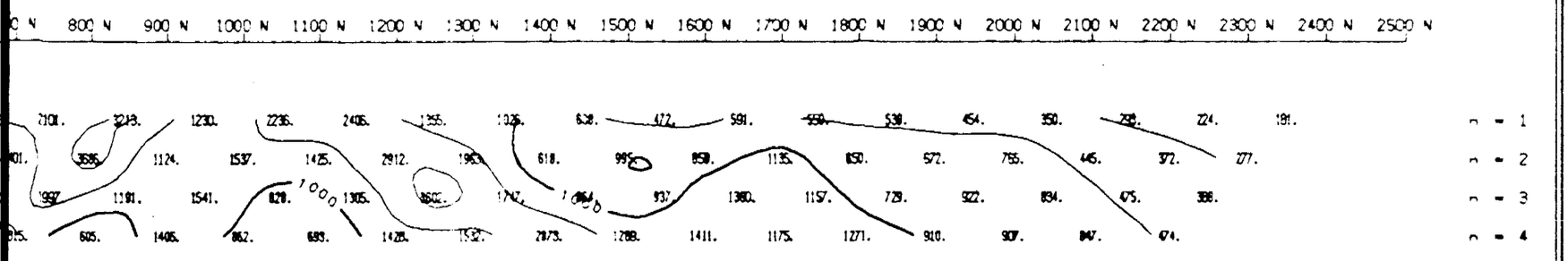
DIPOLE-DIPOLE IP SURVEY
a = 100ft N = 1,2,3,4

ABC/PICKLE CROW Grid - L38W

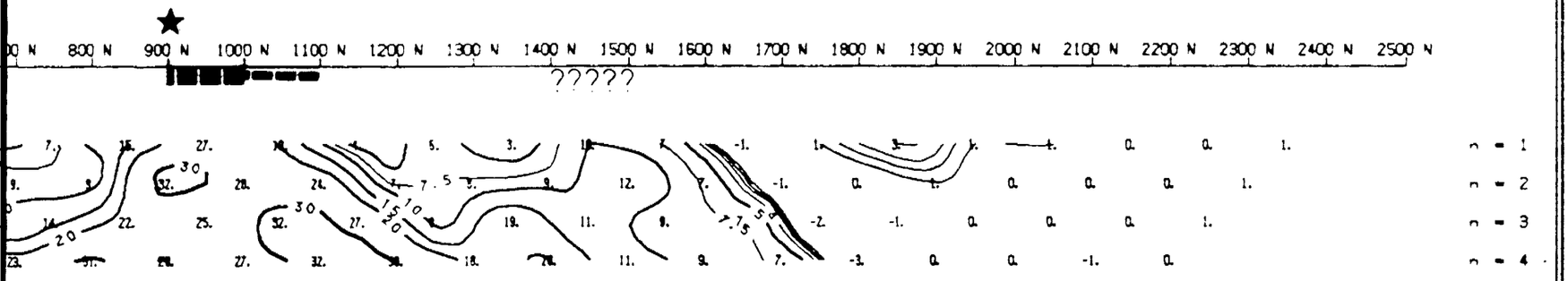
Scale 1:2400 Dec. 1986

QUANTECH CONSULTING INC.

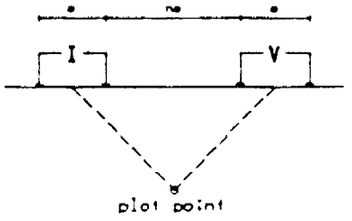

700 S 600 S 500 S 400 S 300 S 200 S 100 S 0 100 N 200 N 300 N 400 N 500 N 600 N 700 N 800 N 900 N 1000 N 1100 N 1200 N 1300 N 1400 N 1500 N 1600 N 1700 N 1800
n = 1
n = 2
n = 3
n = 4
APPARENT RESISTIVITY (ohm-m)
700 S 600 S 500 S 400 S 300 S 200 S 100 S 0 100 N 200 N 300 N 400 N 500 N 600 N 700 N 800 N 900 N 1000 N 1100 N 1200 N 1300 N 1400 N 1500 N 1600 N 1700 N 1800
?????
n = 1
n = 2
n = 3
n = 4
CHARGEABILITY (msec)
I
plot point



RESISTIVITY (ohm-m)



RGEABILITY (msec)



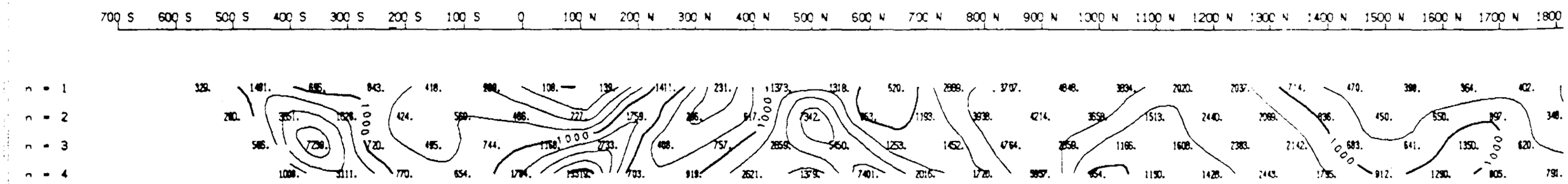
NORAMCO EXPLORATIONS INC
PICKLE CROW PROPERTY

DIPOLE-DIPOLE IP SURVEY
a = 100ft N = 1,2,3,4

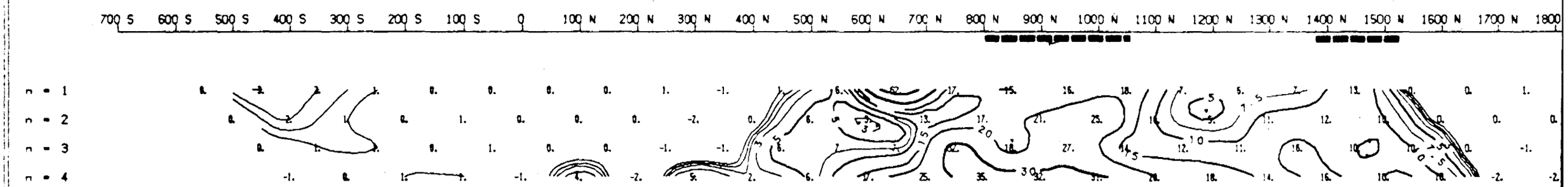
ABC/PICKLE CROW Grid - L34W

Scale 1:2400 Dec. 1985

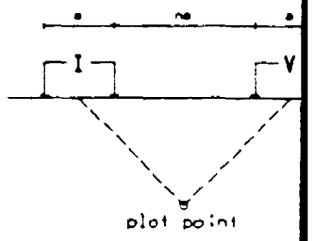
QUANTECH CONSULTING INC.

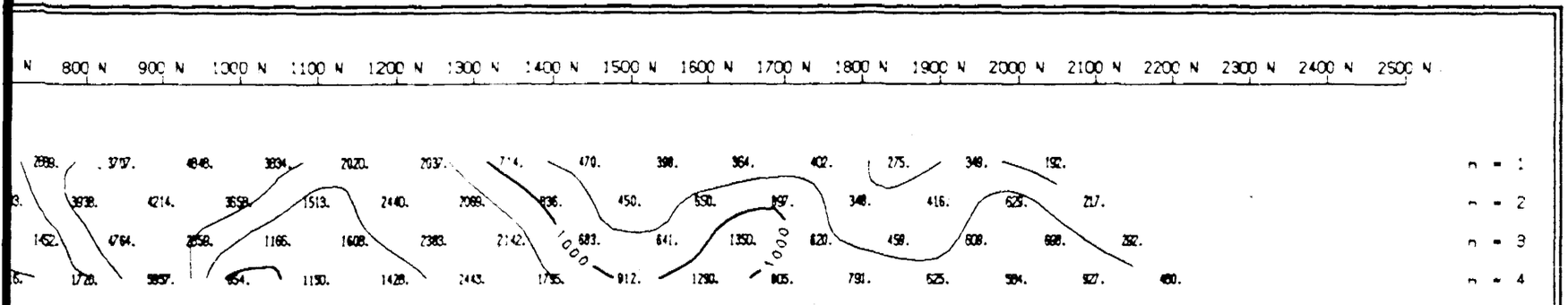


APPARENT RESISTIVITY (ohm-m)

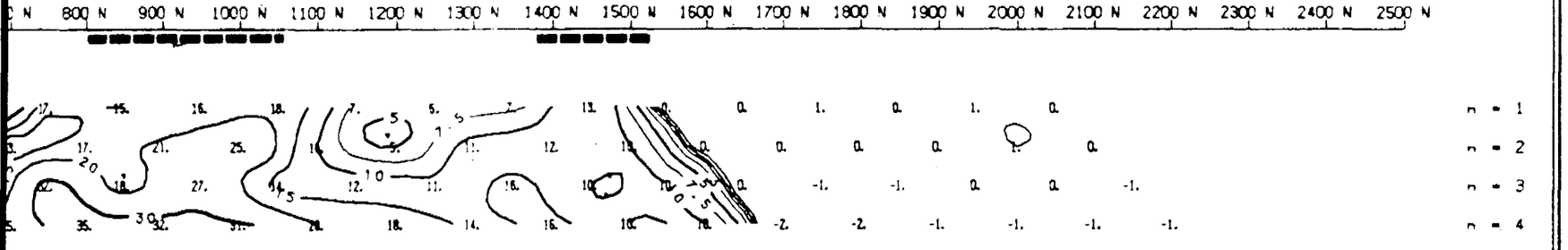


CHARGEABILITY (msec)

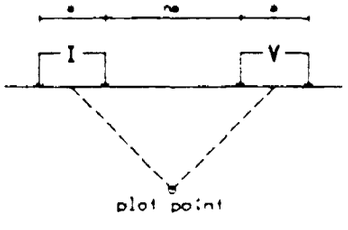




RESISTIVITY (ohm-m)



RGEABILITY (msec)



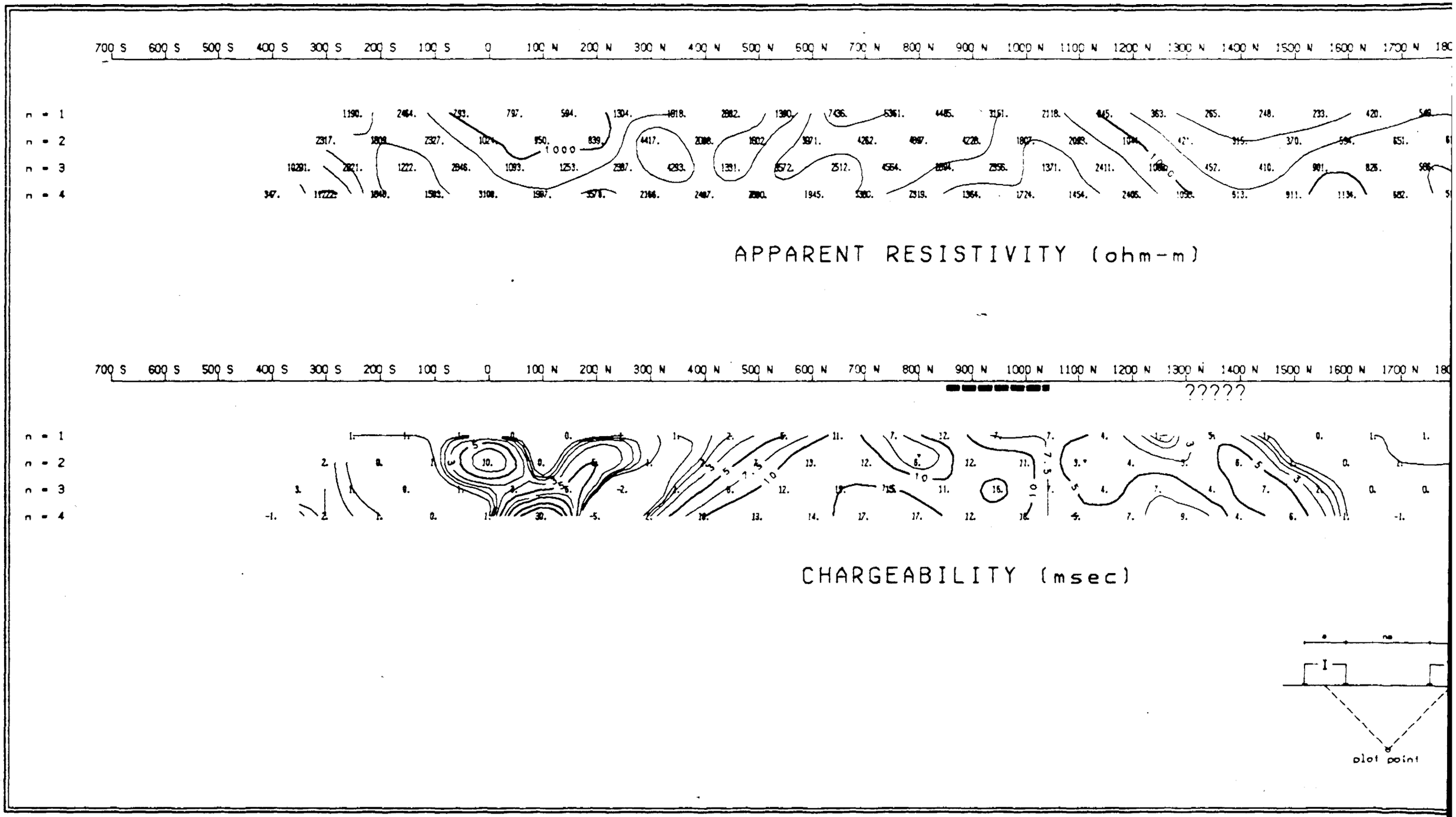
NORAMCO EXPLORATIONS INC
PICKLE CROW PROPERTY

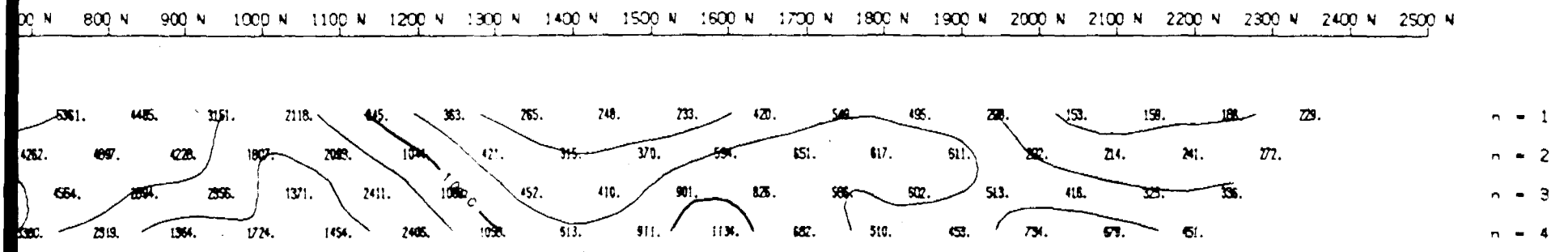
DIPOLE-DIPOLE IP SURVEY
a = 100ft N = 1,2,3,4

ABC/PICKLE CROW Grid - L30W

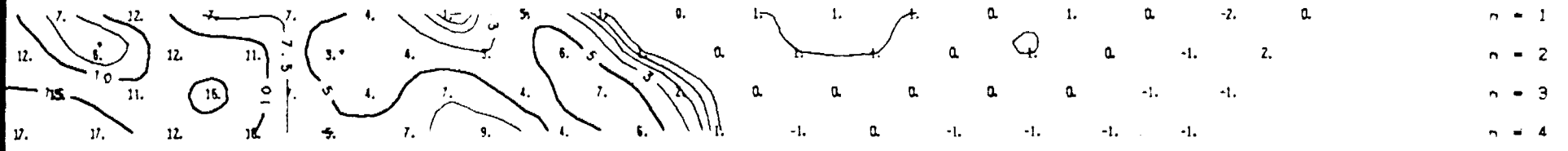
Scale 1:2400 Dec. 1985

QUANTECH CONSULTING INC.

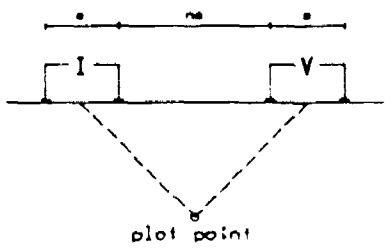

700 S 600 S 500 S 400 S 300 S 200 S 100 S 0 100 N 200 N 300 N 400 N 500 N 600 N 700 N 800 N 900 N 1000 N 1100 N 1200 N 1300 N 1400 N 1500 N 1600 N 1700 N
n = 1
n = 2
n = 3
n = 4
1000
APPARENT RESISTIVITY (ohm-m)
?????
CHARGEABILITY (msec)
I
plot point



T RESISTIVITY (ohm-m)



RGEABILITY (msec)



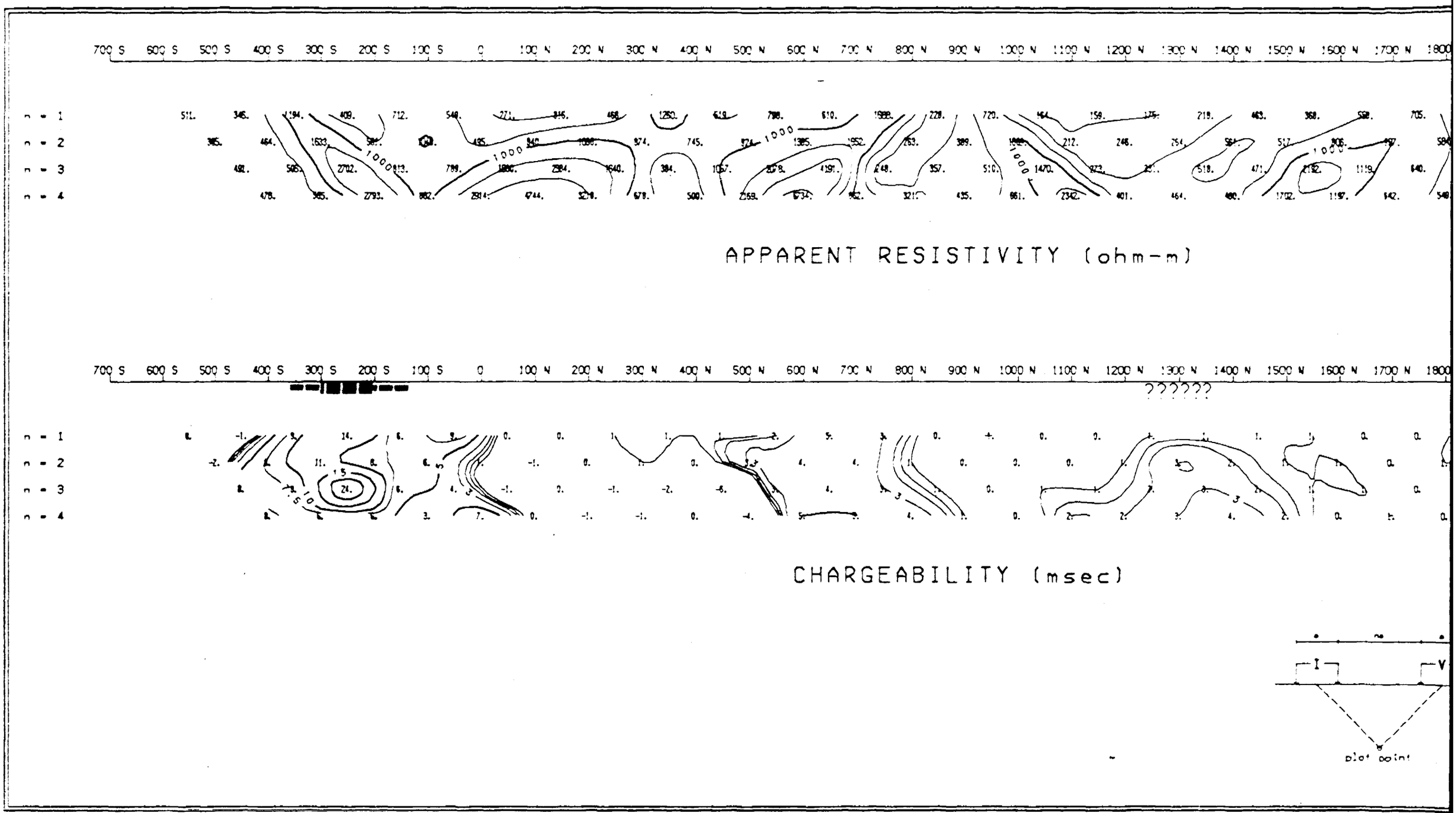
NORAMCO EXPLORATIONS INC
PICKLE CROW PROPERTY

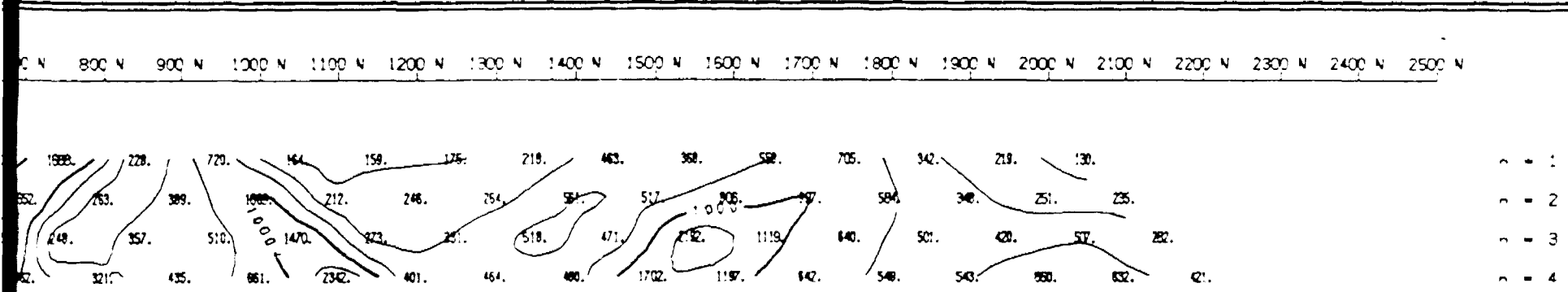
DIPOLE-DIPOLE IP SURVEY
a = 100ft N = 1,2,3,4

ABC/PICKLE CROW Grid - L26W

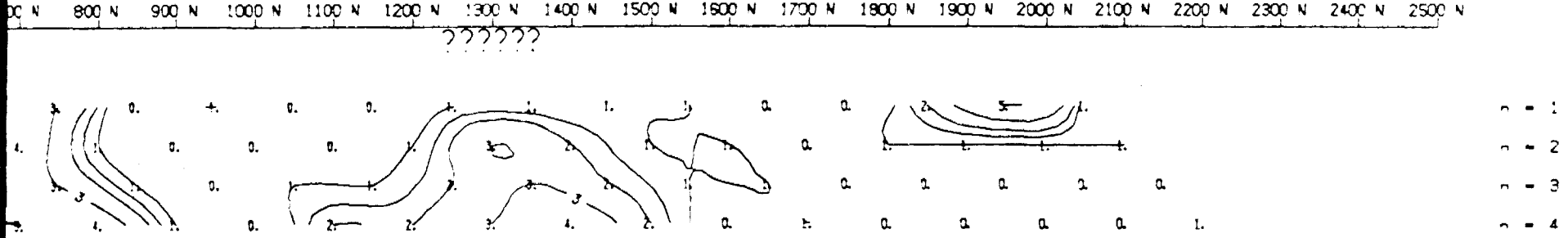
Scale 1:2400 Dec. 1986

QUANTECH CONSULTING INC.

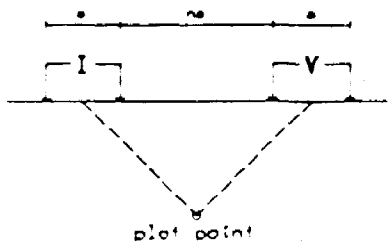

700 S
600 S
500 S
400 S
300 S
200 S
100 S
0
100 N
200 N
300 N
400 N
500 N
600 N
700 N
800 N
900 N
1000 N
1100 N
1200 N
1300 N
1400 N
1500 N
1600 N
1700 N
1800
n = 1
n = 2
n = 3
n = 4
1000
APPARENT RESISTIVITY (ohm-m)
??????
CHARGEABILITY (msec)
I
V
plot point



T RESISTIVITY (ohm-m)



RGEABILITY (msec)



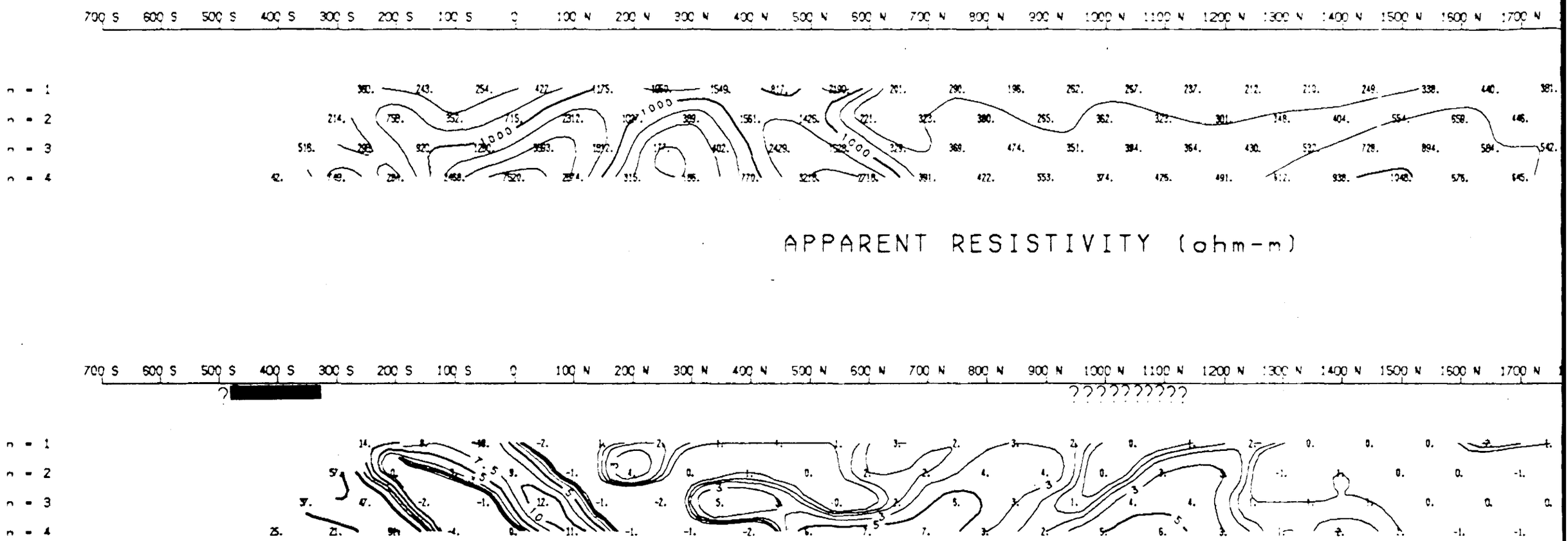
NORAMCO EXPLORATIONS INC
PICKLE CROW PROPERTY

DIPOLE-DIPOLE IP SURVEY
a = 100ft N = 1,2,3,4

ABC/PICKLE CROW Grid - L22W

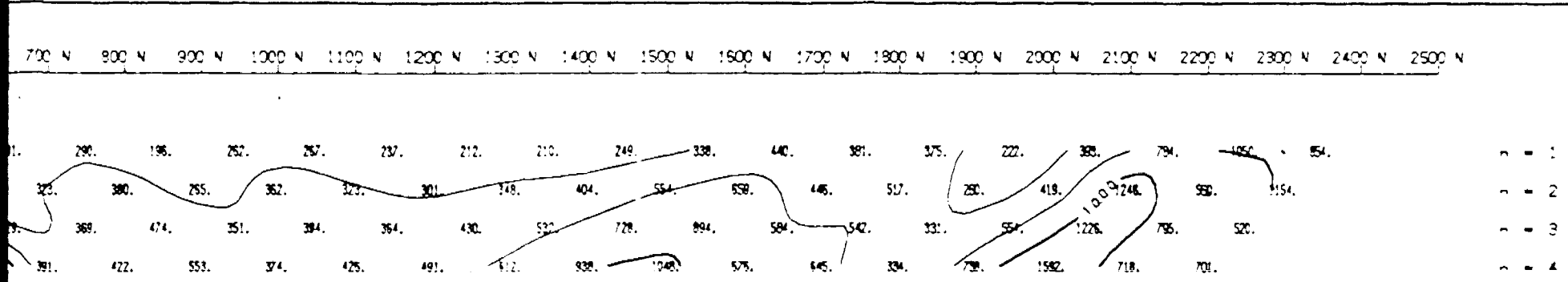
Scale 1:2400 Dec. 1985

QUANTECH CONSULTING INC.

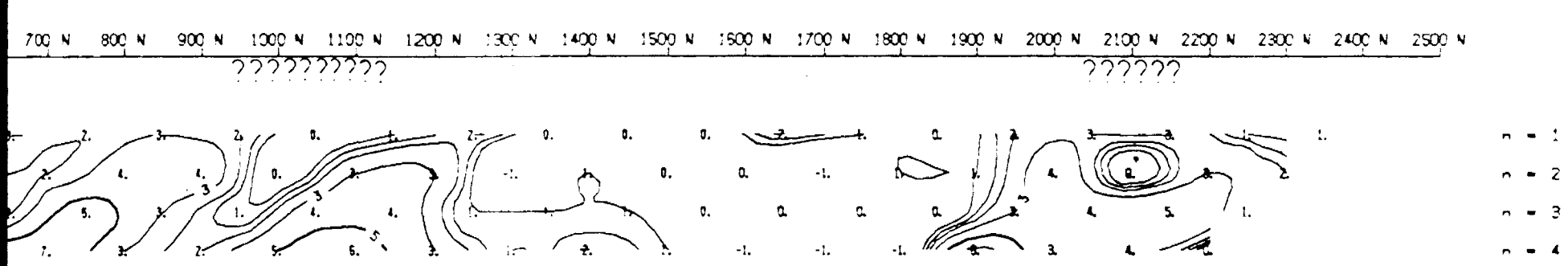


APPARENT RESISTIVITY (ohm-m)

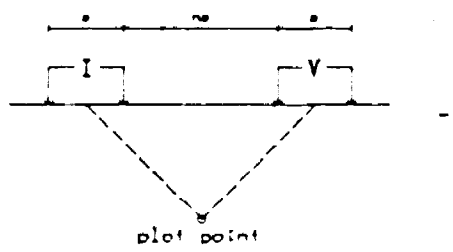
CHARGEABILITY (msec)



NT RESISTIVITY (ohm-m)



ARGEABILITY (msec)



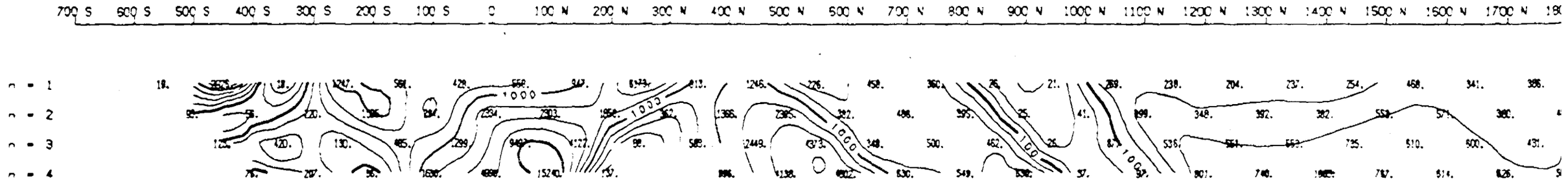
NORAMCO EXPLORATIONS INC
PICKLE CROW PROPERTY

DIPOLE-DIPOLE IP SURVEY
a = 100ft N = 1,2,3,4

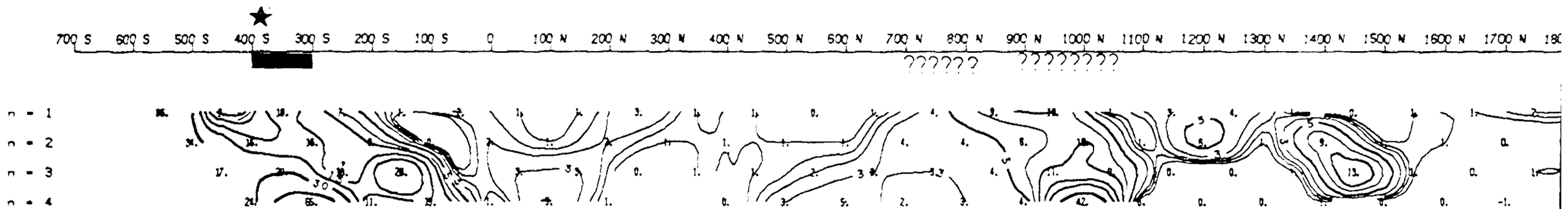
ABC/PICKLE CROW Grid - L18W

Scale 1:2400 Dec. 1986

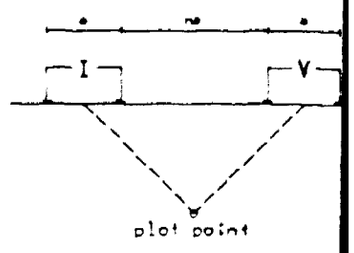
QUANTECH CONSULTING INC.

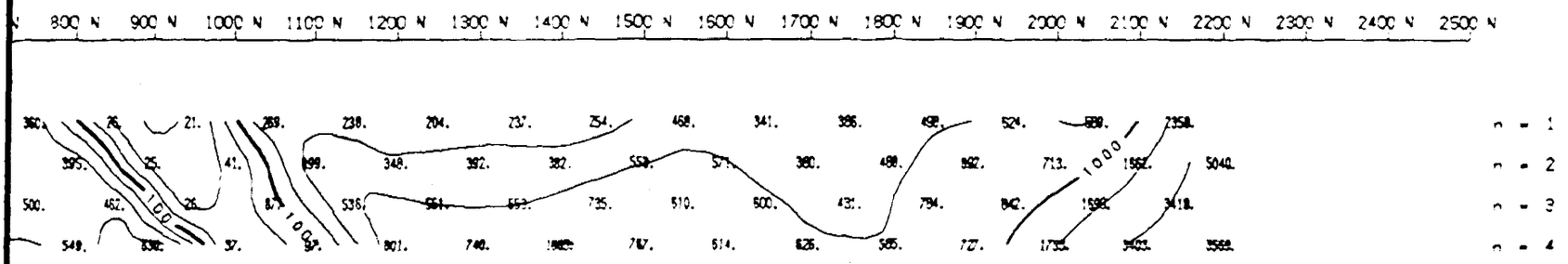


APPARENT RESISTIVITY (ohm-m)

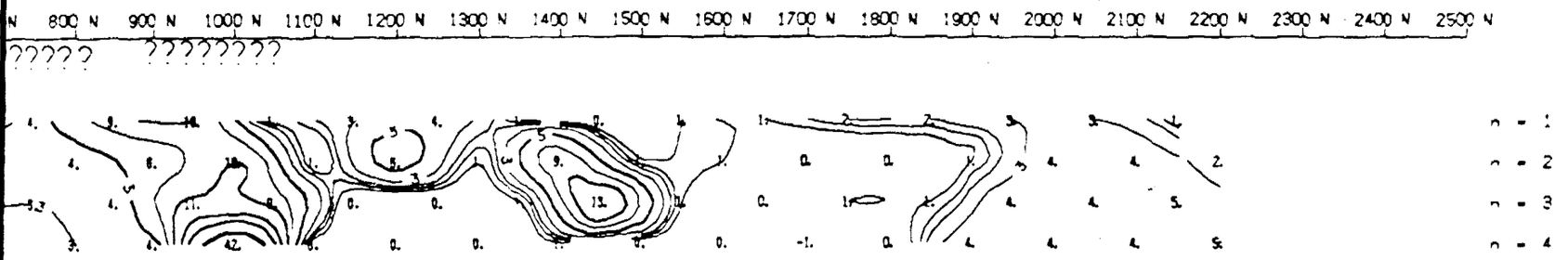


CHARGEABILITY (msec)

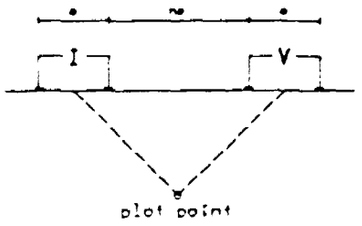




RESISTIVITY (ohm-m)



GEABILITY (msec)



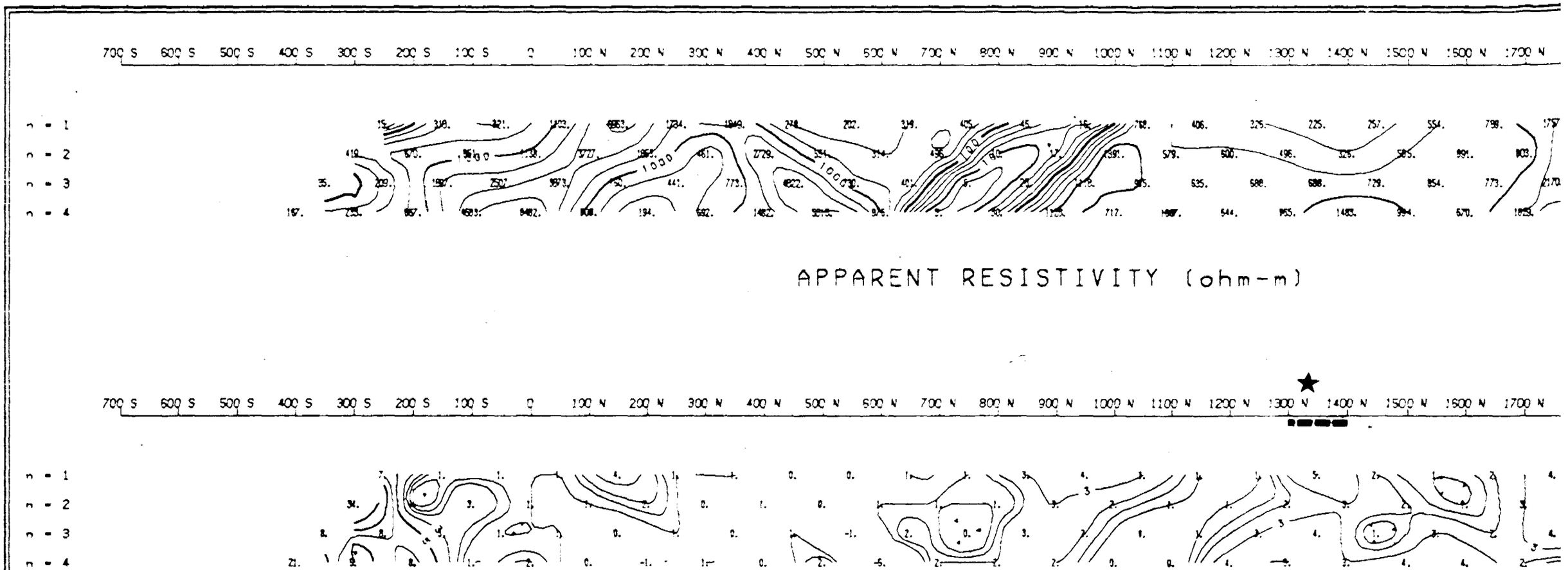
NORAMCO EXPLORATIONS INC
PICKLE CROW PROPERTY

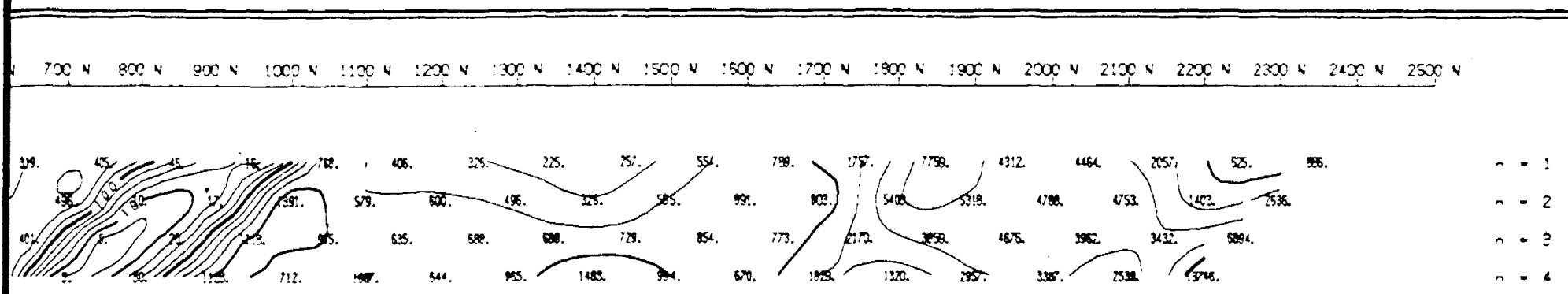
DIPOLE-DIPOLE IP SURVEY
a = 100ft N = 1,2,3,4

ABC/PICKLE CROW Grid - L14W

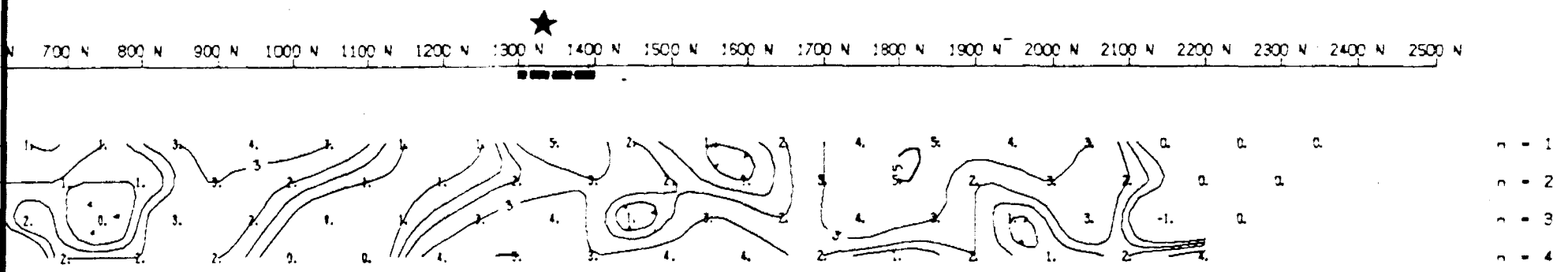
Scale 1:2400 Dec. 1985

QUANTECH CONSULTING INC.

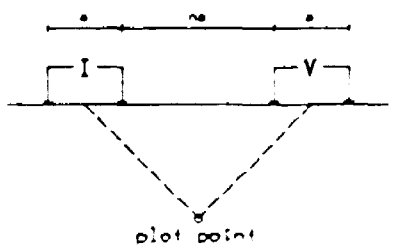

700 S 600 S 500 S 400 S 300 S 200 S 100 S 0 100 N 200 N 300 N 400 N 500 N 600 N 700 N 800 N 900 N 1000 N 1100 N 1200 N 1300 N 1400 N 1500 N 1600 N 1700 N
n = 1
n = 2
n = 3
n = 4
1000
100
100
APPARENT RESISTIVITY (ohm-m)
700 S 600 S 500 S 400 S 300 S 200 S 100 S 0 100 N 200 N 300 N 400 N 500 N 600 N 700 N 800 N 900 N 1000 N 1100 N 1200 N 1300 N 1400 N 1500 N 1600 N 1700 N
n = 1
n = 2
n = 3
n = 4
CHARGEABILITY (msec)
I
plot point



ENT RESISTIVITY (ohm-m)



HARGEABILITY (msec)



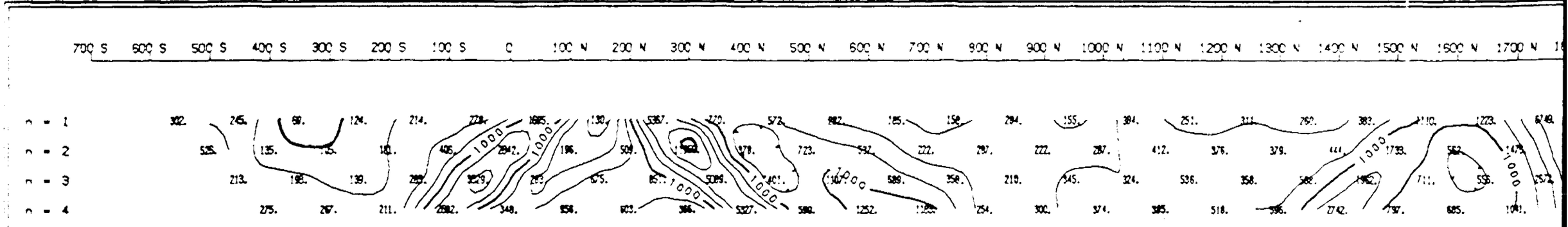
NORAMCO EXPLORATIONS INC
PICKLE CROW PROPERTY

DIPOLE-DIPOLE IP SURVEY
a = 100ft N = 1,2,3,4

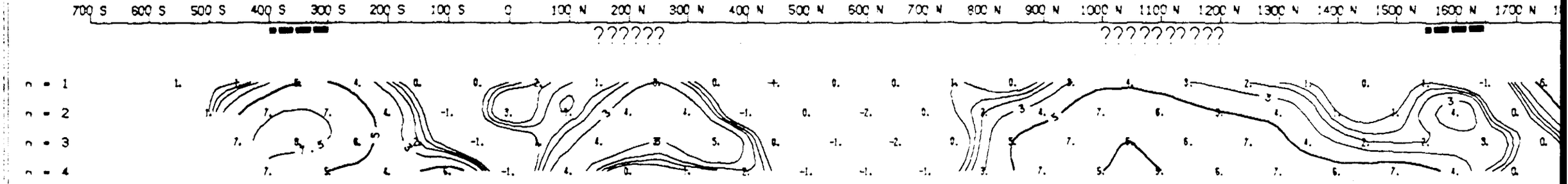
ABC/PICKLE CROW Grid - L10W

Scale 1:2400 Dec. 1986

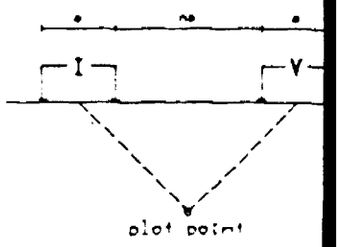
QUANTECH CONSULTING INC.

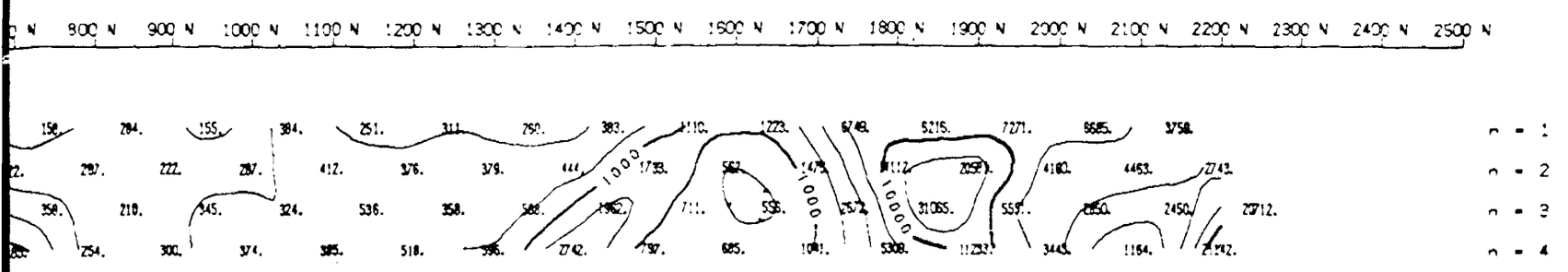


APPARENT RESISTIVITY (ohm-m)

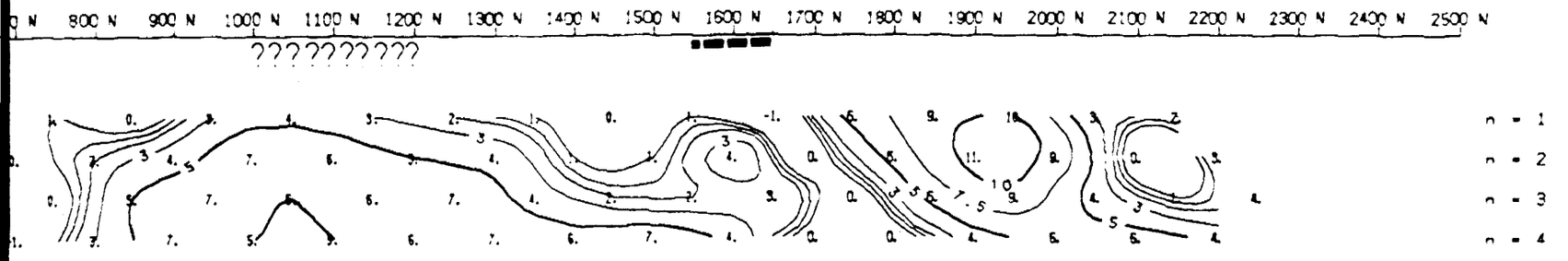


CHARGEABILITY (msec)

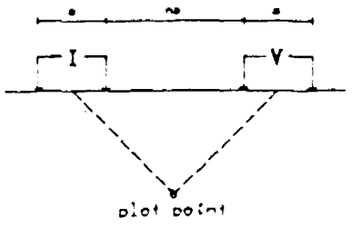




RESISTIVITY (ohm-m)



RGEABILITY (msec)



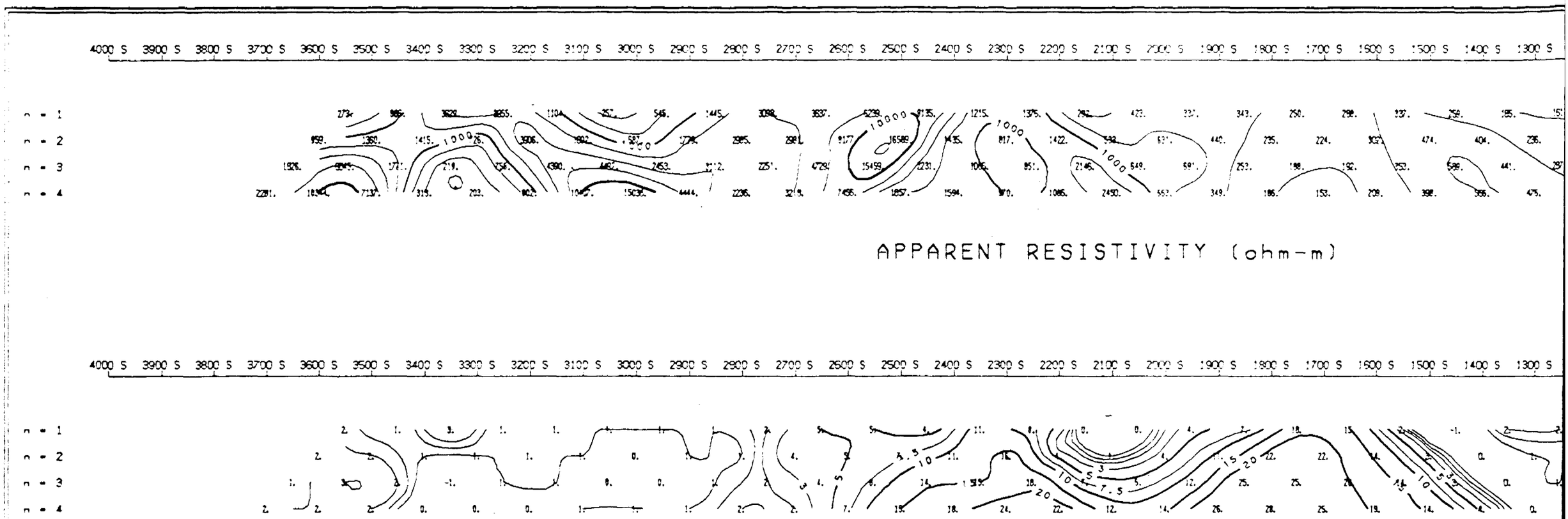
NORAMCO EXPLORATIONS INC
PICKLE CROW PROPERTY

DIPOLE-DIPOLE IP SURVEY
a = 100ft N = 1,2,3,4

ABC/PICKLE CROW Grid - L6W

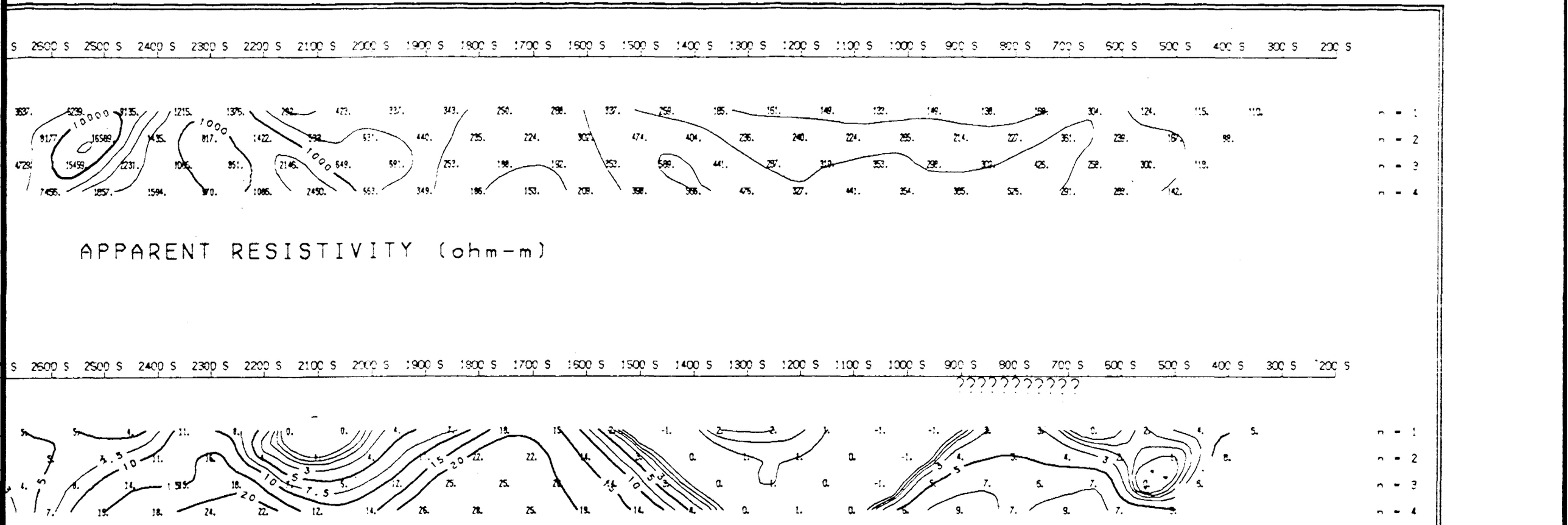
Scale 1:2400 Dec. 1986

QUANTECH CONSULTING INC.

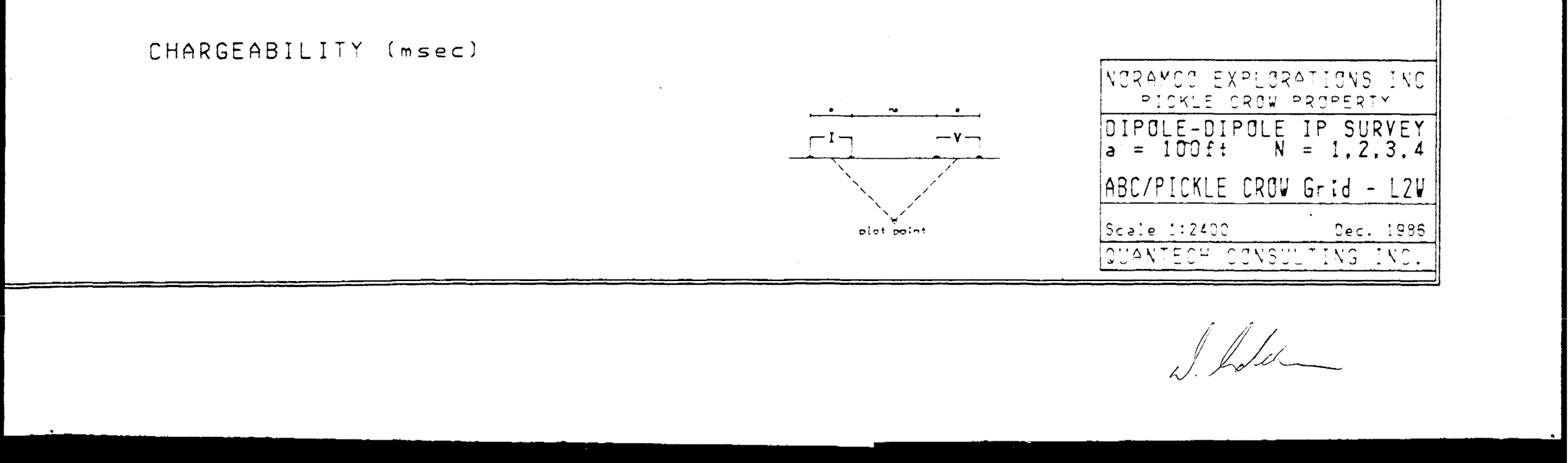


APPARENT RESISTIVITY (ohm-m)

CHARGEABILITY (msec)

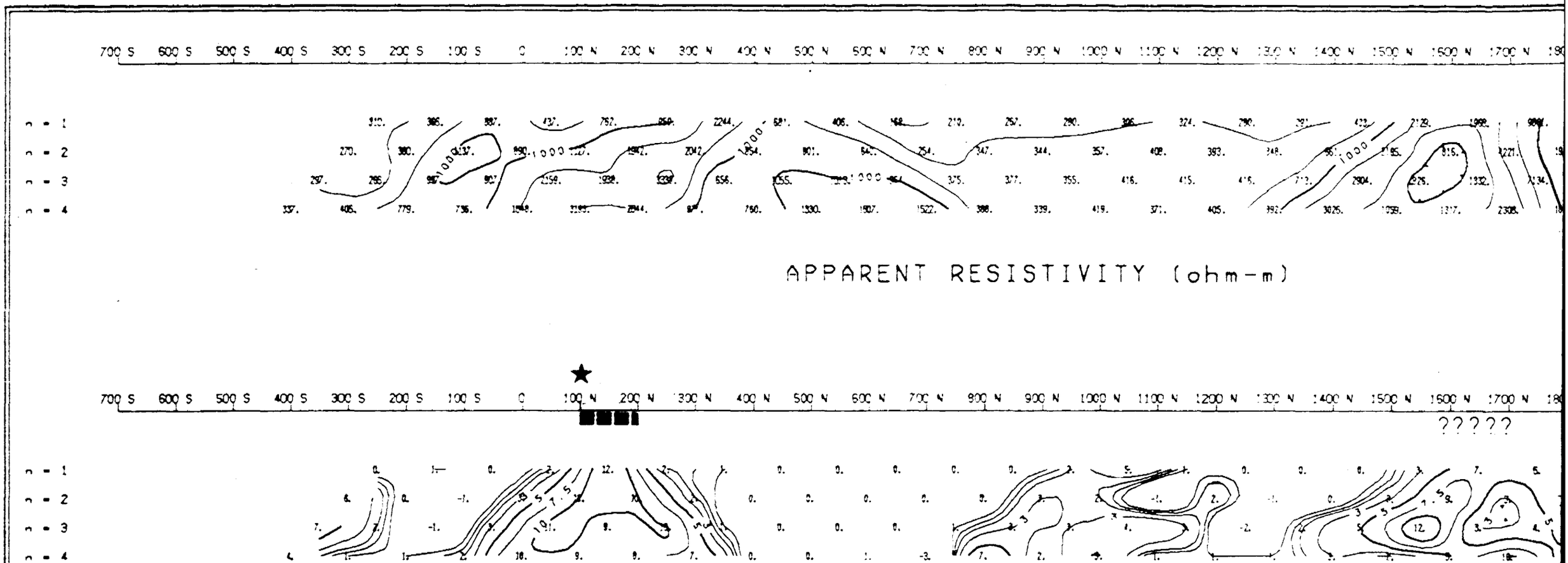


APPARENT RESISTIVITY (ohm-m)

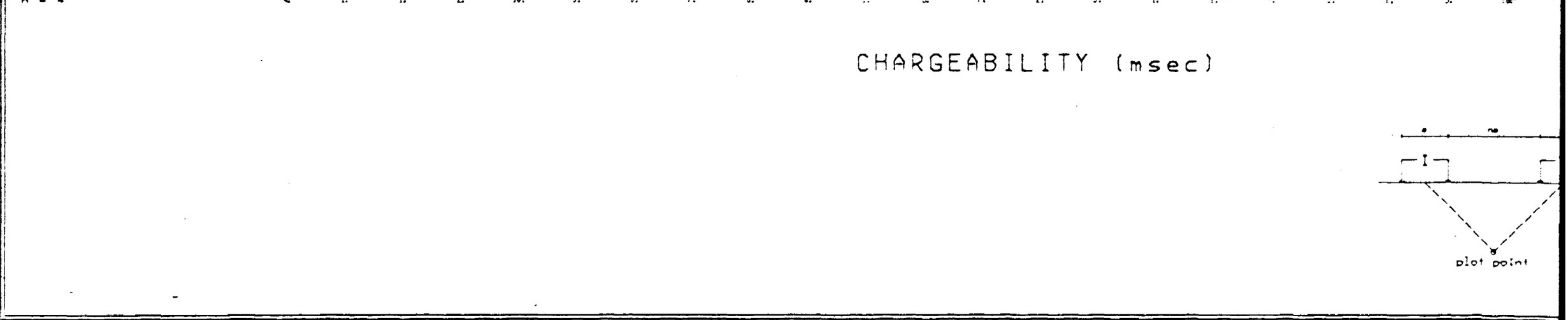


CHARGEABILITY (msec)

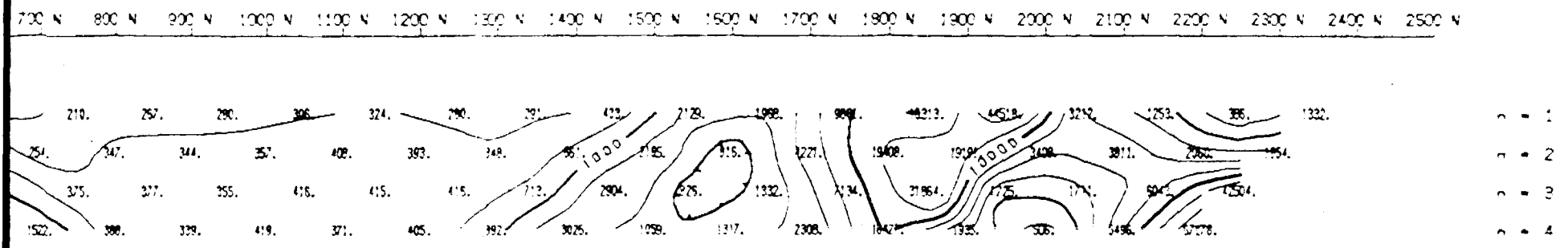
NORAMCO EXPLORATIONS INC PICKLE CROW PROPERTY
DIPOLE-DIPOLE IP SURVEY a = 100ft N = 1,2,3,4
ABC/PICKLE CROW Grid - L2W
Scale 1:2400 Dec. 1986
QUANTECH CONSULTING INC.



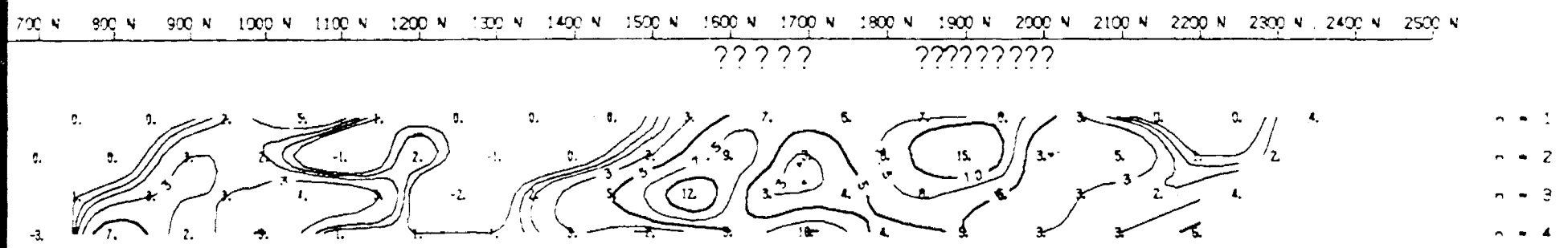
APPARENT RESISTIVITY (ohm-m)



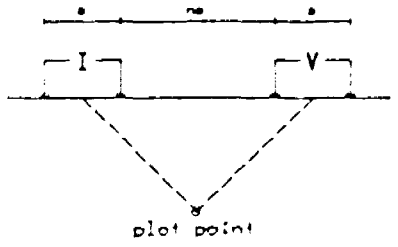
CHARGEABILITY (msec)



NT RESISTIVITY (ohm-m)



ARGEABILITY (msec)



NORAMCO EXPLORATIONS INC
PICKLE CROW PROPERTY

DIPOLE-DIPOLE IP SURVEY
a = 100ft N = 1,2,3,4

ABC/PICKLE CROW Grid - L2W

Scale 1:2400 Dec. 1985

QUANTECH CONSULTING INC.

L 44 W | L 42 W | L 40 W | L 38 W | L 36 W | L 34 W | L 32 W | L 30 W | L 28 W | L 26 W | L 24 W | L 22 W | L 20 W | L 18 W | L 16 W | L 14 W | L 12 W | L 10 W | L 8 W | L 6 W | L 4 W | L 2 W

T.L. 24N

22 N

20 N

18N

16 N

14 N

12 N

10 N

8 N

6 N

4 N

2 N

000

BL 000

2 S

4 S

6 S

8 S

10 S

758

757

LEGEND

Claim Boundary

Diamond Drll Hole

543 675 865 Magnetometer Reading

Isomagnetic Contour

Note Add 60000 nT to readings to obtain total field strength

63.5051
OM86-203

HIGHLAND-CROW RESOURCES LTD.

PICKLE CROW PROPERTY

CLAIMS 757, 758

MAGNETOMETER SURVEY

Fig.5

1": 200'

52089SE9810 63.5051 TARP LAKE

L 31 W | L 30 W | L 29 W | L 28 W | L 27 W | L 26 W | L 25 W | L 24 W | L 23 W

13 N
12 N
11 N
10 N
9 N
8 N
7 N
6 N

758
757

HC-86-78
E.O.H. 617'

HC-86-78
[320°/-50°]

HC-86-77
[140°/-60°]

HC-86-77
E.O.H. 497'

35562 0.004 oz./ton Au
35561 0.001 oz./ton Au
35565 ∠0.001 oz./ton Au
35566 ∠0.001 oz./ton Au
35567 ∠0.001 oz./ton Au
35560 ∠0.001 oz./ton Au
35551 ∠0.001 oz./ton Au
35552 ∠0.001 oz./ton Au
35553 ∠0.001 oz./ton Au
35359 0.013 oz./ton Au
35360 ∠0.001 oz./ton Au
35361 0.319 oz./ton Au
35362 0.01 oz./ton Au
35363 0.015 oz./ton Au
35364 0.001 oz./ton Au
86144 0.58 oz./ton Au
35358 0.015 oz./ton Au
35354 0.005 oz./ton Au
35354 0.005 oz./ton Au
35352 0.02 oz./ton Au
35351 0.002 oz./ton Au
86104 0.06 oz./ton Au
4943 0.008 oz./ton Au
35353 0.02 oz./ton Au
86138 0.014 oz./ton Au
86137 0.01 oz./ton Au
86136 0.003 oz./ton Au
4942 0.829 oz./ton Au
4944 0.002 oz./ton Au
4946 0.009 oz./ton Au
35357 0.008 oz./ton Au
35356 0.001 oz./ton Au
35358 0.001 oz./ton Au
35355 ∠0.001 oz./ton Au
35557 ∠0.001 oz./ton Au
35556 ∠0.001 oz./ton Au
4940 ∠0.019 oz./ton Au
4939 0.002 oz./ton Au

LEGEND

- 2 Iron Formation
- 1 Mafic Tuffs
- Quartz veins
- Bedding attitude
- Shear
- Foliation attitude
- Overburden Stripped Area
- 4942 / 0.829 oz/ton Au — Assay Tag No. oz Au/ton
- HC-86-78 [140°/-50°] — Diamond Drill Hole Azimuth Dip
- Claim Boundary
- Picket Line

63.5051
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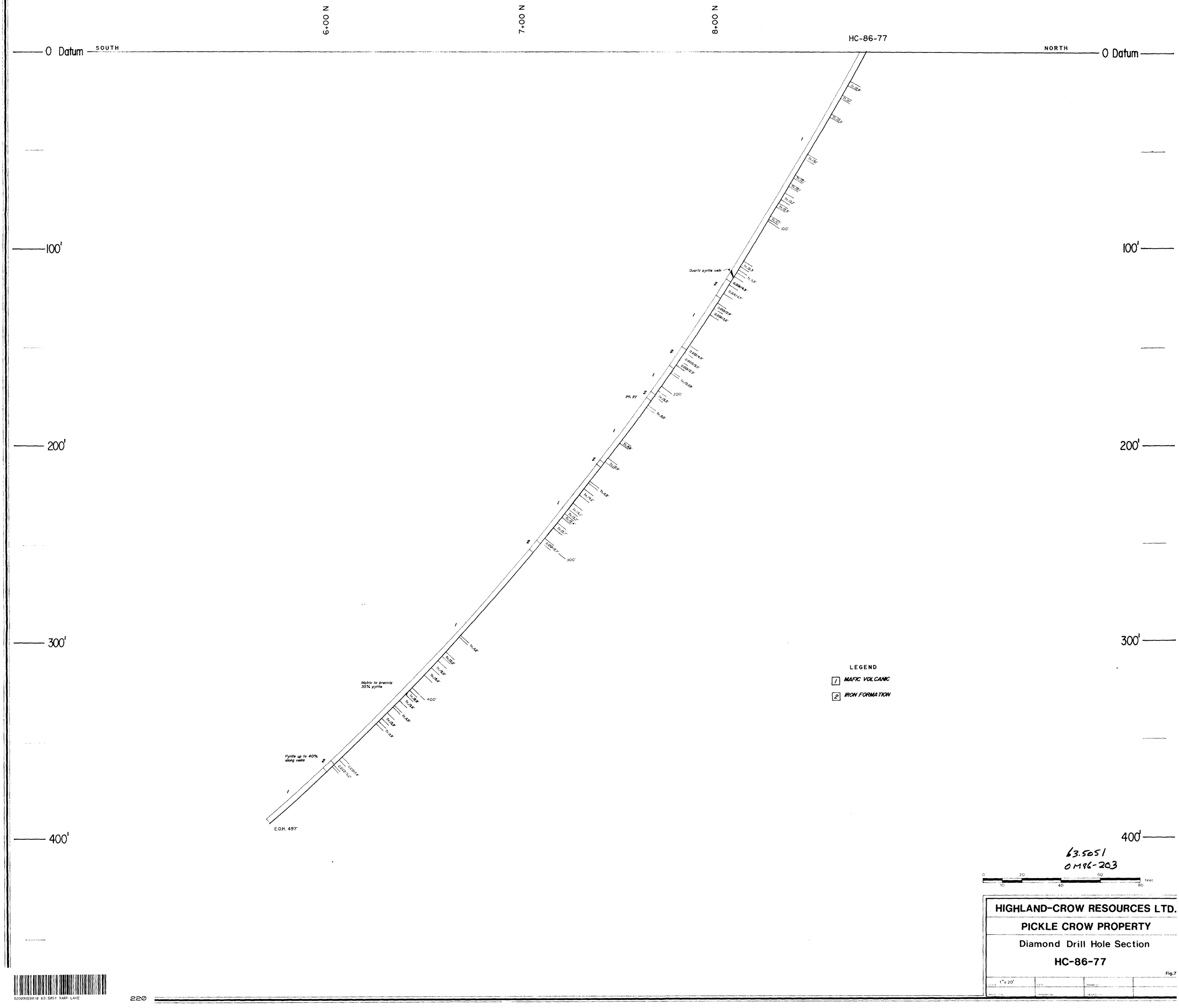
HIGHLAND-CROW RESOURCES LTD.

PICKLE CROW PROPERTY

Claims 757, 758

GEOLOGY, OVERBURDEN STRIPPING
SURFACE SAMPLES& DDH LOCATIONS

SCALE	DATE	DRAWN BY	Fig.6
1:40'			
PROJECT No.	DRAWING No.	CHECKED BY	



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0 20 60 feet
10 40 80

HIGHLAND-CROW RESOURCES LTD.

PICKLE CROW PROPERTY

Diamond Drill Hole Section

HC-86-77

Fig.7

1" = 20'

9+00 N | 10+00 N | 11+00 N | 12+00 N | 13+00 N

HC-86-78

0 Datum — SOUTH — NORTH — 0 Datum

100'

200'

300'

400'

Calcite vein with pyrite

Quartz Calcite vein

5% Quartz Ankerite veins
30% pyrite, chloritized margins

Quartz veins with crosscutting pyrite veins, milled and brecciated

Quartz tourmaline vein

Chloritic shear

Quartz flooding of contact breccia

Pyrite rimmed tourmaline crystals

4" Quartz vein with pyrite

E.O.H. 617

LEGEND

1 MAFIC VOLCANIC

2 IRON FORMATION

63.5051
OM86-203

0 20 60 feet
10 40 80

HIGHLAND-CROW RESOURCES LTD

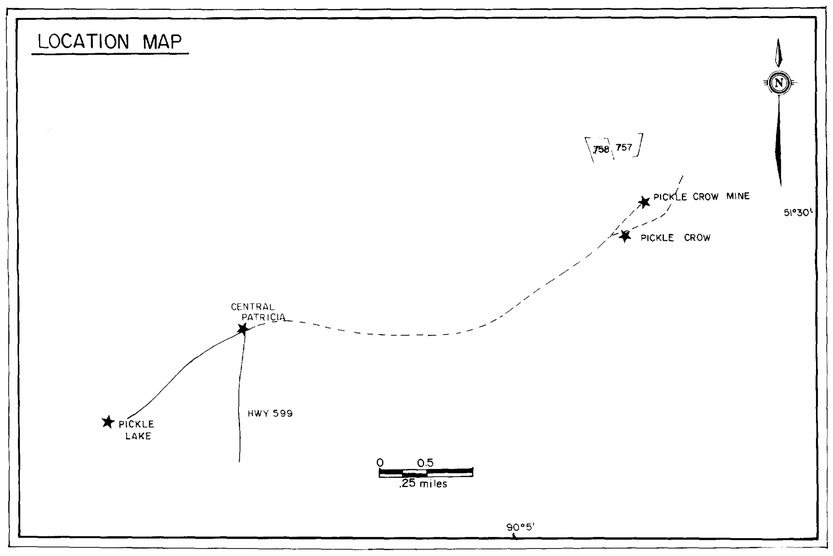
PICKLE CROW PROPERTY

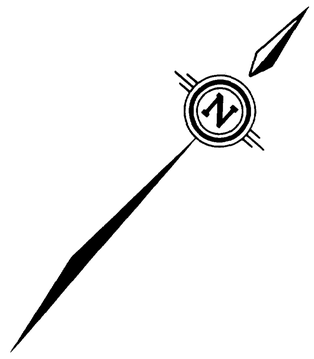
Diamond Drill Hole Section

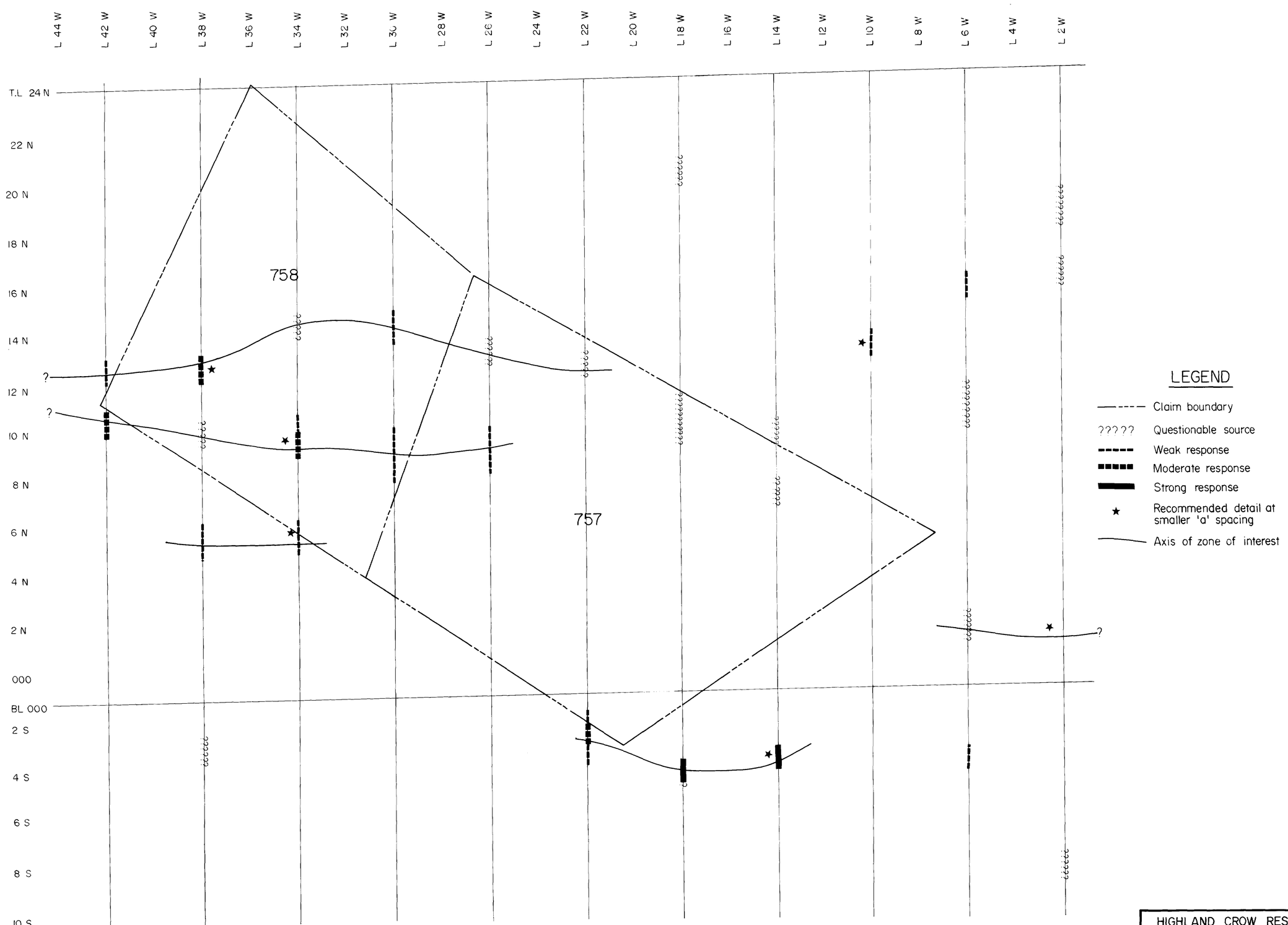
HC-86-78

Fig.8

1" = 20'







LEGEND

- Claim boundary
- ????? Questionable source
- Weak response
- Moderate response
- Strong response
- ★ Recommended detail at smaller 'a' spacing
- Axis of zone of interest

63.5051
OMBC-203

HIGHLAND CROW RESOURCES LTD.
PICKLE CROW PROPERTY
CLAIMS 757,758
INDUCED POLARIZATION SURVEY
PREPARED BY: DAVID C. ANDERSON
DATE: JUNE 3, 1987 SCALE: 1"=200'
SIGNATURE:
QUANTECH CONSULTING INC