

MAP NO.: ASSESSMENT REPORT X
105 D 11 PROSPECTUS X
CONFIDENTIAL X
OPEN FILE

DOCUMENT NO: 092887
MINING DISTRICT: Whitehorse
TYPE OF WORK: Percussion Drilling
Magnetometer

REPORT FILED UNDER: AURORA GOLD LTD.

DATE PERFORMED: Aug.-Nov, 1990

DATE FILED: DEC. 14, 1990

LOCATION: LAT.: 60°40'N

AREA: Whitehorse

LONG.: 135°08'W

VALUE \$: 41,200

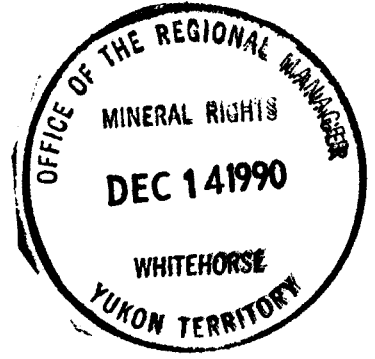
CLAIM NAME & NO.: MAC 1-14,16-19 TESS 1-9 PITT 1-5 BILL 1-11 EMILY 1,2
PARKE 1-5, JEAN 44,45,47, PRINCE 2,4,6,8,10,11, LEY 1-4
DELLA 9,10,13-16,18, SUE 9-16, SNELL 10-11, HEATHER 1-4
JAN 1 GLADYS 3-4 MABLE 5-6 GEORGE 1,2,7,8 KEN 1 GG 1,

WORK DONE BY: CARLYLE GEOLOGICAL SERVICES LTD.

WORK DONE FOR: AURORA GOLD LTD.

DATE TO GOOD STANDING:

REMARKS: The Best Chance-Grafter areas of the Whitehorse Copper Belt were surveyed with magnetometer and the subsequent anomalies tested with 7 Schramm percussion drill holes. The Grafter and Empress of India produced no significant magnetic response. GR90-2 intersected 25 feet of 3.63% Cu and 55 feet of 1.93% Cu.



REPORT ON THE 1990 DRILL PROGRAM
AURORA GOLD LTD. PROPERTY
WHITEHORSE COPPER BELT
WHITEHORSE MINING DISTRICT, YUKON
NTS 105 D-11

for

AURORA GOLD LTD.

by

Larry W. Carlyle, F.G.A.C., P. Geol.

Whitehorse, Yukon

December, 1990

This report has been examined by the Geological Exploration Unit under Section 23 (4) Yukon Quartz Mining Act and is shown as representing work in the amount of \$ _____ to Regional Manager, Exploration and Geological Services for Commissioner of Yukon Territory

092887



This report has been examined by
the Geological Evaluation Unit
under Section 53 (4) Yukon Quartz
Mining Act and is allowed as
representation work in the amount
of \$ ~~41,200~~ 41,200.

W. J. Chellette
Regional Manager, Exploration and
Geological Services for Commissioner
of Yukon Territory.

588880

EXECUTIVE SUMMARY

The Aurora Gold Ltd. property is situated in the Whitehorse Copper Belt on NTS Map Sheet 105 D-11, approximately 3 miles (5 km.) west of the City of Whitehorse. The Whitehorse Copper Belt is one of three hardrock mineral districts found by stamperers to the Klondike goldfields in the late 1890's. Copper mineralization in the belt has been exploited sporadically since that time. The most significant production occurred between 1967 and 1982 when 10 million tonnes with an average grade of 1.5 % copper and with significant values in gold and silver were processed. Five deposits on the Copper Belt are still estimated to contain reserves of 3.0 million tonnes at 1.0 % copper.

The Whitehorse Copper Belt lies within the upper Paleozoic to Jurassic Whitehorse Trough, a northwest trending island arc complex. The most significant source of copper is from skarns hosted in carbonates of the upper Triassic Lewes River Group. The largest deposits are apparently hosted in roof pendants or peninsulas of carbonate rocks totally surrounded by granites or granodiorites.

The 1990 work program consisted of a small detailed magnetometer survey and 7 reverse circulation rotary-percussion holes. Three of these holes were drilled to investigate magnetic or I. P. anomalies. No explanation was found for the anomalies in these holes. The remaining 4 holes were drilled in the area of the old Grafter Mine. These holes have at least partially confirmed a north-south strike for the mineralization in the area. Previous

workers in the area had assumed an east-west strike for the mineralization. The 1990 drilling has linked the Grafter mineralization to an I. P. anomaly which may permit it to be extended off the Grafter claim to the south. The drilling also suggests that the structure in the area may be quite complex.

An additional 5 hole drilling program and extending the detailed magnetometer survey are strongly recommended for the property. The cost of these recommendations is estimated to be \$ 65,000.00.

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Appendix A -- Reverse Circulation Drilling Hole Logs

INTRODUCTION

In 1990, Aurora Gold Ltd. decided more detailed magnetometer surveying than that which had been done earlier was needed to extend the known potential from the Best Chance - Grafter area north into areas where little testing had been done. This magnetometer surveying has been followed by seven reverse-circulation rotary percussion drill holes. The services of Carlyle Geological Services Ltd. were obtained to do the magnetometer surveys in August, 1990 and in October, 1990. The use of these services was extended to include the supervision of the drilling program.

The magnetometer surveying, newly discovered mapping of the old Grafter Mine (Figure 9) and I.P. anomalies suggest that the previously assumed east-west strike for the Grafter deposit may be in error -- a north-south strike for the deposit is more probable. In an attempt to confirm this hypothesis, most of the drilling has been done in the Grafter area.

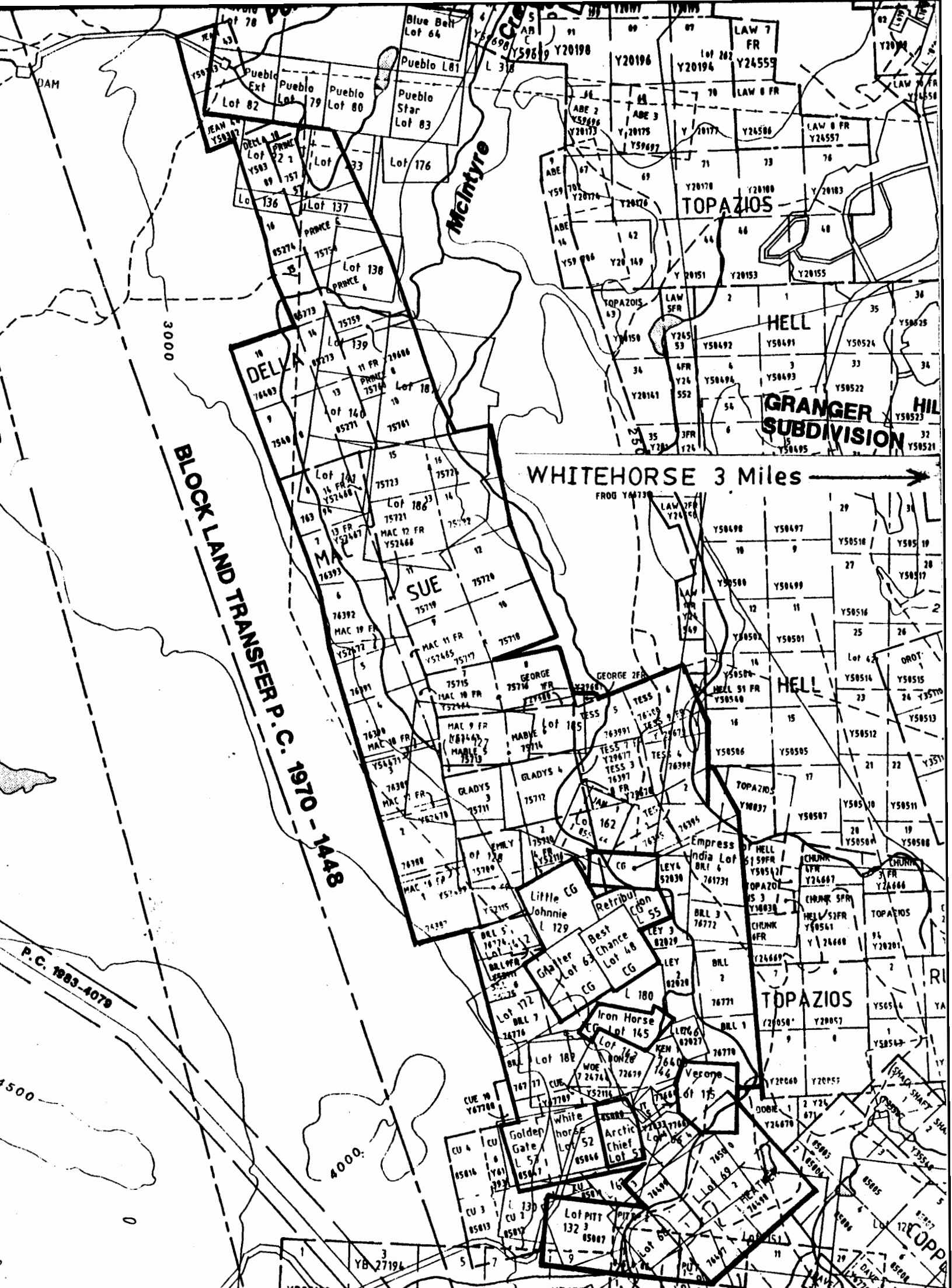
The object of this report is to summarize the information obtained from the program. Of central importance are the 12 profiles and 2 plans (Figures 1 to 8) on which data from the August magnetometer survey have been assembled. Also of major importance are the 2 drill location plans (Figures 10 and 17) and the 7 drill hole profiles (Figures 11 to 16 and Figure 18).

LOCATION, ACCESS AND CLAIMS

The Aurora Gold Ltd. property on the Whitehorse Copper Belt, held under option from Hudson Bay Mining and Smelting, are located just west of Whitehorse, the Yukon capital city, on NTS Map Sheet 105 D-11. The property consists of 99 quartz mineral claims and fractions plus 6 crown granted claims.

Vehicle access is easily achieved from the former Whitehorse Copper haulage road which runs approximately down the center of the property. This haulage road leaves the Fish Lake Road near the north end of the claims on the Pueblo Claims (See Location Map).

<u>CLAIM NAME</u>	<u>GRANT NUMBERS</u>	<u>EXPIRY DATE</u>
Tess 3 & 4	76397 - 76398	January 1, 1991
Mac 9 Fr	Y 52463	January 1, 1991
Mac 16-18 Fr	Y 52469 - Y 52471	January 1, 1991
Heather 1-4	76497 - 76500	January 1, 1991
Pitt 1-3	85085 - 85087	January 1, 1991
Jean 44 & 45 Fr	Y 50382 - Y 50383	January 1, 1991
Jean 47 Fr	Y 50385	January 1, 1991
Bill 2-8	76771 - 76777	January 1, 1992
Bill 9-11 Fr	Y 52111 - Y 52113	January 1, 1992
Ley 2-4 Fr	82028 - 82030	January 1, 1992
Bonzo Fr	72699	January 1, 1992
Tess 1 & 2	76395 - 76396	January 1, 1992
Jan 1	85566	January 1, 1992
Emily 3 & 4 Fr	Y 52115 - Y 52116	January 1, 1992
Prince 2,4,6,8 & 10	75757 - 75761	January 1, 1992
Prince 11 Fr	Y 29686	January 1, 1992
Sue 9-16	75717 - 75724	January 1, 1992
Tess 5 & 6	76399 - 76400	January 1, 1992
Tess 7-9 Fr	Y 29677 - Y 29679	January 1, 1992
Della 9-10	76408 - 76409	January 1, 1992
Della 13-16	85271 - 85274	January 1, 1992
Della 18	Y 50389	January 1, 1992
Emily 1 & 2	75709 - 75710	January 1, 1992
Gladys 3 & 4	75711 - 75712	January 1, 1992
Mable 5 & 6	75713 - 75714	January 1, 1992
George 7 & 8	75715 - 75716	January 1, 1992
George 1 & 2 Fr	Y 29680 - Y 29681	January 1, 1992
Snell 10	85076	January 1, 1992



WHITEHORSE 3 Miles →

LOCATION & CLAIM MAP
AURORA GOLD LTD. CLAIMS
 Whitehorse Copper Belt
 NTS 105 D-11

SCALE: 1: 30,000
 0 30000 60000

Prepared by
 Carlyle Geological Services Ltd.

<u>CLAIM NAME</u>	<u>GRANT NUMBERS</u>	<u>EXPIRY DATE</u>
Snell 11 Fr	Y 29674	January 1, 1992
Mac 1-8	76387 - 76394	January 1, 1992
Mac 10-14 Fr	Y 52464 - Y 52468	January 1, 1992
Mac 19	Y 52472	January 1, 1992
Pitt 4 Fr	85088	January 1, 1992
Pitt 5 Fr	Y 20334	January 1, 1992
Parke 1-3	77664 - 77666	January 1, 1992
Parke 4	Y 12210	January 1, 1992
Parke 5 Fr	Y 52114	January 1, 1992
Golden Gate 1	85847	January 1, 1992
Whitehorse 1	85846	January 1, 1992
Ley 1 Fr	82027	January 1, 1992
Bill 1	76770	January 1, 1992
Ken 1	76403	January 1, 1992

Crown Grant Claims

Best Chance	Lot 48
Retribution	Lot 55
Empress of India	Lot 61
Grafter	Lot 63
Little Johnnie	Lot 129
Iron Horse	Lot 145

HISTORY

Copper mineralization was first discovered in the Whitehorse Copper Belt by Jack McIntyre in 1897 while he was out hunting. This discovery resulted in his staking the Copper King claim on July 6, 1898 -- the first claim staked on the belt. Mr. McIntyre was a stamper on his way to the Klondike. His discovery of copper was one of only three hardrock mineral districts located by stampers -- the other two were the vein gold deposits on Montana Mountain and the Keno Hill silver, lead and zinc veins.

Thorough prospecting resulted in most of the known deposits having been discovered and staked by 1899. Small shipments of ore were made to smelters between 1900 and 1912. The largest mine on the Copper Belt was the Pueblo which produced 127,000

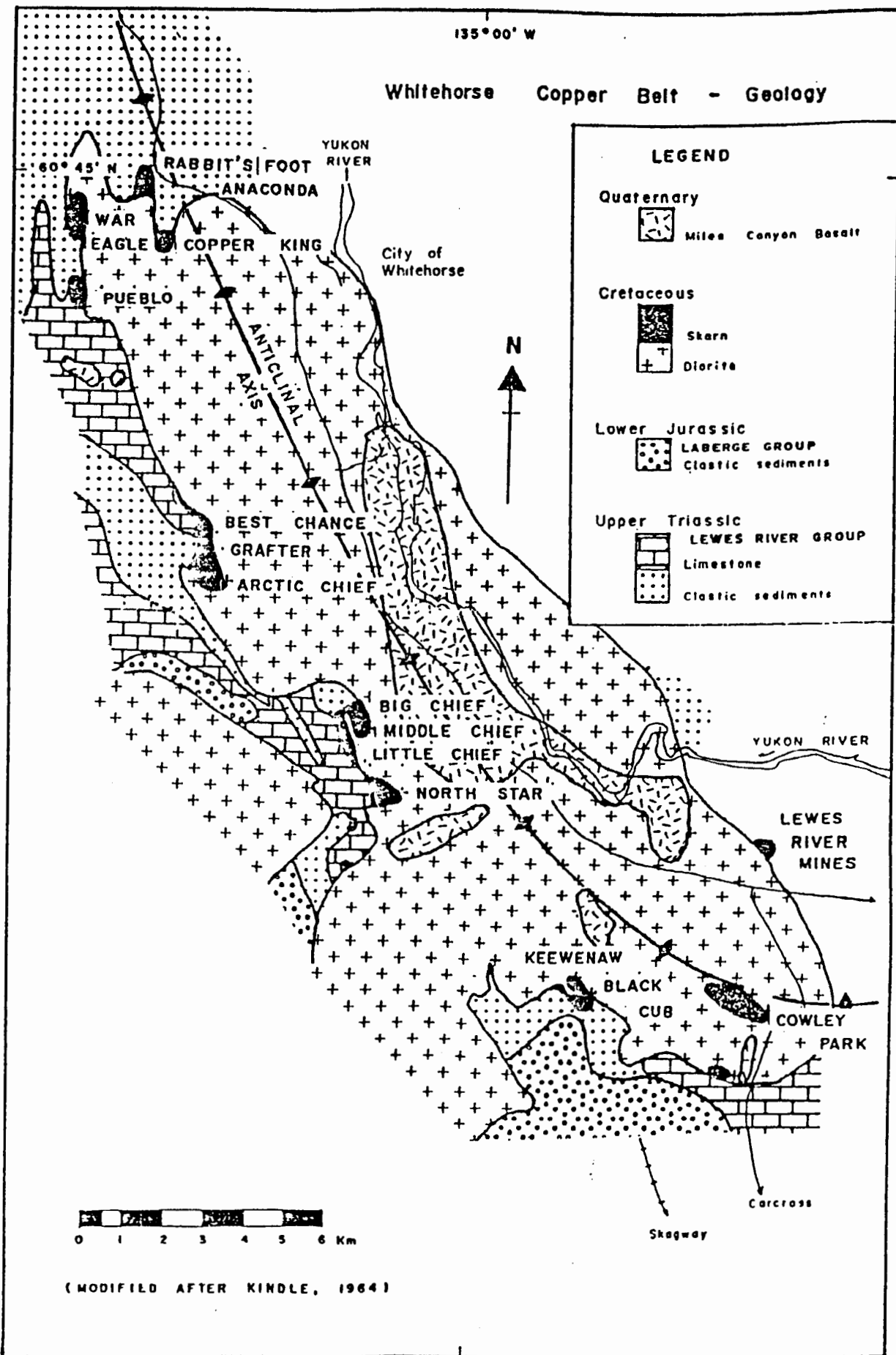
tonnes of 3.5 % copper between 1912 and 1920.

Sporadic exploration and production continued from 1920 to 1967. In 1967, the modern era of mining commenced with the formation of New Imperial Mines Ltd. Production came from the Little Chief, Arctic Chief, Black Cub South, Keewenaw and War Eagle pits. In 1971, the company was reorganized and changed its name to Whitehorse Copper Mines Ltd. From this time until 1982 when mining operations ceased, most of the production came from underground at the Little Chief and Middle Chief deposits.

Total production between 1967 - 1982 was 10 million tonnes with an average grade of 1.5 % copper and with significant values in gold and silver. Five deposits on the Copper Belt are still estimated to contain reserves of approximately 3.0 million tonnes of 1.0 % copper.

REGIONAL GEOLOGY

The Whitehorse Copper Belt lies within the upper Paleozoic to Jurassic Whitehorse Trough, a northwest trending island arc complex. The primary source of copper is from skarns hosted in upper Triassic Lewes River Group carbonates and clastic rocks at, or near, their contact with diorite or granodiorite of a mid-Cretaceous batholith. These skarns have been located along a 32 km. long belt situated about 5 km. west of Whitehorse. The largest deposits are apparently hosted in roof pendants or peninsulas of carbonate rocks totally surrounded by the pluton.



The carbonate units are of dolomitic and calcareous composition. Dolomitic units are richer in iron and host magnetite-serpentine skarns with diopside, red to brown garnet, bornite greater than chalcopyrite and valleriite. Calcareous units have less iron and host wollastonite skarns with beige to yellow garnet, chalcopyrite greater than bornite and molybdenite. Iron-rich skarns generally contain higher precious metal values.

1990 PROGRAM

A - Magnetometer Surveys

In August, 1990, Carlyle Geological Services Ltd. performed 12 lines of proton magnetometer surveying which covered the Best Chance, Grafter and Empress of India copper deposits. Magnetic readings were taken every 25 feet along cut lines separated by a distance of 200 feet. These data have been used to create a diurnally corrected plan (Figure 1) and a contoured value plan (Figure 2). These data have also been used to produce line profiles using a three point average smoothing technique (Figures 3 to 8). The purpose of this more detailed survey was to determine if additional drilling could extend the limits or indicate potentially higher grade zones in the three deposits. The survey outlined a strong north striking magnetic anomaly in the area of the baesline and the haulage road which extends from Line 2N to Line 6N. The highest magnetic response was obtained on Line 4N in the area of the Best Chance deposit (Figure 2). No significant magnetic response was found over the Grafter and Empress of India deposits. The strong presence of copper oxides was observed in the areas of both deposits. It is concluded that

copper in these areas is associated with low iron skarns.

Data from the survey was subsequently worked by a geophysicist in Calgary. He determined that a low amplitude anomaly existed on Line 0 + 00 between the baseline and station 2 + 00 W. Hole BC90 - 1 was drilled to test this anomaly on Line 0 + 00 at station 1 + 00 W and 150 feet below the surface. A very weak anomaly was also located on Line 2 + 00 N in the vicinity of the old Grafter Mine Shaft; he attributed it to surface material left from previous operations.

Carlyle also did detailed magnetic surveys on two areas of the Best Chance (North) Grid. These surveys consisted of very short 2 line loops in each area. Data from the surveys were not plotted and worked since they were performed simply to confirm and better define anomalies located in an earlier survey. The earlier survey had readings taken every 100 feet on lines separated by 400 feet.

The first of these surveys was done on Lines 164 + 00 S and 162 + 00 S to confirm an anomaly at 21 + 00 W. The Carlyle survey showed the peak to be at 20 + 75 W. This strong anomaly occurs close to the same contact between limestones and quartzites as the Best Chance and Grafter deposits. This anomaly was tested by hole DUN90 - 1.

The second of these surveys was done on Lines 128 + 00 S and 126 + 00 S to confirm an anomaly at 19 + 00 W. The Carlyle survey showed the peak to be at 18 + 50 W. This anomaly has yet

to be tested.

B - Rotary - Percussion Drilling

On October 10, 1990, a truck-mounted Schramm reverse circulation, rotary-percussion drill was brought onto the Aurora Gold Ltd. property. Four holes totalling 1518 feet were drilled before the drill left the property on October 22, 1990. All the holes encountered water which severely slows the penetration rate of this type of drill which functions with the use of compressed air. One major and several minor mechanical problems also added to the time required to complete this modest drilling program.

The same drill, this time mounted on a nodwell, returned to the property on November 21, 1990 and left on November 23, 1990. During this stay, the drill completed 3 additional holes totalling 1270 feet. This portion of the program also saw all the holes encounter water. Drilling was further complicated by long hours of work in darkness and temperatures as low as - 40° C. See Figures 10 and 17 for drill hole locations. Profiles of the holes have been drawn on Figures 11 - 16 and Figure 18.

Most of the holes were sampled in 5 foot intervals with sampling started soon after bedrock was encountered. Each sample had the hole number and footage marked on the bag. Samples were collected from the cyclone after they had passed through a series of three splitters. For the first two holes, the 50 % split was collected and bagged for storage as a record. This was discontinued for the next two holes because finding sufficient storage space was a problem. The last split (12.5 %) was bagged

and shipped to Aurora Gold in Calgary for assaying and examination with a binocular microscope. Microscope examination should reveal any zones of mineralization which may not have been detected in the field. During the November drilling, only the 12.5 % split was kept. From this, a further split was taken for shipment to Calgary for assay and for microscopic examination. This was done to reduce the large shipping cost for sending the entire 12.5 % split to Calgary.

See Appendix A for the drill hole logs. The writer or an assistant was present at the drill as each hole was drilled and kept a written log of the rock types and other facts as the hole progressed. To determine what rock types were being penetrated as the hole progressed, handfuls and sievefuls of rock chips were collected from the splitters for inspection. The copper values included in the logs are visual estimates made in the field and may prove to be in error when assayed values are obtained.

Identification of the rocks being penetrated was frequently aided by the colour of the water returned from the hole. White water usually indicated the penetration of limestone or tremolite-wollastonite-actinolite skarn. Green water indicated the penetration of quartzite or diopside-rich skarn. High garnet content in the skarn resulted in a red-brown coloured water. Epidote or yellow garnet caused the water to become yellow-green in colour. Several hematite and iron oxide rich slips were encountered in the holes causing the water to turn instantly orange-brown in colour. On some occasions during the drilling of

GR90 - 2 and GR90 - 4, the water turned black from the high sulphide content of the rock being drilled.

STATEMENT OF COSTS

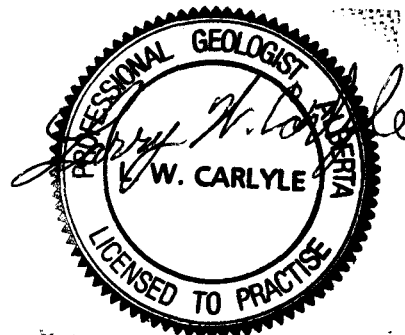
Rig Mobilization	\$ 2,185.00
Rig Stand-By Time (\$220/hr)	\$ 4,620.00
Bulldozer Mob & Demob	\$ 510.00
Bulldozer for Site Preparation	\$ 6,672.50
Loader for Road Clearing	\$ 617.50
Nodwell Charges	\$ 2,100.00
Drilling	\$ 47,930.00
Sampler Labour	\$ 4,250.00
Sample Bags	\$ 853.75
Geologist	\$ 8,514.00

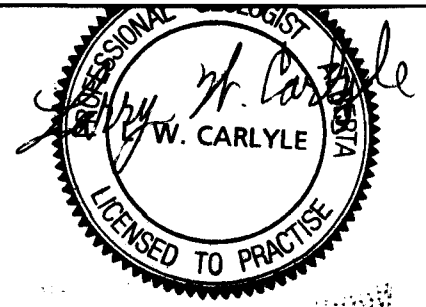
Total	\$ 78,253.94
	=====

The costs for the drilling of hole BC90 - 2 will be subtracted from the above total before assessment is filed. The costs of hole BC90 - 2 are \$ 6,920.74.

TOTAL EXPENSES APPLIED TO ASSESSMENT --- \$ 71,333.20

These costs do not include shipping and assaying since these costs are not presently available. The costs for the drilling of holes BC90 - 1 and GR90 - 1 to 4 located on the Best Chance and Grafter crown grant claims will have their costs justified for filing as assessment under Section 54(2) of the Yukon Quartz Mining Act in the next section of this report.





CONCLUSIONS AND RECOMMENDATIONS

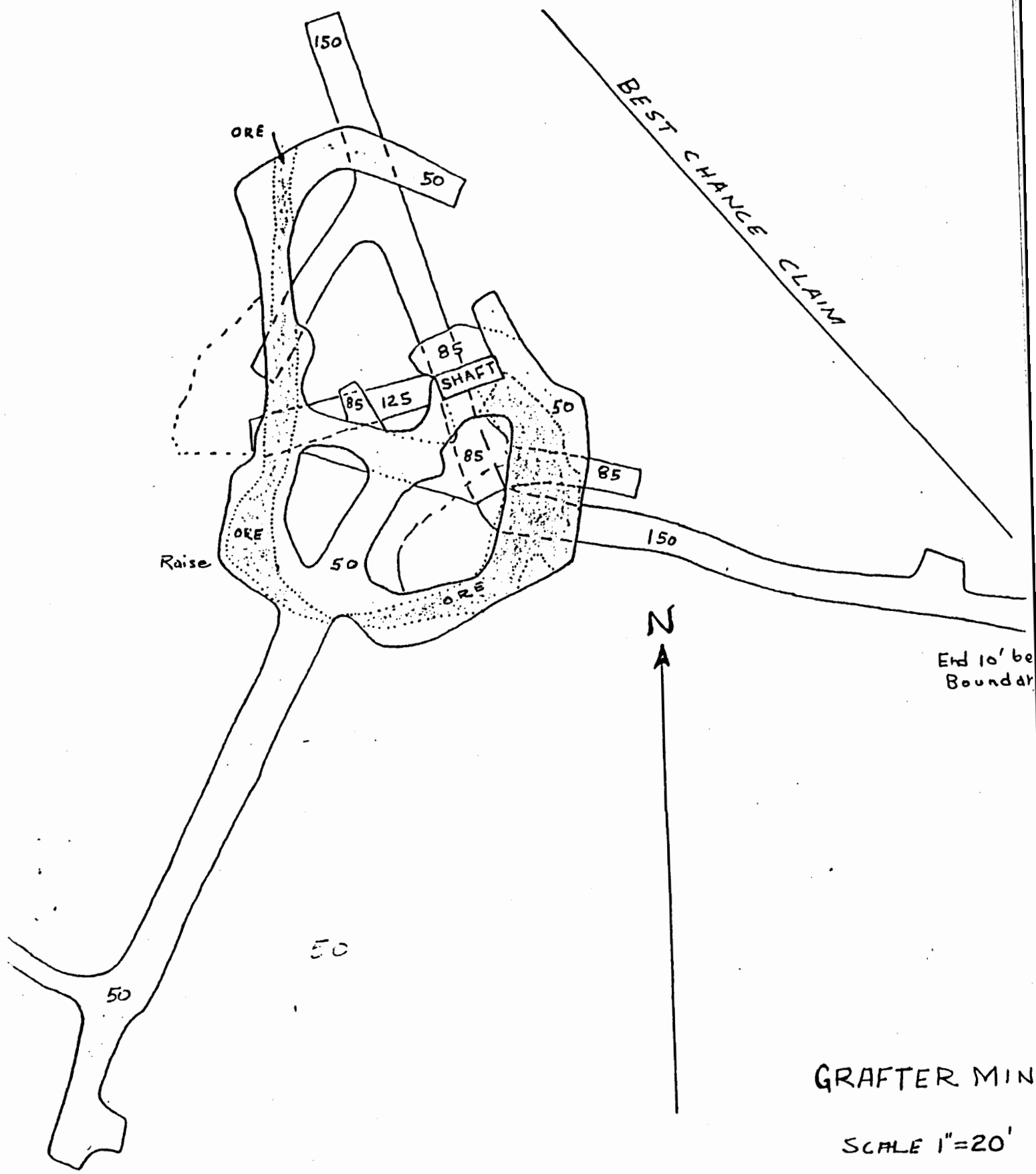
1. No explanation was found for the magnetic anomaly tested with hole BC90 - 1. There are at least three reasons for this:

- the source of the magnetism is near surface rather than deep as thought by the Calgary geophysicist, Trevor Dundas
- the source is, in fact, deep and the hole penetrating the area of the anomaly at a depth of approximately 150 feet overshot it
- a strong fault in the area has moved the source further to the west similar to displacement of the magnetic anomaly seen near the Best Chance Deposit.

The existence of weak malachite and azurite mineralization in a road cut on the Ley 2 Fr. claim (82028) [See Figure 10] approximately 250 feet south of the hole suggests an extension in this direction. A hole to test the anomaly at a depth of approximately 250 feet below surface is recommended for this area.

2. The four holes drilled in the area of the old Grafter Mine have shown:

- a partial confirmation of a north-south strike for the mineralization (See Figures 9 & 10).
- a link of the mineralization to the I. P. anomaly south of the old mine (See Figures 10, 13 & 14). Mineralization may extend south off the Grafter onto the Bill 10 Fr. claim (Y 52112) [See Figure 10] and into the Iron Horse crown granted claim only 200 feet from the southern boundary of the Grafter claim.
- the horseshoe shape of the ore shown in the old Grafter Mine plan (Figure 9) and the lack of mineralization near surface in holes GR90 - 3 & 4 suggest the rock structures in the mine area are complex.



GRAFTER MIN

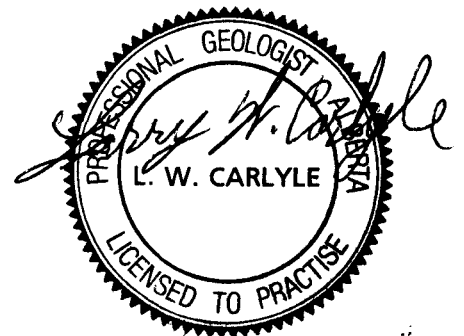
SCALE 1"=20'

FIGURE 9

Additional drilling both north and south from that done in the old mine area is strongly recommended. The potential for development of new mineral reserves here is considered to be excellent.

3. The DUN90 - 1 hole located on the Emily 1 claim (75709) encountered only minor magnetism in the hole. The cause for the length and strength of this anomaly still remains unexplained. The presence of small amounts of serpentine, epidote and yellow garnet (?) suggest the existence of stronger hydrothermal and/or skarn mineral development close by. The hole was stopped at 425 feet due to a very slow penetration rate and the lack of additional drill rods. If the source of the magnetic anomaly is dipping into the cliff (See Figure 18), the drill hole may be too short. Should deepening this hole prove feasible, it should be done.

The success in locating smaller magnetic anomalies using a reading spacing of 25 feet along lines separated by 200 feet indicates that the remainder of the Best Chance (South) Grid north of the Empress of India should be surveyed. The survey will assist in extending known showings and in locating new showings which may exist north of the Grafter.

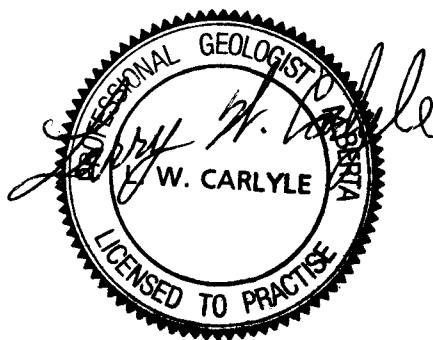


PROPOSED WORK PROGRAM AND BUDGET

1. Five holes to test mineralization north and south along strike at the Grafter (Approx. 2500 feet) \$ 60,000.00
 2. Complete the more detailed magnetometer surveying to the north end of the Best Chance (South) Grid \$ 5,000.00
- Total \$ 65,000.00

REFERENCES

1. Bostock, H.S., "Yukon Territory" Selected Field Reports of the G.S.C. 1898 to 1933, Memoir 284.
2. Hart, C.J.R. and Pelletier, K.S., "Geology of Whitehorse (105 D/11) Map Area" Open File 1989 - 1 Canada/Yukon EDA
3. Watson, P.H., (1984) "The Whitehorse Copper Belt - A Compilation" Exploration and Geological Services Division - Yukon Indian and Northern Affairs, Canada Open File
4. Wheeler, J.O., (1961) "Whitehorse Map Area, Yukon Territory" G.S.C. Memoir 312

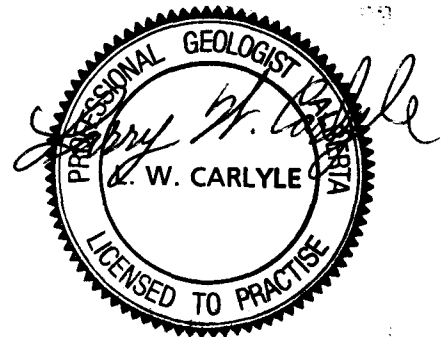


STATEMENT OF QUALIFICATIONS

I, LARRY W. CARLYLE, do certify:

1. That I am a professional geologist operating a business registered as CARLYLE GEOLOGICAL SERVICES LTD. with an office at 74 Tamarack Drive, Whitehorse, Yukon Y1A 4Y6.
2. That I hold a B. Sc. degree in geology from the University of British Columbia (1970).
3. That I am a Fellow of the Geological Association of Canada (F - 4355).
4. That I am a Registered Professional Geologist in the Association of Professional Engineers, Geologists and Geophysicists of the Province of Alberta (41097).
5. That I am a Member of the Canadian Institute of Mining and Metallurgy.
6. That I have practiced my profession as a mine and exploration geologist for sixteen years.
7. The conclusions and recommendations in the attached report are based on a review of all available private and public reports on the property and a work program on the property carried out under my supervision.
8. That I hold no interest in the property or shares of Aurora Gold Ltd.

DATED at Whitehorse, Yukon, this 12th day of December, 1990.



APPENDIX A

REVERSE CIRCULATION DRILLING HOLE LOGS

REVERSE CIRCULATION DRILLING HOLE LOGS

ON

WHITEHORSE COPPER BELT

BY

AURORA GOLD LTD.

HOLE #: BC90 - 1 DATE: October 10 - 12/90
 LOCATION: 0 + 50 S, 0 + 10 E BEARING: W 16° S
 DIP: 50° ELEVATION: ~ 2700 ft.
 LENGTH: 305 ft. LOGGED BY: L. Carlyle

FOOTAGE	DESCRIPTION	REMARKS
0 - 4	Overburden	Casing to 17 ft.
4 - 18	Black hornblende (Tourmaline) Diorite	Samples start @ 20 ft.
18 - 72	Green Quartzite	Minor Garnet-Diopside Skarn
72 - 91	Dark Green-Black Quartzite	Water @ 32 ft. Stopped @ 36 ft. Slight magnetism @ 48 ft.
91 - 96	Garnet-Diopside Skarn (Zoisite)	Damp 59 ft - 65 ft Water from 65 ft.
96 - 129	Dark Green Quartzite	Trace magnetic
129 - 134	Garnet-Diopside Skarn	Some serpentine
134 - 156	Light to Dark Green Quartzite Minor serpentine	More serpentine 139 - 145
156 - 162	Garnet-Diopside Skarn	
162 - 195	Quartzite Minor Garnet	Serpentine(Epidote?) for 2 ft. @ 163 Epidote @ 168 - 170 Garnet-Diopside Skarn @ 165 & 172
195 - 234	Dark Green Quartzite	Talcy with minor garnet 215 - 219
234 - 240	Hornblende Diorite	
240 - 242	Dark Green Quartzite	
242 - 254	Hornblende Diorite	1 ft quartzite @ 245 Talcy quartzite zones 251 - 253
254 - 265	White to Pale Green Tremolite-Actinolite-Garnet Skarn	Some talc & serpentine Trace zoisite

265 - 267	Pale to Dark Green-Black Quartzite	
267 - 274	Tremolite-Actinolite-Garnet Skarn	
274 - 276	Garnet-Diopside Skarn	Epidote @ beginning
276 - 279	Tremolite-Actinolite Skarn	
279 - 281	Epidote-Garnet-Diopside(?) Skarn	
281 - 286	Tremolite-Actinolite Skarn	Minor epidote
286 - 305	Epidote Minor Garnet	Some short Actinolite-Tremolite zones

HOLE #: GR90 - 1

DATE: October 12 - 15/90

LOCATION: 1 + 40 N, 5 + 50 W

BEARING: S 60° W

DIP: 45°

ELEVATION: 2782 ft.

LENGTH: 365 ft.

LOGGED BY: L. Carlyle

FOOTAGE	DESCRIPTION	REMARKS
0 - 34	Overburden	Samples start @ 40
34 - 45	Weakly skarned & silicified Limestone	Strong iron oxide 40 - 45
45 - 53	Dark grey to black Limestone	Weak diopside 45 - 52
53 - 57	White to Dark Grey Limestone	
57 - 61	Green (Diopside-Chloritic ?) Gouge Water ?	
61 - 69	Hornblende Diorite	
69 - 75	Dark Green Diopside-Quartz Skarn	Minor Epidote
75 - 77	Hornblende Diorite	
77 - 83	Pale Green-Black Actinolite- Garnet Skarn	
83 - 123	Mottled White-Dark Green Quartz-Diopside Skarn	Minor garnet, tremolite and actinolite Strong water @ 115
123 - 130	Dark Green-Black Diopside Skarn	Minor garnet and quartz
130 - 135	Dark Green Diopside-Garnet Skarn	Trace Malachite & Azurite
135 - 148	Dark Green Diopside-Garnet Skarn Trace pyrite, chalcopyrite & malachite	2 ft. samples start @ 140 ft.
148 - 157	Garnet-Diopside Skarn No visible mineralization	
157 - 160	Mostly Diopside-Garnet Skarn No mineralization	2 ft. samples stop @ 160 ft.

160 - 167	Quartz (Tremolite ?)- Diopside, Epidote (+ Zoisite) Skarn	Minor garnet
167 - 169	Dark Green-Black Diopside- Garnet Skarn Minor quartz, epidote, tremolite & actinolite	
169 - 171	Diopside-quartz-epidote skarn Weak tremolite & garnet	
171 - 174	Hornblende Diorite + Diopside Skarn	Minor quartz, garnet & epidote
174 - 196	Quartz (Tremolite ?)-Diopside Skarn Weak Garnet & Epidote	Strong garnet @ 178 & 183 Fractured & soft drilling 185 - 199
196 - 198	Hornblende Diorite + Diopside Skarn	
198 - 223	Quartz (Tremolite ?), Diopside -Actinolite Skarn Minor garnet & epidote	Bad ground 200 - 207 Fault (?) 221 - 222
223 - 237	Garnet-Diopside-Tremolite Skarn Weak epidote & Actinolite	Zoisite 228 - 233 Sericitic gouge 236 - 238 ft.
237 - 242	Garnet-Actinolite-Diopside -Epidote Skarn	
242 - 244	White-Pale green Tremolite- Actinolite Skarn Minor Epidote, Diopside & Garnet	
244 - 267	Diopside-Garnet Skarn	Strong epidote 249 - 255 ft. Strong actinolite 256 - 260 ft. Fault gouge 260 - 261 ft. Trace zoisite 263 - 265 ft.
267 - 279	Tremolite-Actinolite Skarn Weak Diopside & Garnet	Fault @ 277 ft.
279 - 283	Actinolite-Tremolite Skarn Weak Garnet & Epidote	
283 - 289	Diopside-Garnet Skarn Strong Epidote	
289 - 295	Actinolite-Tremolite Skarn Weaker Diopside & Garnet	
295 - 312	Actinolite-Tremolite Skarn Weak Diopside, Garnet & Epidote	
312 - 324	Diopside-Garnet Skarn	
324 - 351	Tremolite-Actinolite Skarn Weak Garnet & Epidote (some zoisite)	Fault @ 328 ft.
351 - 362	Mud filled fault	Very few cuttings recovered.
362 - 365	Tremolite-Actinolite Skarn	

HOLE #: GR90 - 2

DATE: October 16 - 18/90

LOCATION: 1 + 60 N, 9 + 20 W

BEARING: True East

DIP: 50°

ELEVATION: ~ 2835 ft.

LENGTH: 423 ft.

LOGGED BY: L. Carlyle

FOOTAGE	DESCRIPTION	REMARKS
0 - 51	White Limestone Weak skarn mineralization & silicification	Casing to 7 ft. Samples start @ 10 ft.
51 - 63	Diopside-Garnet Skarn Minor Zoisite, Actinolite & Tremolite	Strong iron oxide @ contact.
63 - 72.5	Garnet-Diopside Skarn Minor epidote	
72.5 - 81	Went through old workings	Cuttings returned @ 94 ft. 50 ft. level?
94 - 114	Diopside-Garnet Skarn Weak Epidote < 1% pyrite, chalcopryrite, malachite & bornite(?)	Weak water started @ 105 ft.
114 - 116.5	Old Workings	85 ft. level ?
116.5 - 118.5	No cuttings returned	
118.5 - 120.5	Old Workings	85 ft. level ?
120.5 - 145	Very soft ground	No cuttings returned
135 - 145	WARMED WATER CAME FROM HOLE	Very small sample 140 - 145 ft.
145 - 224	Diopside-Garnet-Epidote Skarn <u>Visible Copper Estimates</u> 1 - 2% bornite & chalcopryrite 2 - 4% bornite & chalcopryrite Fault Mud 173 - 178 ft. < 1% copper 178 - 183 ft. Fault Mud 183 - 184 ft. < 1% copper 184 - 188 ft. 1 - 2% copper 188 - 205 ft. < 1% copper 205 - 214 Trace copper 214 - 224 ft.	145 - 165 ft. 165 - 173 ft.
224 - 244	Garnet-Diopside Skarn	Strong zoisite & Actinolite 204 - 226 ft.
244 - 252	Garnet-Diopside Skarn Trace copper.	Strong zoisite 234 - 239 ft.
252 - 263	Garnet-Diopside Skarn	
263 - 270	Garnet-Diopside Skarn Strong Zoisite	Trace copper @ 260
270 - 278	Diopside-Garnet Skarn	
278 - 285	Garnet-Diopside Skarn	

405 - 423 White Limestone
 Weak Actinolite-Tremolite & Quartz.
 Strong hematite with trace malachite, diopside &
 garnet in slips @ 414.5, 416 & 420 ft.

HOLE #: DUN90 - 1 **DATE:** October 20 - 22/90
LOCATION: 18 + 15 W, 164 + 10 S **BEARING:** S 60° W
DIP: 45° **ELEVATION:** 2780 ft.
LENGTH: 425 ft. **LOGGED BY:** L. Carlyle

<u>FOOTAGE</u>	<u>DESCRIPTION</u>	<u>REMARKS</u>
0 - 25	Dark green Quartzite Minor Diorite Trace Pyrite Some iron oxide	Non-magnetic Samples start @ 10 ft.
25 - 71	Dark green Chloritic (?) & Plagioclase Feldspar Diorite Trace pyrite & pyrrhotite	Casing to 7 ft. Slightly magnetic Hit water @ 64 ft.
71 - 85	Dark green Quartzite with Biotite & Hornblende Phenocrysts	
85 - 91	Dark green Chloritic & Plagioclase Feldspar Diorite (Quartzite ?)	
91 - 101	Dark green Quartzite	
101 - 105	Fault - Grey Mud + Water	
105 - 115	Green Quartzite Trace Pyrite up to 1 %	
115 - 120	Fault ? Very soft drilling	
115 - 123	Quartzite with some dioritic zones	
123 - 175	Green Quartzite up to 1% Pyrite	
175 - 190	Quartzite with minor epidote & quartz-calcite on fractures Trace Hematite	
190 - 200	Green Quartzite up to 1% Pyrite	
200 - 215	Green Quartzite with serpentine on fractures	Slight Magnetism
215 - 249	Green Quartzite up to 1% Pyrite	
249 - 250	Fault Gouge	
250 - 350	Green Quartzite up to 1% Pyrite	
350 - 369	Quartzite with < 1% Pyrite Some mottled & intrusive looking zones	
369 - 371	Dark Green-Black speckled intrusive (?) Probably a Quartzite.	

371 - 390	Dark Green-Black Quartzite with < 1% Pyrite Minor epidote and magnetism @ 370, 375 & 390 ft.	Slightly Magnetic
390 - 408	Dark Green Quartzite with some zones of intrusive (?)	
408 - 410	Fault Gouge	Plugs Drill Rods
410 - 425	Green Quartzite with some zones of intrusive (?)	

HOLE #: BC90 - 2

DATE: November 21, 1990

LOCATION: 1 + 50 N, 3 + 25 E

BEARING: N 32° W

DIP: 45°

ELEVATION: Approx. 2650 ft.

LENGTH: 310 ft.

LOGGED BY: L. Carlyle

FOOTAGE	DESCRIPTION	REMARKS
0 - 8	Overburden	Casing to 17 ft. Lost in hole.
8 - 135	White Limestone Minor Skarn Minerals	Minor Water @ 91 ft.
135 - 159	Hornblende Diorite	
159 - 164	Mostly Limestone with minor Diorite & Epidote	
164 - 173	Hornblende Diorite	Minor Water @ 170 ft
173 - 175	Garnet Diopside Skarn	
175 - 310	Hornblende Diorite	Minor Water from 210 - 212 ft. Water @ 227 ft. & @ 230 ft.

Continuous Water from 238 ft.

Minor chlorite & garnet from 274 - 278 ft.

Increasing serpentine & epidote from 278 - 310 ft.

HOLE #: GR90 - 3

DATE: November 21 - 22, 1990

LOCATION: 0 + 83 N, 9 + 73 W

BEARING: True East

DIP: 45°

ELEVATION: 2835 ft.

LENGTH: 455 ft.

LOGGED BY: L. Carlyle
S. Drew MacDonald

FOOTAGE	DESCRIPTION	REMARKS
0 - 2	Overburden	Casing to 7 ft.
2 - 30	Black & White Crystalline Limestone. Some Skarn Minerals	
30 - 99	White Limestone	Trace Skarn Minerals 97 - 99 Dark L. S.
99 - 113	Dk. Brn Garnet Skarn	Some diopside & actinolite
113 - 165	Hornblende Diorite	1 ft L.S.(?) @ 149
165 - 292	Garnet - Diopside Skarn	
292 - 305	Garnet - Diopside Skarn	Trace Chalcopyrite @ 292 - 296 ft.
305 - 310	Hornblende Diorite	

310 - 333	White Limestone (Marble)	
333 - 335	Diorite + Diopside-Garnet Skarn	
335 - 352	White Limestone (Marble)	
352 - 355	Diopside-Garnet Skarn	
355 - 368	White Limestone (Marble)	
368 - 370	Diopside-Garnet Skarn	
370 - 371	White Limestone	
371 - 392	Diopside-Garnet Skarn	
392 - 397	Diopside-Garnet Skarn	4 % Chalcopyrite
397 - 426	Actinolite-Garnet Skarn	Trace bornite @ 409
	Some iron oxide	Minor Diopside @ 415
		Good Chlorite @
		415 - 426 ft.
426 - 438	Actinolite-Diopside Skarn	Minor Chlorite
438 - 440	Lt. grey - green Quartzite	
440 - 455	Actinolite - Garnet Skarn	Chlorite @ 447 ft.

HOLE: GR90 - 4

DATE: November 22 - 23, 1990

LOCATION: 2 + 37 N, 9 + 96 W

BEARING: True East

DIP: 45°

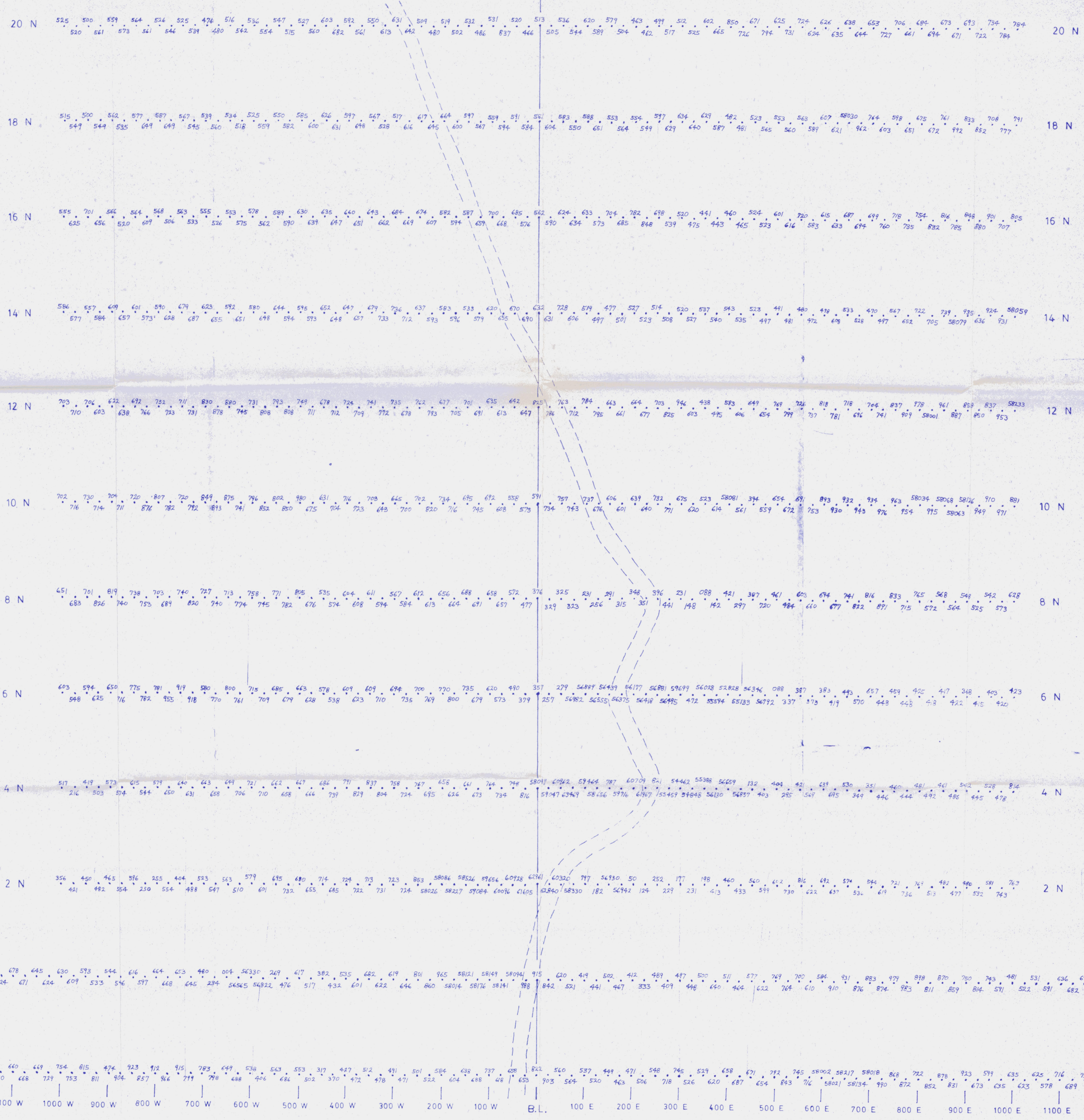
ELEVATION: 2831 ft.

LENGTH: 505 ft.

LOGGED BY: L. Carlyle
S. Drew MacDonald

FOOTAGE	DESCRIPTION	REMARKS
0 - 3	Overburden	Casing to 7 ft.
3 - 34	Hornblende Diorite	
34 - 40	Dk. Grey & White Limestone	
40 - 55	White Limestone	Slip with iron oxide @ 55 ft.
55 - 98	Hornblende Diorite	Minor Zoisite & Diorite
98 - 118	Tremolite-Actinolite Skarn	Some Diorite & Zoisite
118 - 136	Hornblende Diorite	
136 - 150	Diopside-Garnet Skarn	
150 - 172	White Limestone (Marble)	
172 - 188	Hornblende Diorite	
188 - 200	White Limestone	
200 - 202	Serpentinized Limestone	
202 - 209	White Limestone	
209 - 226	Diopside-Garnet Skarn	
226 - 237	White Limestone	
237 - 240	Diopside-Garnet Skarn	
240 - 242	White Limestone	
242 - 314	Diopside-Garnet Skarn	
314 - 323	Garnet-Tremolite Skarn	
323 - 410	Diopside-Garnet Skarn	

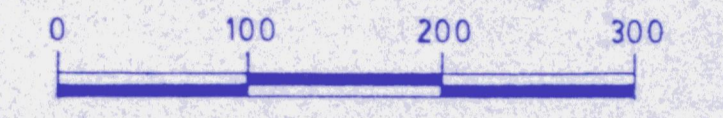
410 - 411	Diopside-Garnet Skarn	Trace Malachite & Bornite
411 - 414	Diopside-Garnet Skarn	25 % Malachite & Chalcopyrite
414 - 418	Diopside-Garnet Skarn	Trace Malachite
418 - 428	Diopside-Garnet Skarn	
428 - 430	Garnet Skarn	
430 - 432	Garnet Skarn	2 % Malachite
432 - 433	Garnet Skarn	
433 - 435	Garnet-Zoisite Skarn	Trace Azurite, Malachite, Pyrite, Chalcopyrite & Bornite (?)
435 - 450	Garnet-Zoisite Skarn	
450 - 468	Tremolite-Garnet Skarn	
468 - 483	Diopside Skarn	2 - 3 % Bornite
483 - 505	White Limestone	Last 3 ft. Dk. grey Limestone



MAGNETOMETER SURVEY
BEST CHANCE (SOUTH) GRID

DIURNALLY CORRECTED RAW DATA

SCALE: 1 inch = 100 feet



LEGEND

- 837 = 57837 gammas
- 58233 = 58233 gammas
- HAULAGE ROAD

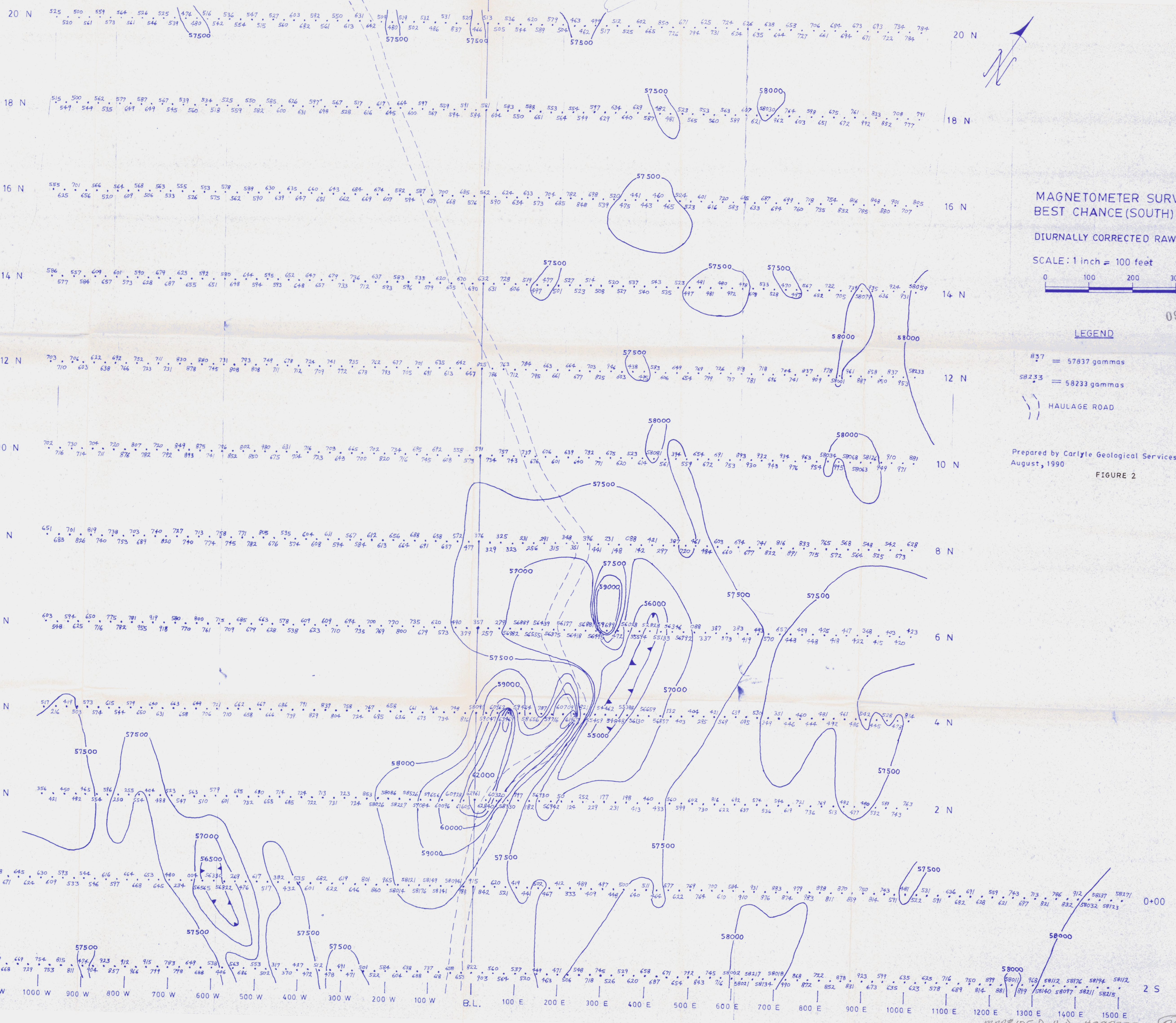
Prepared by Carlyle Geological Services Ltd.
August, 1990

FIGURE 1

092887

0+00 504 457 448 531 555 630 610 514 478 645 630 593 544 616 664 653 480 004 56330 269 617 382 535 682 619 801 965 58121 58149 58094 915 620 419 502 412 489 497 500 511 577 749 700 584 931 883 979 898 870 750 743 481 531 636 691 589 743 713 786 912 58137 58271 482 478 515 493 607 615 600 624 671 624 609 533 546 597 668 645 234 56545 54822 476 517 432 601 622 646 860 58014 58176 58141 388 842 521 441 467 333 609 498 640 464 622 764 610 910 876 874 923 811 829 814 571 522 591 682 628 621 677 821 832 58032 58123 0+00

2 S 619 609 591 529 437 477 619 582 640 649 754 815 474 923 912 915 783 649 538 543 583 317 427 512 491 501 504 638 737 608 653 822 560 537 449 471 548 745 529 658 671 712 745 58002 58217 58018 848 722 878 923 599 635 625 716 750 899 58011 968 58112 58176 58194 58112 639 591 561 511 459 546 597 610 668 729 753 811 904 857 966 719 798 688 406 686 502 370 472 478 471 522 604 604 488 48 608 653 903 564 520 463 506 718 526 620 687 654 843 716 58021 58134 990 872 852 821 673 635 623 578 689 814 881 899 58140 58097 58211 58215 2 S



MAGNETOMETER SURVEY
BEST CHANCE (SOUTH) GRID

DIURNALLY CORRECTED RAW DATA

SCALE: 1 inch = 100 feet



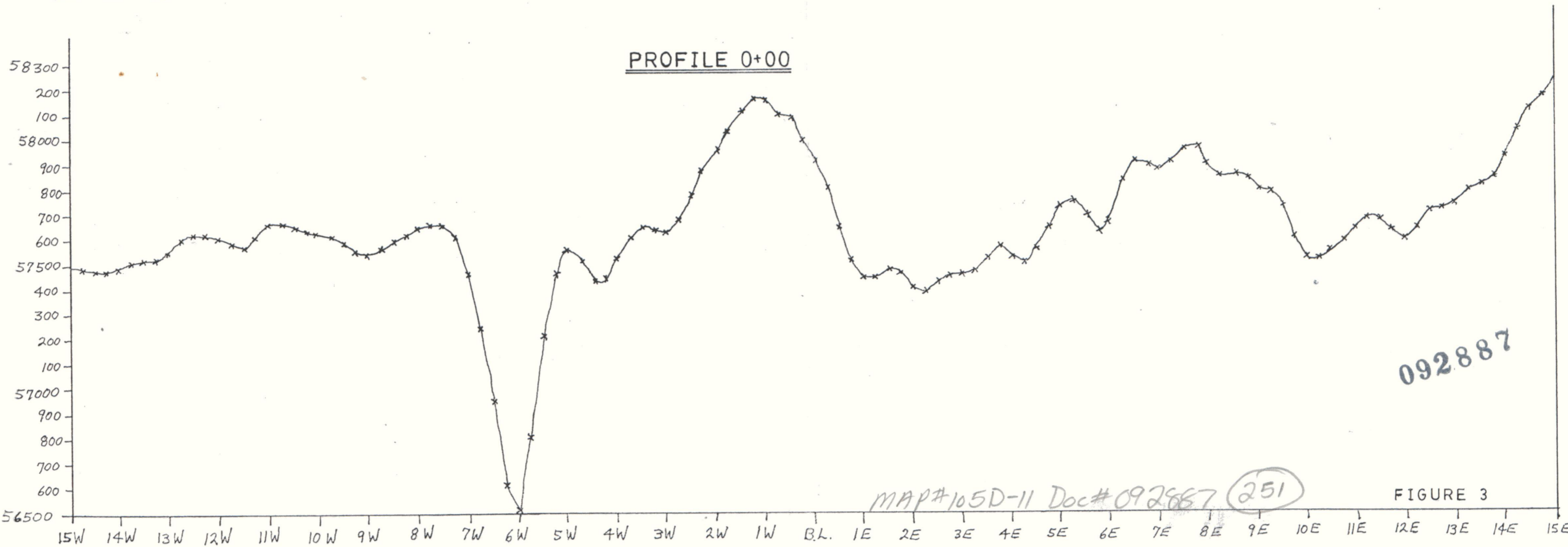
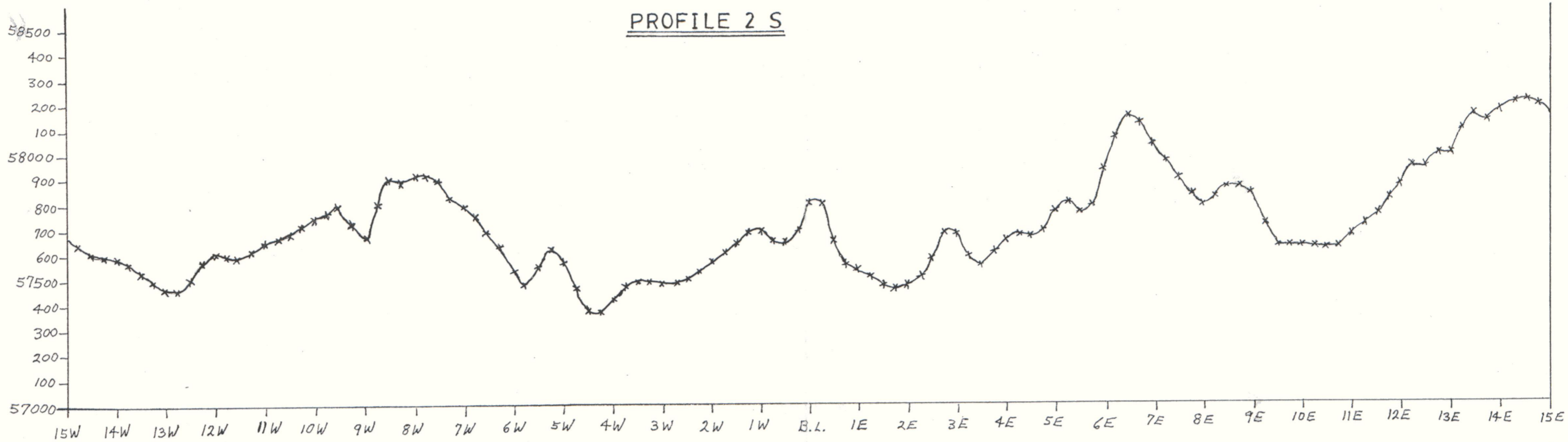
092887

LEGEND

- 837 = 57837 gammas
- 58233 = 58233 gammas
- HAULAGE ROAD

Prepared by Carlyle Geological Services Ltd.
August, 1990

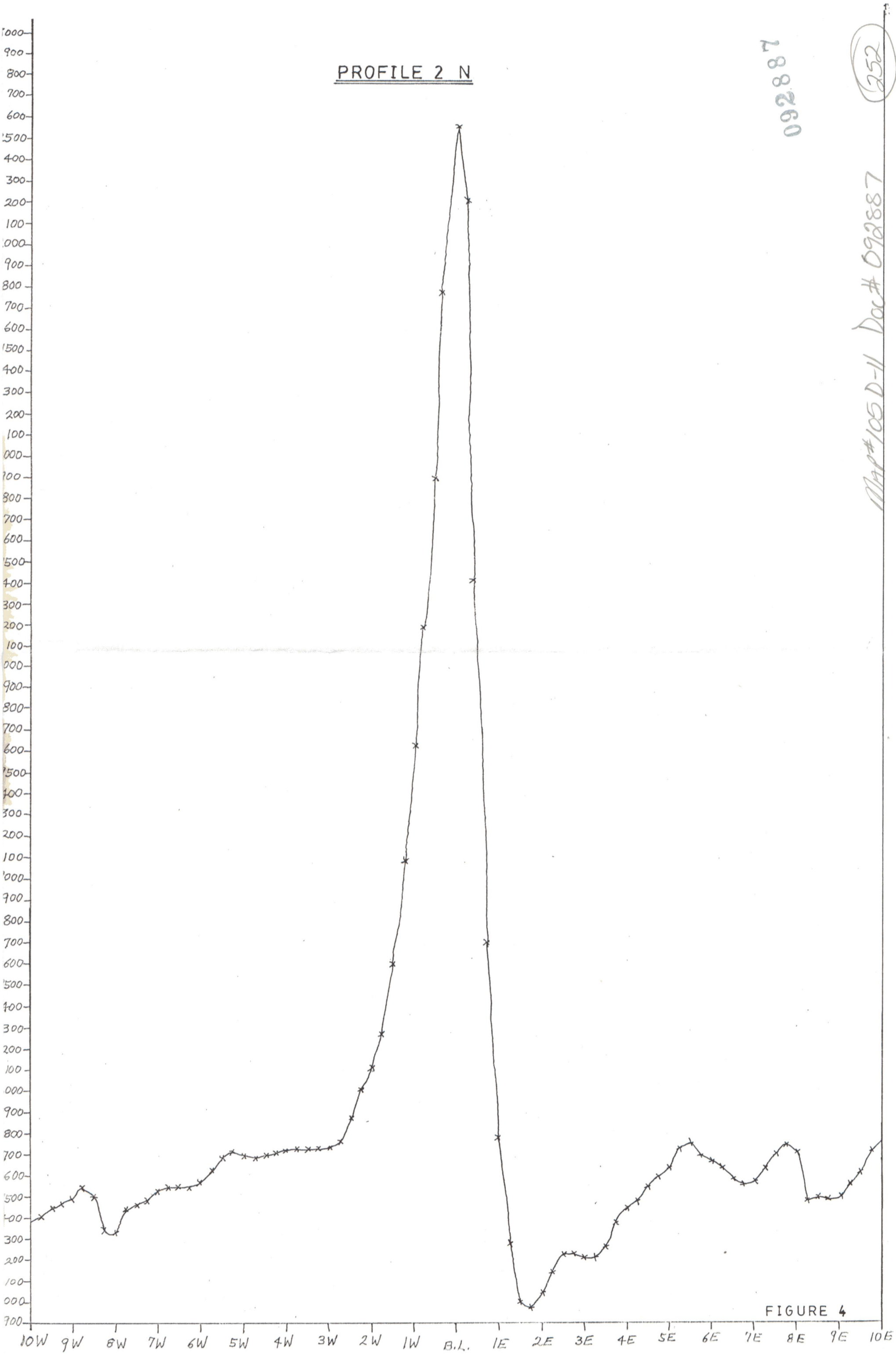
FIGURE 2



092887

MAP#105D-11 Doc#092887 (251)

FIGURE 3



092887

252

Map# 105 D-11 Doc# 092887

FIGURE 4

092887

PROFILE 4 N

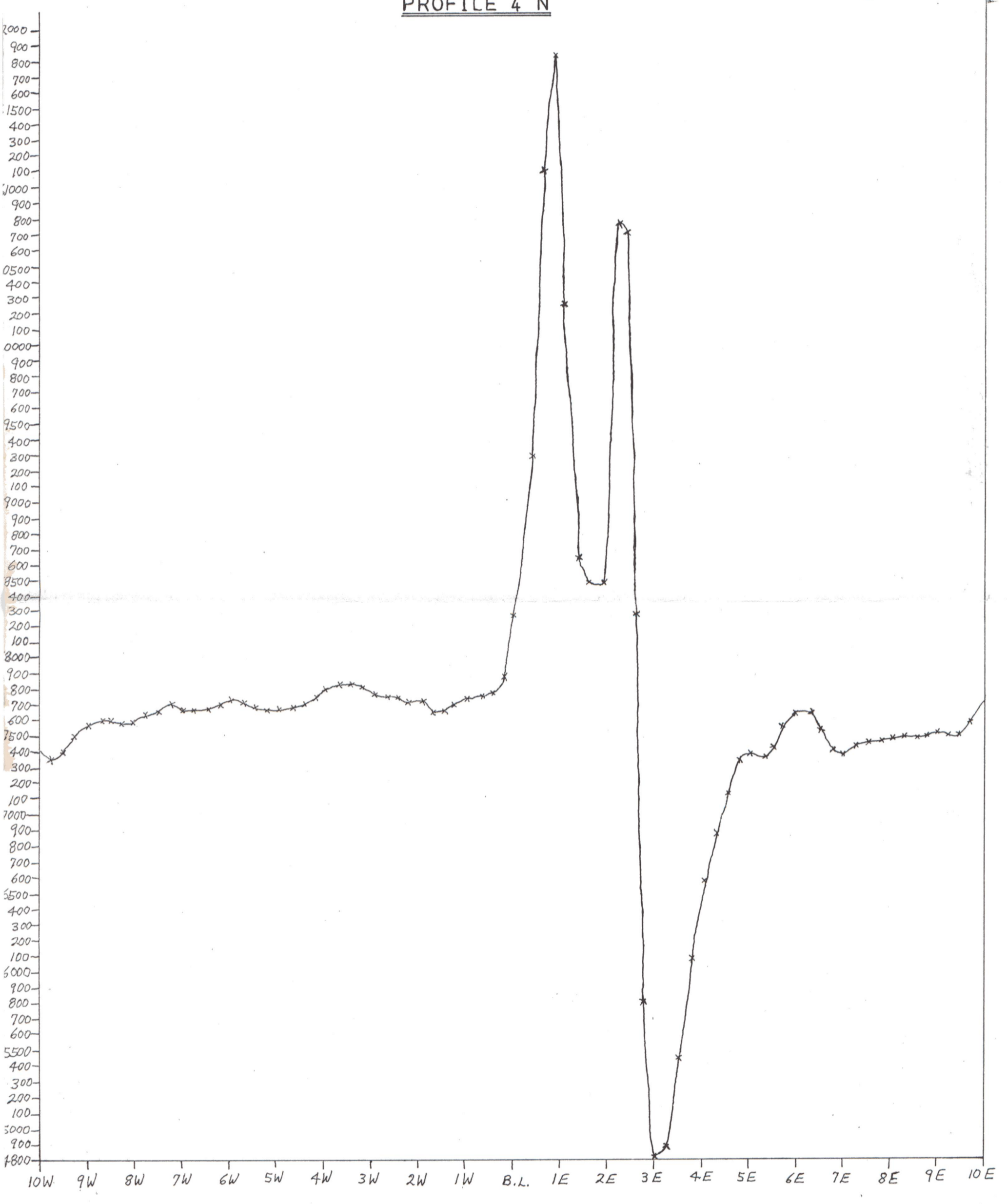


FIGURE 5

092887

PROFILE 6 N

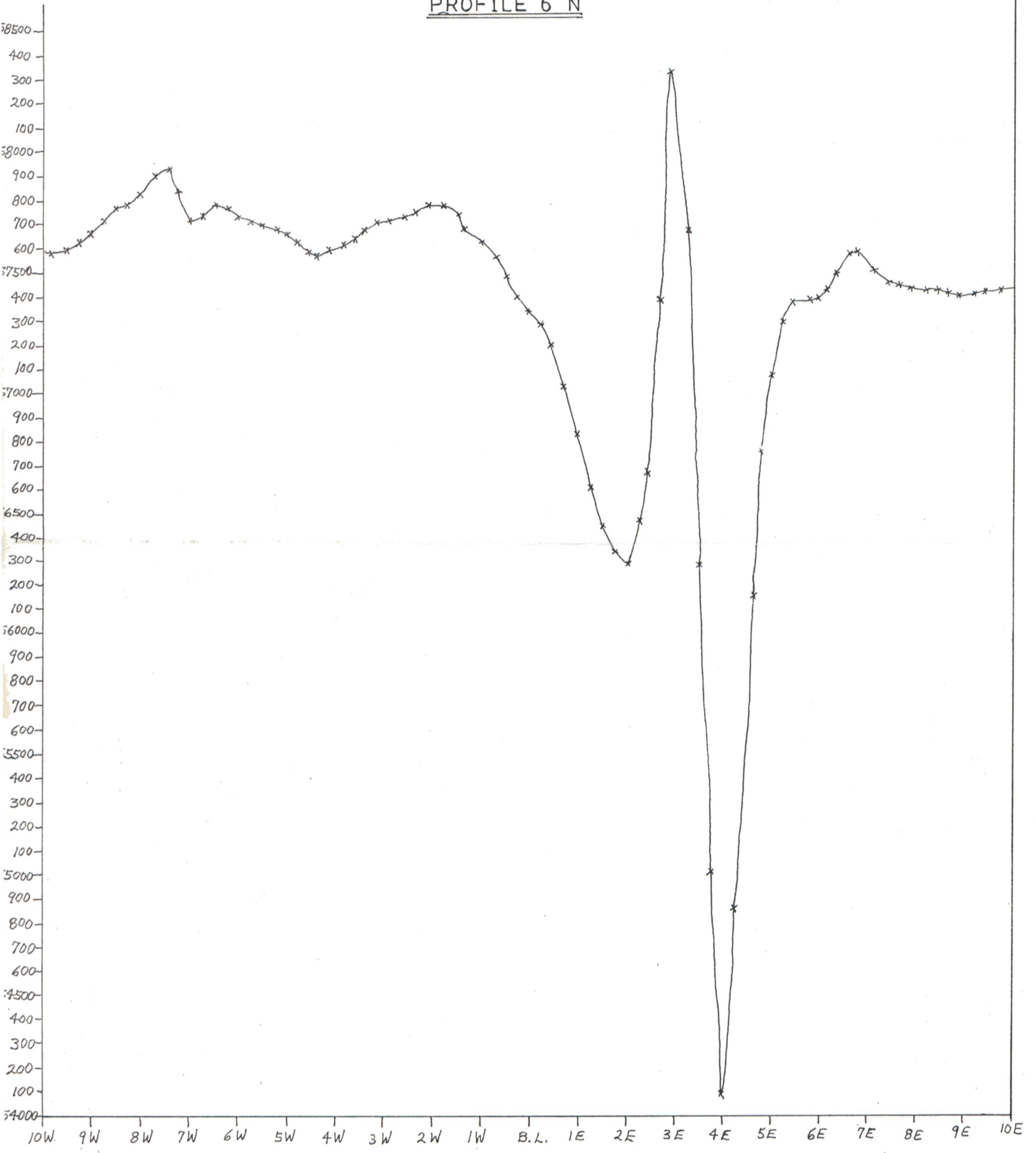


FIGURE 6

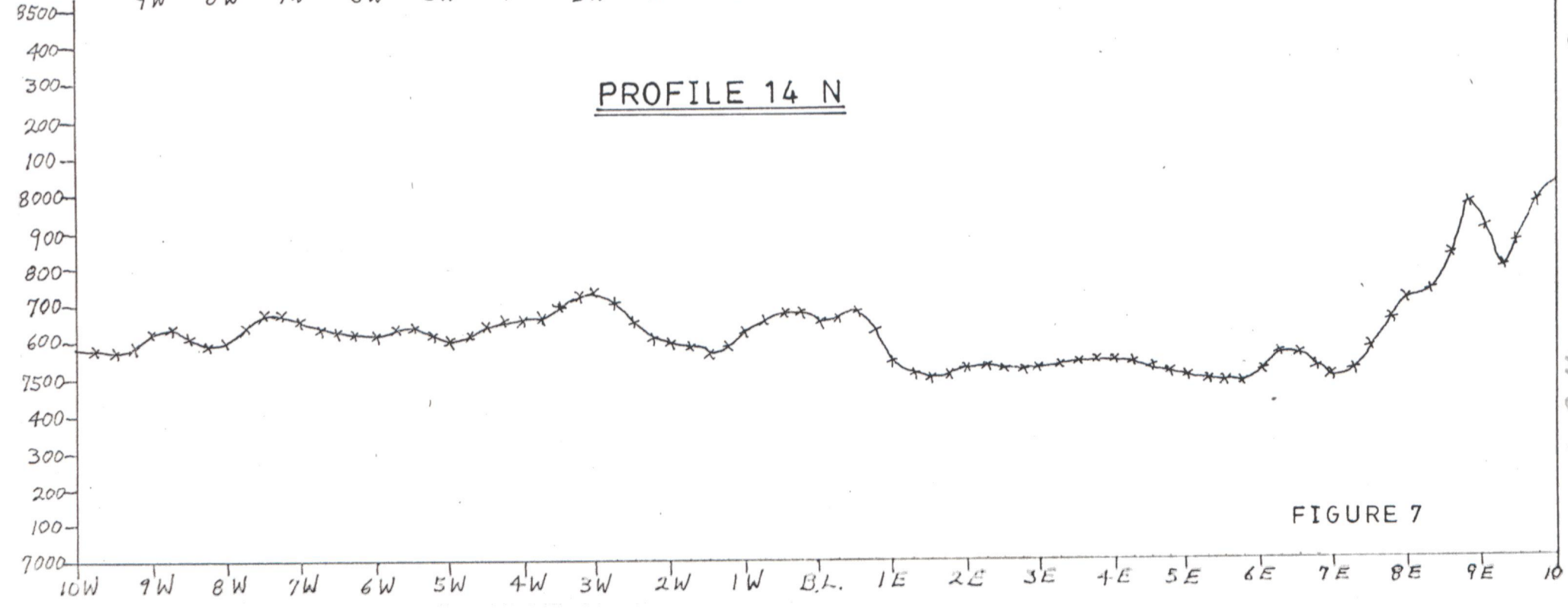
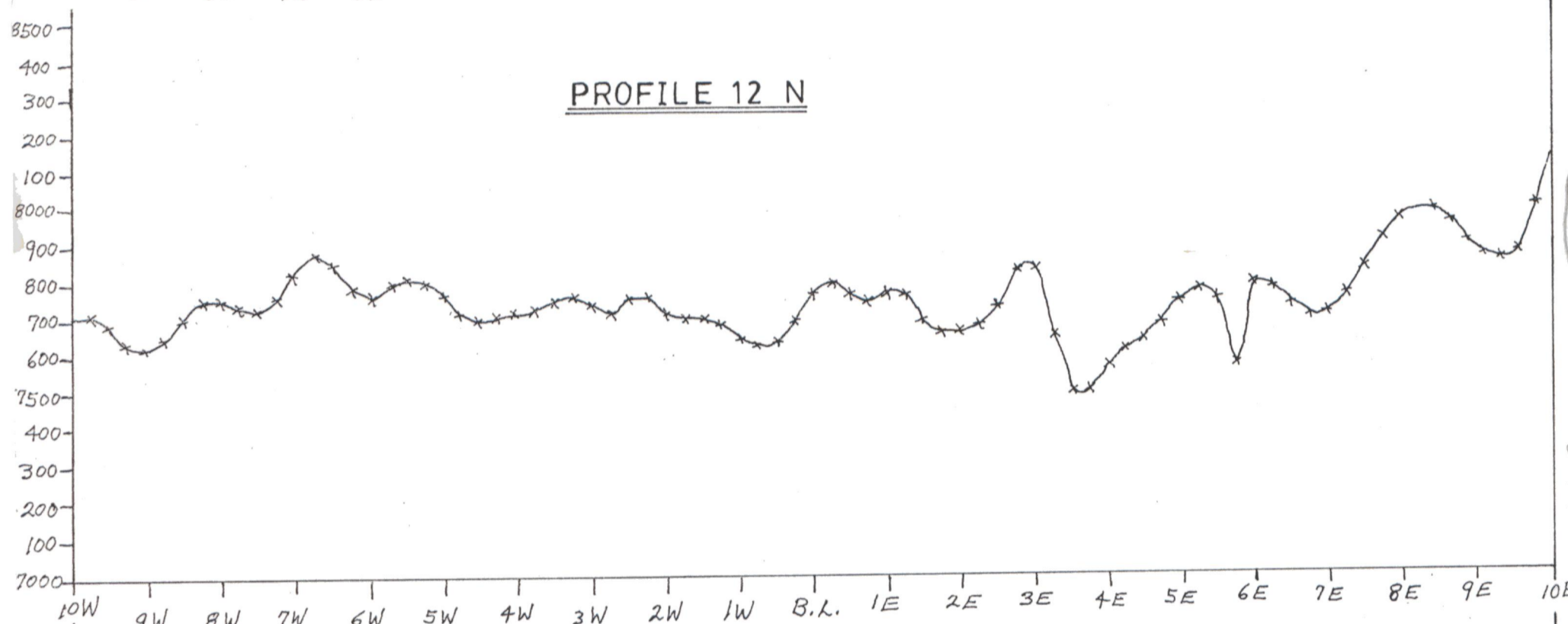
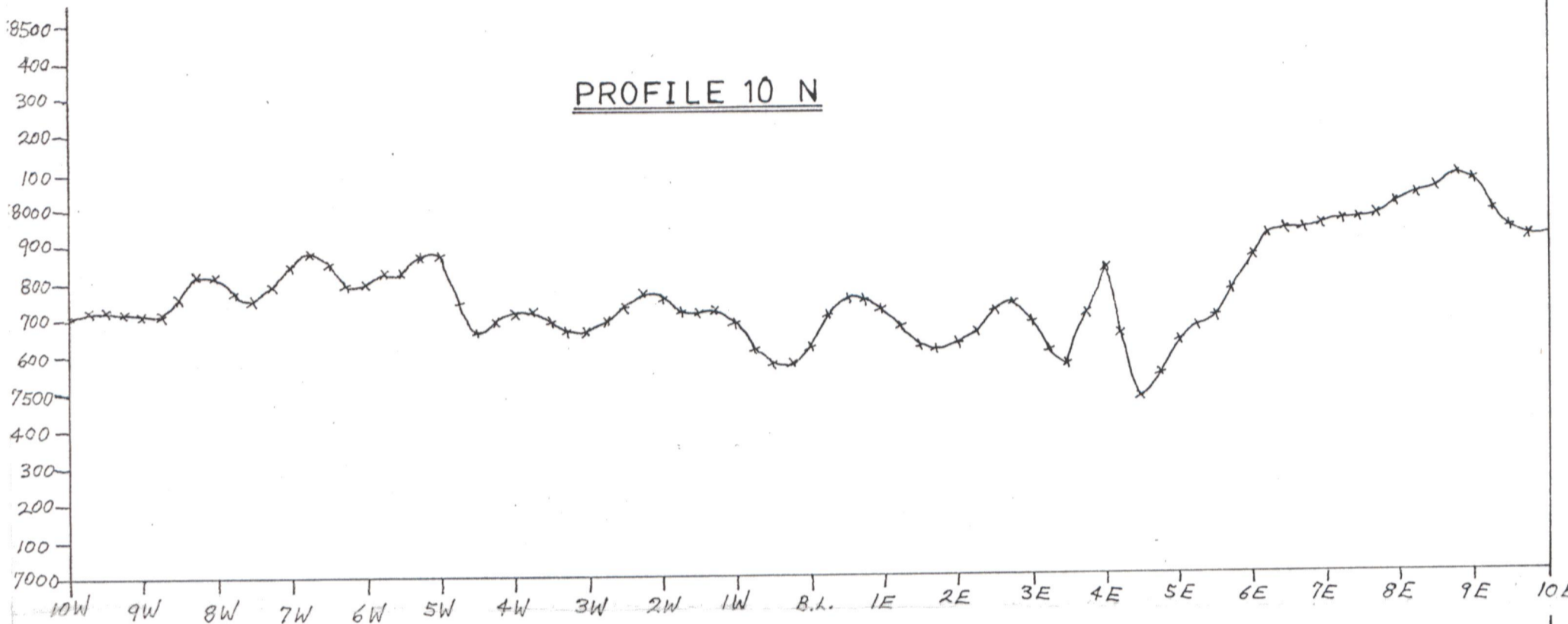
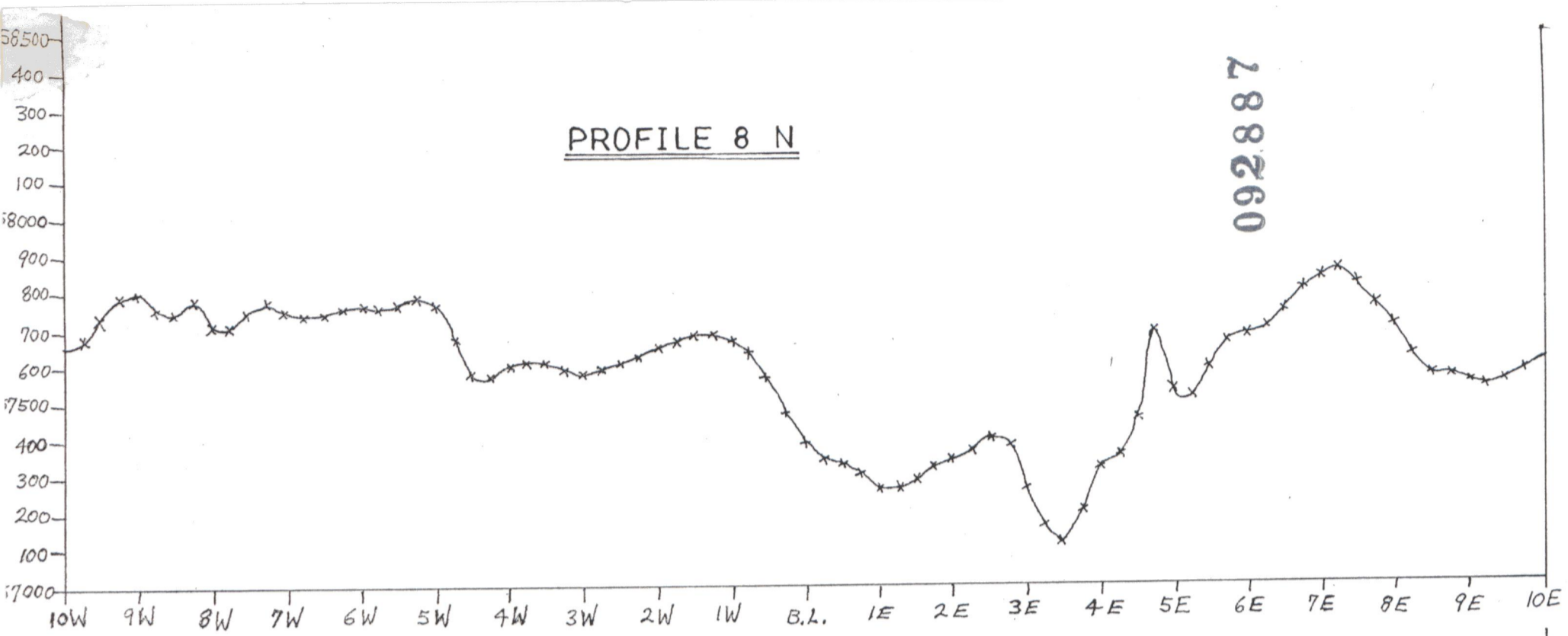
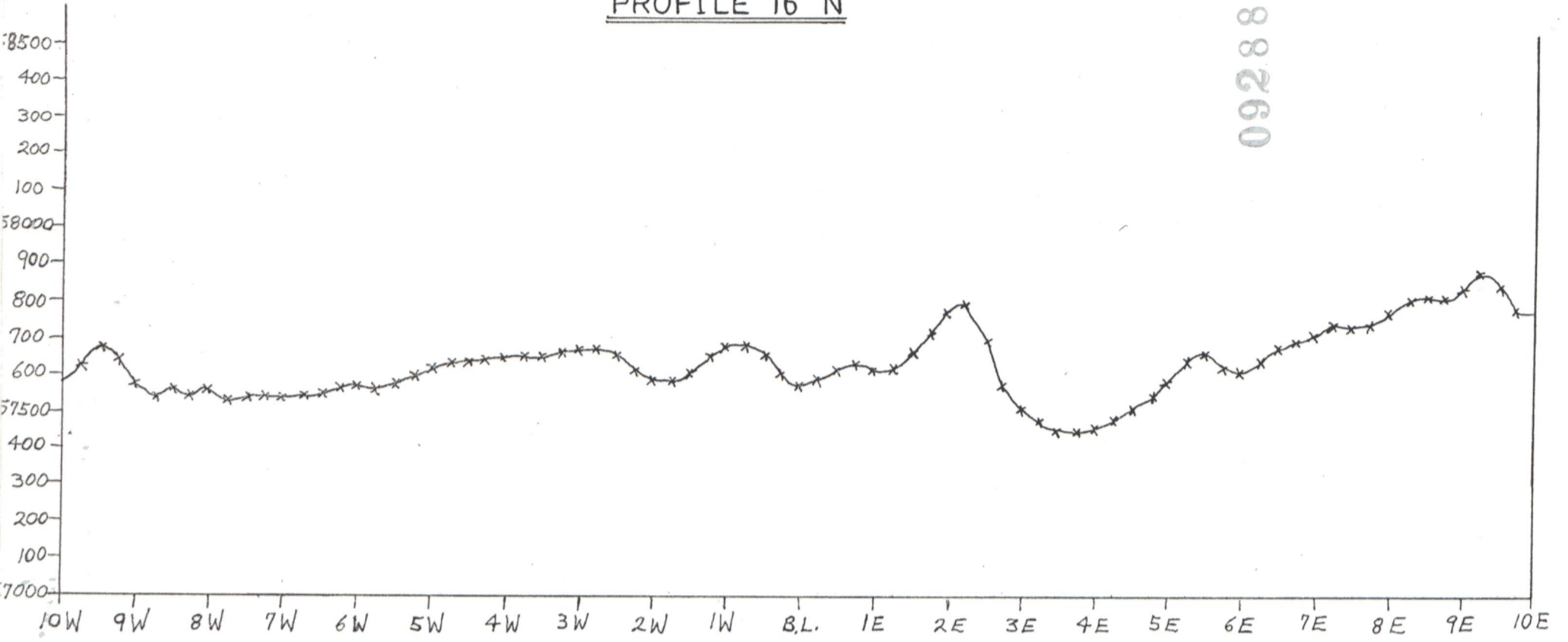


FIGURE 7

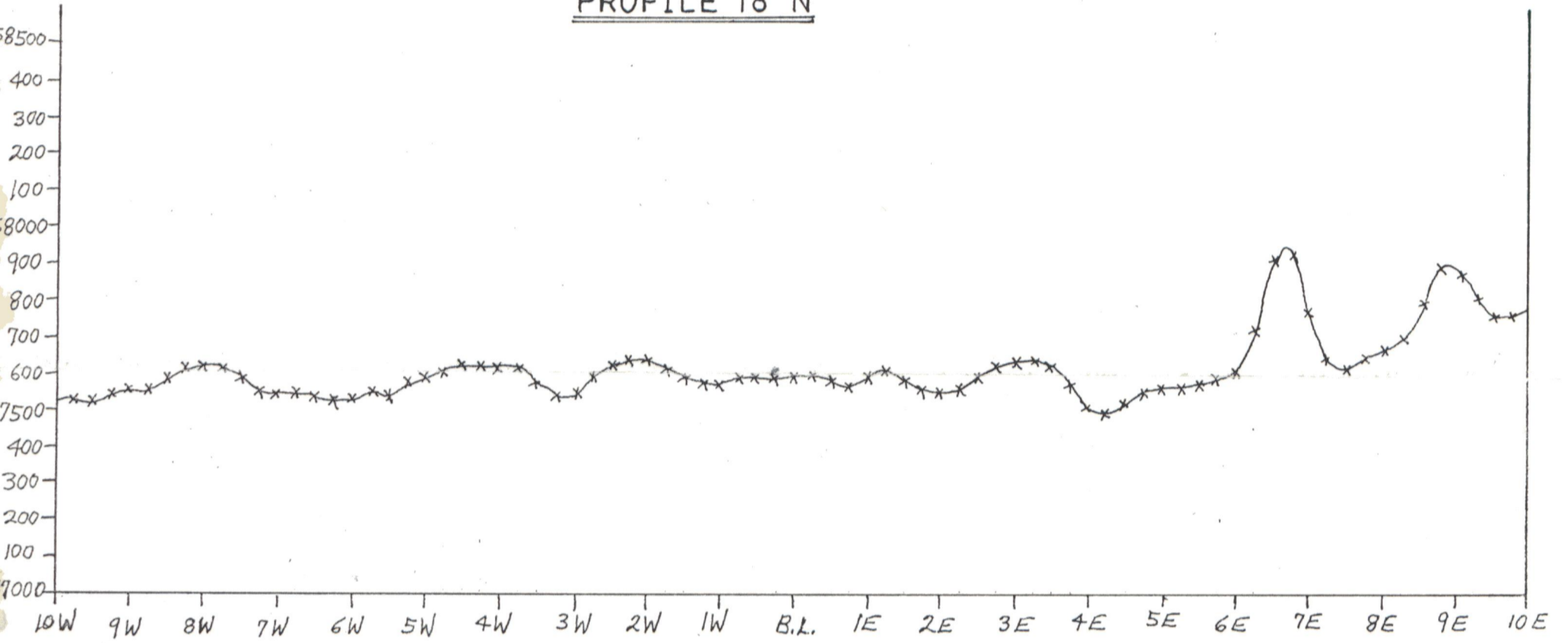
MAP# 105 D-11 Doc #092887 (253)

PROFILE 16 N

092887



PROFILE 18 N



PROFILE 20 N

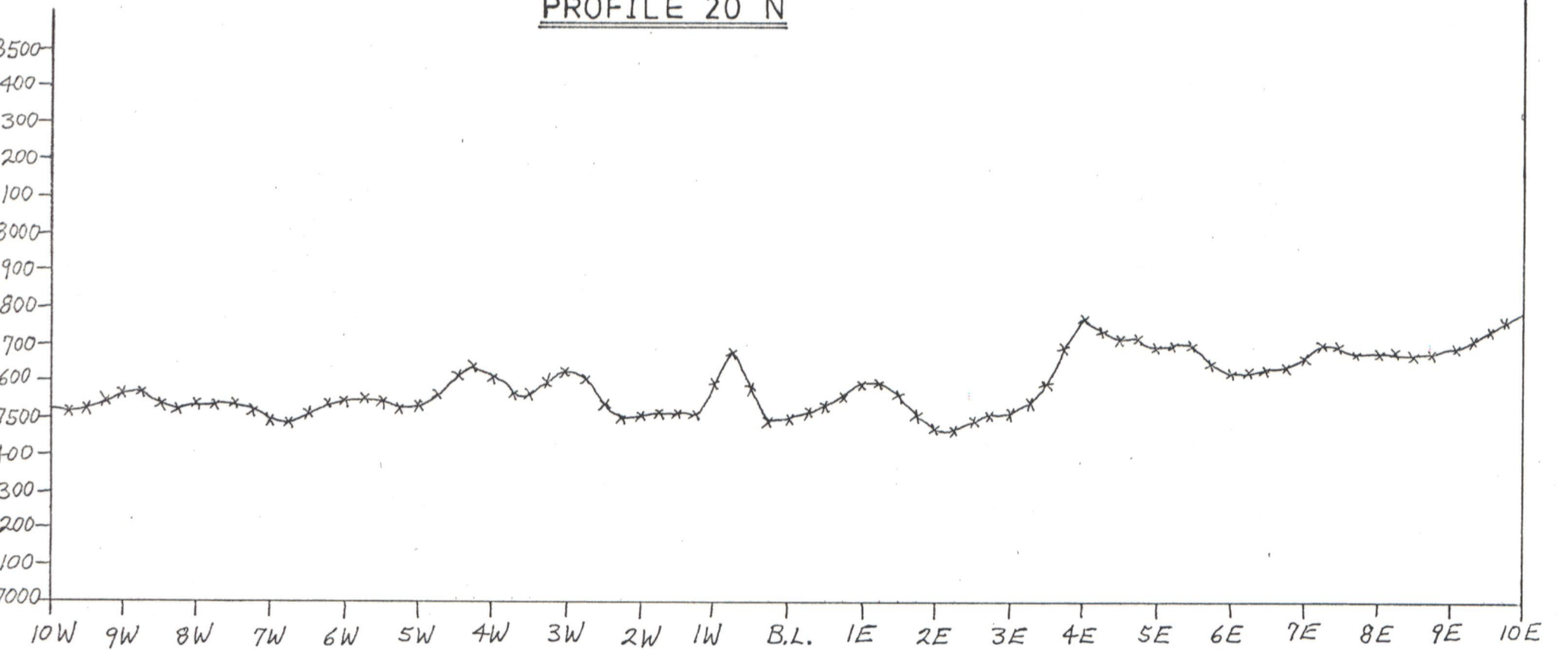


FIGURE 8

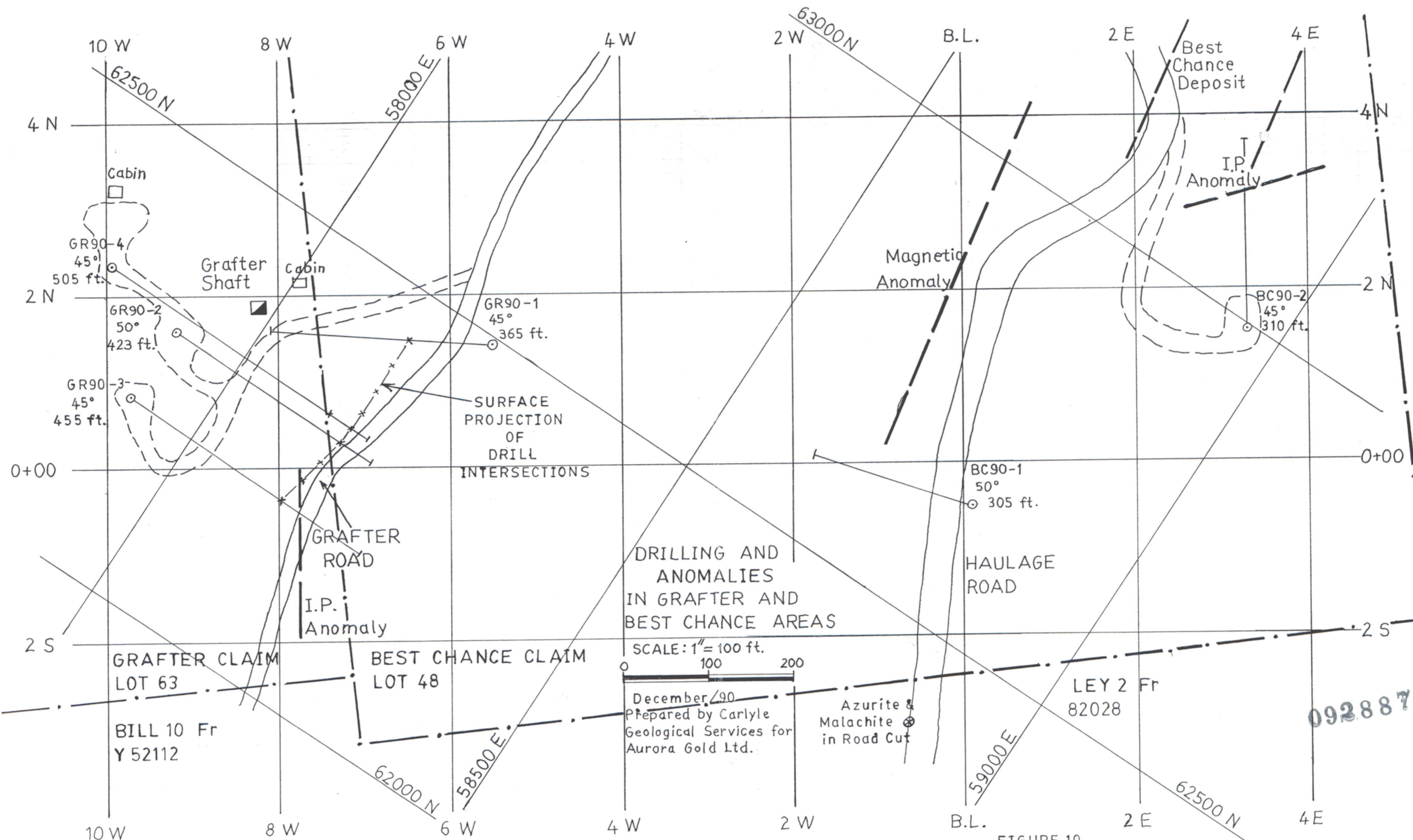
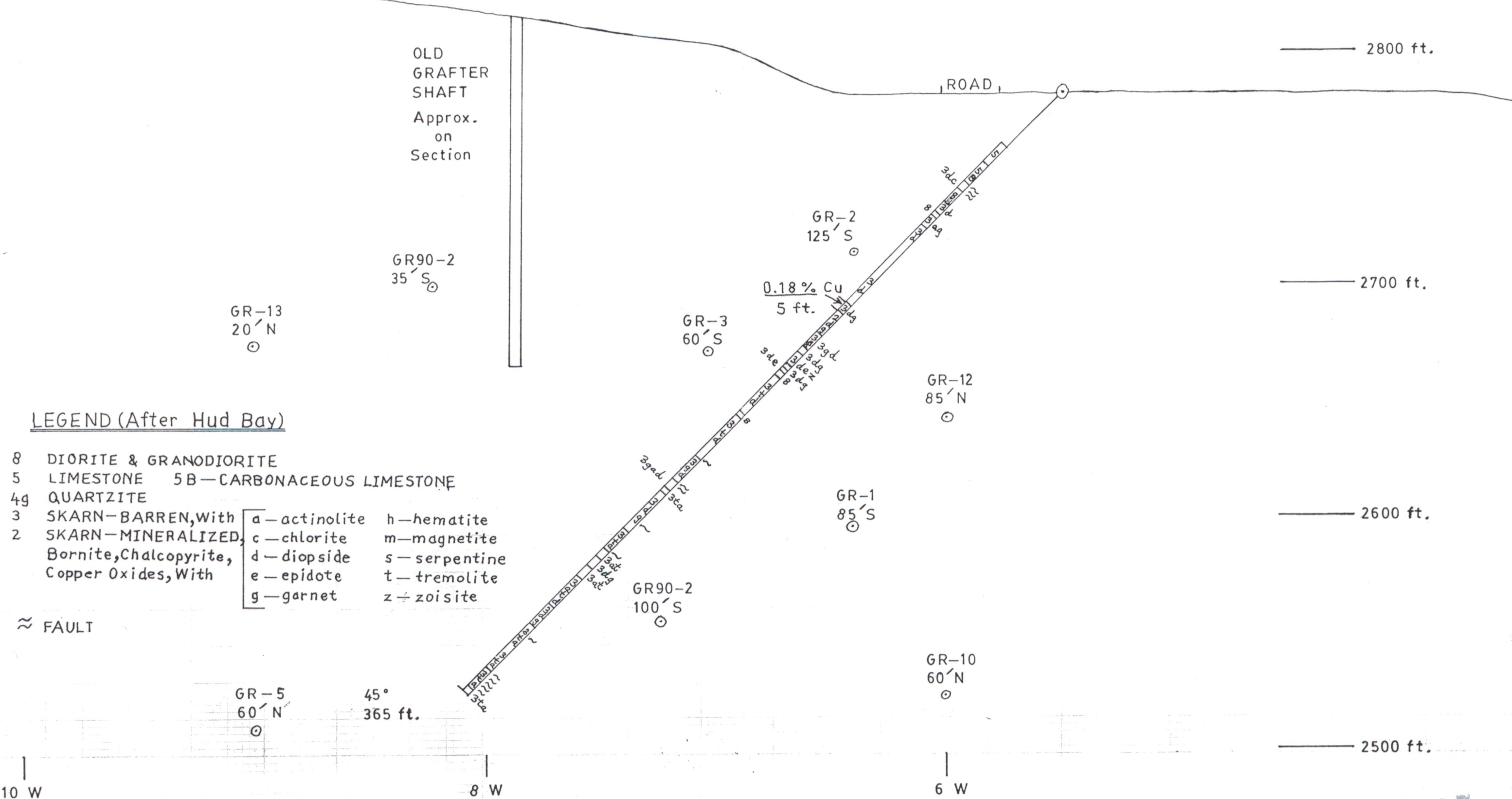


FIGURE 10

MAP#105D-11 Doc#092887

PROFILE GR90-1

SCALE: 1" = 40 ft.
SECTION LOOKS 330° Az



LEGEND (After Hud Bay)

- 8 DIORITE & GRANODIORITE
- 5 LIMESTONE 5B-CARBONACEOUS LIMESTONE
- 4g QUARTZITE
- 3 SKARN-BARREN, With

a-actinolite	h-hematite
c-chlorite	m-magnetite
d-diopside	s-serpentine
e-epidote	t-tremolite
g-garnet	z-zoisite
- 2 SKARN-MINERALIZED, Bornite, Chalcopyrite, Copper Oxides, With

≈ FAULT

FIGURE 11

092887

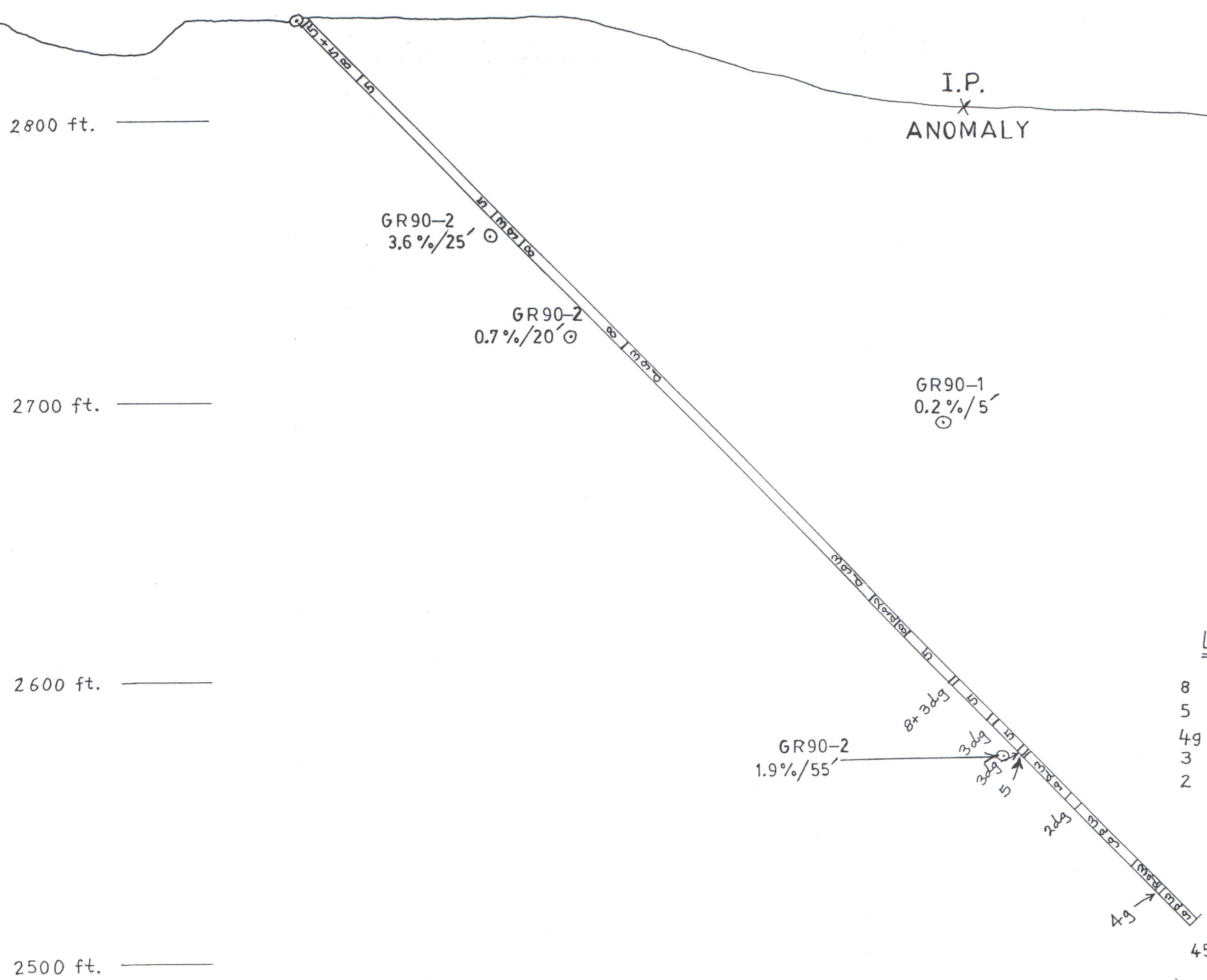
MAP# 105 D-11 Doc# 092887

260

PROFILE GR90-3

SCALE: 1" = 40 ft.

SECTION LOOKS 360° Az



LEGEND (After Hud Bay)

- 8 DIORITE & GRANODIORITE
 - 5 LIMESTONE 5B - CARBONACEOUS LIMESTONE
 - 4g QUARTZITE
 - 3 SKARN-BARREN, with
 - 2 SKARN-MINERALIZED, with Bornite, Chalcopyrite, Copper Oxides, With
- | | |
|----------------|----------------|
| a - actinolite | h - hematite |
| c - chlorite | m - magnetite |
| d - diopside | s - serpentine |
| e - epidote | t - tremolite |
| g - garnet | z - zoisite |

FIGURE 13

092887

MAP#105D-11 Doc#092887

255

PROFILE GR90-4

SCALE: 1" = 40 ft.
SECTION LOOKS 360° Az

2800 ft.

2700 ft.

2600 ft.

2500 ft.

GRAFTER
SHAFT

Approx.
45 ft.
North

GR90-2
3.6%/25'

GR90-2
0.7%/20'

GR90-1
0.2%/5'

Serpentinized
5

3dg
h

3gt

GR90-2
1.9%/55'

LEGEND (After Hud Bay)

- 8 DIORITE & GRANODIORITE
 - 5 LIMESTONE 5B - CARBONACEOUS LIMESTONE
 - 4g QUARTZITE
 - 3 SKARN-BARREN, with
 - 2 SKARN-MINERALIZED, with
Bornite, Chalcopyrite,
Copper Oxides, with
- | | |
|----------------|----------------|
| a - actinolite | h - hematite |
| c - chlorite | m - magnetite |
| d - diopside | s - serpentine |
| e - epidote | t - tremotite |
| g - garnet | z - zoisite |

2dg
3dg
3g
2g
2g

≈ FAULT

45°
505 ft.

FIGURE 14 092887

MAP# 105D-11 Doc# 092887 (256)



PROFILE BC90-1

SCALE: 1" = 40 ft.
SECTION LOOKS 164° Az

Approx. 2700 ft.

2600 ft.

2500 ft.

LEGEND (After Hud Bay)

- 8 DIORITE & GRANODIORITE
- 5 LIMESTONE 5B - CARBONACEOUS LIMESTONE
- 4g QUARTZITE
- 3 SKARN - BARREN, With

a - actinolite	h - hematite
c - chlorite	m - magnetite
d - diopside	s - serpentine
e - epidote	t - tremolite
g - garnet	z - zoisite
- 2 SKARN - MINERALIZED, Bornite, Chalcopyrite, Copper Oxides, With

≈ FAULT

FIGURE 15

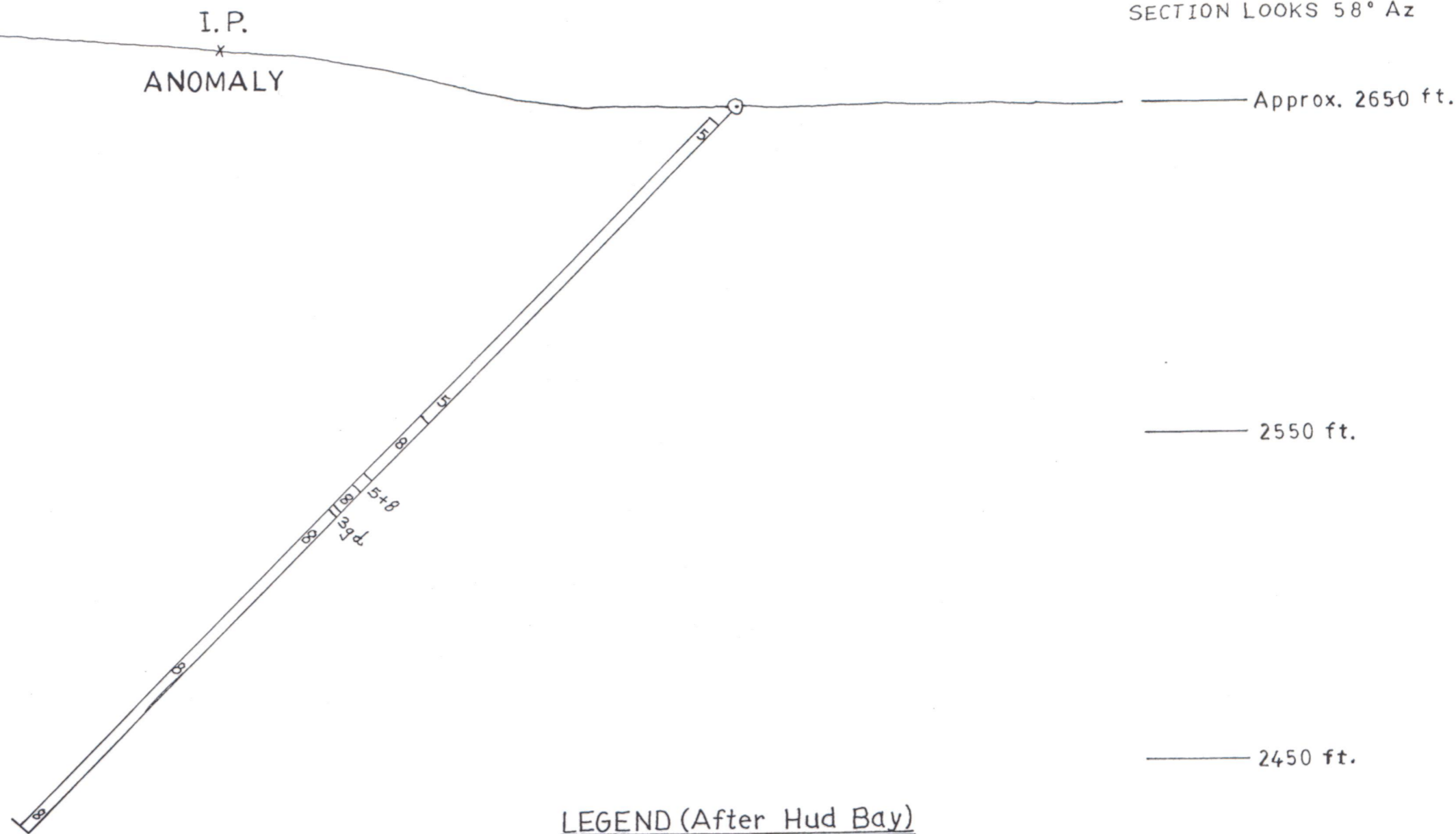
092887

MAP# 105D-11 Doc# 092887

257

PROFILE BC90-2

SCALE: 1" = 40 ft.
SECTION LOOKS 58° Az



LEGEND (After Hud Bay)

- 8 DIORITE & GRANODIORITE
 - 5 LIMESTONE 5B - CARBONACEOUS LIMESTONE
 - 4g QUARTZITE
 - 3 SKARN-BARREN, With
 - 2 SKARN-MINERALIZED, Bornite, Chalcopyrite, Copper Oxides, With
- | | |
|----------------|----------------|
| a - actinotite | h - hematite |
| c - chlorite | m - magnetite |
| d - diopside | s - serpentine |
| e - epidote | t - tremolite |
| g - garnet | z - zoisite |

≈ FAULT

FIGURE 16

092887

MAP#105D-11 Doc#092887

258

160 S



Magnetic Anomaly

HAULAGE ROAD

164 S

SOUTHERN-MOST LINE ON BEST CHANCE (NORTH) GRID

DUN90-1
45°
425 ft.

DRILLING ON EMILY 1 CLAIM

SCALE: 1" = 100 ft.
0 100 200

October 90

Prepared by Carlyle Geological Services
for
Aurora Gold Ltd.

FIGURE 17

15 W

20 W

092887

MAGNETIC ANOMALY

PROFILE DUN90-1

SCALE: 1" = 40 ft.
SECTION LOOKS 330° Az

2900 ft.

2800 ft.

2700 ft.

2600 ft.

2500 ft.

LEGEND (After Hud Bay)

- 8 DIORITE & GRANODIORITE
- 5 LIMESTONE 5B - CARBONACEOUS LIMESTONE
- 4g QUARTZITE
- 3 SKARN-BARREN, With

a - actinolite	h - hematite
c - chlorite	m - magnetite
d - diopside	s - serpentine
e - epidote	t - tremolite
g - garnet	z - zoisite
- 2 SKARN-MINERALIZED, Bornite, Chalcopyrite, Copper Oxides, With

≈ FAULT

45°
425 ft.

20 W

18 W

FIGURE 18

092887

REPRODUCED FROM ORIGINAL