091795

ASSESSMENT REPORT, 1985

(GEOPHYSICAL, GEOCHEMICAL AND DIAMOND DRILLING)

OMEGA 1-56 CLAIMS

Dawson Mining District

N.T.S. 115 P/14 & 116 A/3

NOREX-TECHNIFLUIDS JOINT VENTURE

Author: Wayne Reid
Noranda Exploration Company, Limited
(No Personal Liability)

February, 1986

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 $. 15,200.

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

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CHAPTER ONE: INTRODUCTION

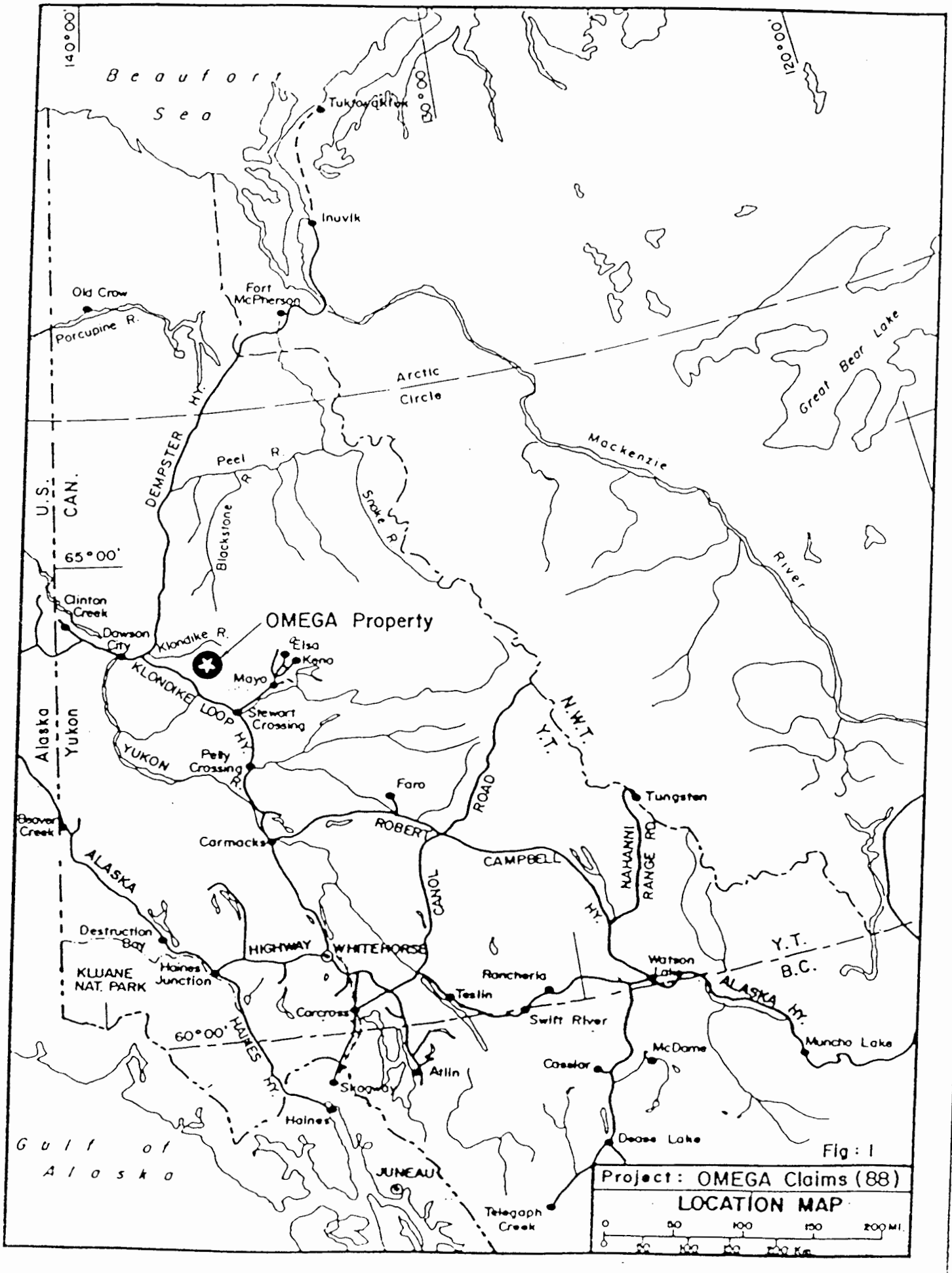
1-1: INTRODUCTORY STATEMENT

Exploration on the OMEGA 1-56 claims in 1985 consisted of a gravity survey and diamond drilling on the Main showing and limited prospecting, soil sampling and drilling on a newly discovered showing.

A total of 1,093 feet (333 metres) of diamond drilling was completed on the claims during a three week period in October, 1985. Six holes were drilled into the Main Deposit and one hole tested the New Showing located 3 kilometres to the northeast along Lost Horses Creek. The other ground surveys were done between July and August prior to the drilling. This report describes the results of the these surveys.

1-2: LOCATION, ACCESS AND PHYSIOGRAPHY

The OMEGA claims are situated on the north slope of the Syenite Range Mountains 110 kilometres east of Dawson City, Yukon at 63°59'N and 137°10'W (Figure 1) on N.T.S. mapsheet 115 P/14. A north-northeast flowing tributary of Lost Horses Creek drains the area and the westerly flowing Ross Creek is located 5 kilometres to the north. Both of these creeks flow into the Little South Klondyke River.


140°00'
Beaufort Sea
Tuktoyaktuk
Inuvik
Old Crow
Porcupine R.
Fort McPherson
DEMPSTER HY.
Arctic Circle
Great Bear Lake
Mackenzie River
Peel R.
Blackstone R.
Snake R.
U.S.
CAN.
65°00'
Clinton Creek
Dawson City
Klondike R.
OMEGA Property
Elsa
Keno
Mayo
KLONDIKE LOOP HY.
Stewart Crossing
Alaska
Yukon
YUKON R.
Petty Crossing
Faro
ROBERT CAMPBELL HY.
ROAD
N.W.T.
Y.T.
Tungsten
Beaver Creek
Carmacks
ALASKA HIGHWAY
CANOL
MACKENZIE RANGE RD.
Destruction Bay
KLUANE NAT. PARK
Haines Junction
WHITEHORSE
Rancheria
Watson Lake
Y.T.
B.C.
ALASKA HY.
Teslin
Swift River
Carcross
60°00'
HAINES HY.
Atlin
Skagway
Haines
McDame
Cassiar
Muncho Lake
Dease Lake
Gulf of Alaska
JUNEAU
Telegraph Creek
Fig : 1
Project : OMEGA Claims (88)
LOCATION MAP
0 50 100 150 200 MI.
0 50 100 150 200 Km

The claims are situated in an area of rounded low hills and plateaus which are covered by small shrubs and grass. Spruce trees are common on some hillsides and creek valleys. Immediately to the south, the hills give way to mountains of the Syenite Range. The claim area ranges from 1,000 to 1,200 metres elevation whereas peaks in the Syenite Range are in excess of 1,900 metres.

Access for the drill program was via helicopter from Dawson City. A cat trail, used during the 1984-5 winter trenching program, leads from Barlow Dome to the Main showing, but is passable only when frozen.

A recent evaluation of road access from the claims to the Dempster Highway suggests that a winter road down the Klondyke River Valley to Kilometre 5 on the Dempster Highway would be the most feasible route.

1-3: PREVIOUS WORK

Initial work in this area started in 1981 in response to a G.S.C. Ba-in-silt anomaly of >10% Ba on Lost Horses Creek. Detailed follow-up in 1982 led to the discovery of a 10 metre thick barite bed and the OMEGA 1-32 claims were staked, centred on this discovery outcrop.

During 1983, geochemical and geophysical surveys were conducted on a chained and flagged grid. Results of these surveys are described in Biczok's 1983 assessment report. The soil survey done at the time showed a possible strike length of 600 metres although the anomaly was not continuous

between lines. Testing of the barite showed it to be of sufficient grade and for use in drill mud. Assuming a 7 metre thickness, 100 metre depth and 600 metre strike length, potential existed for a 2 million tonne ore deposit.

At this point in time it was decided to look for another partner (preferably a drill mud supplier) to further develop the property. Technifluids was approached by Malcolm Fraser on behalf of Noranda and a joint venture was agreed to in June, 1984.

Since the joint venture, a trenching program utilizing two large caterpillar tractors tested the eastern extension of the discovery outcrop without much success from December, 1984 to February, 1985.

1-4: CLAIM STATUS

The property included in the joint venture includes the original OMEGA 1-32 claims staked in 1982 and the OMEGA 33-56 group tied on to the northeast of the original group.

Table I lists the claims and due dates (pending acceptance of this report).

VANCAL 11928

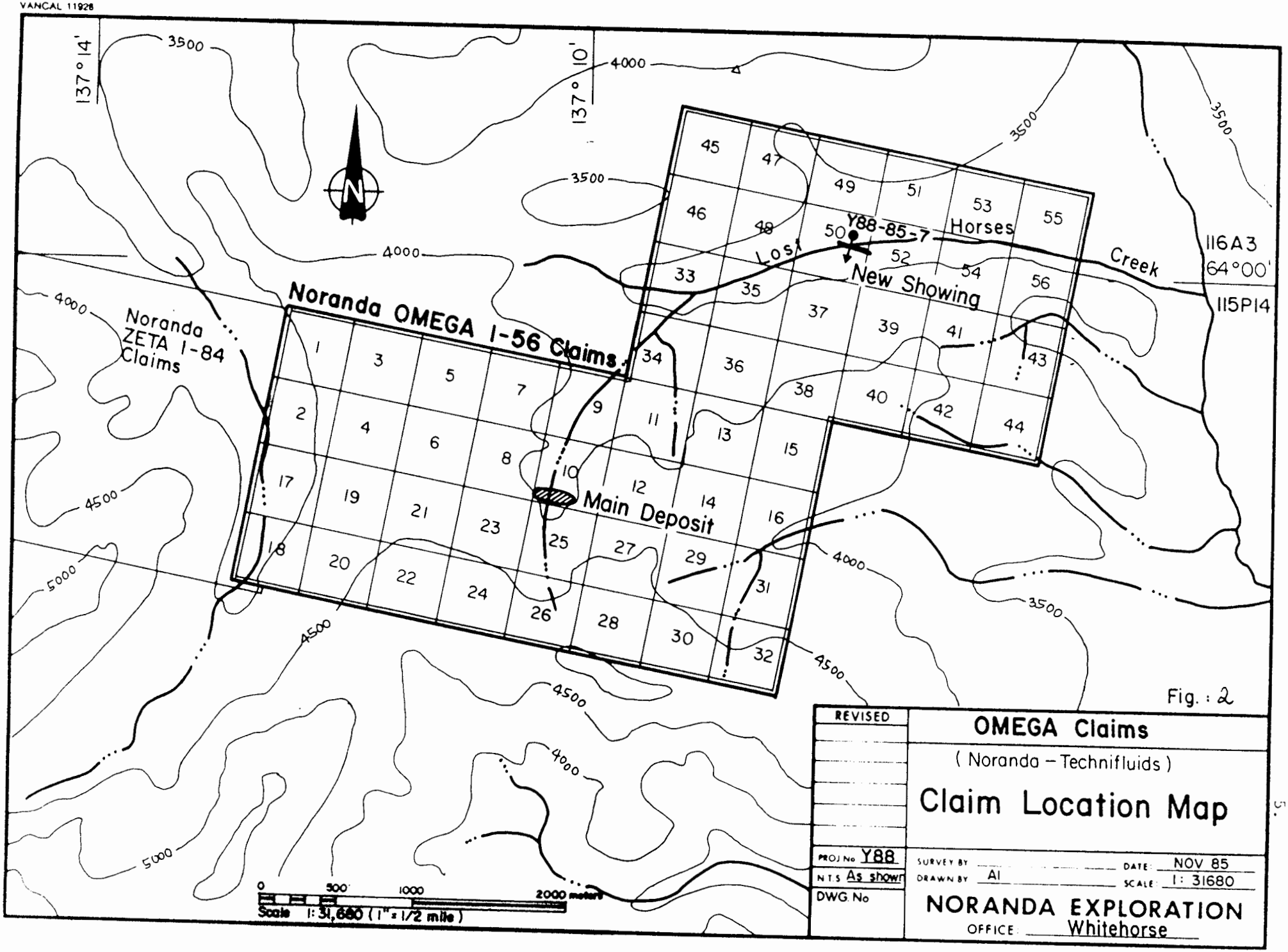


Fig. : 2

REVISED	OMEGA Claims
	(Noranda – Technifluids)
	Claim Location Map
PROJ No Y88	SURVEY BY ____ DATE NOV 85
N.T.S As shown	DRAWN BY Al SCALE 1: 31680
DWG No	NORANDA EXPLORATION
	OFFICE Whitehorse

TABLE I:

Claim Status

CLAIM	GRANT NO.	DATE STAKED	EXPIRY DATE
OMEGA 28	YA-065129	July, 1982	July 26, 1988
OMEGA 1,3,5,7,9, 11,12,15,16,30, 31,32	YA-065102, 04, 06, 08, 10, 12, 14, 16, 17, 31, 32, 33	July, 1982	January 26, 1989
OMEGA 2,4,6,14, 17,18,19,21,22, 24,26,29	YA-065103, 05, 07, 15, 18, 19, 20, 21, 22, 23, 25, 27, 30	July, 1982	January 26, 1990
OMEGA 8,10,12, 23,25	YA-065109, 11, 13, 24, 26	July, 1982	January 26, 1994
OMEGA 33 to 56	YA-87762 to 785	Sept., 1985	Sept. 23, 1988

CHAPTER TWO: GRAVITY SURVEY

A total of 3.325 km of gravity was done on the new grid to test for extensions of the known barite horizon. A compilation of the results on the new grid is shown on Figure 3. A total of six lines, including 600E, 825E, 875E, 925E, 1015E and 1350E, was done on the new grid. In addition to this, three recce lines 200 metres apart were surveyed across the plateau 1.5 km west of the new grid.

A description of all the results plus profiles is presented in Appendix A. Figure 3 is a compilation of the gravity anomalies.

CHAPTER THREE: GEOCHEMISTRY - NEW SHOWING

In early September, 1985 follow-up of anomalous Ba and Zn in silt samples resulted in the location a new bedded barite showing. The showing is located on the south side of Lost Horses Creek, northeast of the Main Deposit. An additional 24 claims (OMEGA 33-56) were staked to cover this new showing.

The best exposure consists of a moderately bedded barite unit dipping 38° north under Lost Horses Creek. Additional prospecting done around this area indicated massive barite-calcite or witherite probably underlies the barite horizon.

Two assays of the mineralization are presented below. R-38022 is a sample of the CO_3 rich material and R-38023 is from the bedded barite.

	Ba (%)	CO_2 (%)	SO_4 (%)	Pb (ppm)	Ag (ppm)
R-38022	42.47	20.52	5.20	145	8.5
R-38023	46.42	<0.05	30.15	12	1.1

A total of 130 soil samples were collected from a flagged and chained grid located over the possible strike extension of the zone. Results are presented on Figures 4 and 5.

All samples were analyzed for Pb, Zn, Ag and Ba. The main barite-witherite showing on the grid is located at L-2000E, 2000N. In this area highly anomalous Ba, Ag and Zn form a 200 metre long geochemical pattern

(Anomaly #1) subparallel to the strike of the barite horizon and the topography. At L-2150E, the Ba anomaly is cut off and the Zn-Ag values continue weakly to the east as far as L-2400 E.

Two other Barium anomalies further east are considerably different than Anomaly #1 in that there is no correlation with Zn or Ag. Anomaly #2 consists of >10,000 ppm Ba located between L-2150E and 2300E, generally north of the baseline. Anomaly #3 is of similar magnitude but covers a much larger area and is not cut off to the north or east.

Drill testing of the New Showing (soil Anomaly #1) resulted in CO_3 contaminated barite underlain by massive witherite (see Chapter 4). Anomalies #2 and 3 have not been followed up and in light of their different geochemical characteristics would be somewhat different that the Barite-witherite found in DDH Y88-85-7. Drainage on the grid is north towards Lost Horses Creek and because of the relatively steep topography source of the Barium anomalies should be easily pinpointed.

Soil geochemistry summary statistics are presented below:

	Zn	Pb	Ag	Ba
No. of Analyses	130	130	130	128
Lowest Value	22	1	.2	700
Highest Value	3100	16	10.0	10000
Mean (Log)	360.0	3.6	.93	3392.4
Stand Dev. (Log)	.458	.317	.502	.359
Mean (Arith)	582.7	4.5	1.69	4672.9
Stand Dev. (Arith)	589.26	2.83	1.888	3552.78

CHAPTER FOUR: DIAMOND DRILLING PROGRAM

4-1: MAIN DEPOSIT

Purpose

A very preliminary feasibility study done in September showed the viability of the Main Deposit assuming winter road access down the Klondyke River to the Dempster Highway and tonnage and grade sufficient to supply the Beaufort Sea oil drilling programs using direct shipping ore (in situ ore >4.2 Specific Gravity) at simple open pit mining costs.

It was decided at this time to firmly establish the tonnage, grade and geometry of the deposit through diamond drilling in order to enable a proper feasibility study to be undertaken. A hydrocore drill, using NQ rods, was contracted from Phil's Diamond Drilling of 100 Mile House, B.C. A 500D helicopter was used for access and drill moves.

Results

A drill pattern was chosen to try to intersect the Barite horizon at an approximate separation of 25 metres. This drill plan proved effective and all six holes intersected significant barite mineralization ranging in thickness from 4.9 metres to >38 metres. Although the barite horizon has been proved to bare significant widths, dilution due to interbedded graphitic argillite has reduced the "ore" widths considerably. Figure 6 shows the drill location plan and Figures 7 to 11 are sections of the same.

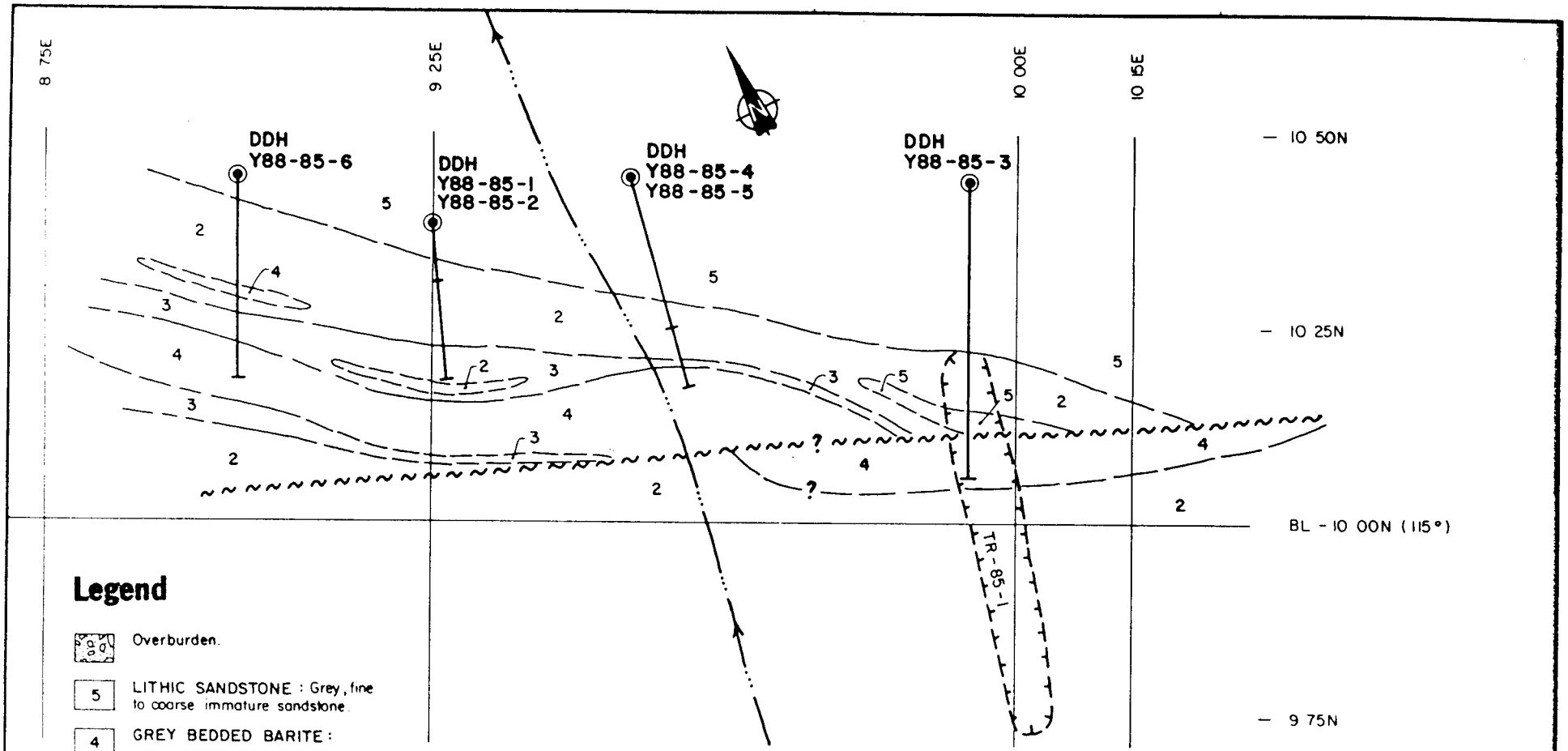


Fig. : 6

REVISED	OMEGA Claims
	(Noranda - Technifluids)
	DRILL PLAN
	Main Deposit
PROJ No Y88	SURVEY BY WR DATE OCT 85
NTS 115 P14	DRAWN BY AI SCALE 1: 500
DWG No	NORANDA EXPLORATION
	OFFICE Whitehorse

Drill logs and assay results are appended (Appendix B).

The stratigraphy of the sedimentary package remained relatively consistent in all holes, striking 110° and dipping 50-60° to the north.

From oldest to youngest (bottom to top of the holes) the generalized section is as follows:

1) Black Graphitic Argillite/Shale

2) Grey Bedded Barite. Thinly bedded to laminated barite with minor interbedded graphitic argillite. Argillite varies from thin partings to 2-3 metre thick beds.

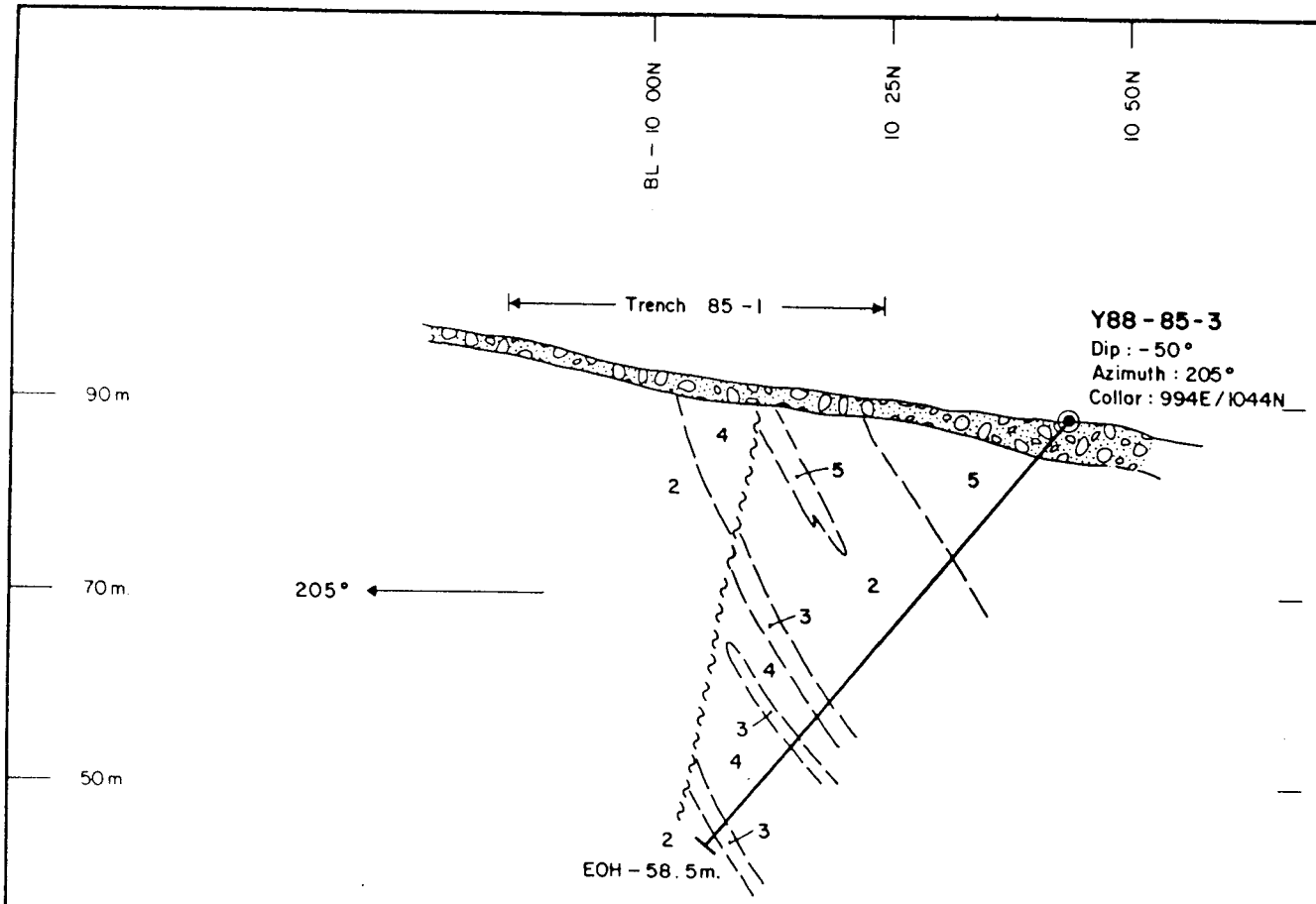
3) Black Argillite. Similar to Unit One but less graphitic. Minor grey argillite and siltstone.

4) Lithic Sandstone. Grey, fine to coarse-grained lithic sandstone, minor arkosic sandstone, greywacke and argillite.

Table II lists the significant barite intersections in the six drill holes.

TABLE II

HOLE #	DIP	AZI.	LENGTH		BARITE INTERSECTION FROM	TO	WIDTH
Y88-85-1	-45°	200°	37.5	L925E 1038N	20.5	25.4	4.9
Y88-85-2	-84°	200°		L925E 1038N	32.92	51.0	18.08
					52.73	67.5	14.77
					69.4	74.07	4.67 plus
Y88-85-3	-50°	205°	58.5	L994E 1044N	40.75	55.3	14.55
Y88-85-4	-45°	190°	40.2	L950E 1044N	23.0	34.1	11.1
Y88-85-5	-70°	190°	54.3	L950E 1044N	28.4	49.6	21.2
					52.1	54.3	2.2 plus
Y88-85-6	-50°	205°	40.5	L900E	25.0	31.0	6.0

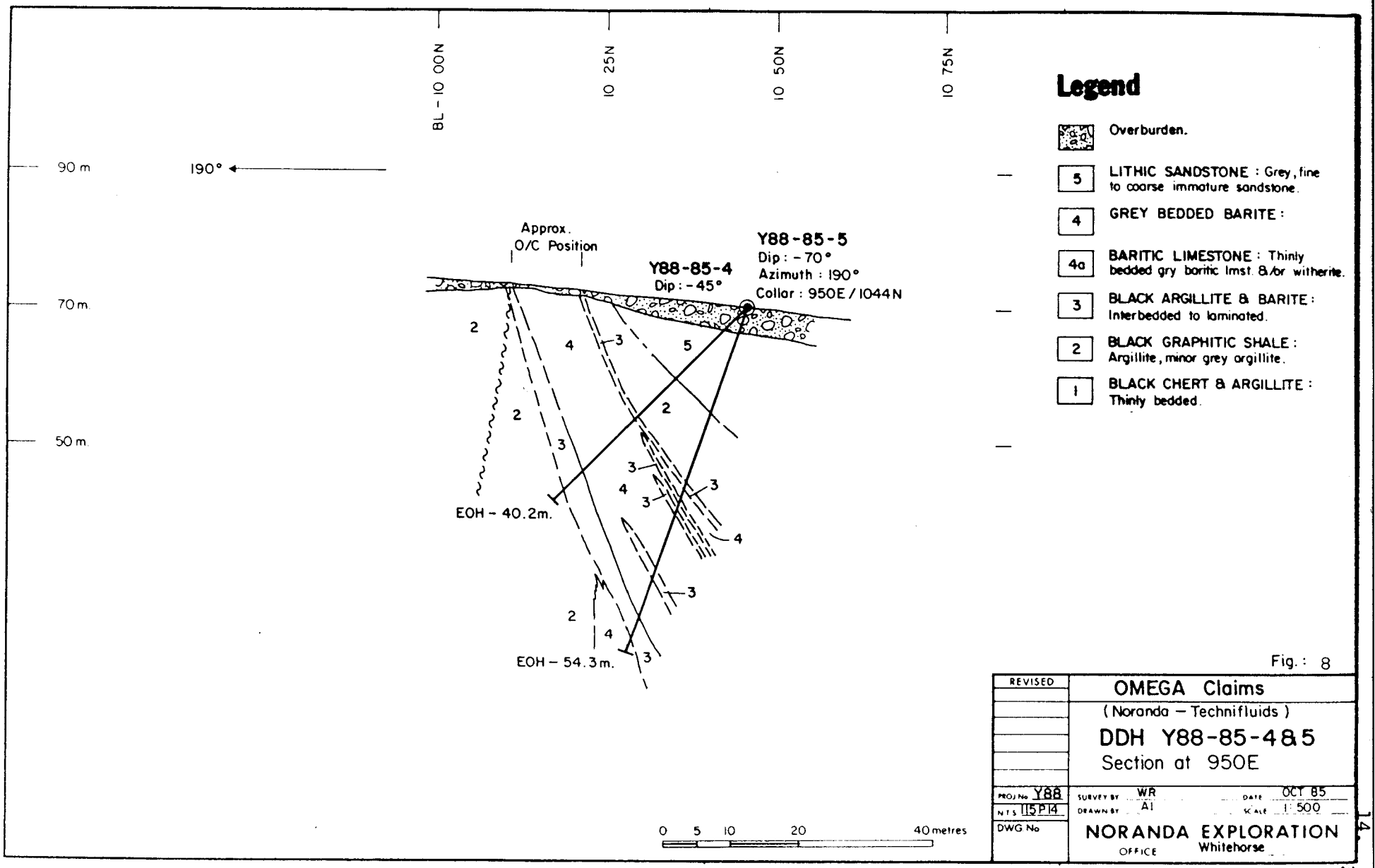


Legend

- Overburden.
- 5 — LITHIC SANDSTONE : Grey, fine to coorse immature sandstone.
- 4 — GREY BEDDED BARITE :
- 4a — BARITIC LIMESTONE : Thinly bedded gry bantic lmst. &/or witherite.
- 3 — BLACK ARGILLITE & BARITE : Interbedded to laminated.
- 2 — BLACK GRAPHITIC SHALE : Argillite, minor grey argillite.
- 1 — BLACK CHERT & ARGILLITE : Thinly bedded.

Fig. : 7

REVISED	OMEGA Claims
	(Noranda – Technifluids)
	DDH Y88-85-3
	Section at 994E
PROJ. No Y88	SURVEY BY WR DATE OCT 85
N.T.S. 115P14	DRAWN BY AI SCALE 1:500
DWG. No	NORANDA EXPLORATION
	OFFICE Whitehorse



Legend

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- 3 — BLACK ARGILLITE & BARITE : Interbedded to laminated.
- 2 — BLACK GRAPHITIC SHALE : Argillite, minor grey orgillite.
- 1 — BLACK CHERT & ARGILLITE : Thinly bedded.

Fig. : 8

REVISED	OMEGA Claims
	(Noranda – Technifluids)
	DDH Y88-85-4&5
	Section at 950E
PROJ No Y88	SURVEY BY WR — DATE OCT 85
NTS 115P14	DRAWN BY AI — SCALE 1:500
DWG No	NORANDA EXPLORATION
	OFFICE Whitehorse

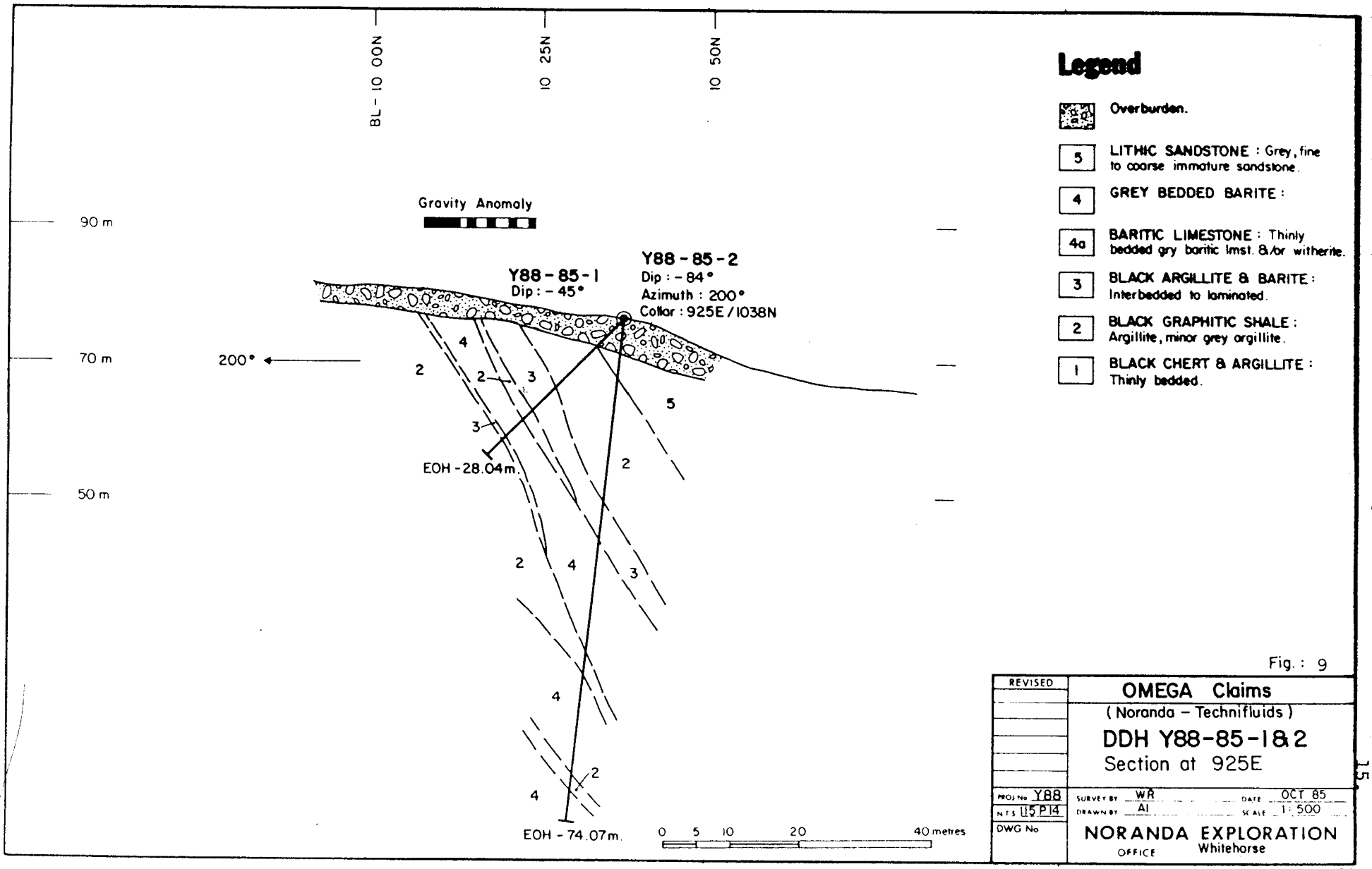


Fig. : 9

REVISED	OMEGA Claims
	(Noranda – Technifluids)
	DDH Y88-85-1&2
	Section at 925E
PROJ No Y88	SURVEY BY WR DATE OCT 85
NTS 115 P14	DRAWN BY AI SCALE 1:500
DWG No	NORANDA EXPLORATION OFFICE Whitehorse

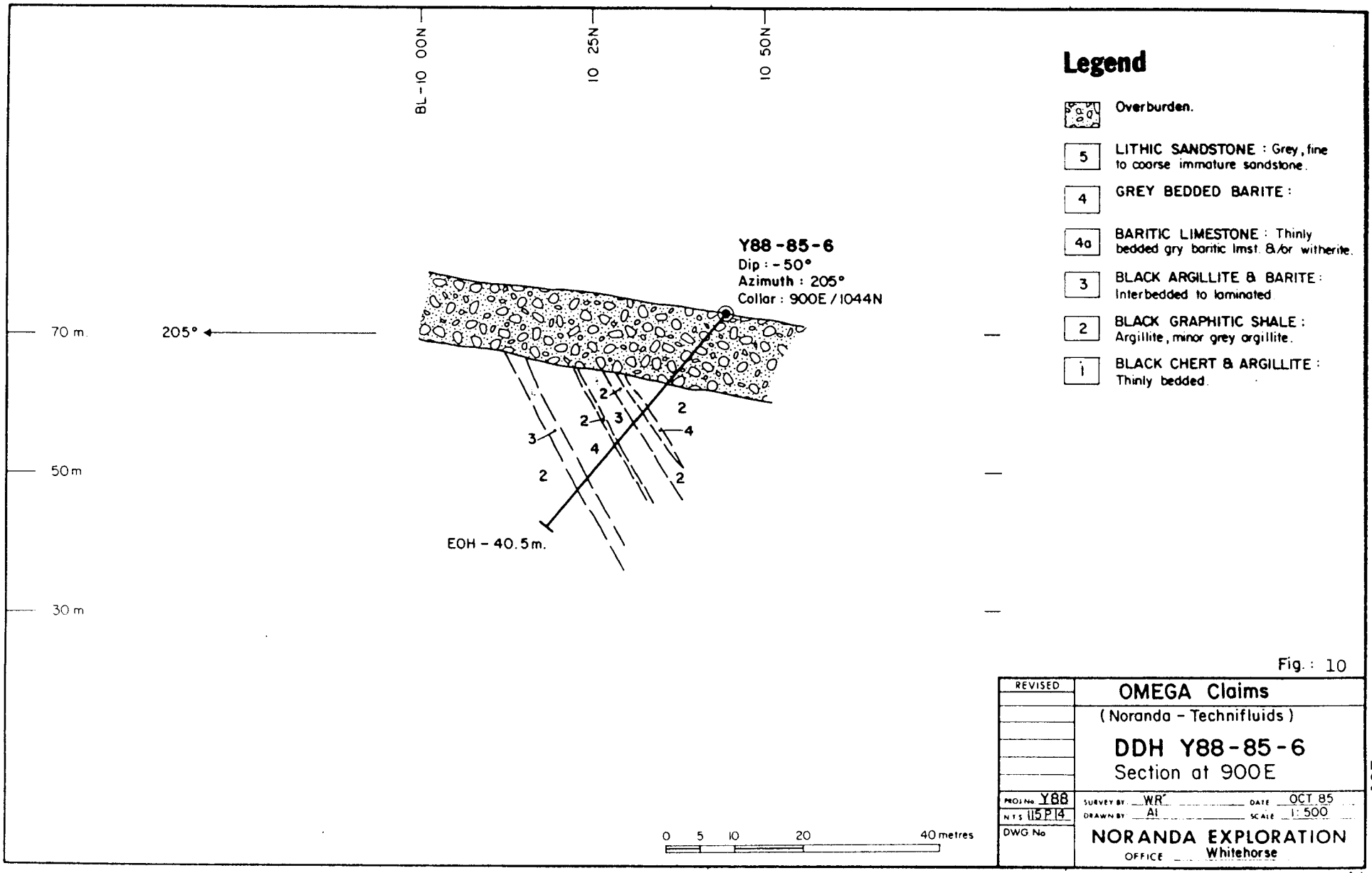


Fig. : 10

REVISED	OMEGA Claims
	(Noranda - Technifluids)
	DDH Y88-85-6
	Section at 900E
PROJ No Y88	SURVEY BY WR DATE OCT 85
NTS 115P14	DRAWN BY AI SCALE 1:500
DWG No	NORANDA EXPLORATION
	OFFICE Whitehorse

Although there is no doubt that the barite intersected in the drilling and the barite exposed at surface are the same horizon, there is some discrepancy in continuity between the two. The barite unit exposed in Trench No. 1 and also in the discovery outcrop is higher up section than the unit intersected by drilling. This barite appears to be structurally uplifted relative to the unit intersected in the drilling and thus there appears to be two barite "blocks" which can be best described as the upper (above 70 metres elevation) and the lower (below 70 metres elevation). The attached sections and plans show the relationship of the two blocks.

Assay Results (Discussion)

Assays of all core samples were done by Bondar Clegg in Vancouver after a sample preparation was carried out by Bondar Clegg in Whitehorse. Results are presented with drill logs in Appendix B.

"In situ ore" is defined as barite with a Specific Gravity of 4.2 or greater and no contamination from CO_3 minerals including calcite and witherite. Further work on the core samples by Technifluids lab has confirmed the absence of contaminants so the main control on "in situ ore" is Specific Gravity. Although some significant intersections do carry a grade of greater than 4.2 Specific Gravity, there is no continuity of these intersections between holes. The main problem encountered is dilution due to argillite interbeds and interlaminations.

Two solutions to this problem are:

1) Selective mining of direct shipping greater than 90% Barite: Difficulty would be realized in selecting proper mine cut-offs. Also the better ore is at some depth and thus waste stripping prior to getting to the ore would be considerable.

2) Bulk mining of ore and sub-ore, and increasing the grade by a simple on site method of screening or jigging: Physically the barite is more massive than the friable graphitic argillite. It also should be noted that grab samples from the discovery outcrop on average assayed 5% higher than chip samples across the outcrop. This is in part due to the tendency for the friable argillite to fall away from the blocky barite. This difference in physical properties coupled with the great density contrast may result in an easy separation. Further work would be necessary to prove this.

4-2: NEW SHOWING (LOST HORSES CREEK)

One drill hole (Y88-85-7) tested the new showing found in September, 1985. This hole collared in grey bedded barite and then passed gradationally(?) into a thinly bedded fetid grey baritic limestone or witherite (Figure 11). The initial 6.7 metres of barite (6.6 to 13.3 metres) appears contaminated by carbonate and soluble Barium as is seen in the assay results (Appendix B). Three samples from this hole were sent of

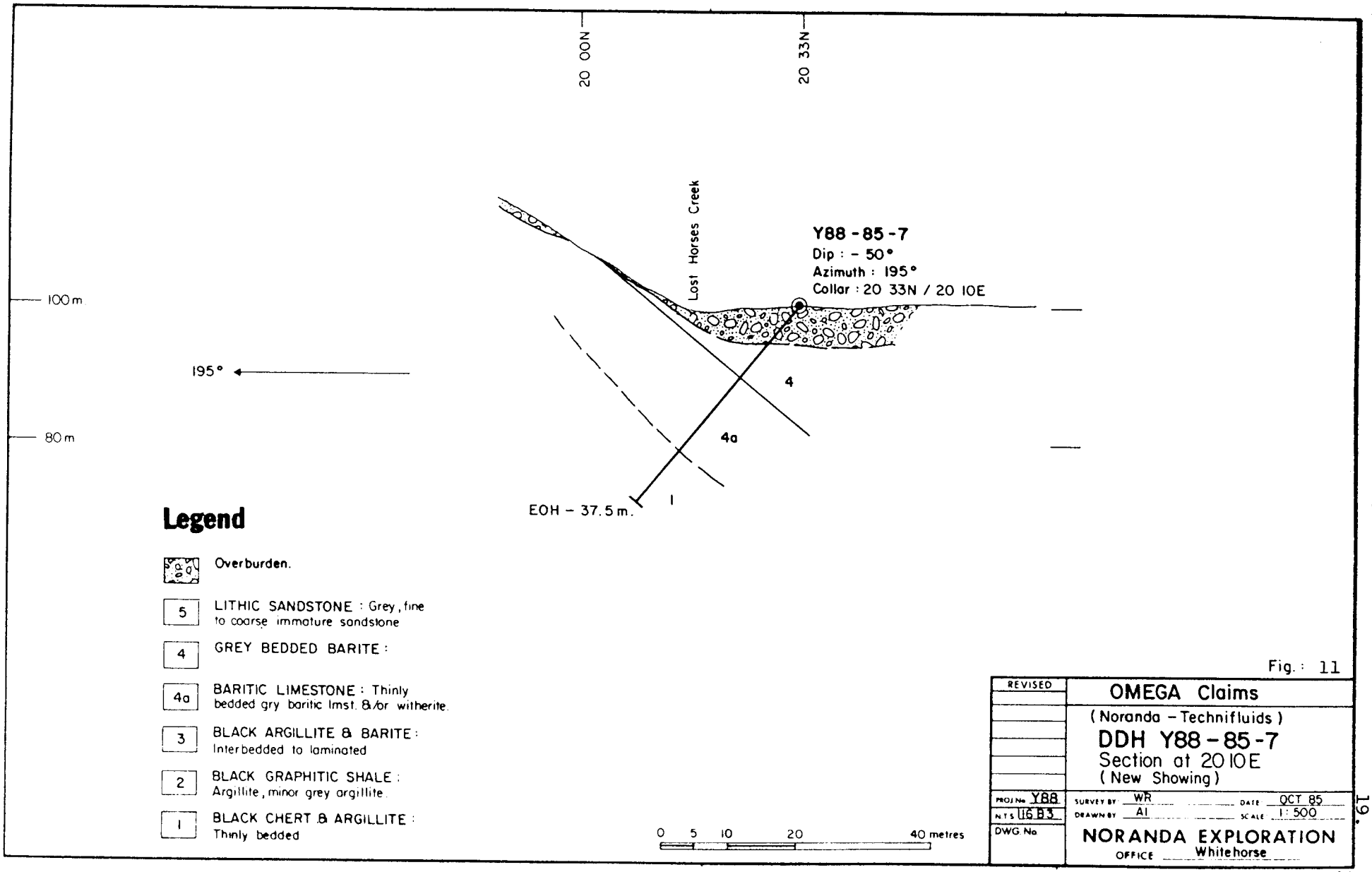


Fig. : 11

REVISED	OMEGA Claims
	(Noranda - Technifluids)
	DDH Y88 - 85 - 7
	Section at 20 10E
	(New Showing)
PROJ No Y88	SURVEY BY WR DATE OCT 85
N.T.S 116 B3	DRAWN BY AI SCALE 1 : 500
DWG No	NORANDA EXPLORATION
	OFFICE Whitehorse

XRD mineral identification and the results along with Specific Gravity (Technifluids Lab) are presented in Table III.

Footwall to this Barium rich package is a thinly bedded black chert and shale which is identical to the unit seen south of the main barite deposit during the earlier trenching program.

It should be pointed out that the Barite horizon appears to have a minimum strike length of 1.0 km and is untested anywhere else. Further work, especially trenching would be required to test the horizon for uncontaminated barite. This would be relatively easy if the Main Omega deposit is developed.

TABLE III

NEW SHOWING (OMEGA II PROPERTY)

BARITE ANALYSIS

Specific Gravity

10.3 m Barite	=	4.153 g/cm^3
13.3 m Barite	=	3.619 g/cm^3
18.0 m Barite	=	4.121 g/cm^3

XRD Data

10.3 m Barite	=	Barite	=	91% $BaSO_4$
		Dolomite	=	9% $Ca,Mg(CO_3)_2$
13.3 m Barite	=	Barite	=	30%
		Dolomite(?)	=	11%
		Barytocalcite	=	+/-56% $Ba,Ca(CO_3)_2$
		Quartz	=	3%
18.0 m Barite	=	Witherite	=	91% $BaCO_3$
		Barite	=	9% $BaSO_4$

CHAPTER FIVE: SUMMARY

The drilling program has proved the barite rich horizon of the Main deposit is of considerable extent and thickness. This however is offset by the fact that interbedded graphitic argillite has reduced the grade considerably and true direct shipping ore (>4.2 Specific Gravity) is rare.

On the other hand, all holes intersected sub-ore (>45% Ba) over minimum widths of 10 metres. Beneficiation of the material may be quite simple (i.e. a jig or simple screening) however this will have to be field tested prior to development of the deposit. A preliminary feasibility study is in progress.

Drilling on the new showing has somewhat reduced the potential of this deposit due to its likely contamination by witherite and/or limestone. However, zoning in this type of deposit is common and further testing along strike may result in relatively uncontaminated barite.

Respectfully submitted,

Wayne Reid

Wayne Reid
Project Geologist

STATEMENT OF QUALIFICATIONS

I, Wayne Reid, of the City of Whitehorse, in the Yukon Territory, do hereby certify that:

1. I have been employed as a Geologist by Noranda Exploration Company, Limited (No Personal Liability) since 1976.

2. I am a graduate of Memorial University of Newfoundland with a Bachelor of Science Degree in Geology.

3. I am a member of the Canadian Institute of Mining and Metallurgy and the Prospectors and Developers Association.

4. I supervised and performed part of the work described in this report.

N. Wayne Reid

N. Wayne Reid
Project Geologist
Noranda Exploration Company, Limited
(No Personal Liability)

STATEMENT OF COSTS

Gravity Survey (OMEGA 1-32 Claims):

Labour	3,700.00		
Helicopter + Fuel	2,250.00		
Transport (land)	350.00		
Groceries + Supplies	650.00		
Equipment Rental	150.00		
Expediting	150.00		
		Total	$7,250.00

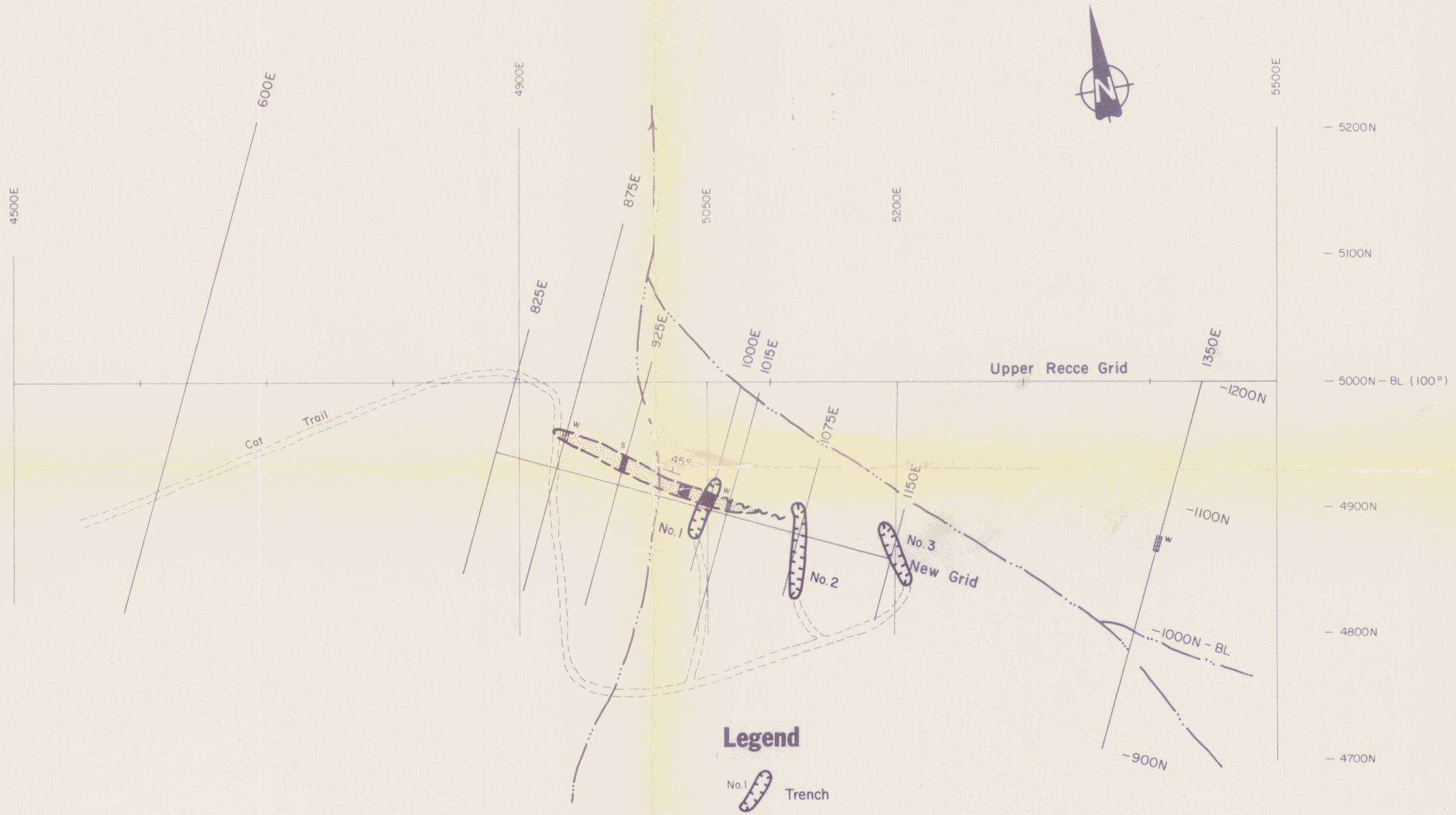
Geochemical Survey (OMEGA 33-56 Claims):

140 samples @$11.50	1,610.00		
Labour	850.00		
Groceries, board, etc.	220.00		
Helicopter + Fuel	1,950.00		
Transport (land)	150.00		
		Total	4,780.00

Diamond Drilling (OMEGA 1-56):

Phil's Diamond Drilling	31,480.00		
Helicopter + Fuel	14,700.00		
Labour (Norex)	7,500.00		
Transport (land) + Fuel	1,800.00		
Groceries, supplies, etc.	7,500.00		
Assays	3,940.00		
Expediting	550.00		
		Total	73,470.00

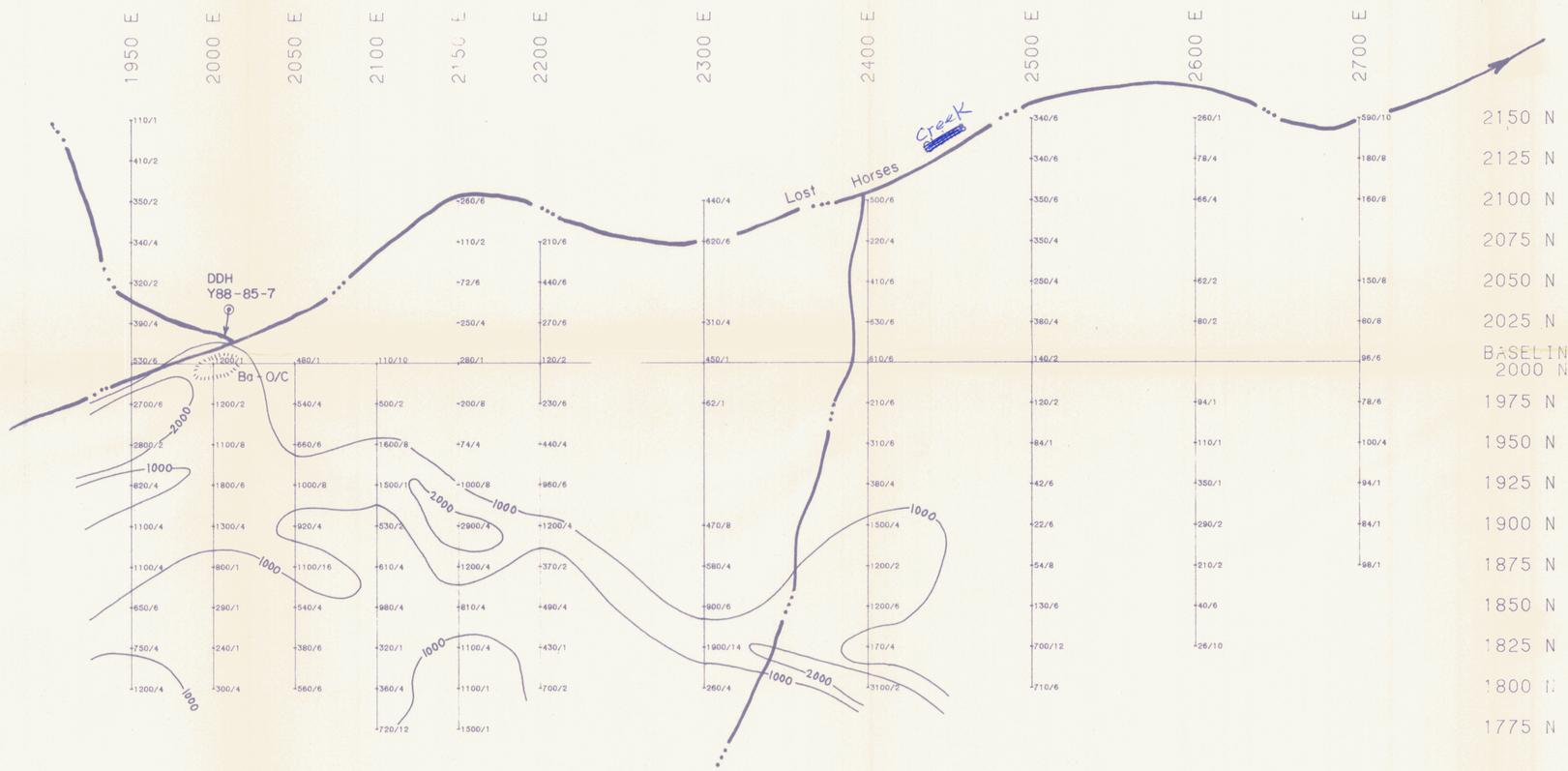
Report writing, drafting, etc.	1,000.00
GRAND TOTAL	$86,500.00



091795 Fig. : 3

REVISED	OMEGA Claims
	Gravity Compilation
PROJ. No. 88	SURVEY BY. DATE. JUL 85
N.T.S. 115 P 14	DRAWN BY AI SCALE 1: 2500
DWG. No	NORANDA EXPLORATION
	OFFICE Whitehorse

VANCAL-1919



Zn/Pb

0 20 60 100 metres

091795 Map/Fig.: 4

REVISED

OMEGA GRID

(NEW SHOWING)

SOIL GEOCHEMISTRY

(ZN), PB IN PPM.

PROJ. No. 850088

N.T.S. 115P14/116A3

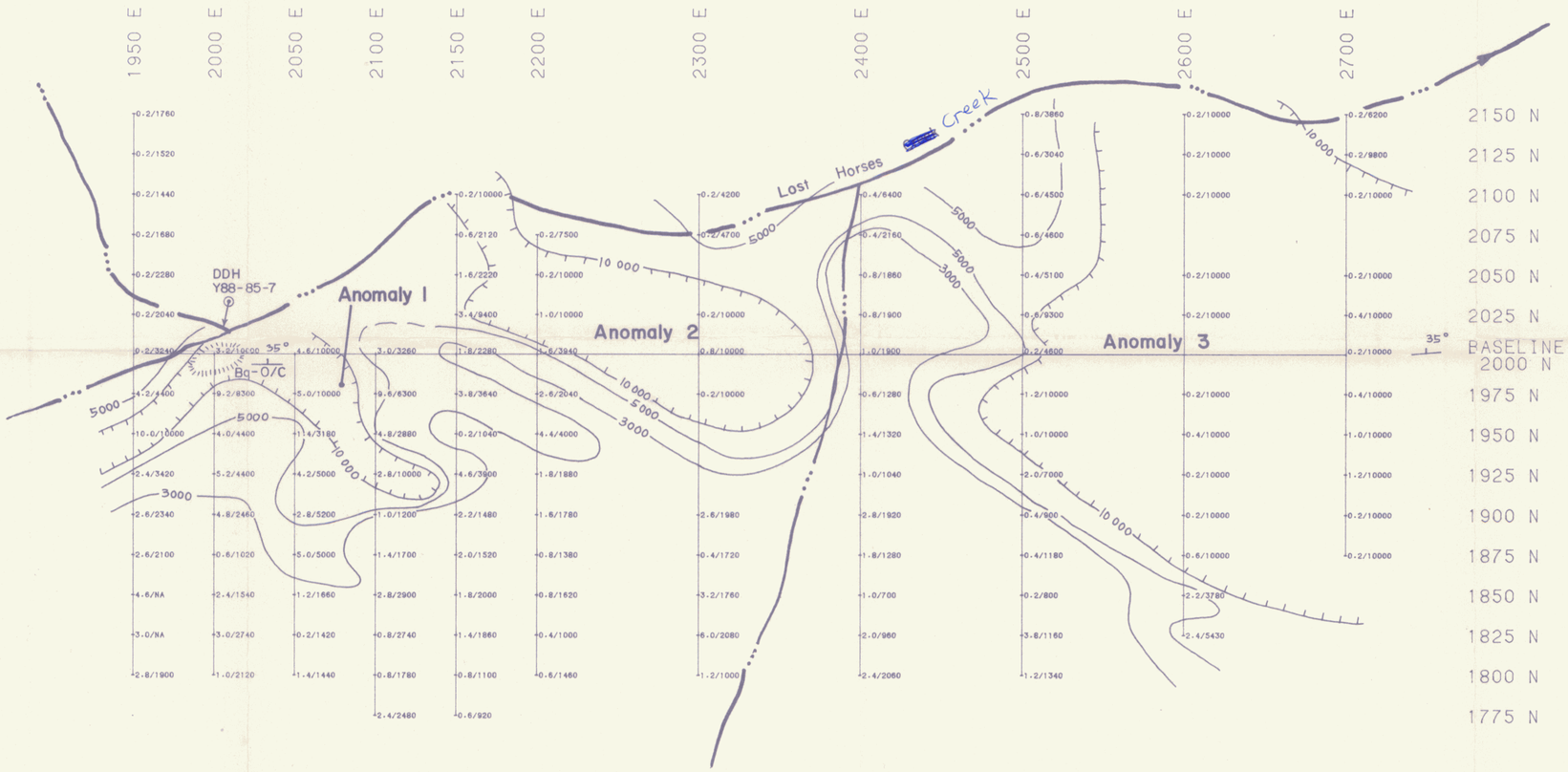
DWG. No.

SURVEY BY: W.R. DATE: FEB. 12, 1986.

DRAWN BY: EDP/VAN SCALE: 1:2000

NORANDA EXPLORATION

OFFICE: WHITEHORSE



Ag/(Ba)

0 20 60 100 metres

091795 Map/Fig.: 5

REVISED	OMEGA GRID
	(NEW SHOWING)
	SOIL GEOCHEMISTRY
	AG, (BA) IN PPM.
PROJ. No. 850088	SURVEY BY: W.R. DATE: FEB.12.1986.
N.T.S. 115P14/116A3	DRAWN BY: EDP/YAN SCALE: 1:2000
DWG. No.	NORANDA EXPLORATION
	OFFICE: WHITEHORSE


Legend
6 LIMESTONE :
5 LITHIC SANDSTONE : Grey, fine to coarse immature sandstone.
4 GREY BEDDED BARITE :
4a BARITIC LIMESTONE : Thinly bedded grey baritic limestone &/or witherite.
3 BLACK ARGILLITE & BARITE : Interbedded to laminated.
2 BLACK GRAPHITIC SHALE : Argillite, minor grey argillite.
1 BLACK CHERT & ARGILLITE : Thinly bedded.
Symbols
Geological contact
Trench
Bedrock
Diamond drill hole location & no.
Creek
Fault
12 00N
11 50N
11 00N
10 50N
10 00N - BL (115°)
(New Grid)
9 50N
9 00N
8 25E
8 75E
9 25E
10 00E
10 15E
10 75E
11 50E
(Old Grid)
85-6
85-1&2
85-4&5
85-3
Trench No. 1
Trench No. 2
Trench No. 3
6(4a)
B.M. - 100.0m.
Cat Trail
091795 Fig. : 12
OMEGA Claims
(Noranda - Technifluids)
Compilation
NORANDA EXPLORATION
Whitehorse
SCALE 1 : 500
0 5 10 20 40 metres

APPENDIX A

GRAVITY SURVEY REPORT - L. Bradish

July 29, 1985

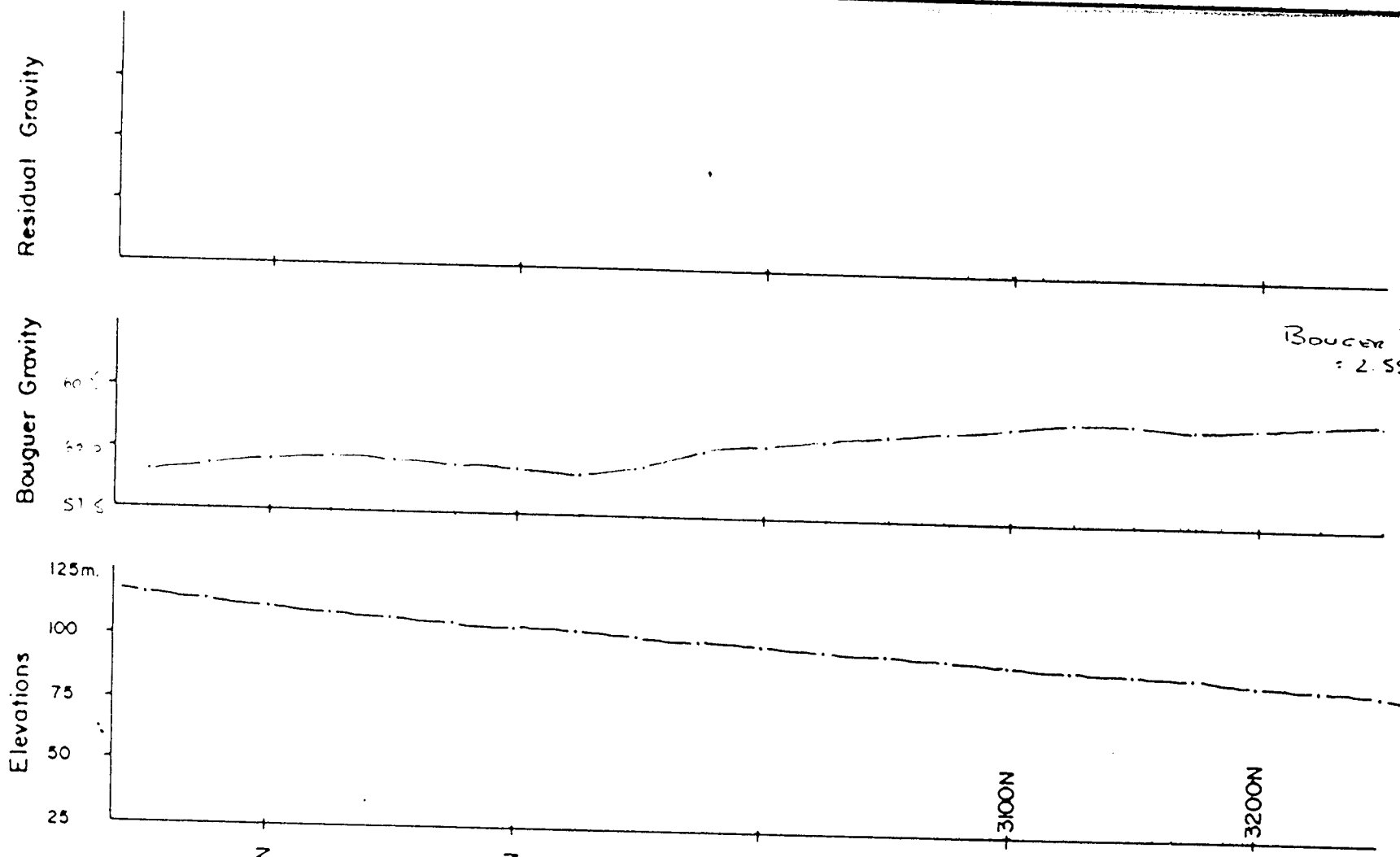
From : L. Bradish
Subject: Gravity Survey - Omega Claims (Y88)

During the period July 11 and July 14, 1985 a Gravity survey was completed over nine lines on the Omega claim. The purpose of the survey was to define a barite source that had been identified in a nearby creek bed and trench.

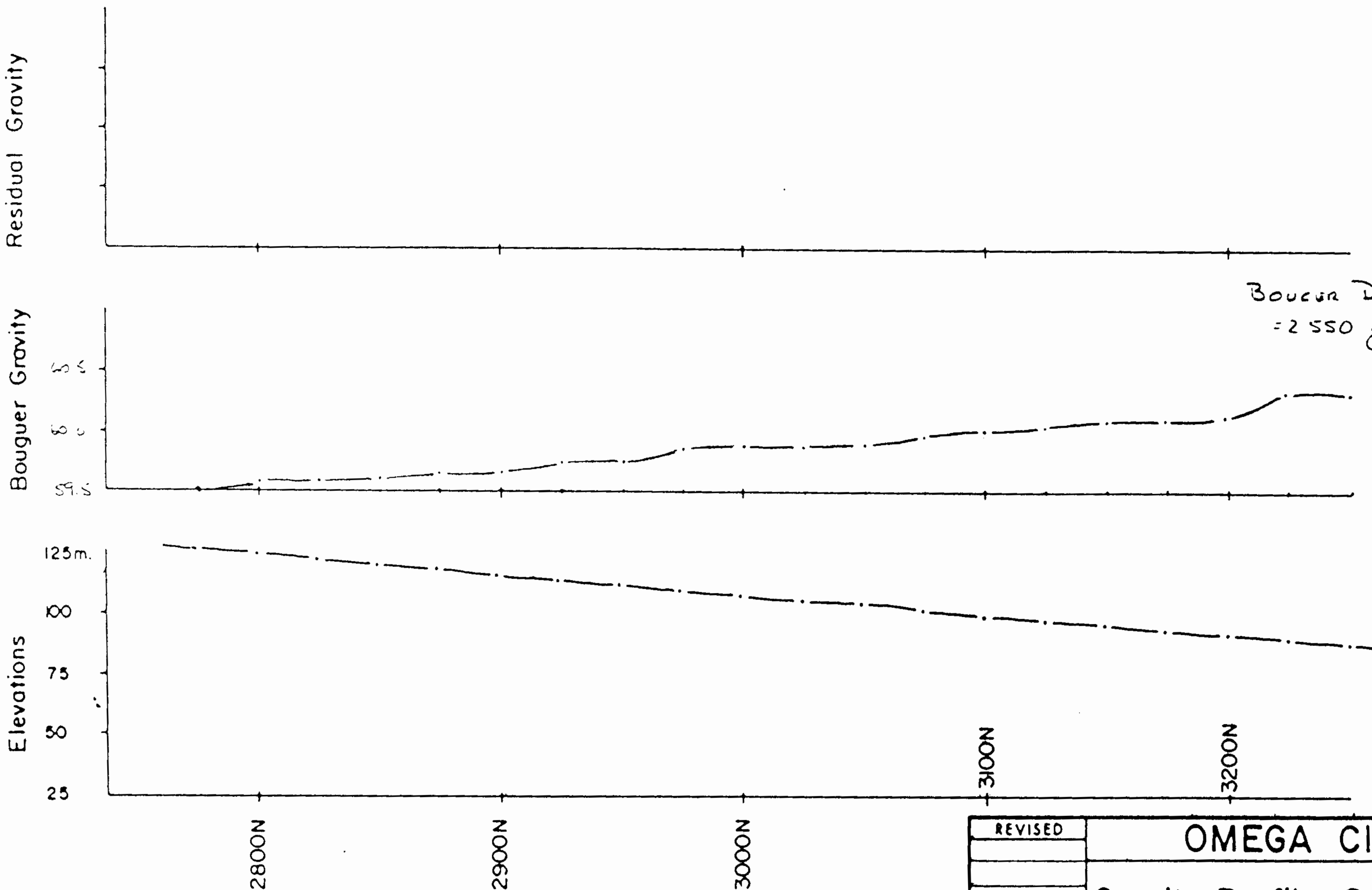
Two grids were constructed (New Grid and Upper Recce Grid) with stations typically at 25 meter intervals. Intermediate (12.5m) stations were established in anomalous areas. The equipment consisted of a SODIN gravimeter (K = 0.10072) and all observation stations were levelled with a NIKKON level.

UPPER RECCE GRID (Figs. 1, 2, and 3)

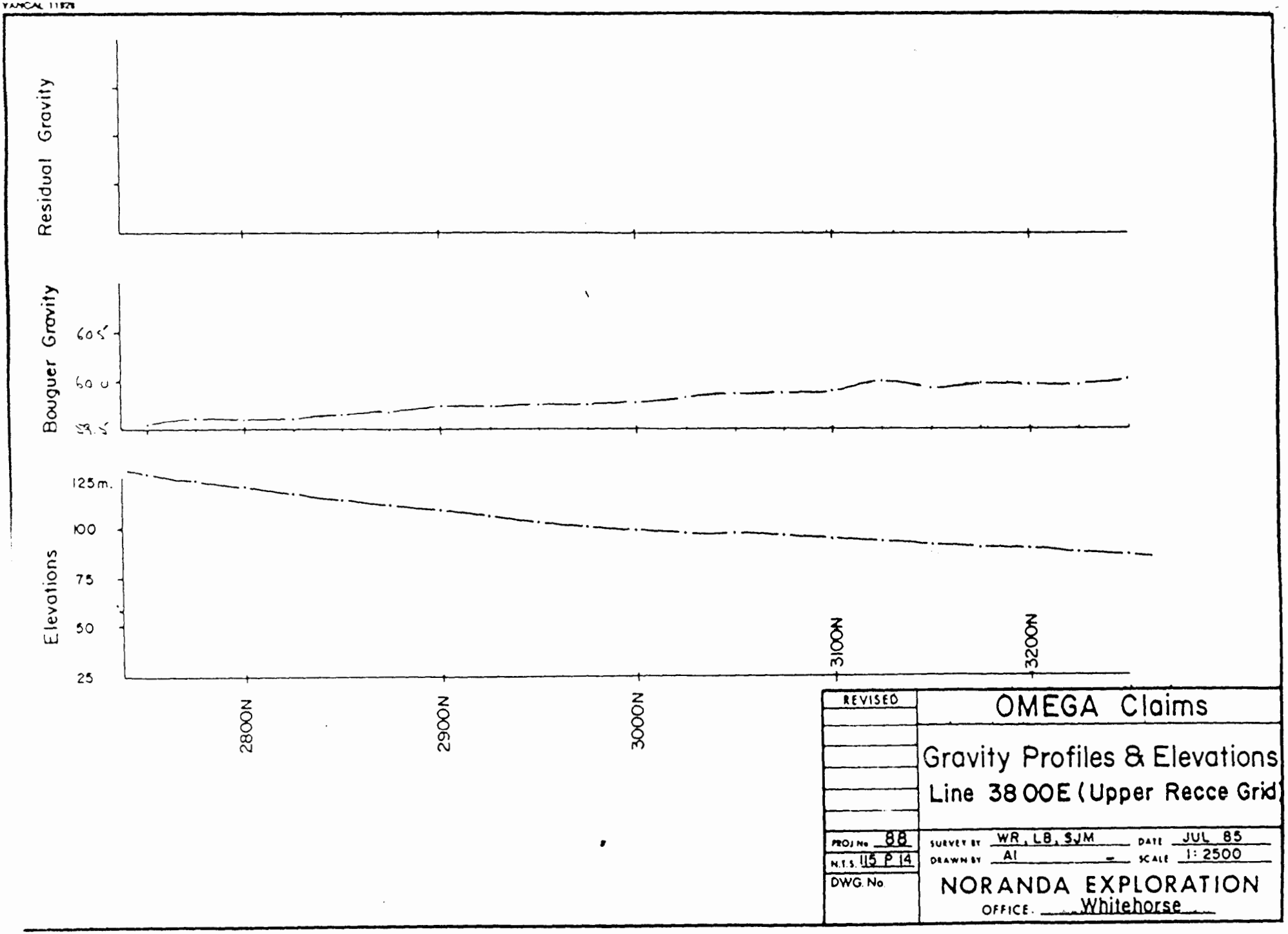
Three lines at 200 meter spacing were surveyed at 25 meter intervals. Using a Bouger Density of 2.550 gm/cc, no response of interest was recorded. The Bouger gravity profiles show some pertubations but none of which are of interest within the scope of the survey. Step features on the profile for Line 3600E probably reflect changes in overburden thickness or changes in the bedrock geology.



REVISED	**OMEGA Claims**
	Gravity Profiles & Elevations
	Line 34 00E (Upper Recce Grid)
PROJ. No. 88	SURVEY BY: WR, LB, SJM DATE: JUL. 85
N.T.S. 115 P 14	DRAWN BY: AI SCALE: 1:2500
DWG. No.	**NORANDA EXPLORATION**
	OFFICE: Whitehorse



REVISED	OMEGA Claims
	Gravity Profiles & Elevations Line 3600E (Upper Recce Grid)
PROJ. No. 88 N.T.S. 115 P 14 DWG. No.	SURVEY BY WR, LB, SJM DATE: JUL. 85 DRAWN BY AI SCALE: 1:2500 NORANDA EXPLORATION OFFICE: Whitehorse



REVISED

OMEGA Claims

Gravity Profiles & Elevations
Line 3800E (Upper Recce Grid)

PROJ No. 88
N.T.S. 115 P 14
DWG. No.

SURVEY BY WR, LB, SJM DATE JUL 85
DRAWN BY AI SCALE 1:2500

NORANDA EXPLORATION
OFFICE Whitehorse

NEW GRID (Figs. 4 - 9, map 1)

Six lines of gravity were completed on this grid which covers the barite zone exposed in the creek and trench.

L. 600E: The Bouger gravity profile shows a strong influence due to topographic effects. The residual gravity shows no response of interest.

L. 825E: No response of interest.

L. 875E: The Bouger profile shows a broad response centered at 1050 N which is attributed to topographic effects and/or variation in overburden thickness.

L. 925E: Two anomalous effects are evident on this Bouger gravity profile:

1) a broad gravity high which is attributed to the same source(s) as for L. 875E. The same regional curve used for L. 875E was employed for this line profile to produce the residual gravity.
2) The sharp hump, for lack of a better descriptor, riding on the regional gravity.

The interpreted source of this residual anomaly using a 2-D Tolwani modeling routine returns the following parameters:

Depth to source	:1.5m
Width of source (horizontal)	:9.5m(top)
	7.5m(bottom)
Dip of source	:44 deg grid N
Down dip length of source	:49m

A density contrast of 1.6 gm/cc was chosen as a reasonable value for a barite source in sediments.

L. 1015E: The Bouger profile shows a broad high. Using the same regional trend as for Line 875E and 925E produces a non-anomalous residual gravity profile. The symbol (N) indicates noisy readings.

L. 1350E: The results from this line has recorded an excellent example of a contact between rock types of different densities. A density contrast of 0.10 gm/cc would be sufficient to produce this type of gravity profile.

Conclusions:

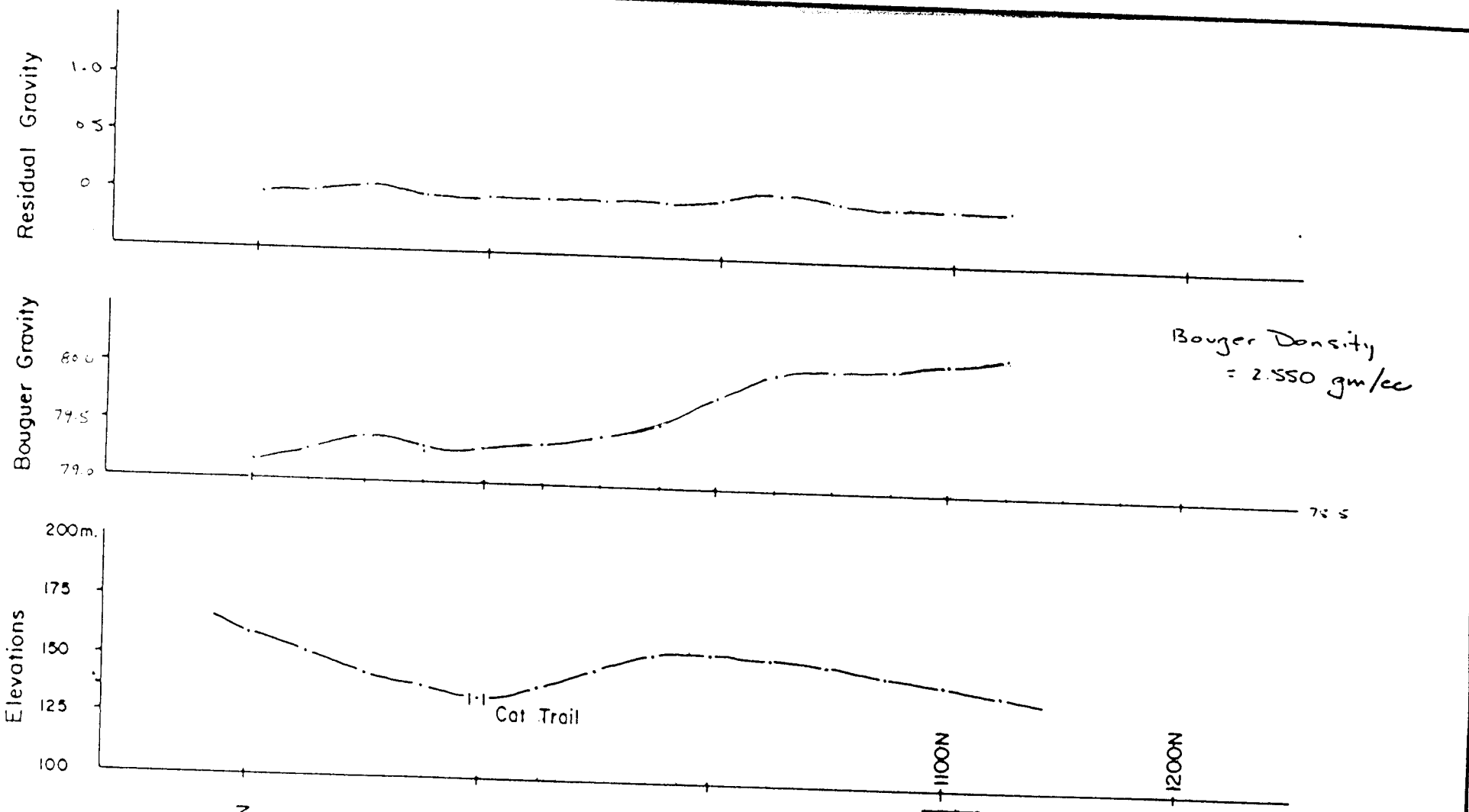
It must be mentioned that gravity interpretation is inherently ambiguous as there is no single and unique mathematical solution that describes the source of the gravity field.

The gravity field data has defined one possible source of barite (?) located on Line 925E whose interpreted physical parameters are as listed in the previous section. This interpretation of the gravity anomaly is probably secure as it fits quite well with the observed geology.

PRODUCTION GRAVITY: 3.325 Km.

CC: D. Cross
W. Mercer

YANCAL 11828



REVISED

OMEGA Claims

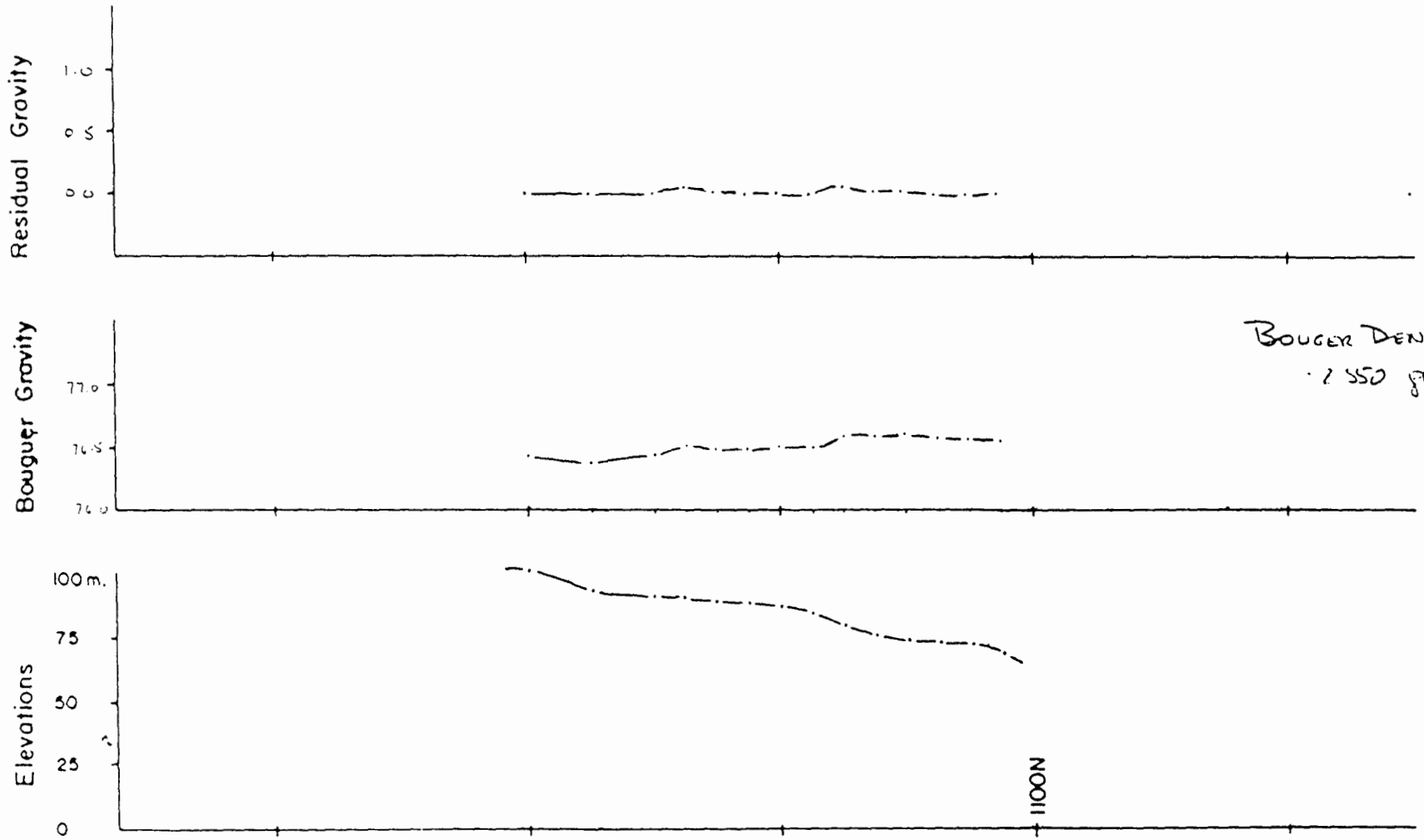
Gravity Profiles & Elevations
Line 600E (New Grid)

PROJ. No. 88
N.T.S. 115 P 14
DWG. No.

SURVEY BY: WR, LB, SJM DATE: JUL 85
DRAWN BY: AI SCALE: 1:2500

NORANDA EXPLORATION
OFFICE: Whitehorse

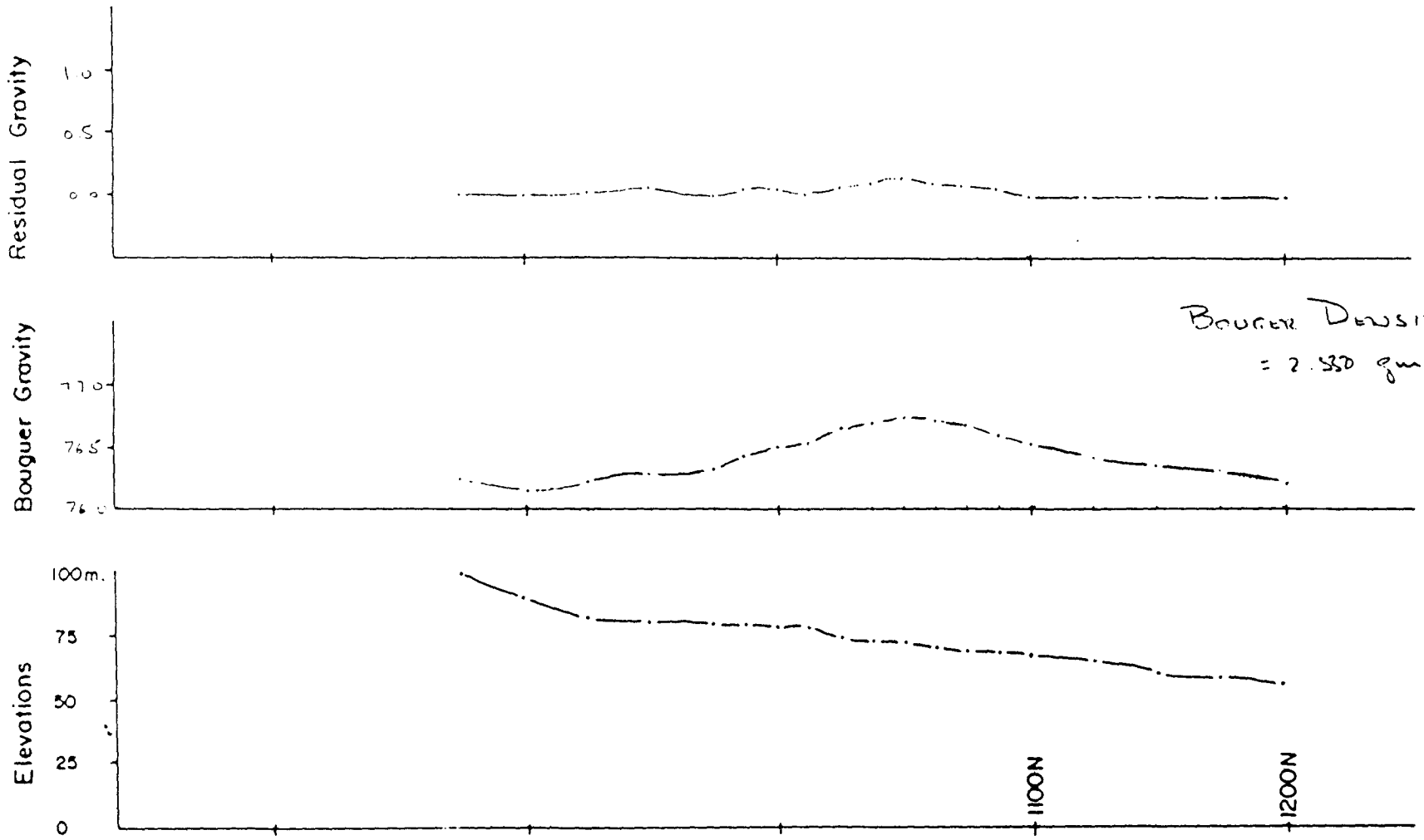
YANCAL 11828



BOUGER DENSITY
2.550 gm/cc

REVISED	OMEGA Claims
	Gravity Profiles & Elevations
	Line 825E (New Grid)
PROJ No. 88	SURVEY BY WR, LB, SJM DATE JUL 85
N.T.S. 115 P 14	DRAWN BY AI SCALE 1:2500
DWG. No.	NORANDA EXPLORATION
	OFFICE: Whitehorse

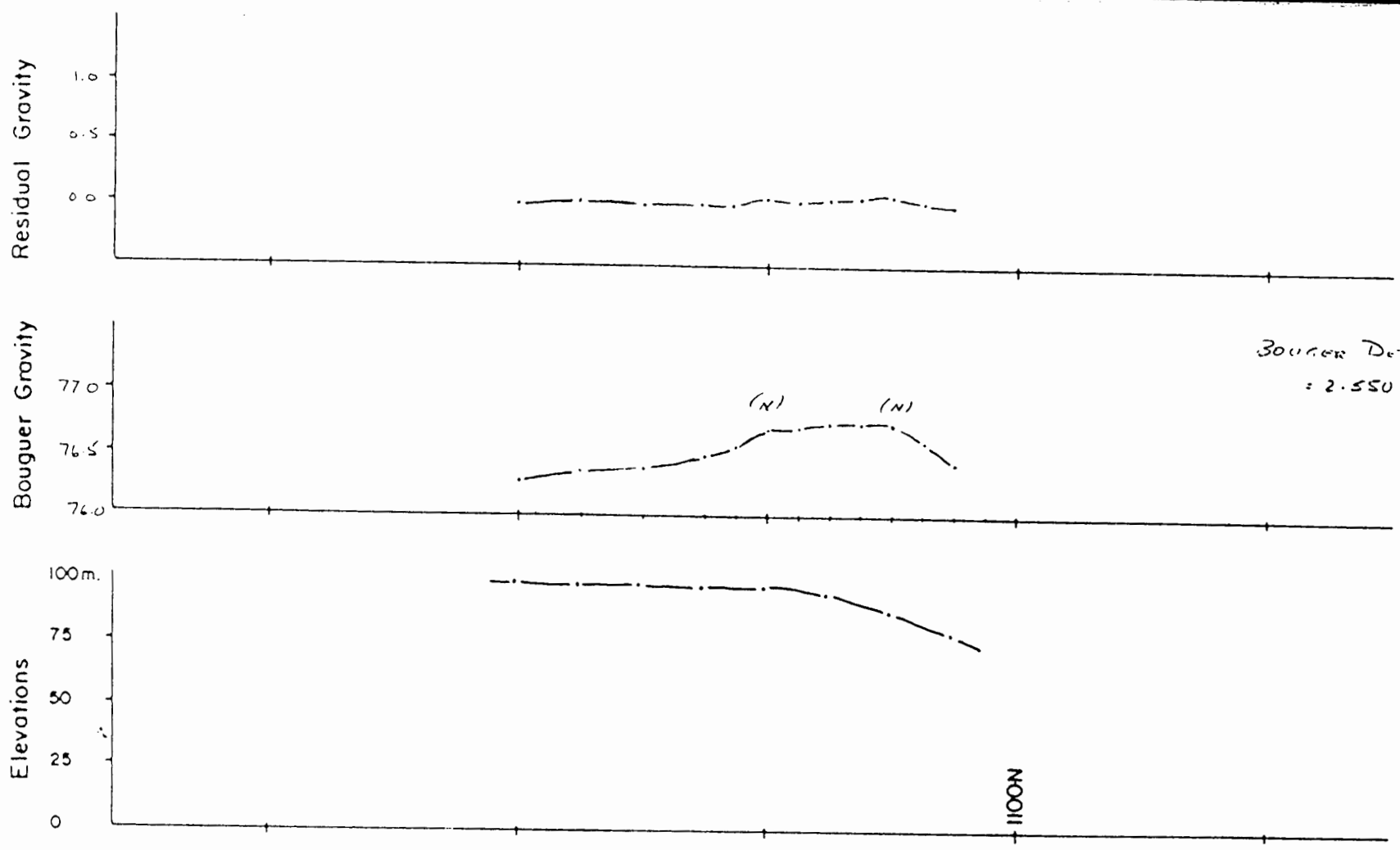
VANCAL 11928



BOUGER DENSITY
= 2.350 gm/cc

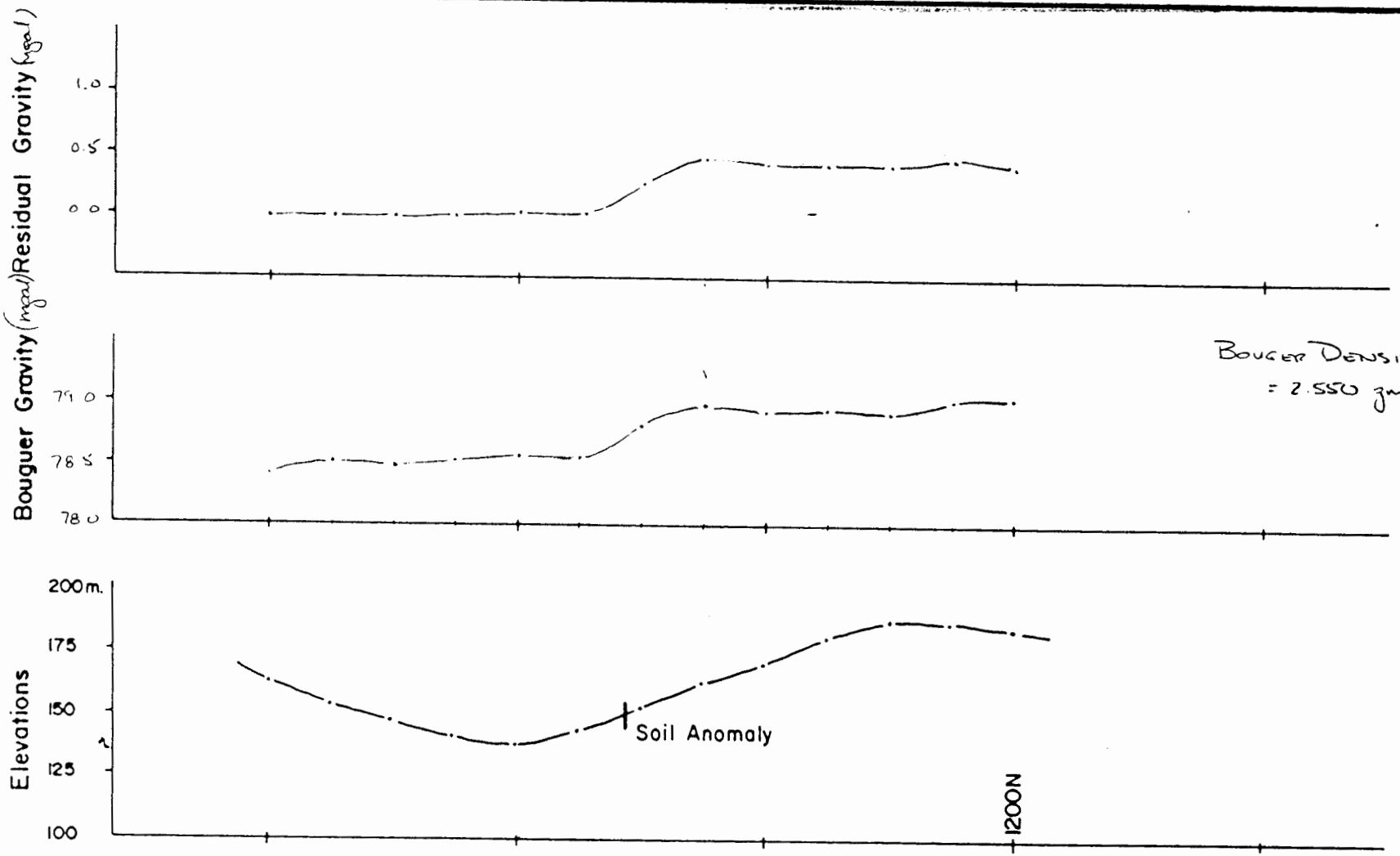
REVISED	OMEGA Claims
	Gravity Profiles & Elevations
	Line 8 75E (New Grid)
PROJ No. 88	SURVEY BY: WR, LB, SJM DATE: JUL 85
N.T.S. 115 P 14	DRAWN BY: AI SCALE: 1:2500
DWG. No.	NORANDA EXPLORATION
	OFFICE: Whitehorse

VANCAL 11828

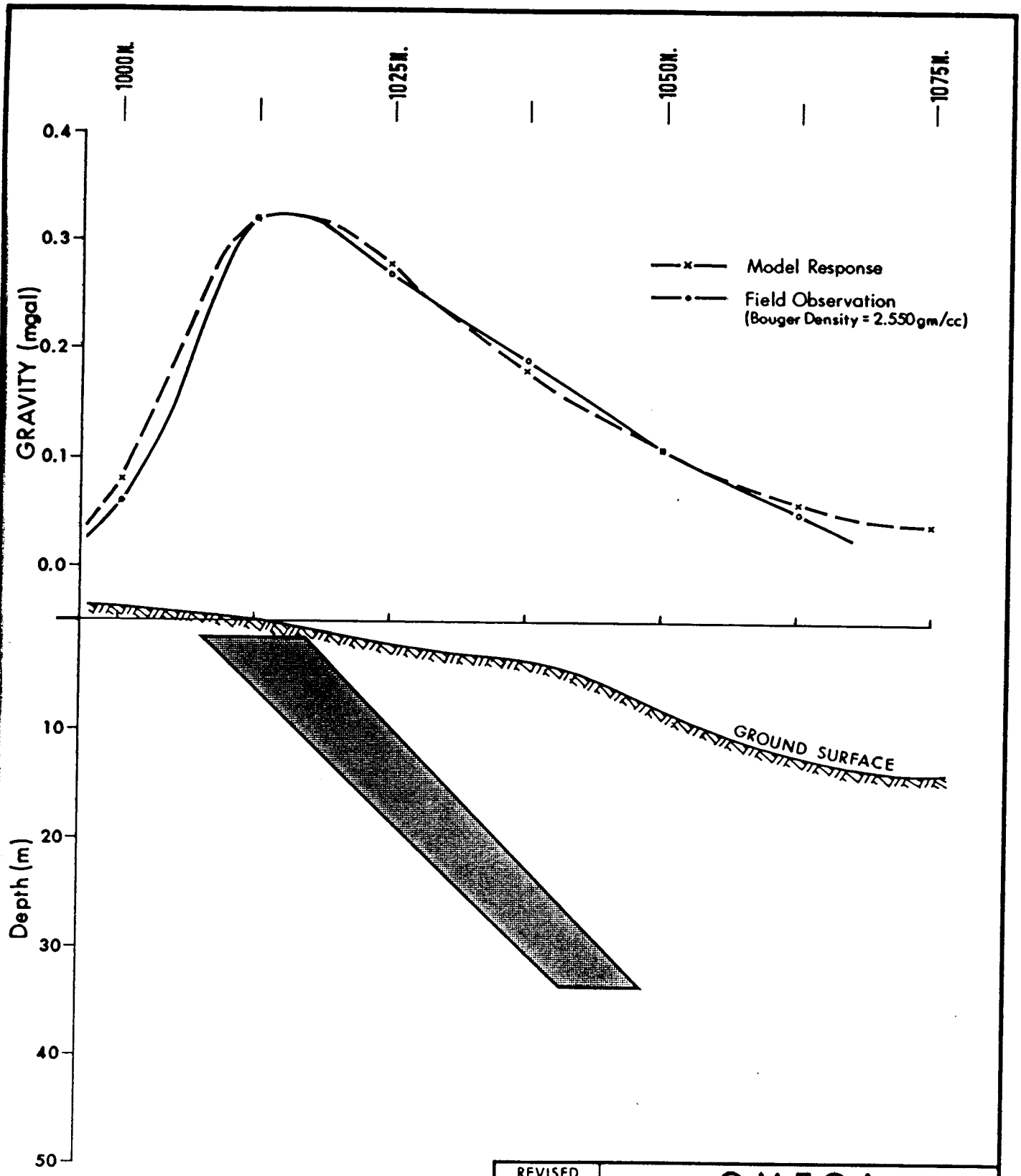


REVISED	**OMEGA Claims**
	Gravity Profiles & Elevations
	Line 1015E (New Grid)
PROJ No 88	SURVEY BY WR, LB, SJM DATE JUL 85
NTS 115 P 14	DRAWN BY AI SCALE 1:2500
DWG No	**NORANDA EXPLORATION**
	OFFICE Whitehorse

VANICAL 11928

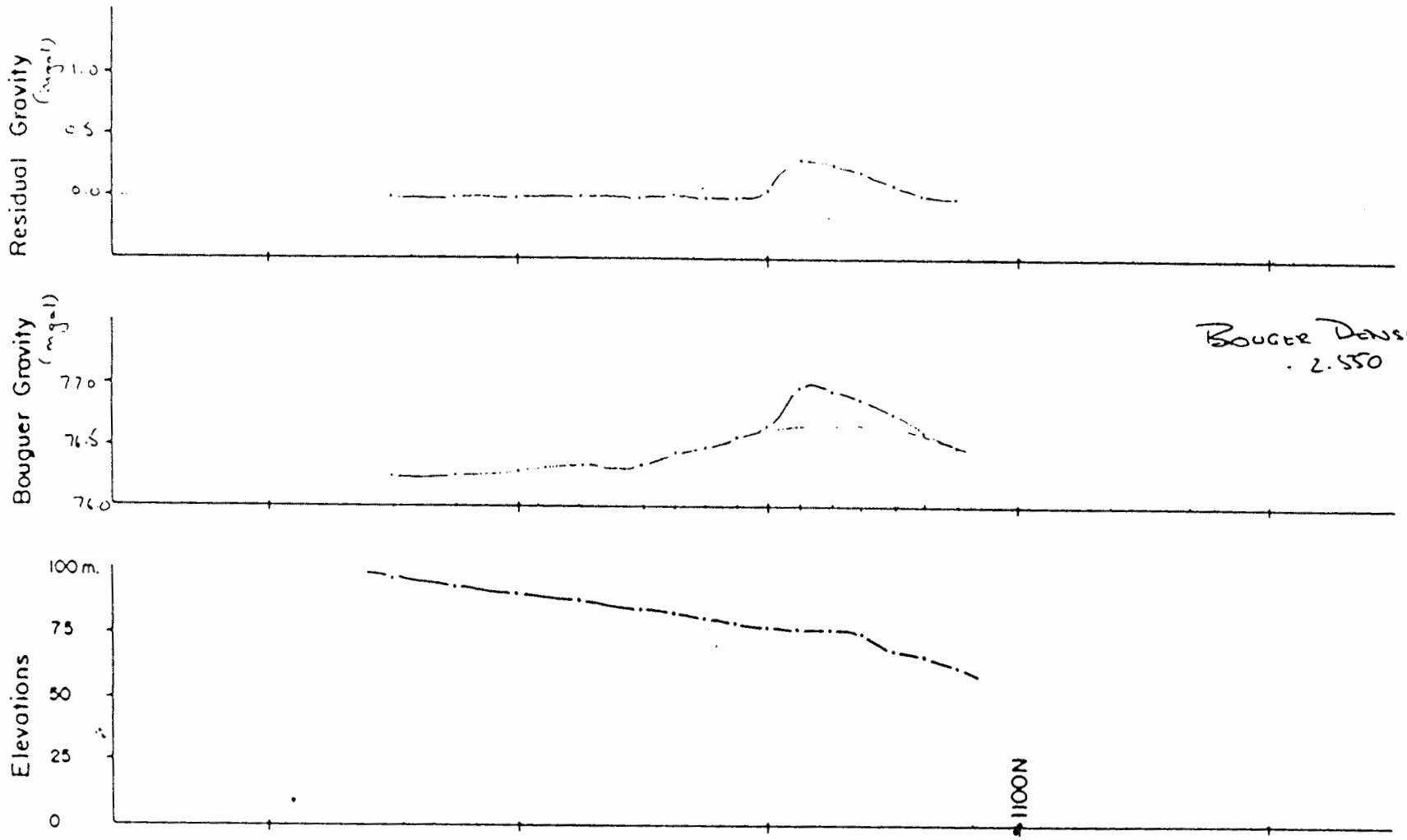


REVISED	**OMEGA Claims**
	Gravity Profiles & Elevations
	Line 1350E (New Grid)
PROJ No. 88	SURVEY BY WR, LB, SJM DATE JUL 85
N.T.S 115 P 14	DRAWN BY AI SCALE 1:2500
DWG. No.	**NORANDA EXPLORATION**
	OFFICE: Whitehorse



REVISED	OMEGA
	GRAVITY Line 925E
PROJ. No. 88	SURVEY BY: L. Brodish DATE: July/85
N.T.S.	DRAWN BY: [illegible] SCALE: 1cm. = 5m.
DWG. No.	NORANDA EXPLORATION OFFICE: Vancouver

VANCAL 11927



Bouger Density
2.550 gm/cc

REVISED	OMEGA Claims
	Gravity Profiles & Elevations
	Line 925E (New Grid)
PROJ No 88	SURVEY BY WR, LB, SJM DATE JUL 85
N.T.S 115 P 14	DRAWN BY AI SCALE 1:2500
DWG. No	NORANDA EXPLORATION
	OFFICE Whitehorse

APPENDIX B

ASSAY SHEETS AND DIAMOND DRILL LOGS

Bondar-Clegg & Company Ltd.
136 Industrial Road
Whitehorse, Yukon Territory Y1A 2V1
Phone: (403) 667-6523
Telex 036-8-460

BONDAR-CLEGG

Geochemical Lab Report

REPORT: 125-3607 PROJECT: YUG PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	CU PPM	PB PPM	ZN PPM	AG PPM	SIO2 PCT	CAO PCT	P2O5 PCT
D2 78301		34	32	440	5.2	21.84	0.14	0.07
D2 78302		18	15	305	4.0	21.98	0.05	0.08
D2 78303		26	12	750	3.6	15.57	0.07	0.15
D2 78304		28	9	321	0.6	6.75	0.05	0.09
D2 78305		39	4	300	0.3	9.53	0.05	0.09
D2 78306		37	6	158	0.3	23.84	0.08	0.09
D2 78307		24	4	122	0.3	13.16	0.04	0.10
D2 78308		17	3	90	0.2	12.29	0.04	0.08
D2 78309		42	7	94	0.5	24.19	0.29	0.15
D2 78310		69	12	730	0.9	58.81	0.08	0.18
D2 78311		86	9	325	0.6	49.40	0.08	0.21
D2 78312		28	4	130	<0.2	18.67	0.06	0.02
D2 78313		23	5	90	0.4	19.10	0.03	<0.01
D2 78314		5	2	80	<0.2	4.39	0.02	<0.01
D2 78315		3	<2	70	<0.2	2.74	0.13	<0.01
D2 78316		5	<2	128	<0.2	3.02	1.20	<0.01
D2 78317		11	<2	67	<0.2	5.30	0.10	<0.01
D2 78318		13	4	252	<0.2	7.65	0.06	0.03
D2 78319		17	4	86	0.2	10.53	0.59	0.11
D2 78320		15	8	30	0.6	14.08	13.13	0.11
D2 78321		50	10	500	1.0	51.42	3.02	0.07
D2 78322		10	3	19	<0.2	6.22	1.39	0.09
D2 78323		46	32	111	4.5	5.74	2.92	0.01
D2 78324		8	2	30	<0.2	5.13	0.32	0.02
D2 78325		9	3	15	<0.2	6.22	0.89	0.03
D2 78326		19	5	49	0.2	15.87	2.00	0.05
D2 78327		17	2	70	0.2	20.97	0.33	0.04
D2 78328		49	9	660	0.8	52.26	0.98	0.08
D2 78329		10	3	50	0.4	9.20	0.98	0.02
D2 78330		12	2	39	0.2	7.81	0.23	0.06
D2 78331		183	33	343	0.7	69.79	0.08	0.10
D2 78332		24	4	580	<0.2	12.37	0.60	0.04
D2 78333		15	2	200	0.2	5.95	0.07	0.03
D2 78334		85	10	660	1.0	65.77	0.05	0.05
D2 78335		12	3	270	<0.2	9.62	2.81	<0.01
D2 78336		12	4	156	<0.2	6.97	1.21	0.01
D2		29	6	110	0.5	17.46	0.08	0.02
D2 78338		28	4	310	0.2	20.13	0.21	0.07
D2 78339		21	3	640	0.2	28.53	0.17	0.05
D2 78340		56	15	1500	1.0	74.69	2.19	0.10

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Geochemical Lab Report

REPORT: 425-3407 PROJECT: Y88 PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	BA PCT	BASOL PCT	SO4 PCT	SG	SAMPLE NUMBER	ELEMENT UNITS	BA PCT	BASOL PCT	SO4 PCT	SG
D2 78301		37.64	2.90	24.30	3.4	D2 78341		15.56	3.30	15.10	2.9
D2 78302		36.68	2.60	24.10	3.4	D2 78342		46.19	2.80	32.00	3.8
D2 78303		40.01	2.40	26.10	3.5	D2 78343		52.97	3.20	35.90	4.1
D2 78304		49.63	2.40	33.25	3.9	D2 78344		47.66	2.60	32.70	3.9
D2 78305		49.43	2.40	32.35	3.9	D2 78345		40.74	2.60	20.00	3.6
D2 78306		34.29	2.90	24.10	3.3	D2 78346		29.91	2.60	23.45	3.2
D2 78307		42.77	2.50	28.90	3.6						
D2 78308		42.37	2.30	29.40	3.7						
D2 78309		32.74	2.10	25.60	3.3						
D2 78310		7.56	3.00	8.66	2.6						
D2 78311		16.50	3.10	13.80	2.8						
D2 78312		43.33	2.80	30.50	3.7						
D2 78313		42.18	3.30	29.75	3.6						
D2 78314		55.02	3.20	36.60	4.2						
D2 78315		55.66	2.50	36.90	4.2						
D2 78316		52.93	2.70	35.60	4.1						
D2 78317		53.45	3.10	36.30	4.1						
D2 78318		49.01	3.50	33.97	3.8						
D2 78319		45.13	2.70	31.80	3.5						
D2 78320		25.55	2.90	17.90	3.0						
D2 78321		9.77	3.10	12.15	2.5						
D2 78322		50.28	2.60	34.50	4.0						
D2 78323		49.45	2.70	33.20	3.9						
D2 78324		52.42	3.20	35.00	4.1						
D2 78325		51.43	10.60	30.10	4.0						
D2 78326		42.14	6.20	27.30	3.7						
D2 78327		41.34	7.40	26.10	3.6						
D2 78328		20.72	9.40	13.10	2.9						
D2 78329		48.40	6.40	30.90	4.0						
D2 78330		50.35	3.92	33.50	4.1						
D2 78331		13.39	3.36	8.95	2.5						
D2 78332		45.73	3.00	30.60	3.8						
D2 78333		51.84	2.40	35.30	4.1						
D2 78334		14.39	3.00	14.55	2.7						
D2 78335		47.25	2.70	32.95	3.8						
D2 78336		49.33	2.40	34.10	3.9						
D2 78337		41.89	2.70	31.00	3.6						
D2 78338		41.15	3.30	29.70	3.6						
D2 78339		36.78	4.00	25.60	3.4						
D2 78340		3.35	2.70	7.10	2.5						

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Geochemical Lab Report

REPORT: 125-3407 PROJECT: Y88 PAGE 2

SAMPLE NUMBER	ELEMENT UNITS	CU PPM	PB PPM	ZN PPM	AG PPM	SIO2 PCT	CAO PCT	P2O5 PCT
D2 78341		79	10	560	1.0	59.64	<0.01	0.12
D2 78342		21	4	137	0.4	13.58	0.10	0.05
D2 78343		12	2	63	<0.2	4.54	<0.01	0.02
D2 78344		11	2	62	<0.2	8.73	1.23	<0.01
D2 78345		25	4	140	0.3	16.58	1.60	0.06
D2 78346		32	4	365	0.6	34.78	0.81	0.11

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Geochemical Lab Report

REPORT: 425-3609 PROJECT: Y88 PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	BA PCT	BASOL PCT	SO4 PCT	SG
R2 78347		6.09	2.44	10.26	2.6
R2 78348		44.23	1.68	29.75	3.8
R2 78349		47.30	2.08	30.95	3.9
R2 78350		54.20	1.89	35.20	4.2
R2 78351		54.40	2.00	34.90	4.0
R2 78352		52.18	1.56	39.85	4.1
R2 78353		42.00	1.64	29.60	3.4
R2 78354		53.10	1.92	35.00	4.1
R2 78355		50.65	1.72	37.40	4.0
R2 78356		28.44	2.00	24.00	3.2
R2 78357		50.55	1.84	33.20	4.0

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Geochemical Lab Report

REPORT: 125-3309 PROJECT: Y88 PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	CU PPM	PB PPM	ZN PPM	AG PPM	CAO PCT	P2O5 PCT	SIO2 PCT
R2 78347		116	13	935	1.7	0.06	0.15	78.28
R2 78348		22	3	139	<0.2	1.37	0.06	13.07
R2 78349		16	2	159	<0.2	0.10	0.02	12.45
R2 78350		4	2	79	<0.2	0.08	<0.01	6.13
R2 78351		5	2	123	<0.2	0.18	0.02	3.04
R2 78352		11	3	117	0.2	0.05	0.13	5.98
R2 78353		18	4	1780	0.2	0.96	0.15	16.50
R2 78354		5	2	329	<0.2	0.57	0.12	3.17
R2 78355		11	3	374	<0.2	0.47	0.08	6.41
R2 78356		46	7	379	0.8	1.05	0.08	36.15
R2 78357		5	2	54	<0.2	1.56	0.07	5.69

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Geochemical Lab Report

REPORT: 125-3718 PROJECT: Y88 PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	CU PPM	PB PPM	ZN PPM	AG PPM	CAO PCT	P2O5 PCT	SIO2 PCT
R2 72701		5	17	141	0.3	6.02	0.06	9.67
R2 72702		5	8	124	<0.2	2.10	0.02	3.65
R2 72703		6	7	128	<0.2	2.33	0.01	2.66
R2 72704		7	9	58	0.2	3.64	0.02	4.17
R2 72705		5	9	45	<0.2	1.06	0.03	4.79
R2 72706		5	22	87	<0.2	0.70	0.01	3.18
R2 72707		6	8	97	<0.2	0.44	0.05	4.63
R2 72708		6	10	263	<0.2	3.95	0.06	6.82
R2 78358		18	5	255	0.2	0.07	0.02	6.49
R2 78359		60	8	35	0.6	0.08	0.02	16.35
R2 78360		21	6	155	<0.2	0.10	0.04	7.50
R2 78361		38	11	371	0.3	0.11	0.08	17.32
R2 78362		102	20	252	1.2	0.13	0.11	59.19

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Geochemical Lab Report

REPORT: 425-3716 PROJECT: Y88 PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	BA PCT	SO4 PCT	SG	BASOL PCT	
R2 72701		43.95	16.20	3.6	24.20	
R2 72702		52.13	30.00	4.0	7.88	
R2 72703		52.60	31.70	4.1	5.80	
R2 72704		49.55	8.18	3.7	41.20	
R2 72705		60.73	8.12	4.0	52.00	#7
R2 72706		63.20	7.70	4.1	54.40	
R2 72707		61.67	7.63	4.1	54.40	
R2 72708		50.32	12.00	3.7	41.00	
R2 78358		50.62	33.20	4.0	2.00	
R2 78359		39.83	30.30	3.6	1.92	#6
R2 78360		51.69	34.25	4.0	2.24	
R2 78361		42.20	29.90	3.5	2.52	
R2 78362		16.22	16.95	2.7	2.88	

NORANDA EXPLORATION COMPANY LTD.

Property	OMEGA	Started	Oct. 12, 1985	FIELD CO-ORDINATES	SURVEYED CO-ORDINATES	DIP TESTS						NTS no.	115 P/14
Hole no.	Y88-85-1	Finished	Oct. 13, 1985	Lat. 1038N	Lat.	Depth	Bearing	Dip	Depth	Bearing	Dip	Project no.	Y88
Bearing	200°	Length	28 m	Dep. L-925E	Dep.							Logged by	W. Reid H. Copland
Dip - Collar	-45°	Core size	NQ	Elev. 76.0 m	Elev.							Sheet	1 of 2

METRES From	METRES To	% Recovery	Graphic Log	DESCRIPTION OF UNITS	% Mineralization	Sample no.	METRES From	METRES To	METRES Width	ASSAYS Ba	ASSAYS BaSol	ASSAYS SO_4	ASSAYS S.G.	ASSAYS SiO_2	ASSAYS CaO
0	5.18			OVERBURDEN: Some large immature sandstone blocks, may be bedrock.											
5.18	13.81			BLACK GRAPHITIC ARGILLITE: Broken and crumbly black argillite, poor recovery. 5.18-13.1: Lost core, black water return.											
13.81	18.50			LAMINATED BARITE and BLACK SHALE: Black to dark grey laminated unit with up to 50% graphitic argillite as inter-laminae and more massive interbeds. Very minor qtz veinlets. Barite is incorporated in argillite. 14.63-16.15: 1.4 metres lost core. 16.15-16.76: 0.4 metres lost core 16.50: Core is extremely broken with minor limonite, quartz and gypsum along fractures.		78301	13.81	14.63	0.82	37.64	2.90	24.30	3.4	21.34	0.14
						78302	14.63	16.15	1.52	36.68	2.60	24.10	3.4	21.98	0.05
						78303	16.15	16.76	0.61	40.01	2.40	26.10	3.5	15.77	0.07
						78304	16.76	17.68	0.92	49.63	2.40	33.25	3.9	6.75	0.05
						78305	17.68	18.50	0.82	49.43	2.40	32.35	3.9	9.53	0.05
18.50	20.50			BLACK GRAPHITIC ARGILLITE: Black crumbly unit with moderate cleavage, parallel to bedding. Minor barite "spheroids".		78306	18.50	21.4	2.9	34.29	2.90	24.10	3.3	23.84	0.08
20.5	25.4			LAMINATED BARITE (lesser ARGILLITE): Inter-laminated light grey fine to medium grained barite (composed of small spheroids, streaks and discontinuous lenses) and dark grey graphitic rich laminae. Generally 1 mm wide with the barite spheroids etc. incorporated or floating in argillite. Minor slumping. Unit is marked from upper barite by its good bedding plane cleavage and relatively clean blocky appearance (flaggy?). Upper contact sharp from low grade baritic argillite to higher grade section at 20.5 m. Minor limonite staining along fractures and cleavages in first 1.6 metres. Also minor white (gypsum?) coatings on fractures. 21.9: C.A. bedding 85° 22.25-22.5: Slumped bed 23.45: C.A. bedding 65° 23.8-23.9: Slump 25.1: C.A. bedding 75° Graphitic material increases after 24.2 m, up to 50% at end of section. Lower contact: Gradational over .25 metres.		78307	21.4	22.8	1.4	42.77	2.50	28.90	3.6	13.76	0.04
						78308	22.8	24.2	1.4	42.37	2.30	29.40	3.7	12.29	0.04
						78309	24.2	25.4	1.2	32.74	2.10	25.60	3.3	24.19	0.29

NORANDA EXPLORATION COMPANY LTD. — Property OMEGA — Hole no. Y88-85-1 — Sheet 2 of 2

METRES From	METRES To	% Recovery	Graphic Log	DESCRIPTION OF UNITS	% Mineralization	Sample no.	METRES From	METRES To	METRES Width	ASSAYS Ba	ASSAYS BaSol	ASSAYS SO_4	ASSAYS S.G.	ASSAYS SiO_2	CaO
25.40	28.04			BLACK GRAPHITIC ARGILLITE (SHALE): Rock is generally featureless except for good cleavage parallel to bedding. Barite is completely absent. Minor limonite and gypsum along rare fractures. 25.7: 3 mm wide discontinuous qtz. veinlet. Graphite on cleavage planes have black metallic sheen.		78310	25.4	26.4	1.0	7.56	3.00	8.66	2.6	59.81	0.08
	28.04			END OF HOLE											

NORANDA EXPLORATION COMPANY LTD.

Property	OMEGA	Started	Oct. 14, 1985	FIELD CO-ORDINATES	SURVEYED CO-ORDINATES	DIP TESTS						NTS no.	115 P/14
Hole no.	Y88-85-2	Finished	Oct. 16, 1985	Lat. 1038N	Lat.	Depth	Bearing	Dip	Depth	Bearing	Dip	Project no.	Y88
Bearing	200°	Length	74.07 m	Dep. L-925E	Dep.							Logged by	W. Reid H. Copland
Dip - Collar	-84°	Core size	NQ	Elev. 76.0 m	Elev.							Sheet	1 of 2

METRES From	METRES To	% Recovery	Graphic Log	DESCRIPTION OF UNITS	% Mineralization	Sample no.	METRES From	METRES To	METRES Width	ASSAYS Ba	ASSAYS BaSol	ASSAYS SO_4	ASSAYS S.G.	SiO_2	CaO
0	5.2			OVERBURDEN											
5.2	8.7			IMMATURE LITHIC SANDSTONE: Medium to coarse grained light grey pebbly sandstone with 70% angular to sub-rounded black to grey argillite and chert clasts, poorly sorted. Lower contact broken but appears sharp.											
8.7	26.82			BLACK GRAPHITIC ARGILLITE (SHALE): Minor interbedded light grey argillite over 2 cm. Good cleavage parallel to bedding. Very minor calcite veinlets. 9.2: C.A. Bedding 45° 10.8: C.A. Bedding 48° 14.3: C.A. Bedding 30° 23.2: C.A. Bedding 43° 24.7: C.A. Bedding 45° 25.2: C.A. Bedding 50°		78311	25.32	26.82	1.5	16.50	3.10	13.80	2.8	49.70	0.08
26.82	32.92			INTERLAMINATED BARITE & BLACK ARGILLITE (TRANSITION ZONE): Generally 50:50 of each type with some short sections of either 90% barite or 90% black argillite. Good cleavage parallel to bedding. Barite occurs as medium grained (xlline) laminae or more commonly spheroids and lenses incorporated in argillite (within one laminae). In more massive barite with 10% argillite laminae barite occurs as fine to medium sand and silt beds (up to 3 mm wide). Minor scouring and grading in beds indicate tops up but not definite. Very minor gypsum veinlets and lesser limonite plus qtz generally on cleavage planes. 28.1: C.A. bedding 40° 30.8: C.A. bedding 50° 33.0: C.A. bedding 46°		78312	26.82	29.82	3.0	43.33	2.80	30.50	3.7	16.57	0.05
						78313	29.82	32.92	3.1	42.18	3.30	29.75	3.6	19.10	0.03
32.92	51.0			MASSIVE BEDDED BARITE: Light grey fine to medium grained barite siltstone, generally laminated. Beds showing change in grain size and minor dark grey argillite interlaminae. Unit as a whole is quite consistent. Minor slumping and swirls in bedding. Some short sections of more graphitic rich material (20-30% argillite) but overall barite grade should be 90%. 39.15-39.35: Broken to grungy looking graphitic rich core with some quartz-gypsum veinlets. Possible small fault? 42.06: 4 cm wide qtz filled vug with 5 mm long euhedral quartz xls.		78314	32.92	35.97	3.05	55.02	3.20	36.60	4.2	4.31	0.02
						78315	35.97	39.01	3.04	55.66	2.50	36.90	4.2	2.74	0.13
						78316	39.01	42.06	3.05	52.93	2.70	35.60	4.1	3.02	1.20
						78317	42.06	45.11	3.05	53.45	3.10	36.30	4.1	5.33	0.15
						78318	45.11	48.16	3.05	49.01	3.50	33.97	3.8	7.65	0.16
						78319	48.16	49.90	1.74	45.13	2.70	31.80	3.5	10.53	0.41
						78320	49.90	51.0	1.10	25.55	2.90	17.90	3.0	19.42	

NORANDA EXPLORATION COMPANY LTD. Property .....OMEGA..... Hole no. .....Y88-85-2..... Sheet ...2...of...2...

METRES From	METRES To	% Recovery	Graphic Log	DESCRIPTION OF UNITS	% Mineralization	Sample no.	METRES From	METRES To	METRES Width	ASSAYS Ba	BaSol	SO_4	S.G.	SO_4	
				49.9-50.6: Calcite plus quartz veined section with some "limy" barite material in proximity to calcite veinlets. This is the first appearance of calcite.											
				33.6: C.A. bedding 35°											
				37.2: C.A. bedding 42°											
				38.6: C.A. bedding 48°											
				42.3: C.A. bedding 50°											
				43.0: C.A. bedding 50°											
				45.7: C.A. bedding 35°											
				46.8: C.A. bedding 5°											
				47.5: C.A. bedding 25°											
				49.4: C.A. bedding 30°											
51.0	52.73			GRAPHITIC ARGILLITE: Black argillite with good cleavage. Minor interlaminated barite. Graphitic argillite increases down unit until between 51.9 and 52.73 no barite is seen.		78321	51.0	52.73	1.73	9.77	3.10	12.15	2.5	51.42	3.32
				52.0: C.A. bedding 60°											
52.73	67.5			GREY BEDDED BARITE: Minor graphitic argillite rich sections over 0.2 m. Generally unit is identical to the unit above. However it begins to slowly shale out after 63.0 m.		78322	52.73	55.80	3.07	50.28	2.60	34.50	4.0	6.22	1.39
						78323	55.80	57.70	1.90	49.45	2.70	33.20	3.9	5.74	2.92
				53.8-54.0: Graphitic rich section with 40% "spheroids" of barite within argillite.		78324	57.70	60.35	2.65	52.42	3.20	35.0	4.1	5.13	0.32
						78325	60.35	63.40	3.05	51.43	10.60	30.10	4.0	6.22	0.89
				56.3: 0.2 m of 50% argillite which appears quite porous and vuggy over 10 cm.		78326	63.40	65.40	2.00	42.14	6.20	27.30	3.7	15.87	2.00
						78327	65.40	67.50	2.10	41.34	7.40	26.10	3.6	20.97	0.33
				57.7-67.0: 1-2% calcite veinlets with lesser quartz crosscutting unit.											
				After 63 m increase in graphitic shale laminae to 20% near bottom of section.											
				52.0: C.A. bedding 60°											
				55.8: C.A. bedding 75°											
				57.2: C.A. bedding 55°											
				58.3: C.A. bedding 55°											
				60.0: C.A. bedding 65°											
				62.3: C.A. bedding 65°											
				63.4: C.A. bedding 50°											
				66.3: C.A. bedding 53°											
				67.4: C.A. bedding 50°											
67.5	69.4			GRAPHITIC ARGILLITE: Highly graphitic section with numerous veinlets of calcite and quartz cutting broken barite unit at beginning of section.		78328	67.50	69.4	1.9	20.72	9.4	13.10	2.9	52.26	0.98
				68.6: C.A. bedding 60°											
69.4	74.07			BEDDED BARITE with 10% Graphitic Interlayers: Bedding has changed considerably to vertical immediately after 69.4 m.		78329	69.40	72.50	3.10	48.40	6.40	30.90	4.0	9.20	0.98
						78330	72.50	74.07	1.57	50.35	3.92	33.50	4.1	9.81	0.33
				Last 1.5 metres of core shows the bedding to be normal. This may indicate some imbrication or drag due to faulting at the graphitic section above.											
				70.0: C.A. bedding 0°											
				73.0: C.A. bedding 65°											
	74.07			END OF HOLE											

NORANDA EXPLORATION COMPANY LTD.

Property	OMEGA	Started	Oct. 18, 1985	FIELD CO-ORDINATES	SURVEYED CO-ORDINATES	DIP TESTS						NTS no.	115 P/14
Hole no.	Y88-85-3	Finished	Oct. 19, 1985	Lat. 1044N	Lat.	Depth	Bearing	Dip	Depth	Bearing	Dip	Project no.	Y88
Bearing	205°	Length	58.5 m	Dep. L-994E	Dep.							Logged by	W. Reid H. Copland
Dip - Collar	-50°	Core size	NQ	Elev. 88.5 m	Elev.							Sheet	1 of 3

METRES From	METRES To	% Recovery	Graphic Log	DESCRIPTION OF UNITS	% Mineralization	Sample no.	METRES From	METRES To	METRES Length	ASSAYS
0	4.9			OVERBURDEN						
4.9	18.3			INTERBEDDED LITHIC SANDSTONE and GREY ARGILLITE: Generally brown weathering on fractures and cleavage planes, sandstone consists of sub-rounded to sub-angular clasts of argillite, rare chert and sericite altered frags and numerous small clay altered (feldspar). Sometimes approaching arkose and others greywacke looking. These beds are up to .8 m wide and occupy 60% of unit. Dark grey argillite generally broken up with fine grained siltsone interbedded. Minor slumps and swirls throughout indicating high energy environment. 8.7: C.A. bedding 55° 9.0: Graded bedding indicating tops down hole. 11.0: C.A. bedding 80° 12.0: C.A. bedding 65° 12.1: 5 cm wide qtz vein 12.2: Graded bedding indicating tops up. After 12.2 m rock gets increasingly darker with more graphitic argillite. 13.2: Brecciated quartz-limonite vein material over 10 cm. 13.8: C.A. bedding 65° 14.2: Graded bedding, tops up 15.9-16.15: White qtz vein with brown limonite on fractures 17.0: C.A. bedding 70°						
18.3	22.6			EXTREMELY BROKEN ARGILLITE with NUMEROUS QUARTZ-CHERT BRECCIA BANDS: 18.3-19.2: Extremely broken with more competant qtz fragments, good limonite weathering on fractures & cleavage 19.2-22.6: 30% of section contains 1 cm bands of brecciated white quartz or blue grey chert with arg. matrix. Bands appear parallel to bedding. Remainder of section is graphitic argillite and siltstone. 20.2: C.A. bedding 85°						
22.6	38.5			BLACK GRAPHITIC ARGILLITE: Laminated to thinly bedded black graphitic shale with lesser grey argillite-shale (more siliceous than black material but not cherty). Good cleavage parallel to bedding. 22.6-26.8: Unit has up to 50% dark grey siltstone, is quite broken with brown Fe-oxide on all fractures and associated with minor quartz veins. After 26.8 unit is much more graphitic and qtz veining + Fe-oxide staining completely absent.						

NORANDA EXPLORATION COMPANY LTD. Property OMEGA Hole no. Y88-85-3 Sheet 2 of 3

METRES From	METRES To	% Recovery	Graphic Log	DESCRIPTION OF UNITS	% Mineralization	Sample no.	METRES From	METRES To	METRES Width	ASSAYS Ba	ASSAYS BaSol	ASSAYS SO_4	ASSAYS S.G.	ASSAYS SiO2	CaO
				Graphitic unit quite broken and friable with very minor fine grained diss. pyrite over a 2 mm band. Very minor barite lenses begin to appear over last 0.5 m of core. 22.8: C.A. bedding 80° 27.7: C.A. bedding 80° 29.5: C.A. bedding 85° 31.0: C.A. bedding 55° 36.1: C.A. bedding 80°		78331	37.0	38.5	1.5	13.39	3.36	8.95	2.5	69.79	0.08
38.5	40.75			GRADATIONAL CONTACT (BLACK SHALE AND BARITE): Increasing light grey barite content in black argillite down hole. Barite as spheroids and discontinuous lenses floating in argillite. Barite increases from 10% to 90% through section. Minor-moderate crosscutting veinlets of (gypsum?) with limonite on fractures. 39.0-39.6: Well fractured with limonite plus green yellow clay on fractures. 39.6-40.5: Less fracturing probably due to increase in barite. Some 20 cm sections of heavy limonite plus clay altered fractures. 39.6: C.A. bedding 75°		78332	38.5	40.75	2.25	45.73	3.00	30.60	3.8	12.37	0.66
40.75	55.3			GREY BEDDED BARITE: Light grey, fine to medium grained laminated to thinly bedded barite; minor thin graphitic beds and partings. Good cleavage parallel to bedding which show minor scouring, wavy banding and sandstone lenses. (Tops up from scour marks). Minor crosscutting soft white "gypsum" veinlets (1 mm wide) 40.75-41.5: Well fractured zone with minor limonite on fractures 41.8-42.1: Moderate limonite & clay veinlets up to 5 mm wide.		78333	40.75	43.8	3.05	51.84	2.40	35.30	4.1	5.76	0.07
				43.8-44.6: Bedded graphitic shale only 10% interlensed barite. Upper contact marked by fractured rubbly material Lower contact gradational into good bedded barite. 42.2: C.A. bedding 80° 42.4: C.A. bedding 90° 44.7: C.A. bedding 80°		78334	43.8	44.6	0.8	14.39	3.00	14.55	2.7	65.77	0.05
				46.7-47.1: Fractured rubbly zone with increased graphite and calcite veinlets to 5 mm. 48.4: Scouring and infilling indicating tops up. 50.1: Minor slump 49.9-53.5: Increase in graphite as thin interbeds with "floating" barite spheroids. Total barite approx. 80%. 46.0: C.A. bedding 75° 49.5: C.A. bedding 75° 51.2: C.A. bedding 77° 52.7: C.A. bedding 75° 54.5: C.A. bedding 80°		78335	44.6	47.6	3.0	47.25	2.70	32.95	3.8	9.62	2.81
						78336	47.6	50.6	3.0	49.33	2.40	34.10	3.9	6.92	1.21
						78337	50.6	53.6	3.0	41.89	2.70	31.00	3.6	17.46	0.08
						78338	53.6	55.3	1.7	41.15	3.30	29.70	3.6	20.13	0.21

NORANDA EXPLORATION COMPANY LTD. Property OMEGA Hole no. Y88-85-3 Sheet 3 of 3

METRES From	METRES To	% Recovery	Graphic Log	DESCRIPTION OF UNITS	% Mineralization	Sample no.	METRES From	METRES To	METRES Width	ASSAYS Ba	ASSAYS BaSol	ASSAYS SO_4	ASSAYS S.G.	ASSAYS SiO_2	ASSAYS CaO
55.3	57.2			GRADATIONAL ZONE (BARITE to GRAPHITIC SHALE): Barite begins to shale out as interlaminated barite and shale. Begins at approx. 70% barite and reduces down to approx. 10% barite by end of section. Barite occurs as laminae and typical spheroids in argillite. 56.1: C.A. bedding 85°		78339	55.3	57.2	1.9	36.78	4.00	25.60	3.4	28.51	0.17
57.2	58.5			BLACK GRAPHITIC SHALE: Laminated to thinly bedded black graphitic argillite, good cleavage parallel to bedding. 58.4: C.A. bedding 80°		78340	57.2	58.5	1.3	3.35	2.70	7.1	2.5	74.69	2.19
	58.5			END OF HOLE											

NORANDA EXPLORATION COMPANY LTD.

Property	OMEGA	Started	Oct. 19, 1985	FIELD CO-ORDINATES	SURVEYED CO-ORDINATES	DIP TESTS						NTS no.	115 P/14
Hole no.	Y88-85-4	Finished	Oct. 21, 1985	Lat. 1044N	Lat.	Depth	Bearing	Dip	Depth	Bearing	Dip	Project no.	Y88
Bearing	190°	Length	40.2 m	Dep. L-950E	Dep.							Logged by	W. Reid H. Copland
Dip - Collar	-45°	Core size	NQ	Elev. 70 m	Elev.							Sheet	1 of 2

METRES From	METRES To	% Recovery	Graphic Log	DESCRIPTION OF UNITS	% Mineralization	Sample no.	METRES From	METRES To	METRES Width	ASSAYS Ba	ASSAYS BaSol	ASSAYS SO_4	ASSAYS S.G.	ASSAYS SiO_2	ASSAYS CaO
0	4.9			OVERBURDEN: Boulders of chert pebble conglomerate and and lithic sandstone.											
4.9	15.2			LITHIC SANDSTONE: Medium grey, medium to coarse grained sandstone composed of light to dark grey argillite, minor chert and clay altered (white feldspar?) grains set in a dark grey silty matrix. Unit has approximately 15% interbedded dark grey argillite beds generally showing some laminated bedding. Sandstone is moderately sorted with graded bedding in coarser beds. Minor greenish clay alteration and lesser limonite on fractures and cleavage planes which are generally restricted to argillite. Sandstone displays some banding indicated by flattened lithic clasts. Minor crosscutting thin white "gypsum" veinlets and lesser quartz. 7.4: C.A. bedding 70° 9.0: C.A. bedding 70° 11.0: C.A. bedding 75° 15.0: Moderate quartz veining over 10 cm.											
15.2	23.0			BLACK GRAPHITIC SHALE: Laminated dark grey to black argillite with moderate to excellent cleavage parallel to bedding. Minor warps and slumping in laminated sections over short distances. Barite begins to become interbedded towards end of section. 17.4: C.A. bedding 65° 19.0: C.A. bedding 60° 19.8: C.A. bedding 60° 20.7-22.3: 1.4 m lost core 22.5: 0.1 m bed of grey bedded barite 22.5-23.0: Minor lensy barite (20%) in final 0.5 m of shale unit.		78341	22.3	23.0	0.7	15.56	3.30	15.10	2.9	59.64	<0.01
23.0	34.1			GREY BEDDED BARITE: Medium light grey laminated to thinly bedded barite. Upper contact is gradational between 22.5 and 23.5 m. Bedding appears to be more structurally complex displaying wavy to discontinuous lensy bedding, small tight folding, and minor fragments. These could all be the result of soft sediment deformation. Minor scouring indicating tops up. Minor interbedded to interlaminated thin graphitic argillite		78342	23.0	25.3	2.3	46.19	2.80	32.00	3.8	13.33	0.10
						78343	25.3	28.3	3.0	52.97	3.20	35.90	4.1	8.54	<0.01
						78344	28.3	31.4	3.1	47.66	2.60	32.70	3.9	8.73	1.23
						78345	31.4	34.1	2.7	40.74	2.60	30.00	3.6	16.48	1.69

NORANDA EXPLORATION COMPANY LTD. Property OMEGA Hole no. Y88-85-4 Sheet 2 of 2

METRES From	METRES To	% Recovery	Graphic Log	DESCRIPTION OF UNITS	% Mineralization	Sample no.	METRES From	METRES To	METRES Width	ASSAYS Ba	ASSAYS BaSol	ASSAYS SO_4	ASSAYS S.G.	ASSAYS SiO_2	ASSAYS CaO
				Also very minor gypsum-qtz veinlets and limonite weathering.											
				23.05: C.A. bedding 68°											
				24.9: C.A. bedding 65°											
				25.9: C.A. bedding 75°											
				27.4: C.A. bedding 50°											
				28.7: C.A. bedding 45°											
				30.1: Tight fold or slump over 5 cm											
				31.1: C.A. bedding 55°											
				32.6: C.A. bedding 62°											
				After 31.4 m a slight increase in interlaminated graphitic argillite.											
34.1	38.5			INTERLAMINATED BLACK ARGILLITE and lesser GREY BARITE:											
				Overall 65% black argillite as interlaminations or more massive beds up to 0.4 m.											
				Barite also occurs as beds up to 0.4 m however main unit consists of interlaminated rock types with barite seldom exceeding 30% of the unit.											
				34.3: C.A. bedding 70°											
				35.0: C.A. bedding 70°											
				34.1-36.2: Barite content decreases from 50% to less than 5%.		78346	34.1	37.2	3.1	29.91	2.60	23.45	3.2	34.72	0.81
				36.2-37.3: More bedded barite up to 50% overall.											
				37.3-38.5: Complete shaling out of barite to 95% black graphitic argillite.											
				Core angles "steepen?" considerably in this part of unit to less than 30° to C.A.											
				One area of intraformational conglomerate composed of fragments of interlaminated argillite and barite over 10cm											
				38.2: C.A. bedding 35°											
38.5	40.2			GRAPHITIC ARGILLITE: Highly graphitic black, very fine grained argillite with moderate to good cleavage parallel to bedding. Almost massive black looking core.											
				39.3: C.A. bedding 70°											
	40.2			END OF HOLE											

NORANDA EXPLORATION COMPANY LTD.

Property	OMEGA	Started	Oct. 22, 1985	FIELD CO-ORDINATES	SURVEYED CO-ORDINATES	DIP TESTS						NTS no.	115 P/14
Hole no.	Y88-85-5	Finished	Oct. 23, 1985	Lat. L 9+50E 10+44N	Lat.	Depth	Bearing	Dip	Depth	Bearing	Dip	Project no.	Y88
Bearing	190°	Length	54.3 m	Dep.	Dep.							Logged by	H. Copland
Dip - Collar	-70°	Core size	NQ	Elev.	Elev.							Sheet	1 of 2

METRES From	METRES To	% Recovery	Graphic Log	DESCRIPTION OF UNITS	% Mineralization	Sample no.	METRES From	METRES To	METRES Length	ASSAYS Ba	ASSAYS BaSol	ASSAYS SO_4	ASSAYS S.G.	ASSAYS SiO_2	ASSAYS CaO
0	4.0			OVERBURDEN											
4.0	18.0			INTERBEDDED LITHIC SANDSTONE & ARGILLITE Sandstone: Medium grey, med.-coarse grained clasts of: 1) Black argillite, sub-rounded to 5 mm in size, 10-15% 2) Chert: Light-med. grey, subrounded average 2 mm in size, max. 1 cm, <5% 3) White clay altered mineral (feldspar?): Subrounded <1 mm in size, 25%. All in med. grey silty matrix. 8.3-12.0: Band of argillite/shale 12.6 & 13.1: Good graded bedding, tops up crosscutting veinlets of white soft mineral (gypsum?) and minor quartz, avg. 1-2 mm in width up to 5 mm width. Soft green clay of epidote colour & limonite frequent in fractures. Argillite: Dark grey to black laminated argillite; graphitic, comprises ~20% of section. 10.8: C.A. bedding 80° 11.5: C.A. bedding 80° 15.6: C.A. bedding 75° 17.3: C.A. bedding 90°											
18.0	28.4			GRAPHITIC SHALE: Dark grey to black, laminated Medium to intense fracturing parallel to bedding. Cross-cutting gypsum & minor quartz veinlets. Consistent C.A. bedding 60-65° throughout. 19.2-20.0: Intense fracturing 27.1-27.4: Intense fracturing 27.3-27.4: Brecciated shale fragments in a gypsum & minor quartz matrix, 1 cm fragments over 2 cm wide area. 27.9-28.4: 10% medium grey barite spheroids & discontinuous lenses in shale. 22.0: C.A. bedding 65° 24.8: C.A. bedding 65° 26.6: C.A. bedding 60°		78347	27.4	28.4	1.0	6.09	2.44	10.26	2.6	26.35	0.06
28.4	49.6			BEDDED BARITE: Medium to dark grey laminated barite. Fine (silt) to med. grain (sand). Thin mm scale beds with inter-laminated black shale (10%) with zones of lesser (60%) spheroidal and discontinuous barite lenses. Weak to moderate fracturing parallel to bedding. Soft sediment slumping and deformation in several locations. Minor crosscutting white soft clay (gypsum) and lesser quartz. Upper contact sharp. 28.4-30.9: Massive (90%) barite with interlaminated shale. 28.7: C.A. bedding 65°											

NORANDA EXPLORATION COMPANY LTD. Property OMEGA Hole no. Y88-85-5 Sheet 2 of 2

METRES From	METRES To	% Recovery	Graphic Log	DESCRIPTION OF UNITS	% Mineralization	Sample no.	METRES From	METRES To	METRES Length	ASSAYS Ba	BaSol	SO_4	S.G.	SiO_2	CaO
				30.9-31.5: Lesser (60%) barite, spheroids & lenses		78348	28.4	31.4	3.0	44.23	1.68	29.75	3.8	13.07	1.37
				31.5-32.4: Orangey-brown limonite clay on fractures.		78349	31.4	34.4	3.0	47.30	2.08	30.95	3.9	12.45	0.10
				32.4-33.1: Lesser (20-60%) barite, spheroids & lenses.											
				33.7: Graded bedding in barite, tops up.											
				34.8-35.8: Orangey-brown limonite on fracture surf.		78350	34.4	37.4	3.0	54.20	1.89	35.20	4.2	6.13	0.08
				36.0-37.5: Mislatch - 40% core recovery.		78351	37.4	40.5	3.1	54.40	2.00	34.90	4.2	3.04	0.18
				39.5-41.6: Intense fracturing, intense soft sed. deformation, beds cut off by fractures & gypsum veinlets, increased C.A. bedding to 90°.		78352	40.5	41.6	1.1	52.18	1.56	39.85	4.1	5.98	0.05
				41.6-43.2: Decreased barite (30-60%). Intense fracturing crumbly core in zones of lesser barite, discontinuous lenses and spheroids of barite. Weak limonitic staining on fract. surfaces. Minor quartz veinlets.		78353	41.6	43.2	1.6	42.00	1.64	29.60	3.4	11.50	0.96
						78354	43.2	46.2	3.0	53.10	1.92	35.00	4.1	3.17	0.57
				30.9: C.A. bedding 65°											
				33.7: C.A. bedding 60°											
				35.3: C.A. bedding 55°											
				36.1: C.A. bedding 60°											
				37.5: C.A. bedding 90°											
				38.8: C.A. bedding 65°											
				39.1: C.A. bedding 90°											
				40.8: C.A. bedding 52°											
				43.2: C.A. bedding 60°											
				44.0-46.3: Intense soft sed. slumping, 90% barite. Moderate fracturing. Vuggy sections in core occurring parallel to veinlets and/or subparallel to bedding, up to max. 10% vugs. Intense crosscutting gypsum and minor quartz veinlets.		78355	46.2	49.6	3.4	50.65	1.72	37.40	4.0	6.41	0.47
				47.7-47.8: Lesser barite (10-50%) in form of lensoids floating in black shale matrix. Sharp contacts at each end.											
				48.0-49.3: C.A. bedding increasing to 75-80°.											
				49.3-49.6: Intensely fractured zone with strong cross-cutting by gypsum veinlets (20%).											
				45.8: C.A. bedding 25°											
				46.8: C.A. bedding 65°											
				47.9: C.A. bedding 75°											
49.6	52.1			GRAPHITIC ARGILLITE WITH MINOR BARITE: Gradational change at both ends of section between 90% barite and lesser 10% barite in black shale/argillite. Spheroids of barite to 1 cm in size in lesser sections. Bottom contact sharper than top but still gradational.		78356	49.6	52.1	2.5	28.44	2.00	24.00	3.2	36.15	1.05
				51.7: C.A. bedding 20°											
52.1	54.3			BEDDED BARITE: Fine to med. grained grey bedded barite as previous (80-85%). Mod.-intense soft sed. deformation. Lower C.A. bedding ~50°		78357	52.1	54.3	2.2	50.55	1.84	33.20	4.0	5.87	1.56
				53.3: C.A. bedding 50°											
	54.3			END OF HOLE											

NORANDA EXPLORATION COMPANY LTD.

Property	OMEGA	Started	Oct. 27, 1985	FIELD CO-ORDINATES	SURVEYED CO-ORDINATES	DIP TESTS						NTS no.	115 P/14
Hole no.	Y88-85-6	Finished	Oct. 30, 1985	Lat. 1044N	Lat.	Depth	Bearing	Dip	Depth	Bearing	Dip	Project no.	Y88
Bearing	205°	Length	40.5 m	Dep. L 900E	Dep.							Logged by	W. Reid H. Copland
Dip - Collar	-50°	Core size	NQ	Elev.	Elev.							Sheet	1 of 2

METRES From	METRES To	% Recovery	Graphic Log	DESCRIPTION OF UNITS	% Mineralization	Sample no.	METRES From	METRES To	METRES Length	ASSAYS Ba	BaSol	SO_4	S.G.	SiO_2	CaO
0	13.7			OVERBURDEN											
13.7	17.9			BROWN WEATHERING ARGILLITE: Dark grey to black graphitic, very fine grained argillite. Well weathered to a buff coloured shale. Good cleavage. Top 2.4 m is more weathered and broken up compared to the bottom 1.8 m of black shale. C. angle cleavage averages 75°.											
17.9	18.6			BARITE: Light to med. grey interlensed barite (80%) and argillite (20%). Unit is somewhat weathered and shows a somewhat cataclastic texture consisting of augened 1 cm lensoid barite fragments in a wavy interlaminated barite plus argillite matrix. Also minor thin quartz veining. Top contact appears conformable with an increase in argillite interlaminae up section. Bottom contact is sharp and has a weak foliation parallel to banding (possible fault?). 18.3: C.A. banding 75°		78358	17.9	18.6	0.7	50.62	2.00	33.20	4.0	5.49	5.07
18.6	20.7			BLACK GRAPHITIC ARGILLITE: Similar to above black argillite unit. Brown weathering over first 0.5 m grading into non-weathered black argillite. Some steeper core angles near top of section (50°). 19.2-20.7: 0.8 m lost core 19.5: C.A. bedding 75°											
20.7	25.0			INTERLAMINATED GRAPHITIC ARGILLITE and GREY BARITE (Gradational contact): Up to 70% total argillite content with 30% barite. 20.7-22.2: Brown weathering light grey argillite and barite up to 60% of subunit. However weathering makes total barite content unclear. Top contact is mainly broken core. 22.2-24.0: Unweathered interlaminated section with barite (30%) consisting of spheroids, lenses and thin beds in black argillite. 24.0-25.0: Greater than 95% graphitic argillite (massive looking). 22.3: C.A. bedding 75° 23.5: C.A. bedding 53°											

NORANDA EXPLORATION COMPANY LTD. - Property OMEGA Hole no. Y88-85-6 Sheet 2 of 2

METRES From	METRES To	% Recovery	Graphic Log	DESCRIPTION OF UNITS	% Mineralization	Sample no.	METRES From	METRES To	METRES Length	ASSAYS Ba	ASSAYS BaSol	ASSAYS SO_4	ASSAYS S.G.	ASSAYS %	
25.0	31.0			GREY BEDDED BARITE: Thinly bedded to laminated fine sand to silt size barite with up to 10% graphitic partings and interlaminations. Top 0.3 m gradational into more massive barite. Bedding shows small slumping and crenulations indicating soft sediment deformation. Minor short 10 cm sections with up to 20% argillite (graphitic). 25.3: C.A. bedding 75° 26.2: C.A. bedding 10° 28.7: C.A. bedding 60° 30.0: C.A. bedding 65° After 30.0 m unit begins to "shale out" with up to 25% argillite laminae.		78359	25.0	27.0	2.0	39.83	1.92	30.30	3.6	16.35	0.08
						78360	27.0	30.0	3.0	51.69	2.24	34.25	4.0	7.50	0.10
						78361	30.0	31.0	1.0	42.20	2.52	29.90	3.5	17.32	0.11
31.0	33.5			GRADATIONAL ZONE: Interbedded thin graphitic argillite and barite. Barite near 60% at top of section but near 0% at bottom. 31.6: C.A. bedding 70°		78362	31.0	33.5	2.5	16.22	2.88	16.95	2.7	59.19	0.13
33.5	40.5			GRAPHITIC ARGILLITE (SHALE): Very black unit with moderate cleavage parallel to weak bedding. Minor discordant qtz veins more concentrated over short 10 cm sections. Cleavage planes often have a graphitic to irridescent parting. 33.7: C.A. cleavage (bedding) 63° 33.9-34.1: 15% quartz veinlets 35.4: C.A. bedding 60° 37.0: C.A. bedding 60° 40.0: C.A. bedding 55°											
	40.5			END OF HOLE											

NORANDA EXPLORATION COMPANY LTD.

Property	OMEGA (New Showing)	Started	Oct. 31, 1985	FIELD CO-ORDINATES	SURVEYED CO-ORDINATES	DIP TESTS						NTS no.	116 A/3
Hole no.	Y88-85-7	Finished	Nov. 1, 1985	Lat. 2033N	Lat.	Depth	Bearing	Dip	Depth	Bearing	Dip	Project no.	Y88
Bearing	195°	Length	37.5 m	Dep. L 2010E	Dep.							Logged by	W. Reid
Dip - Collar	-50°	Core size	NQ	Elev.	Elev.							Sheet	1 of 2

METRES From	METRES To	% Recovery	Graphic Log	DESCRIPTION OF UNITS	% Mineralization	Sample no.	METRES From	METRES To	METRES Length	ASSAYS Ba	BaSol	SO_4	S.G.	% SO_4	CaO
0	6.6			OVERBURDEN: Boulders (diorite, chert pebble conq.) plus sand. Black water return last 1.5 m.											
6.6	13.3			GREY BEDDED BARITE: Light grey fine-grained, thin bedded to laminated silty barite showing good small scale slumping warping and breaking up of beds. Minor silicification as evidenced by quartz veinlets. Bedding is often discontinuous to broken due to soft sediment slumping. Some fragmented barite due to same process.											
				6.6-7.9: 10% quartz vein material as veins causing some		72701	6.6	7.9	1.3	41.95	24.20	16.20	3.6	9.57	5.02
				brecciation, up to 30% quartz over 40 cm. Core is broken.		72702	7.9	10.9	3.0	52.13	7.88	30.00	4.0	3.55	2.10
				Possibly minor limestone towards end of this section.		72703	10.9	13.3	2.4	52.60	5.80	31.70	4.1	2.66	2.33
				7.7: C.A. bedding 80°											
				11.4: C.A. bedding 70°											
				10.3: C.A. bedding 75°											
13.3	27.4			FETID BARITIC LIMESTONE: Light to medium grey, fine to medium grained thinly bedded unit. Unit has quite a high specific gravity, has a hardness of approx. 4.5 and is very fetid on its darker grey, more xlline-looking fresh broken surface.											
				Upper contact is sharp with laminated barite. Very hard to tell difference between limestone and barite without using HCl.											
				Main physical differences are:											
				1) Limestone a little coarser grained and xlline											
				2) Limestone is thinly bedded and barite is laminated											
				3) Limestone is fetid											
				4) Limestone has more soft sediment deformation including more fragmented sections.											
				Within this unit are minor 20 cm thick sections of inter-laminated barite? and grey argillite (graphitic).											
				Minor white quartz plus calcite + clay veinlets.											
				Bedding core angles vary from 10° to 90° but average 75°.											
				13.3-14.3: Fine grained limestone at top of unit. Changes		72704	13.3	16.3	3.0	49.55	41.20	8.18	3.7	4.17	3.64
				to a more xlline medium grained limestone below.		72705	16.3	19.3	3.0	60.73	52.00	8.12	4.0	4.27	1.06
				18.2: C.A. bedding 45° to 10° (slump?)		72706	19.3	22.3	3.0	63.20	54.40	7.70	4.1	3.76	0.79
				18.3-18.5: Section of laminated argillite and possible		72707	22.3	25.3	3.0	61.67	54.40	7.63	4.1	4.63	0.44
				barite.		72708	25.3	27.4	2.1	50.32	41.00	12.00	3.7	6.82	3.95
				20.7: C.A. bedding 75°											
				Bedding becomes more consistent after 22.0 m.											
				23.3: C.A. bedding 70°											
				25.8: C.A. bedding 75°											
				24.2-24.4: Laminated barite + argillite											
				27.1: C.A. bedding 75°											

NORANDA EXPLORATION COMPANY LTD. Property OMEGA (New Showing) Hole no. Y88-85-7 Sheet 2 of 2

METRES From	METRES To	% Recovery	Graphic Log	DESCRIPTION OF UNITS	% Mineralization	Sample no.	METRES From	METRES To	METRES Length	ASSAYS
27.4	37.5			INTERBEDDED BLACK CHERT and SHALE: 70% black chert beds up to 3 cm thick with 30% thinner beds of graphitic shale. Top contact somewhat broken with minor limestone fragments in first 10 cm. Bedding appears conformable. Minor crosscutting quartz veinlets. 29.2: C.A. bedding 80° 31.7: C.A. bedding 70° 32.8: C.A. bedding 90° 36.0: C.A. bedding 89°						
	37.5			END OF HOLE.						

Mt. Brenner Valley

DDH 85-1

DDH 85-2

Camp

R72376

124 00N

122 00N

120 00N

88 75E

90 00E

92 00E

94 00E

96 00E

98 00E

100 00E

101 00E

1400'

1500'

1600'

1700'

Scale 1:5000

0 100 200 400 meters

Legend

CRETACEOUS

- 4 — Mt. Brenner stock, monzonite, syenite and diorite.
- 4a — Biotite diorite
- 4b — Hornblende diorite
- 4c — Syenite – monzonite

JURASSIC

- 3 — Jurassic "Schist" – Argillite, slate fine grained phyllite. Quartzite and argillaceous quartzite. Minor limestone and chert.
- 3a — Black shale to phyllite. Minor quartzite.
- 3b — Quartzite and argillaceous quartzite.
- 3c — interbedded shale and dark argillaceous limestone.
- 3d — Black chert and argillaceous chert.

PERMIAN

- 2 — Tahkandit Limestone – Sparitic fossilliferous, argillaceous limestone with chert pebble conglomerate and chert lenses

ORDOVICIAN – SILURIAN

— ROAD RIVER FORMATION —

- 1 — Black chert and shale
- 1a — Black and grey chert
- 1b — Interbedded black chert and shale

SILURIAN ?

- A — Andesite, dark green, amygdaloidal.

Symbols

- Outcrop
- Geological contact (definite, approx.)
- Fault or shear zone
- Bedding (vert., incl., overturned)
- Bedding, may in part be foliation (vert., incl.)
- Foliation (vert., incl.)
- Dominant Cleavage (vert., incl.) 091795
- Fold (arrow points down plunge, bar shows dip of axial plane)
- (F) (Q) (S.C.) Fossil locality / Quartz / Sub-crop

Map 1

REVISED

Mt. Brenner Valley (MARN Claims)

Geology

091-95

PROJ. No.

N.T.S. 116 B 7/10

DWG. No.

SURVEY BY: SJM DATE: FEB 86

DRAWN BY: AI SCALE: 1:5000

NORANDA EXPLORATION

OFFICE Whitehorse