

MAP NO.:  
095D 6

ASSESSMENT REPORT X  
PROSPECTUS  
CONFIDENTIAL X  
OPEN FILE

DOCUMENT NO: 093086  
MINING DISTRICT: WATSON LAKE  
TYPE OF WORK: DIAMOND DRILLING

REPORT FILED UNDER: NOVAMIN RESOURCES INC

DATE PERFORMED: 1987

DATE FILED:

LOCATION: LAT.: 60°21'N

AREA:

LONG.: 127°24'W

VALUE \$:

CLAIM NAME & NO.:

WORK DONE BY: ~~DAVE MILLER~~

*Tom Grogan Dave Miller*

WORK DONE FOR: NOVAMIN RESOURCES

DATE TO GOOD STANDING:

REMARKS: REPORT COMPLETED FOR EXPLORATION INCENTIVE PROGRAM.  
DRILL LOGS FOR DIAMOND DRILLING ON THE MEL PROPERTY.


DESIGNATION NO. EIP 86 - 041

*Duplicate*

REPORT ON DIAMOND DRILLING

MEL PROPERTY, YUKON

(JEAN 1, 4 AND 19 CLAIMS)

Claim Sheet 95D/6

Latitude 60 degrees 21 minutes North

Longitude 127 degrees 24 minutes West

Prepared by

D. C. MILLER, P. ENG.

for

NOVAMIN RESOURCES, INC.

Covering Field Work

Between

February 2 and March 25, 1987

Submitted April 30, 1987

093086

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## INTRODUCTION AND SUMMARY

Previous drilling at the Mel property during 1974-1979 established geological ore reserves totalling 4.8 million tonnes grading 5.61% zinc, 2.05% lead and 52.1% barite. Mineralization occurs in a folded lens-shaped body up to 21.7 metres thick at its centre. Mineralization gradually thins towards both ends over an 800 m strike-length.

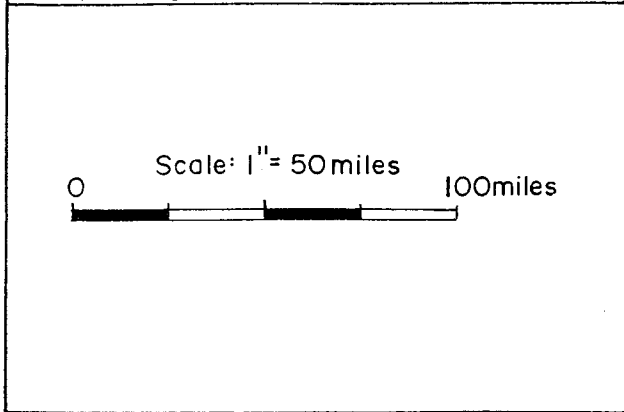
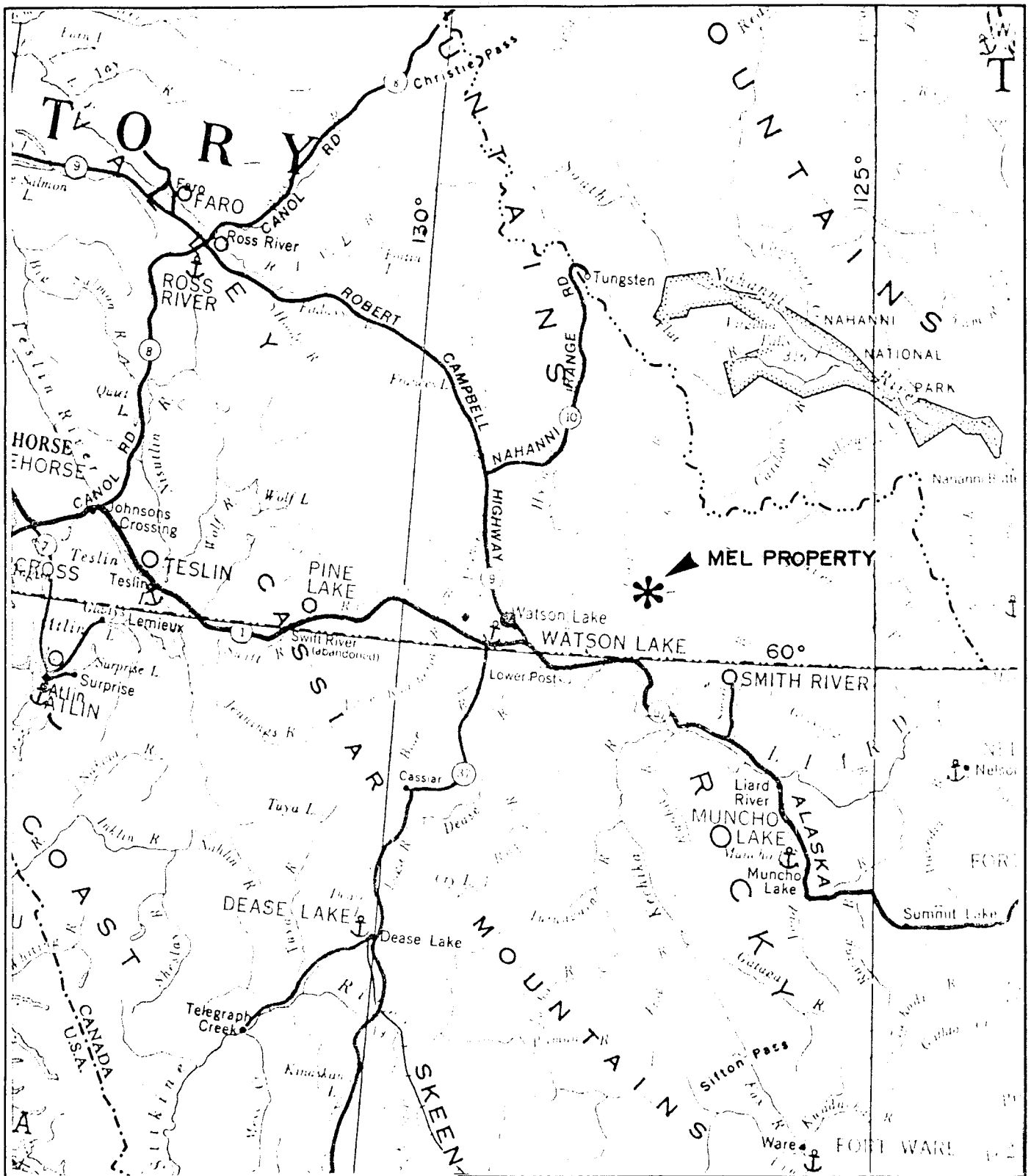
During February to March 1987, 7 B.Q. diamond drill holes totalling 2011.99 m were completed on the Jean 1, 4 and 19 claims. Actual drilling commenced on February 21 and was completed on March 21. The drilling programme was designed to test two areas: (1) down-dip of previously tested mineralization in the main zone and (2) weak geophysical-geochemical anomalies lying 200 m to 700 m south of the main zone.

Four deep holes tested a 300 m strike-length 100 - 200 m down-dip of previous mineralization. All holes encountered zinc - lead - barite mineralization. The two central holes 87-4 and 87-5 intersected the best values averaging 15.24% zinc, 0.87% lead and 32.0% barite over an average true width of 6.23 m and over a 212 m strike-length. The deposit has now been tested to a vertical depth of 489.5 m and is still open at depth. Geological ores reserves have been increased to 5,581,030 tonnes grading 6.63% zinc, 1.92% lead and 49.6% barite.

Three short holes drilled to test weak geophysical-geochemical anomalies south of the main zone failed to intersect mineralization.

## LOCATION AND ACCESS

The Mel property is located 80 km east/northeast of Watson Lake,



<b>NOVAMIN RESOURCES INC.</b>	
<b>LOCATION MAP</b>	
<b>MEL PROPERTY</b>	
Drawn by: D. C. M.	N.T.S.: 95D/6
Date: APRIL 30, 1987	Figure No.: I

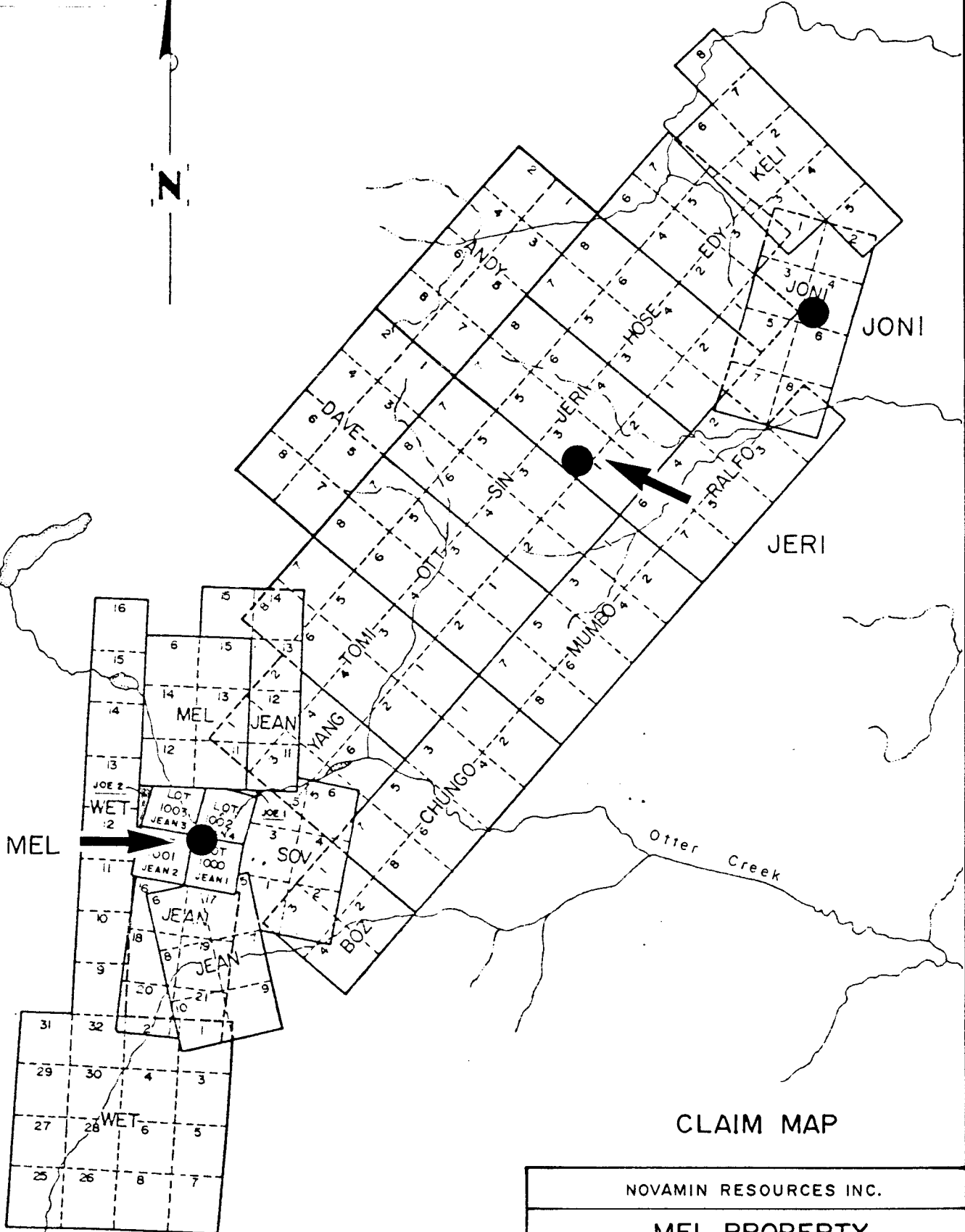
Yukon. Access to the property is provided by a 52 km winter road leading from the Alaska Highway at a point 7.6 km eastward of Contact Creek. During recent operations this road was utilized and travel time between the property and the Alaska Highway was about 2 hours. Alternative access is provided by a 640 m long airstrip located 1.5 km south of the Mel deposit. During previous work in 1985, this airstrip accommodated a Caribou aircraft with an 18,000 pound payload.

#### PROPERTY AND OWNERSHIP

The property comprises 171 claims and is owned jointly by Novamin Resources Inc. and Barytex Resources Corp. Under the terms of an agreement dated February 15, 1985 Novamin is entitled to earn a 100% interest in the property by making expenditures of \$500,000 by February 15, 1988. Barytex retains a 10% net profits interest and receives advance royalties of \$20,000 per year. Barytex has the right to an additional 5% participating interest at the time a production decision is reached. As a result of expenditures made by Novamin in 1985 and 1987, Novamin is entitled to its 100% interest as defined by the preceding mentioned agreement.

60° 25'

127° 25'

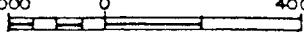


60° 20'

127° 25'

SCALE 1" = 4000'

FEET 2000 0 4000 FEET



### CLAIM MAP

NOVAMIN RESOURCES INC.

MEL PROPERTY  
YUKON TERRITORY

DRAWN BY:  
D.C.M.

NTS  
95D/6

FIGURE  
2

REPORT DATE  
APRIL 30/87

PROJECT NO.  
6250

D C MILLER GEOLOGICAL SERVICES

PROPERTY AND OWNERSHIP (CONTINUED)

The property includes the following claims:

<u>Claim-Name</u>	<u>Grant No.</u>	<u>Anniversary Date</u>
Mel 11 - 16	Y 22230-35	April 3
Jean 1 - 4	Y 72731-34	April 3
Jean 5 - 10	Y 72961-66	April 3
Jean 11 - 21	Y 74418-28	October 15
Wet 1 - 16	Y 83309-24	April 3
Wet 25 - 32	Y 83325-32	April 3
Sov 1 - 6	YA 28600-05	April 26
Joe 1 Fraction	YA 45269	August 13
Joe 2 Fraction	YA 45270	August 13
Keli 1 - 4	YA 66842-45	August 10
Joni 1 - 8	YA 66846-53	August 10
Hose 1 - 8	YA 66919-26	August 24
Keli 5 - 8	YA 66927-30	August 24
Jeri 1 - 8	YA 66931-38	August 24
Ralfo 1 - 7	YA 66939-45	August 24
Chungo 1 - 8	YA 66946-53	August 24
Ott 1 - 8	YA 66954-61	August 24
Edy 1 - 7	YA 66962-68	August 24
Tomi 1 - 8	YA 66969-76	August 24
Mumbo 1 - 8	YA 66977-84	August 24
Boz 1 - 4	YA 66985-88	August 24
Sin 1 - 8	YA 66989-96	August 24
Yang 1 - 6	YA 66997-YA 67002	August 24
Dave 1 - 8	YA 72501-08	November 5
Andy 1 - 8	YA 72509-16	November 5

TOTAL 171 claims

## PHYSIOGRAPHY

The base elevation at the property is 850 m and maximum elevations range up to 1300 m. Topography is generally moderate. Forests in the area comprise mainly spruce, pine and balsam. Much of the forests on the claims were burned during 1982 by a large forest fire. A number of open, marshy areas containing several small lakes, ponds and connecting streams are present on the claims. Otter Creek and its tributaries drain eastward to the Rock River, while Mel Creek drains southward to the Coal River. Overburden depths on the property are variable ranging from 0 metres on hillsides to over 50 m below valleys.

## HISTORY

The property was first staked in 1967 by Jake Melnychuk and T. Flint and optioned to Newmont Mining Corporation. Early work by Newmont included road work, trenching and a geochemical survey. Newmont dropped their option and the property was later sold to Barytex Resources Corp. (formerly Empire Metals Corporation Ltd.). Barytex optioned the property to Granby Mining Corporation Ltd. which drilled 18 B.Q. diamond drill holes totalling 1952 m during 1974 and 1975. During 1976, R.C. Carne of the geological branch of Indian and Northern Affairs conducted geological mapping and core logging and wrote a report later in 1976 (Open File Report EGS 1976-16).

In December 1976 St. Joseph Explorations Limited optioned the property from Granby and conducted geological, geochemical and geophysical surveys in 1977 followed by 4054.2 m of B.Q. diamond drilling in 19 holes during 1978 and 1979. In 1981 the Canadian

interests of St. Joe Minerals Corporation were sold to Sulpetro Limited and St. Joseph Explorations Limited was renamed Sulpetro Minerals Limited.

In 1981 regional exploration work by Sulpetro discovered smithsonite mineralization 7.5 km northeast of the Mel deposit. The new showing was named Mel-East or Joni, but little further work was done on this showing. Following further follow-up work, a second smithsonite showing was discovered in June 1984 between the Mel and the Joni and was named the Jeri showing. During October and November 1984 Sulpetro completed a new access road from the Alaska Highway to the Mel property and built an airstrip near the main Mel deposit.

In 1985 Sulpetro utilized the airstrip to mobilize equipment to drill the Jeri showing which was tested by 10 B.Q. holes totalling 1009.8 m. Nine of the 10 holes intersected zinc mineralization ranging up to 13.11% zinc over 3.37 m within a large area of silicified and dolomitized limestone containing irregular zones of zinc mineralization over a 550 m strike-length.

In late 1985 Sulpetro Limited sold its mineral assets to a new company named Novamin Resources Inc.

#### CURRENT WORK

Mobilization of camp and drill equipment began in early February including plowing and grading of the 1984 access road and construction of an ice bridge over the Coal River. By February 19 road work was completed and a camp including a bunkhouse trailer, a kitchen trailer and a 14' x 16' tent was set up. All work including road work, camp

construction and operation, drilling, mobilization and demobilization was carried out by D.J. Drilling Ltd. under an all-inclusive contract based on a minimum drill contract of 5000 ft. (1524 m).

Equipment utilized included 1 Longyear 38 unitized drill rig, 1 D 8-L and 2 D6 Caterpillars, 1 large and 1 medium sized flat-deck trucks, 3 - 3/4 ton 4 x 4 trucks, 2 generators and 2 radio telephones. Fuel was brought in in 45 gallon drums on a weekly basis and empty drums were taken out on return trips. Camp fuel consumption (diesel) was about 125 gal. per day.

Personnel included 4 drillers, 1 cook, 1 - 2 camp maintenance men, 1 geologist (the writer) and one geological assistant. The drillers, the writer and the geological assistant arrived at the property on February 19 and drilling commenced on February 21. Seven holes totalling 2011.99 m were completed by March 21 for an average drilling rate of 69.38 m per day including moves. The drillers worked on 2 - 11 hour shifts.

All holes exceeding 67 m were tested with a Sperry-Sun single shot "B" down-the-hole survey device. Three tests were taken in deeper holes as indicated on accompanying drill logs. The property grid north was determined to be 2.6 degrees east of true north and holes were drilled at 273 degrees (grid west).

Holes were spotted along the existing grid using chain and compass and were later surveyed with a Topcon theodilite and a stadia rod. The survey was done twice as a check on accuracy and was found to close within one metre.

At the south end of the property (Section 90N) it was found that

the surveyed hole collar was 7 m further south and 10 m further east than the collar as measured from the grid. This difference is thought to be caused by a slight but cumulative error in original chaining and to a small difference in line between the current survey and the original grid baseline.

All drill core was logged on a daily basis and all significant mineralization was split and assayed for zinc, lead and barite by Bondar Clegg and Co. of Vancouver, B.C. Samples were shipped via air freight from Watson Lake.

During the course of the work material to construct core racks was brought in and core racks were built of 3/8 inch steel and 2" x 6" lumber sufficient to store all core.

At the end of the job the final 14 boxes of hole 87-5 were delivered to the H.S. Bostock Core Library, Whitehorse as required by the Yukon Economic Development Agreement. All other core is stored in a core rack near the initial post of the Jean 4 claim.

At the completion of the job all material other than one 14 x 16 foot tent frame was removed from the claims. Demobilization to Watson Lake was completed on February 24.

During the course of the work one day was spent digging out and starting the John Deere 350-C Caterpillar stored at the airstrip. At the end of the job this machine was covered by a new nylon tarpaulin.

During initial snow plowing at the property the iron pin marking the common corner of Lot 1003 and Lot 1002 was disturbed (bent) but not completely pulled out.

## GEOLOGY

The Mel area is underlain by Cambrian to Ordovician strata including carbonates and various clastic sediments. The strata have been folded into a north-south trending overturned syncline. The Mel zinc-lead-barite deposit occurs at the top of a 200 m thick cryptograined limestone unit which is overlain by a finely laminated calcareous shale-phyllite unit some 30 m thick which in turn grades into a thick overlying unit of wavy banded limestone (700 m).

Mineralization is largely confined to the cryptograined limestone but also locally extends a few metres upward into the shaly unit. The deposit is essentially strataform and occurs in a folded lens-shaped body up to 21.7 m thick at its centre and gradually thinning outward over a total strike-length of 800 m. To date drilling has intersected mineralization to a vertical depth of 489.5 m and is still open at depth.

## DIAMOND DRILLING RESULTS

### D.D.H. 87-1 (Section 94N, Fig. 5, Fig. 3)

This hole was drilled to test below a weak IP-Gravity anomaly. The hole failed to encounter any mineralization other than less than 1% pyrite associated with the upper part of the cryptograined limestone unit. An assumed fault which was previously projected through this area is now interpreted to cut the cryptograined limestone-shale contact about 200 m north of section 94N.

### D.D.H. 87-2 and 87-3 (Section 90N, Fig. 4, Fig. 3)

These holes were both drilled at the same location. Hole 87-2 was drilled at -60 degrees and 87-3 at -85 degrees. The holes were drilled to test a weak geochemical anomaly and a zinc float occurrence in this area. Hole 87-2 intersected the cryptograined limestone sooner than expected and Hole 87-3 was drilled to confirm the attitude of the stratigraphy on this section. No mineralization was intersected by these holes. An assumed fault is postulated in this area to account for the shift in stratigraphy between the drill holes and surface mapping to the south. Surface float mineralization may be related to such cross-faulting.

D.D.H. 87-4 (Section 98 + 59N, Fig. 7, Fig. 3)

This hole intersected good, coarse grained mineralization from 499.60 - 509.93 m, core length 10.33 m, grading 12.08% zinc, 0.02% lead and 54.5% barite. Based on a core angle of 45 degrees the true width was calculated to be 7.30 m. Core recovery was 99%.

Low grade mineralization was also intersected in from 489.60 - 499.60 m, core length 10 m, grading 1.23% zinc, 0.32% lead and 35.06% barite. This mineralization is largely within mineralized calcareous shale from 489.60 - 496.92 m. Siliceous breccia was intersected from 496.92 - 498.30 m and a pure barite section (94.59% barite) was intersected from 498.30 - 499.60 m. In general, the calcareous shale is reasonably competent except at 489.50 - 489.60 m.

The cryptograined limestone below the main mineralization tends to be broken, discolored and partly dolomitized. This may indicate proximity to a feeder structure for mineralizing fluids.

The main intersection in this hole is about 100 m below where it was anticipated due to a steepening of dip. The base of the intersection is 489.4 m (1606 ft.) vertically below surface and 215 m down-dip of a previous intersection in hole 79-11. The hole deflected an average of 5.7 degrees north and flattened from -76 degrees at its collar to -70 degrees at its base.

D.D.H. 87-5 (Section 100 + 06N, Fig. 8, Fig. 3)

This hole intersected above average mineralization from 387.95 - 394.10 m, core length 6.15 m, grading 19.72% zinc, 2.08% lead and 0.07% barite. Based on core angles of 57 degrees the true width was calculated to be 5.16 m. From 387.95 - 388.96 m the ore host rock is interpreted to be silicified shale whereas from 388.96 - 394.10 m the ore host rock is silicified limestone. Overall core recovery was 99%. Mineralization is chiefly coarse grained honey to brown colored sphalerite with very minor galena and barite.

The base of the mineralized zone is 373 m (1224 ft.) vertically below surface and 145 m down-dip of a previous intersection in hole 79-7. The calcareous shale hanging wall is generally reasonably competent except from 384.5 - 386.5 m where core is broken along smooth micaceous bedding plane partings.

This hole intersected deep overburden (51.82 m) which is believed to be responsible for deflecting the hole some 15 degrees average to the south. The hole flattened from -77 degrees at its collar to -63 degrees at its base.

D.D.H. 87-6 (Section 100 + 87N, Fig. 9, Fig. 3)

This hole intersected mineralization from 439.30 - 441.70 m, core length 2.40 m, grading 4.10% zinc, 0.18% lead and 0.11% barite. Based on core angles averaging 62.5 degrees the true width is calculated to be 2.13 m. Mineralization is interpreted to be within a silicified shale host rock with only traces of mineralization in the underlying cryptograined limestone. Mineralization is much finer grained than mineralization cut by holes 87-4 and 87-5.

The hanging wall shale is more broken and incompetent compared with holes 87-4 and 87-5. The cryptograined limestone below the mineralization is partly discolored and contains minor pyrite and traces of sphalerite and galena.

The base of the mineralization is 433 m vertically below surface and 188 m down-dip of previous drill hole 79-6.

The hole intersected deep overburden (57.9m) and a tricone wheel broke off near bedrock. In drilling through the tricone wheel the hole deflected to the north but then deflected back on course and ended up a total of 11.3 m too far north. The hole steepened from -79 to -80.75 degrees in overburden and then flattened to -74.75 degrees at the end of the hole.

D.D.H. 87-7 (Section 97 + 90N, Fig. 6, Fig. 3)

Mineralization was intersected from 401.05 - 403.10 m, core length 2.05 m, grading 8.19% zinc, 1.59% lead and 0.37% barite. Based on core angles averaging 20 degrees the true width was calculated to be 0.70 m. Mineralization occurs within silicified shale and the underlying cryptocrystalline limestone is barren. Sphalerite mineralization varies from fine to coarse grains ranging up to over 1 cm.

The hanging wall of the mineralization is reasonably competent. Minor zinc-lead mineralization (0.13% combined Pb-Zn) occurs in fractures from 387.80 - 390.00 m well above the main mineralization.

This hole stayed fairly well on azimuth and flattened from -81.5 degrees at the collar to -73 degrees at the base. The base of the main mineralized zone was intersected at 393.3 m vertically below surface and 125 m down-dip of a previously drilled hole (79-9).

TABLE OF INTERSECTIONS

<u>Hole No.</u>	<u>Drill Hole Intercept (m)</u>	<u>Core Length (m)</u>	<u>Core Angle Degrees</u>	<u>Calculated True Width (m)</u>	<u>Percent</u>		
					<u>Lead</u>	<u>Zinc</u>	<u>Barite</u>
87-4	499.60 - 509.93	10.33	45	7.30	0.02	12.08	54.5
87-5	387.95 - 394.10	6.15	57	5.16	2.08	19.72	0.07
87-6	439.30 - 441.70	2.40	62.5	2.13	0.18	4.10	0.11
includes	439.30 - 440.40	1.10	62.5	0.98	0.38	8.72	0.14
87-7	401.05 - 403.10	2.05	20	0.70	1.59	8.19	0.37

DIAMOND DRILLING SUMMARY (ALL B.Q. CORE)

<u>HOLE NO.</u>	<u>SECTION (M)</u>	<u>LATITUDE (M)</u>	<u>DEPARTURE (M)</u>	<u>ELEV. (M)</u>	<u>ASTRONOMIC</u>		<u>OVERBURDEN DEPTH (M)</u>	<u>TOTAL DEPTH</u>	<u>DATE STARTED/ COMPLETED 1987</u>
					<u>AZIMUTH DEGREES</u>	<u>DIP DEG.</u>			
87 - 1	94 + OON	9,399.1	10,107.1	905.4	273	-50	42.67	133.20	FEB 21/22
87 - 2	90 + OON	8,943.0	10,045.4	900.2	273	-60	6.10	38.71	FEB 23/23
87 - 3	90 + OON	8,943.0	10,045.4	900.2	273	-85	6.10	66.75	FEB 23/24
87 - 4	98 + 59N	9,861.1	10,287.2	902.2	273	-76	6.10	515.72	FEB 24/MAR 3
87 - 5	100 + 06N	10,006.1	10,227.9	902.5	273	-77	51.82	399.59	MAR 4/10
87 - 6	100 + 87N	10,089.6	10,216.3	912.7	273	-79	57.91	448.06	MAR 10/16
87 - 7	97 + 90N	9,787.1	10,229.9	902.3	273	-81.5	9.14	<u>409.96</u>	MAR 17/21
								<u>2,011.99</u>	
								=====	

GEOLOGICAL ORE RESERVES

Based on previous work, ore reserves in 1979 were calculated to be 4,782,380 tonnes grading 2.05% lead, 5.61% zinc and 52.1% barite (see Appendix 1 for calculation). By the addition of mineralization intersected by holes 87 - 4 and 87 - 5 to previous results the following ore reserves are calculated:

SECTION NO.	HOLE NO.	TRUE WIDTH (M)	STRIKE LENGTH (M)	DIP LENGTH (M)	SPECIFIC GRAVITY	TONNES	PERCENT		
							Pb	Zn	Barite
98+59N	79-11	6.51	69.0	60.0	3.37	90,826	1.41	4.46	31.80
98+59N	84-4	7.30	94.0	157.5	3.81	411,771	0.02	12.86	54.50
100+06N	79.7	9.77	79.5	24.0	3.65	68,040	4.60	4.34	37.10
100+06N	87.5	5.16	118.0	124.0	3.02	228,013	2.08	19.72	0.07
						798,650	1.16	12.74	34.90
1979 Calc.		7.69			3.80	4,782,380	2.05	5.61	52.10
<b>TOTAL</b>						5,581,030	1.92	6.63	49.64

Average true width (weighted) = 7.56m

Short tons = 6,151,969

## CONCLUSIONS

This year's drilling shows that zinc-lead-barite mineralization continues to depth below the Mel deposit. Geological ore reserves were increased to 5,581,030 tonnes grading 1.9% lead, 6.63% zinc and 49.64% barite.

Four deep holes tested a 300 m strike-length in the central portion of the deposit at depths ranging from 373 m to 489.5 m. All holes intersected zinc mineralization, however, only the two most central holes 87-4 and 87-5 intersected good grade mineralization over mining widths. Hole 87-5 contained the highest grade zinc mineralization drilled to date in the deposit, while Hole 87-4 contains above average zinc and barite grades. In both of these holes and particularly in hole 87-4, considerable honey colored sphalerite is present compared with more brown colored sphalerite in previous higher elevation holes.

The mineral zoning pattern indicated by previous drilling is still valid: a barite rich host rock at the centre of the deposit with quartz rich host rocks outward from the barite.

Previous contouring of barite grades in longitudinal section indicated the barite would close-off at depth. However, hole 87-4 indicates the barite continues strongly with a southerly rake.

In this year's drilling, considerable lead-zinc and some barite mineralization was intersected in altered hanging wall shale. Some of this mineralization is clearly cross-cutting bedding. This mineralization is thought to represent remobilized mineralization from the underlying cryptograined limestone. Where only hanging wall

mineralization is present, such mineralization might represent mineralization at the north and south extremities of the deposit.

This year's drilling has shown the dip of the deposit to steepen at depth. Vertical cross-sections accompanying this report show relatively uniform mineralization between drill hole intersections. However, folding noted in drill core may indicate mineralization between drill hole intersections may be more folded than shown. This possibility can only be resolved by detailed drilling or underground work.

#### RECOMMENDATIONS

To date only lead, zinc and barite assays have been done on 1987 drill core. It is recommended that composite samples from holes 4, 5, 6 and 7 be prepared and assayed for silver, and that assays for gold, germanium, gallium, cadmium, mercury, antimony and arsenic be made of a composite sample representing all holes.

It is recommended the longitudinal section made for previous drilling be enlarged and up-dated to show 1987 drilling results.

It is recommended that two additional deep holes be drilled 100 m north and 100 m south of hole 87-4. These holes would be about 520 m deep and would provide additional information on zoning and extent of mineralization at depth.



Respectfully submitted,

*D. C. Miller*  
D. C. Miller, P. Eng.

April 30, 1987

CERTIFICATE

I, DAVID C. MILLER, of 769 Fraser Street, Kamloops, B.C. V2C 3H1,  
hereby certify that:

- (1) I am a graduate of the University of British Columbia  
and received a B. A. Sc. degree in Geological  
Engineering in 1959.
- (2) I have practiced my profession continuously since that  
time and have over 25 years experience.
- (3) I am a registered member of the Association of  
Professional Engineers of B.C. and the Geological  
Association of Canada.
- (4) This report is based on personal work at the subject  
property.



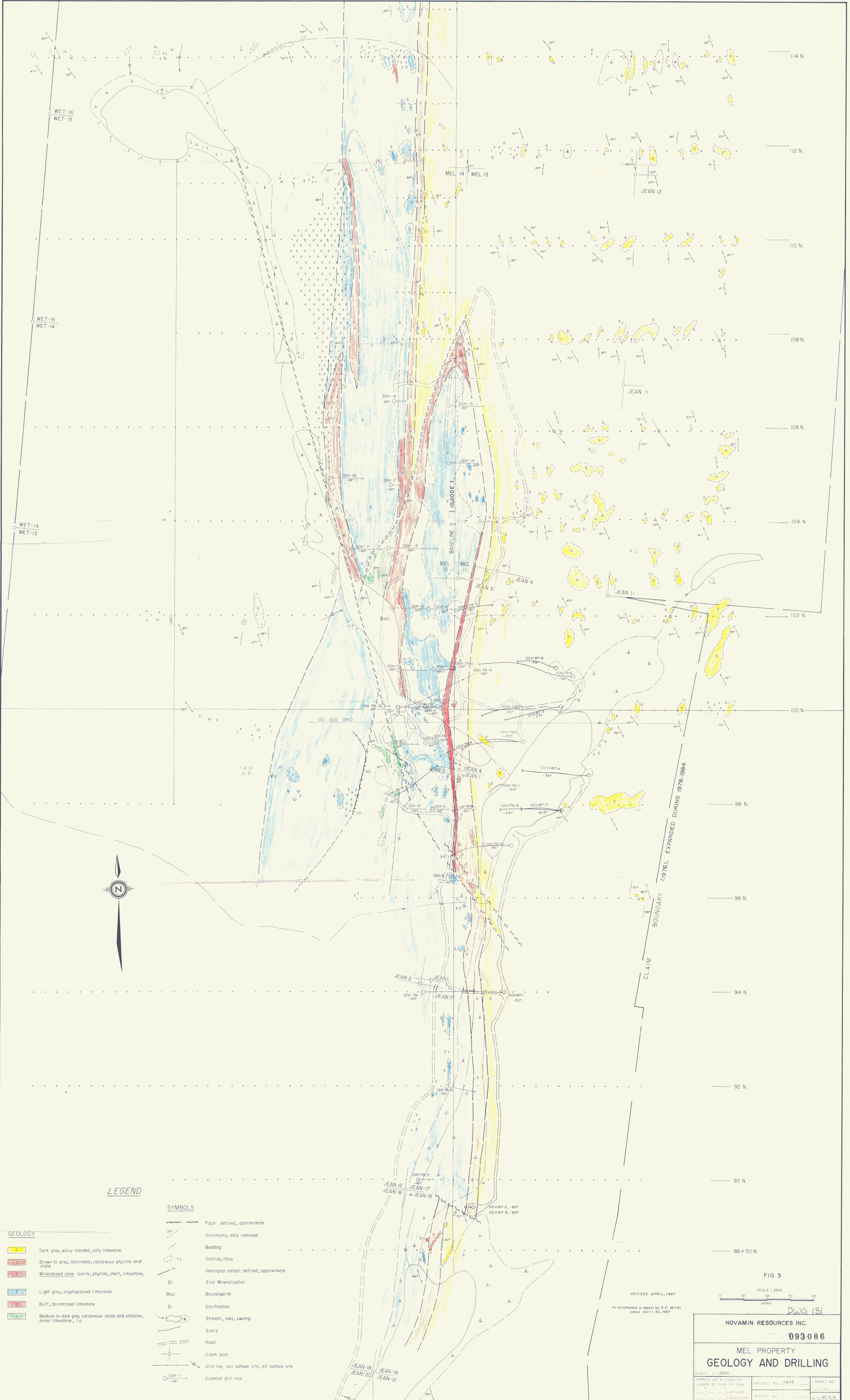
*D. C. Miller*

D. C. Miller, P. Eng.

April 30, 1987







**LEGEND**

- GEOLOGY**
- Dark grey, wavy-banded, silty limestone
  - Brown to grey, laminated, calcareous phyllite and shale
  - Mineralized zone: barite, phyllite, chert, limestone
  - Light grey, cryptograin limestone
  - Buff, dolomitized limestone
  - Medium to dark grey calcareous shale and siltstone, minor limestone, 1g

- SYMBOLS**
- Fault: defined, approximate
  - Schistosity, slaty cleavage
  - Bedding
  - Outcrop, talus
  - Geological contact: defined, approximate
  - Zn
  - Zinc Mineralization
  - Boul
  - Boulangerite
  - Si
  - Silicification
  - Stream, lake, swamp
  - Scarp
  - Road
  - Claim post
  - Grid line, soil sample site, silt sample site
  - DDH-1
  - Diamond drill hole

FIG. 3

SCALE 1:2500  
0 50 100 150 200  
Meters

REVISED APRIL, 1987  
To accompany a report by D.C. Miller dated April 30, 1987

DWG 131

**NOVAMIN RESOURCES INC.**

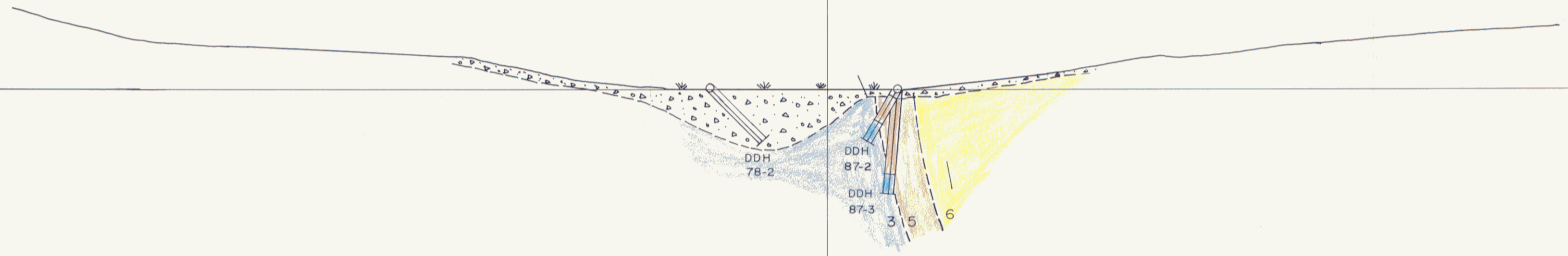
**093086**

**MEL PROPERTY  
GEOLOGY AND DRILLING**

SCALE 1:2500	PROJECT NO. 6250	SHEET NO.
APPROX. LAT. & LONG. OF LOWER BY COR. OF LOGS	REPORT NO.	DATE
LATITUDE	N 13 95 D 6	
LONGITUDE		

Baseline 10,000E

900m



LEGEND

- 6 Grey, wavy-banded, silty limestone.
- 5 Brown to grey, laminated calcareous shale, shaly limestone, phyllite.
- 4 Mineralized zone: barite, quartz, mudstone, limestone, shale, smithsonite, sphalerite, galena and pyrite.
- 3 Light grey, crypto-grained limestone.
- 2 Buff, dolomitized limestone.
- 1 Medium to dark grey calcareous shale and siltstone, minor limestone, la.

Fault: defined, approximate.

Pb, Zn, BaSO<sub>4</sub>  
True thickness in metres

DWG 137  
093086

FIG. 4

To accompany a report by D.C. Miller dated April 30, 1987

NOVAMIN RESOURCES INC.  
TORONTO, ONTARIO

MEL PROJECT  
COAL RIVER AREA, Y.T.  
SECTION 90 N

SCALE: 1:2500

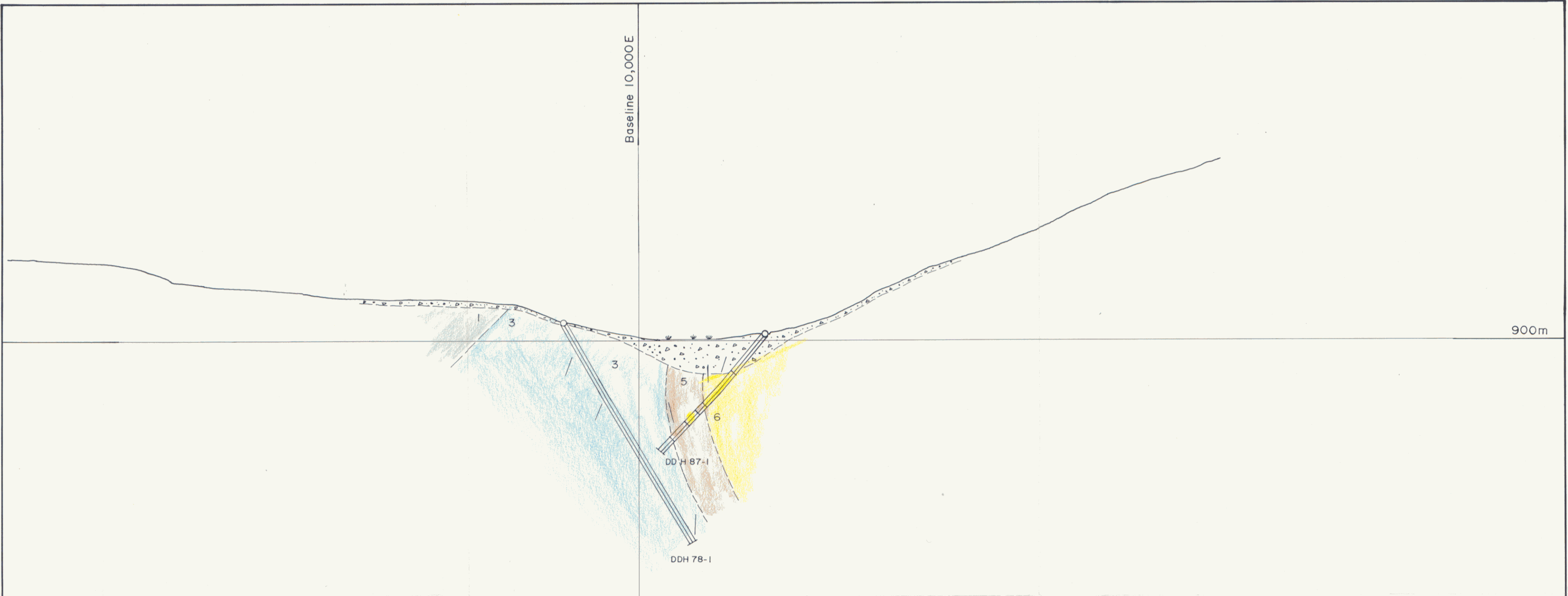


DRAWN BY: D.C. MILLER

PROJECT NO. 6250

DATE: APRIL, 1987

NTS 95D/6



**LEGEND**

- 6 Grey, wavy-banded, silty limestone.
- 5 Brown to grey, laminated calcareous shale, shaly limestone, phyllite.
- 4 Mineralized zone: barite, quartz, mudstone, limestone, shale, smithsonite, sphalerite, galena and pyrite.
- 3 Light grey, cryptograined limestone.
- 2 Buff, dolomitized limestone.
- 1 Medium to dark grey calcareous shale and siltstone, minor limestone, la.

~~~~~ Fault: defined, approximate.

Pb, Zn, BaSO<sub>4</sub>  
True thickness in metres

DWG 136  
093086

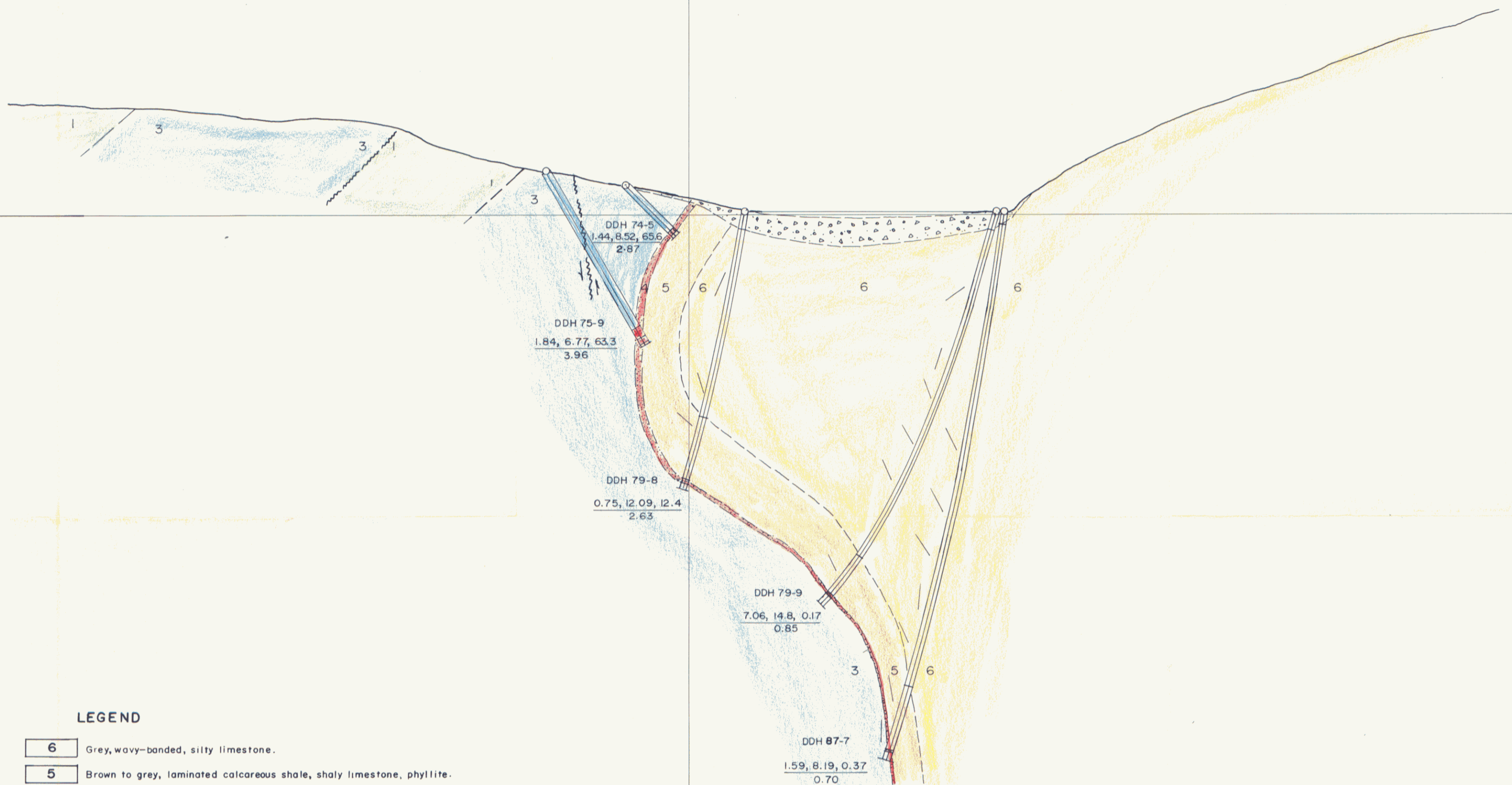
FIG. 5

To accompany a report by D.C. Miller dated April 30, 1987

|                                                                             |                  |
|-----------------------------------------------------------------------------|------------------|
| <p><b>NOVAMIN RESOURCES INC.</b><br/>TORONTO, ONTARIO</p>                   |                  |
| <p><b>MEL PROJECT</b><br/>COAL RIVER AREA, Y.T.<br/><b>SECTION 94 N</b></p> |                  |
| <p>SCALE: 1:2500</p> <div style="text-align: right;"> </div>                |                  |
| DRAWN BY: D.C. MILLER                                                       | PROJECT NO. 6250 |
| DATE: APRIL, 1987                                                           | NTS 95D/6        |

Baseline 10,000E

900m



**LEGEND**

- 6** Grey, wavy-banded, silty limestone.
- 5** Brown to grey, laminated calcareous shale, shaly limestone, phyllite.
- 4** Mineralized zone: barite, quartz, mudstone, limestone, shale, smithsonite, sphalerite, galena and pyrite.
- 3** Light grey, cryptocrystalline limestone.
- 2** Buff, dolomitized limestone.
- 1** Medium to dark grey calcareous shale and siltstone, minor limestone, la.

~~~~~ Fault: defined, approximate.

Pb, Zn, BaSO<sub>4</sub>  
True thickness in metres

DWG 135  
093086

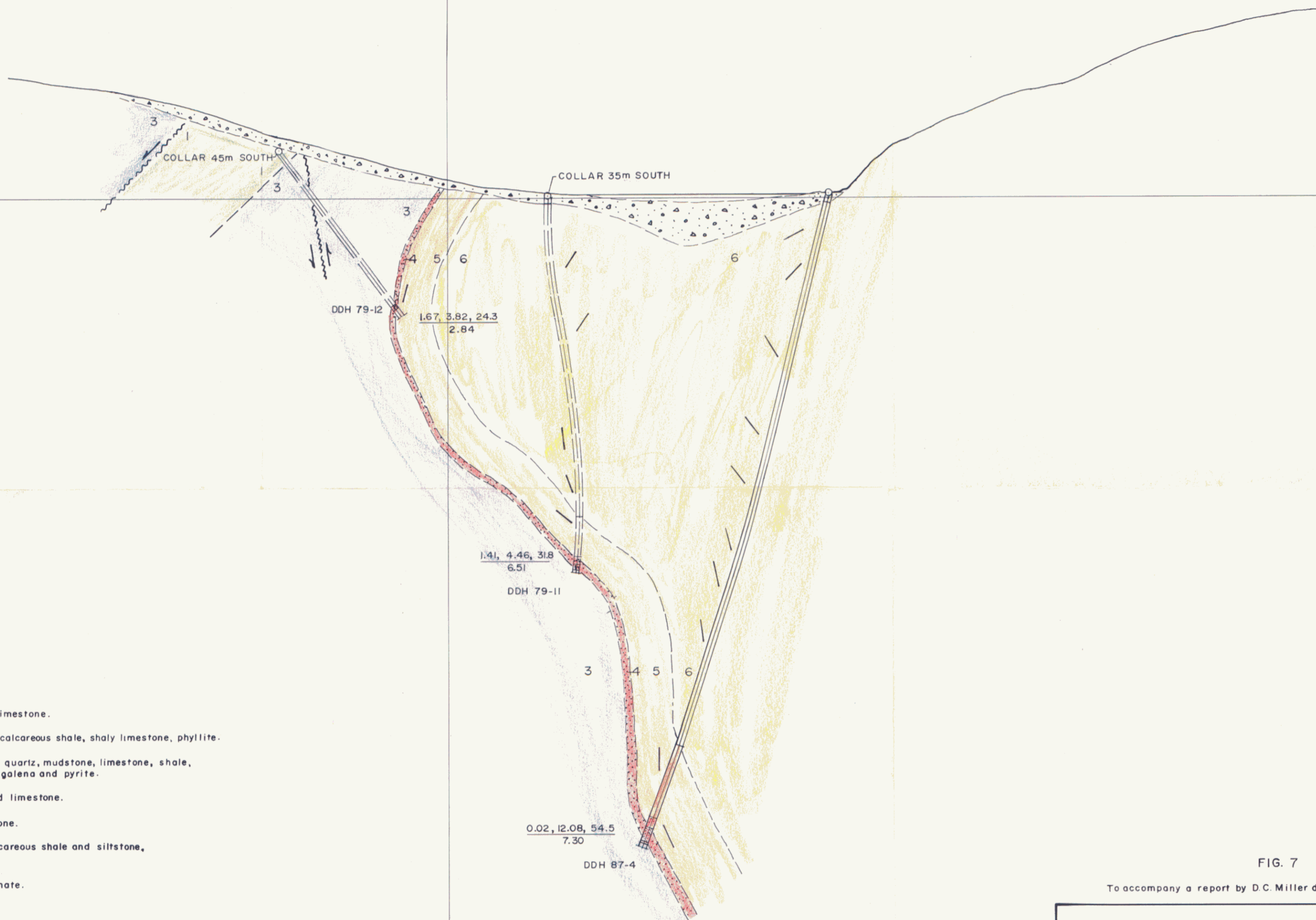
FIG. 6

To accompany a report by D.C. Miller dated April 30, 1987

|  |                  |
|--|------------------|
| <b>NOVAMIN RESOURCES INC.</b><br>TORONTO, ONTARIO                    |                  |
| <b>MEL PROJECT</b><br>COAL RIVER AREA, Y.T.<br><b>SECTION 97+90N</b> |                  |
| SCALE: 1:2500  |                  |
| DRAWN BY: D.C. MILLER  | PROJECT NO. 6250 |
| DATE: APRIL, 1987  | NTS 95D/6        |

Baseline 10,000E

900m



LEGEND

- 6 Grey, wavy-banded, silty limestone.
- 5 Brown to grey, laminated calcareous shale, shaly limestone, phyllite.
- 4 Mineralized zone: barite, quartz, mudstone, limestone, shale, smithsonite, sphalerite, galena and pyrite.
- 3 Light grey, cryptocrystalline limestone.
- 2 Buff, dolomitized limestone.
- 1 Medium to dark grey calcareous shale and siltstone, minor limestone, ls.

Fault: defined, approximate.

Pb, Zn, BaSO<sub>4</sub>  
True thickness in metres

DWG 134  
093086

FIG. 7

To accompany a report by D.C. Miller dated April 30, 1987

NOVAMIN RESOURCES INC.

TORONTO, ONTARIO

MEL PROJECT  
COAL RIVER AREA, Y.T.  
SECTION 98+59 N

SCALE: 1:2500



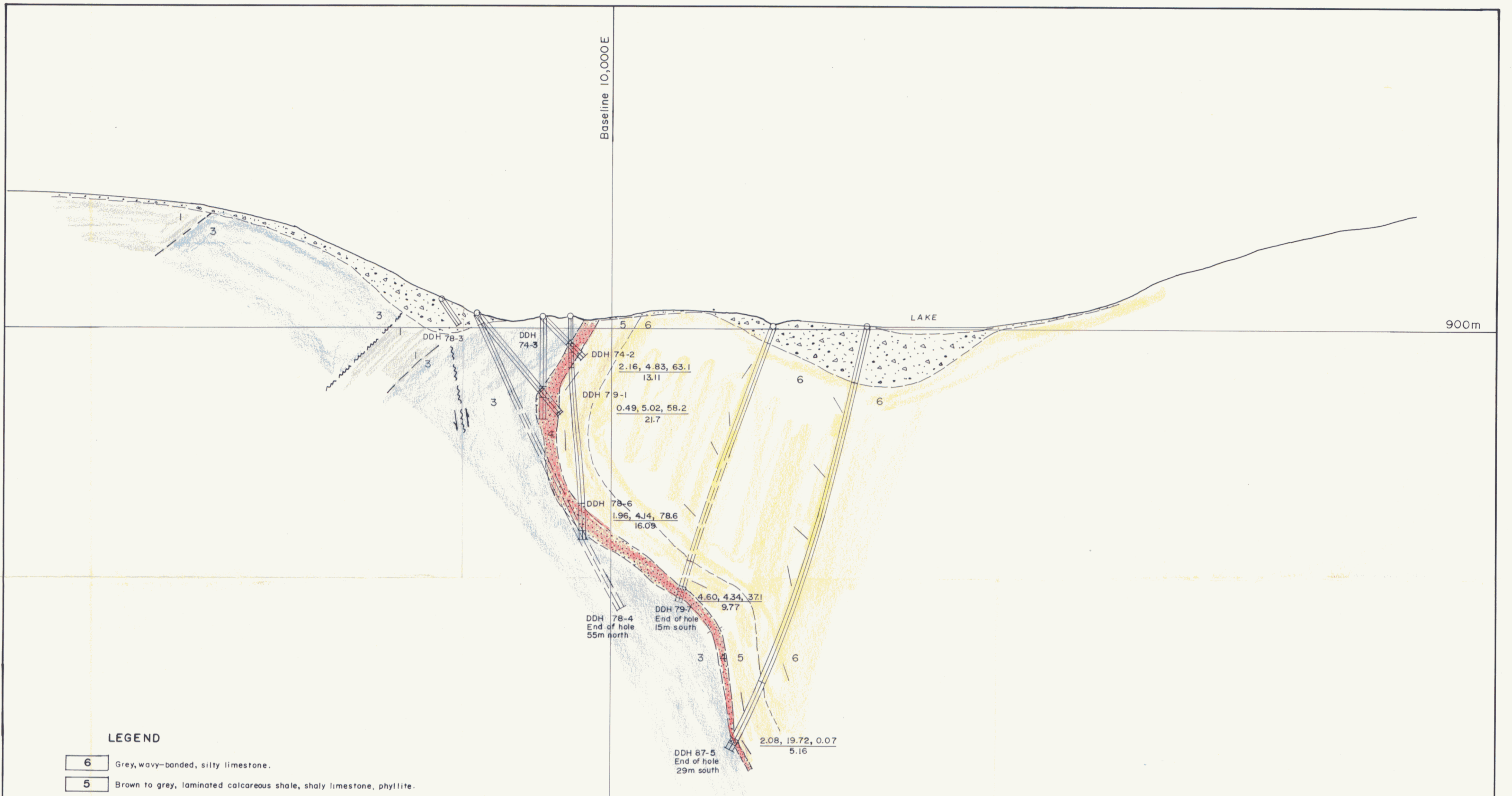
DRAWN BY: D.C. MILLER

PROJECT NO. 6250

DATE: APRIL, 1987

NTS 95D/6

Baseline 10,000E



LEGEND

- 6 Grey, wavy-banded, silty limestone.
- 5 Brown to grey, laminated calcareous shale, shaly limestone, phyllite.
- 4 Mineralized zone: barite, quartz, mudstone, limestone, shale, smithsonite, sphalerite, galena and pyrite.
- 3 Light grey, cryptocrystalline limestone.
- 2 Buff, dolomitized limestone.
- 1 Medium to dark grey calcareous shale and siltstone, minor limestone, la.

~~~~~ Fault: defined, approximate.

$\frac{\text{Pb, Zn, BaSO}_4}{\text{True thickness in metres}}$

DWG 133  
093086

FIG. 8

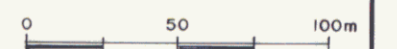
To accompany a report by D.C. Miller dated April 30, 1987

NOVAMIN RESOURCES INC.

TORONTO, ONTARIO

MEL PROJECT  
COAL RIVER AREA, Y.T.  
SECTION 100+06N

SCALE: 1:2500



DRAWN BY: D.C. MILLER

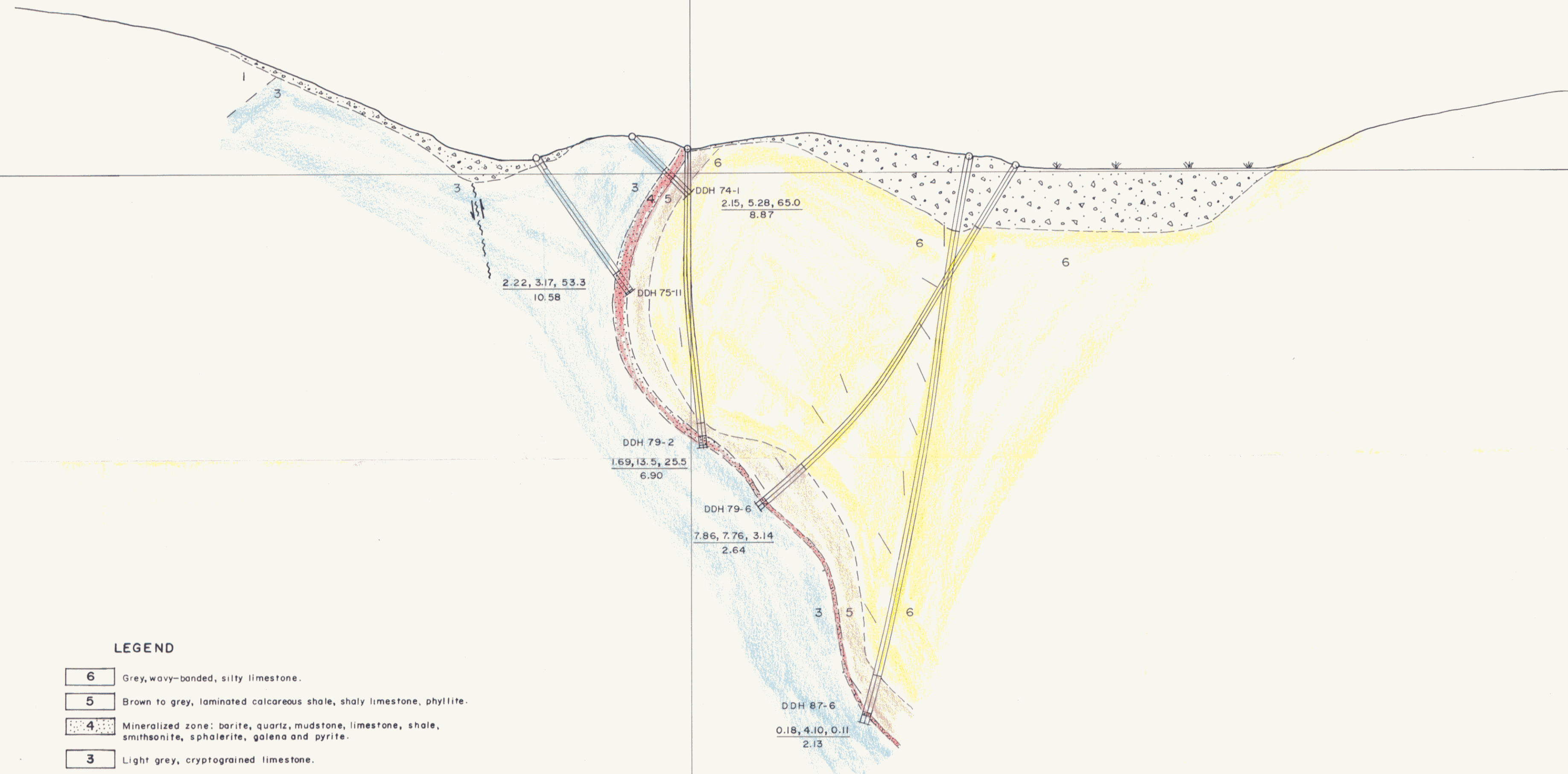
PROJECT NO. 6250

DATE: APRIL, 1987

NTS 95D/6

Baseline 10,000E

900m



LEGEND

- 6 Grey, wavy-banded, silty limestone.
- 5 Brown to grey, laminated calcareous shale, shaly limestone, phyllite.
- 4 Mineralized zone: barite, quartz, mudstone, limestone, shale, smithsonite, sphalerite, galena and pyrite.
- 3 Light grey, cryptocrystalline limestone.
- 2 Buff, dolomitized limestone.
- 1 Medium to dark grey calcareous shale and siltstone, minor limestone, la.

~~~~~ Fault: defined, approximate.

Pb, Zn, BaSO<sub>4</sub>  
True thickness in metres

DW4 132  
093086

FIG. 9

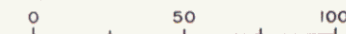
To accompany a report by D.C. Miller dated April 30, 1987

NOVAMIN RESOURCES INC.

TORONTO, ONTARIO

MEL PROJECT  
COAL RIVER AREA, Y.T.  
SECTION 100+87N

SCALE: 1:2500



DRAWN BY: D.C. MILLER

PROJECT NO. 6250

DATE: APRIL, 1987

NTS 95D/6

MEL PROJECT 6250 ORE RESERVE CALCULATION

April 1979

| SECTION | HOLE NO. | TRUE<br>WIDTH (m) | STRIKE<br>LENGTH (m) | DIP<br>LENGTH (m) | SPECIFIC<br>GRAVITY | TONNES  | % Pb | % Zn  | % BaSO <sub>4</sub> |
|---------|----------|-------------------|----------------------|-------------------|---------------------|---------|------|-------|---------------------|
| 97+90N  | 74-5     | 2.87              | 111.0                | 70                | 4.05                | 90,315  | 1.44 | 8.52  | 65.6                |
| 97+90N  | 75-9     | 3.96              | 111.0                | 102               | 4.01                | 179,789 | 1.84 | 6.77  | 63.3                |
| 97+90N  | 79-8     | 2.63              | 72.5                 | 124               | 3.07                | 72,586  | 0.75 | 12.09 | 12.4                |
| 97+90N  | *79-9    | 1.69              | 72.5                 | 100               | 2.94                | 36,022  | 3.53 | 7.40  | 0.1                 |
| 98+59N  | 79-12    | 2.84              | 69.0                 | 225               | 3.24                | 142,855 | 1.67 | 3.82  | 24.3                |
| 98+59N  | 79-11    | 6.51              | 69.0                 | 173               | 3.37                | 261,882 | 1.41 | 4.46  | 31.8                |
| 99+28N  | 74-4     | 9.72              | 73.5                 | 94                | 3.68                | 247,132 | 1.05 | 5.86  | 48.3                |
| 99+28N  | 78-7     | 11.55             | 73.5                 | 88                | 4.01                | 299,569 | 2.05 | 4.91  | 63.8                |
| 99+28N  | 79-4     | 8.98              | 73.5                 | 75                | 4.06                | 200,979 | 2.97 | 6.63  | 62.7                |
| 100+06N | 79-1     | 21.68             | 79.5                 | 83                | 3.82                | 546,472 | 0.49 | 5.02  | 58.2                |
| 100+06N | 74-2     | 13.11             | 79.5                 | 52                | 4.00                | 216,787 | 2.16 | 4.83  | 63.1                |
| 100+06N | 78-6     | 16.09             | 79.5                 | 110               | 4.27                | 600,819 | 1.96 | 4.14  | 78.6                |
| 100+06N | 79-7     | 9.77              | 79.5                 | 106               | 3.65                | 300,511 | 4.60 | 4.34  | 37.1                |
| 100+87N | 74-1     | 8.87              | 104.5                | 68                | 4.04                | 254,642 | 2.15 | 5.28  | 65.0                |
| 100+87N | 75-11    | 10.58             | 104.5                | 119               | 3.80                | 499,957 | 2.20 | 3.17  | 53.3                |
| 100+87N | 79-2     | 6.88              | 104.5                | 105               | 3.39                | 255,914 | 1.69 | 13.50 | 25.5                |
| 100+87N | 79-6     | 2.64              | 104.5                | 81                | 3.24                | 72,402  | 7.86 | 7.76  | 3.1                 |
| 102+15N | 79-3     | 4.84              | 128.0                | 40                | 3.82                | 94,663  | 4.44 | 4.44  | 48.6                |
| 102+15N | 74-8     | 4.42              | 128.0                | 62                | 3.93                | 137,853 | 2.87 | 9.00  | 54.5                |
| 102+15N | 75-12    | 4.15              | 128.0                | 148               | 3.45                | 271,231 | 1.15 | 5.67  | 35.8                |
| AVERAGE |          | 7.69              |                      |                   | 3.80                |         | 2.05 | 5.61  | 52.1                |

4,782,380

Short Tons = 5,271,672

\* Width doubled, grade cut by half















|                            |  |                                    |                                       |                     |        |         |   |
|----------------------------|--|------------------------------------|---------------------------------------|---------------------|--------|---------|---|
| PROPERTY<br><b>MEL</b>     | TP OR AREA<br><b>NTS 95D-6, YUKONE</b> | AZIMUTH<br><b>273° (GRID WEST)</b> | DATE STARTED<br><b>FEB. 24, 1987</b>  | CORRECTED DIP TESTS |        |         | LOCATION SKETCH OF HOLE                                 |
|                            |  |                                    |                                       | DEPTH               | DIP    | AZIMUTH |   |
| PROJECT<br><b>6250</b>     | LOT & CONC.<br><b>SECTION 9B+59 N</b>  | DIP<br><b>-76°</b>                 | DATE COMPLETED<br><b>MAR. 3, 1987</b> | 180m                | -76°   | 282°    | TESTS:<br>(SPERRY SUN-CORRECTED 30°)<br>FOR DECLINATION |
| CLAIM NO.<br><b>JEAN 4</b> | CO-ORDINATES<br><b>9861.1 N</b>        | LENGTH<br><b>515.72</b>            | DRILLED BY<br><b>D.J. DRILLING</b>    | 350m                | -72.2° | 275°    |   |
| GRID NO.                   | <b>10287.2 E</b>                       | COLLAR ELEV.<br><b>902.2</b>       | LOGGED BY<br><b>D.C. MILLER</b>       | 504m                | -70.6° | 279°    |   |
|                            |  |                                    |                                       |                     |        |         |   |

| METRES |        | SECTION | B.Q. CORE DESCRIPTION   | ASSAYS     |      |    |        |
|--------|--------|---------|---|------------|------|----|--------|
| FROM   | TO     |         |   | SAMPLE NO. | FROM | TO | LENGTH |
| 0      | 6.10   |         | OBJECTIVES:- TEST MEL DEPOSIT AT DEPTH.<br>Casing - no core.  |            |      |    |        |
| 6.10   | 212.45 |         | <u>WAVY BANDED LIMESTONE</u><br>Light and dark grey alternating bands with boudinage structure; lighter colored bands are often drawn out into sausage shaped pads surrounded by darker silty bands; locally nearly massive with no layering; light colored bands 2-4cm thick, dark bands less than 5mm thick.<br>(6.10 - 16.15) - pale brown colored because of surface oxidation; 0-70° banding broken core, 87% recovery.<br>(15.90 - 16.50) - massive; good core.<br>(16.50 - 20.90) - 10-40° banding, good core. 99% recovery.<br>(20.90 - 23.00) - pale brown, broken, 90% recovery.<br>(23.00 - 25.50) - 50° banding, unaltered, core, breaks parallel to banding - 2-20 cm pieces; minor oxidized pyrite @ 25.50 associated with calcite vein; some talc? on core breaks.<br>(25.50 - 26.50) - nearly massive, good core.<br>(26.50 - 30.00) - occasional white quartz-calcite vein to 3 cm cross-cutting bedding.<br>(26.50 - 28.50) - 25° banding, minor oxidation, good core.<br>(28.50 - 36.40) - oxidized, broken, leached core in pieces 1cm to 20cm, about 90% core recovery; 30° banding.<br>(36.40 - 40.90) - mostly unoxidized with 30-40° banding; broken @ (43.50 - 43.60) 95% core recovery. |            |      |    |        |





| METRES |        | SECTION | DESCRIPTION  | ASSAYS     |      |    |        |
|--------|--------|---------|--|------------|------|----|--------|
| FROM   | TO     |         |  | SAMPLE NO. | FROM | TO | LENGTH |
| 6.10   | 212.45 |         | <p><u>WAVY BANDED LIMESTONE (CONT'D)</u></p> <p>(164.70 - 212.45) Similar to preceding, occasional quartz-calcite vein to 20 cm.; banding mainly @ 45-60°, but @ 0-60° @ <del>164.70</del> (180.50 - 185.80), (folded); minor local framboidal pyrite. Also fold axis @ 173.70 with 50 and 20° limbs; 95% core recovery. Soft broken core @ (174.30 - 174.50).</p> <p>(196.10 - 193.00) - Banding @ 40-65°.</p> <p>(193.00 - 203.40) - Folded @ 0 - 40°; fold <del>axis</del> axes @ 192.3, 192.70 &amp; 198.50.</p> <p>(203.40 - 212.45) 25- 50° banding.</p> |            |      |    |        |
| 212.45 | 213.15 |         | <p><u>QUARTZ-CALCITE VEIN</u></p> <p>White with watery grey blobs of quartz; no sulphides; 45° contacts <del>most</del> nearly parallel to banding.</p>  |            |      |    |        |
| 213.15 | 263.20 |         | <p><u>WAVY BANDED LIMESTONE</u></p> <p>As preceding, banding 40° @ 220, 50-60° @ (227.00 - 240.00), 35°-45° @ (240 - 263.20); core is tending to be more broken, particularly @ (254.50 - 257.40) where it is in 2-10 cm pieces; occasional blob or veinlet of framboidal pyrite, total pyrite much less than 0.10%; core breaks along smooth partings parallel to banding; 95% core recovery.</p>   |            |      |    |        |
| 263.20 | 270.70 |         | <p><u>LIMESTONE</u></p> <p>Pale grey with very fine silty layers, banding @ 30-35°; very minor blobs of framboidal pyrite; good core 99% recovery; 10% calcite-quartz veins to 10 cm.</p>  |            |      |    |        |

| METRES |        | SECTION | DESCRIPTION  | SAMPLE NO. | FROM | TO | LENGTH | ASSAYS |  |  |  |  |
|--------|--------|---------|--|------------|------|----|--------|--------|--|--|--|--|
| FROM   | TO     |         |  |            |      |    |        |        |  |  |  |  |
| 270.70 | 303.00 |         | <p><u>WAVY BANDED LIMESTONE (CONTD)</u><br/>                     Light and dark grey with increasing darker bands as compared to preceding; fairly uniform banding @ 25-35"; occasional white calcite-quartz veins to 10 cm; 99% core recovery.<br/>                     (278.89 - 279.00) associated with minor soft grey clay.</p> <p>Broken core @ (279.40 - 279.50), (279.73 - 280.20), (281.10 - 281.35), (286.90 - 287.100), (289.56 - 289.70) - open vugs with calcite crystals @ 289.60.</p> <p>(270.70 - 303.00) minor framboidal pyrite associated with calcite blebs.</p> <p>273.00 \$ 273.70 - Very fine unknown brassy metallic mineral - specimens taken.</p> <p>(298.50 - 300.25) 3 fold axes in this interval with 15-30° limbs.</p> |            |      |    |        |        |  |  |  |  |
| 303.00 | 320.00 |         | <p><u>WAVY BANDED LIMESTONE</u><br/>                     Similar to preceding but banding now averages 45° and ranges from 35-70°; minor pyrite associated with calcite-quartz blebs and veins up to 20cm thick; good core; 99% recovery.</p>  |            |      |    |        |        |  |  |  |  |
| 320.00 | 340.00 |         | <p><u>WAVY BANDED LIMESTONE</u><br/>                     Similar to preceding, banding averages 40° and ranges from 0-70°; good core with 99% recovery; core breaks on partings parallel to banding and averages 1 break per 15cm; occasional white calcite-quartz vein to 2.5cm. usually less than 4cm; several short 2cm. discontinuous white calcite veinlets healing short tension fractures cutting banding at various angles; 99% core recovery.</p>   |            |      |    |        |        |  |  |  |  |

Drillers report increase in water at 283 m with fine sand.

| METRES |        | SECTION | DESCRIPTION   | ASSAYS     |      |    |        |
|--------|--------|---------|---|------------|------|----|--------|
| FROM   | TO     |         |   | SAMPLE NO. | FROM | TO | LENGTH |
| 340.00 | 433.00 |         | <p><u>WAVY BANDED LIMESTONE (CONTD)</u><br/>                     As preceding, better core, core breaks average 25cm with some pieces over 50cm; 99% core recovery; increasing volume of dark bands<br/>                     Banding: (340.00 - 363.00) averages 30°<br/>                     (363.00 - 374.90) " " 12°;<br/>                     ranges from 0 - 15°.</p> <p>374.90 = Fold axis<br/>                     (374.90 - 377.00): banding averages 25°<br/>                     (377.00 - 395.00) " " 35°<br/>                     (395.00 - 400.00) " " 40°</p> <p>355.70 - minor framboidal pyrite associated with calcite; also @ 395.40.</p> <p>(364.50 - 366.50) - larger pale grey bands with some fossil debris; specimen taken @ 364.54.</p> <p>(400.00 - 404.00) - several short 1-2cm discontinuous white calcite veins cutting darker bands nearly at right angles; similar to (320.00 - 340.00); 42° banding; bands 1cm + with light grey to dark grey band ratio 3:1; minor pyrite-calcite nodules.</p> <p>(404.00 - 421.00) Banding @ 45°; strong banding structure; dark bands 1-3mm; light bands 5-20mm; minor pyrite-calcite nodules.</p> <p>(421.00 - 428.00) Banding @ 35-30° uniform; strong banding structure.<br/>                     0-40°</p> <p>(428.00 - 433.00) Banding @ 0-40°, minor folding, average about 25°; percent of dark bands increasing to 1:1 ratio of dark to light bands 2cm + wide; banding structure weakening.</p> |            |      |    |        |

| METRES |        | SECTION | DESCRIPTION  | SAMPLE NO. | FROM   | TO     | LENGTH | ASSAYS  |      |         |        |
|--------|--------|---------|--|------------|--------|--------|--------|---------|------|---------|--------|
| FROM   | TO     |         |  |            |        |        |        | PERCENT |      |         |        |
|        |        |         |  |            |        |        |        | ZINC    | LEAD | BARITUM | BARITE |
| 433.00 | 452.50 |         | <p><u>CALCAREOUS SHALE</u> <span style="float: right;">Volume ratio of</span><br/>                     Darker bands now predominant with dark bands to light bands 4:1; consists of many fine dark and light bands (2mm ±) with larger (1cm) light grey bands spaced 4cm apart; banding @ 30-35°; bound bedding structure weakening; partings parallel to banding increasing to 1 per 10 cm locally; 99% recovery; 2% calcite-quartz veins to 10cm thick.<br/>                     (448.50 - 452.50) Banding @ 0-15°, light grey bands increasing.</p>   |            |        |        |        |         |      |         |        |
| 452.50 | 457.00 |         | <p><u>WAVY-BANDED LIMESTONE</u><br/>                     Light and dark grey with bands of light grey limestone about 4cm x 2cm enclosed by anastomosing dark grey silty limestone; banding @ 0-20°; 99% recovery; minor pyrite associated with calcite blobs; 2% quartz calcite veins to 4cm.</p>   |            |        |        |        |         |      |         |        |
| 457.00 | 463.15 |         | <p><u>CALCAREOUS SHALE</u> alternating<br/>                     Consists of uniform light and dark bands about 2cm thick at 35° and ~ 1:1 ratio; 2% white calcite-quartz veins to 2cm thick.</p>   |            |        |        |        |         |      |         |        |
| 463.15 | 489.60 |         | <p><u>CALCAREOUS SHALE</u><br/>                     As 433.00 - 452.50; 15-25° banding @ (463.15 - 471.00) dark to light bands 4:1; banding 30-50° @ (471.00 - 489.60); excellent core; 99% recovery, core breaks along bedding planes, approximately 1 break per 20 cm.<br/>                     466.40m Bedding plane fault @ 20° with 1 cm clay gouge.<br/>                     (474.70 - 476.20) - Bedding structure with ratio of dark to light bands 1:2.<br/>                     (476.20 - 489.60) - Becomes increasingly more finely laminated; dark to <sup>light</sup> 2:1.<br/>                     (488.60 - 489.60) - Becomes lighter colored to light grey; some beds non-calcareous near 489.60; very fine discontinuous pyrite veinlets, less than 1mm thick mainly parallel to banding; last 10 cm very fissile with 2cm breaks along smooth partings.</p> |            |        |        |        |         |      |         |        |
|        |        |         |  | 42951      | 488.60 | 489.60 | 1.00   | 60.01   | 0.08 | 0.95    |        |

x  
L = LESS THAN

| METRES |        | SECTION | DESCRIPTION  | SAMPLE NO.     | FROM             | TO               | LENGTH       | ASSAYS       |              |                |                |
|--------|--------|---------|--|----------------|------------------|------------------|--------------|--------------|--------------|----------------|----------------|
| FROM   | TO     |         |  |                |                  |                  |              | PERCENT      |              |                |                |
|        |        |         |  |                |                  |                  |              | ZINC         | LEAD         | BARUM          | BARITE         |
| 489.60 | 496.92 |         | <p><u>MINERALIZED CALCAREOUS SHALE</u><br/>                     Light greenish-grey, generally finely laminated, laminations uniform at 40-60° from (489.60 - 493.51) and then are variable with folding and range from 0-70° and average about 45°; generally good core with minor broken sections; becomes non-calcareous towards 496.92.</p> <p>mineralization includes:</p> <p>(1) Fine galena and pyrite veinlets generally less than 1 mm thick, but ranging up to 3 mm; these both parallel and cross-cut bedding; combined galena-pyrite content is about 2% with about 1% galena.</p> <p>(2) Barite and barite quartz veins containing minor honey colored to brown sphalerite in single and multiple grains ranging up to several cm in size; minor pyrite occurs at the edges of some sphalerite blobs.</p> |                |                  |                  |              |              |              |                |                |
|        |        |         | (489.64 - 489.86) - Barite-calcite vein with fair galena.  | 42852          | 489.60           | 491.60           | 2.00         | 0.06         | 0.98         | 2.53           | 4.30           |
|        |        |         | (489.86 - 491.79) - Calcareous shale with minor fine galena and pyrite veinlets.   | 42853          | 491.60           | 492.95           | 1.35         | 0.25         | 0.09         | 28.86          | 49.04          |
|        |        |         | (491.79 - 492.37) coarse grained white to grey barite with minor sphalerite and galena near 492.37.  |                |                  |                  |              |              |              |                |                |
|        |        |         | (492.37 - 492.95) - Calcareous shale with minor fine galena and pyrite veinlets.   |                |                  |                  |              |              |              |                |                |
|        |        |         | (492.95 - 496.92) - Contains 40% barite-quartz veining and replacement with minor brown sphalerite, galena and pyrite; approximately 2% sphalerite and 1% galena.  | 42854<br>42855 | 492.95<br>495.00 | 495.00<br>496.92 | 2.05<br>1.92 | 2.20<br>2.90 | 0.21<br>0.35 | 19.39<br>14.83 | 32.95<br>25.20 |

| METRES |        | SECTION | DESCRIPTION   | SAMPLE NO. |        |        | ASSAYS  |       |        |        |       |
|--------|--------|---------|---|------------|--------|--------|---------|-------|--------|--------|-------|
| FROM   | TO     |         |   | FROM       | TO     | LENGTH | PERCENT |       |        |        |       |
|        |        |         |   |            |        |        | ZINC    | LEAD  | BARIUM | BARITE |       |
| 496.92 | 498.30 |         | <u>MINERALIZED SILICA ZONE</u><br>Light grey with a mottled brecciated texture due to various stages of veining and replacement; minor remnants of calcareous shale near 496.92; minor barite veining; minor white calcite; contains approximately 3% sphalerite in disseminated blobs to 1cm with lesser amounts of galena and pyrite; sphalerite ranges from honey colored to brown; excellent core, 99% recovery.  | 42856      | 496.92 | 498.30 | 1.38    | 0.69  | 0.02   | 15.75  | 26.77 |
| 498.30 | 499.60 |         | <u>BARITE</u><br>white to grey, coarse grained, minor sphalerite near contacts, excellent core 99% recovery; contacts at approximately 35°.   | 42857      | 498.30 | 499.60 | 1.30    | 0.64  | 0.01   | 55.66  | 94.59 |
|        |        |         |   | Average    | 499.60 | 499.60 | 10.00   | 1.23  | 0.32   | 20.63  | 35.06 |
| 499.60 | 509.93 |         | <u>MAIN MINERALIZED ZONE</u><br>Consists of masses and individual blobs of brown and honey colored sphalerite in a matrix of barite, mudstone and quartz; excellent core with 99% recovery; the presence of brown mudstone indicates the original rock was cryptocrystalline limestone; minor galena and pyrite are also present; total sphalerite content is approximately 15% with less than 1% galena and about 1% pyrite including very fine grained pyrite in brown mudstone clasts ranging up to 10 cm; approximately 1% white sericite is present in mudstone; high barite low sphalerite sections occur at (503.50-503.80) and (507.20-508.00); matrix calcite is present at (509.00-509.93).<br>(499.60 - 501.60) - approximately 25% sphalerite, 10% barite<br>(501.60 - 503.60) - " " 5% " " 70% "<br>(503.60 - 505.60) - " " 12% " " " "<br>(505.60 - 507.20) - " " 12% " " " "<br>(507.20 - 508.00) " " Trace " " 90% "<br>(508.00 - 509.93) " " 17% " " 60% " | 42858      | 499.60 | 501.60 | 2.00    | 29.20 | 0.03   | 14.83  | 25.20 |
|        |        |         |   | 42859      | 501.60 | 503.60 | 2.00    | 6.95  | 0.05   | 30.59  | 51.98 |
|        |        |         |   | 42860      | 503.60 | 505.60 | 2.00    | 6.90  | 0.01   | 38.09  | 64.73 |
|        |        |         |   | 42861      | 505.60 | 507.20 | 1.60    | 7.75  | 0.01   | 39.42  | 66.99 |
|        |        |         |   | 42862      | 507.20 | 508.00 | 0.80    | 0.01  | 0.01   | 55.33  | 94.03 |
|        |        |         |   | 42863      | 508.00 | 509.93 | 1.93    | 13.60 | 0.02   | 29.59  | 50.29 |
|        |        |         |   | Average    | 499.60 | 509.93 | 10.33   | 12.08 | 0.02   | 32.09  | 54.53 |
| 509.93 | 510.86 |         | <u>DOLOMITIZED CRYPTOGRANED LIMESTONE</u><br>Yellowish grey, contains 20% brown mudstone clasts; 2% fine grained pyrite is associated with mudstone as fine disseminations; traces of fine sphalerite.  | 42864      | 509.93 | 510.86 | 0.93    | 0.32  | 0.02   | 0.93   | 1.58  |















| METRES |        | SECTION | DESCRIPTION   |            |        |        |        | ASSAYS  |        |        |  |  |  |  |
|--------|--------|---------|---|------------|--------|--------|--------|---------|--------|--------|--|--|--|--|
| FROM   | TO     |         |   | SAMPLE NO. | FROM   | TO     | LENGTH | PERCENT |        |        |  |  |  |  |
|        |        |         |   |            |        |        | Zn     | Pb      | Barium | Barite |  |  |  |  |
| 331.80 | 387.95 |         | <u>CALCAREOUS SHALE CONT'D.</u>   |            |        |        |        |         |        |        |  |  |  |  |
|        |        |         | (370.50 - 387.95) 50 - 64° banding  |            |        |        |        |         |        |        |  |  |  |  |
|        |        |         | (359.50 - 374.22) Contains 1% fine-grained pyrite associated with calcite veinlets.   |            |        |        |        |         |        |        |  |  |  |  |
|        |        |         | (357.00 - 387.95) Sharp increase in dark bands with the ratio of dark to light bands 3:1; composite dark bands range up to 5 cm and are composed of many fine dark and few light colored laminae; light colored bands are generally less than 1 cm. |            |        |        |        |         |        |        |  |  |  |  |
|        |        |         | (374.22 - 387.95) Approximately 2% very fine grained pyrite veinlets (less than 1mm) mainly parallel to bedding.  |            |        |        |        |         |        |        |  |  |  |  |
|        |        |         | (387.45 - 387.95) Very minor (less than 1/2% galena associated with fine pyrite veining; minor brecciation and silicification.  | 42867      | 387.45 | 387.95 | 0.50   | L 0.01  | 0.41   | 0.08   |  |  |  |  |
|        |        |         | (383.70 - 387.95) Increasingly less calcite content, some short sections with no acid reaction.   |            |        |        |        |         |        |        |  |  |  |  |
|        |        |         | (384.35 - 386.50) Blocky core with pieces to 1 cm breaking parallel to bedding planes; breaks with smooth talcy surfaces.<br>talcy  |            |        |        |        |         |        |        |  |  |  |  |

L = Less than





|                     |                                 |                       |                                  |                     |                |                 |   |
|---------------------|---------------------------------|-----------------------|----------------------------------|---------------------|----------------|-----------------|---|
| PROPERTY<br>MEL     | TP OR AREA<br>NFS 95D-6 YUKON   | AZIMUTH<br>273°       | DATE STARTED<br>MARCH 10, 1987   | CORRECTED DIP TESTS |                |                 | LOCATION SKETCH OF HOLE<br>(TESTS: SPERRY SON SINGLE SHOT;<br>MAGNETIC CORRECTION<br>30°) |
| PROJECT<br>6250     | LOT & CONC.<br>SECTION 100+87 N | DIP<br>-79            | DATE COMPLETED<br>MARCH 16, 1987 | DEPTH<br>140        | DIP<br>-80 3/4 | AZIMUTH<br>304° |   |
| CLAIM NO.<br>JEAN 4 | CO-ORDINATES<br>10089.6 N       | LENGTH<br>448.06      | DRILLED BY<br>D.J. DRILLING LTD. | 305                 | -79            | 276°            |   |
| GRID NO.            | 10216.3 E                       | COLLAR ELEV.<br>912.7 | LOGGED BY<br>D.C. MILLER         | 443                 | -74 3/4        | 264 1/2°        |   |

| METRES |        | SECTION | DESCRIPTION   | SAMPLE NO. |    |        | ASSAYS |
|--------|--------|---------|---|------------|----|--------|--------|
| FROM   | TO     |         |   | FROM       | TO | LENGTH |        |
| 0      | 57.91  |         | <p><b>B.Q CORE</b></p> <p><b>OBJECTIVES:-</b> TEST MEL DEPOSIT AT DEPTH CASING, NO CORE.</p> <p>NOTE: TWO TRICONE WHEELS BROKE OFF AT 57.91 AND WERE DRILLED OUT WITH A DIAMOND BIT IN ORDER TO CONTINUE HOLE. OVERBURDEN REPORTED TO CONSIST OF MANY LARGE BOULDERS. THE HOLE WAS APPARENTLY DEFLECTED NORTH AND STEEPENED IN OVERBURDEN.</p>  |            |    |        |        |
| 57.91  | 63.95  |         | <p><u>WAVY BANDED LIMESTONE</u></p> <p>Consists of alternating dark and light bands with light bands ranging from 1cm to 10cm and dark bands averaging about 2mm; banding averages 65°; core is broken and crushed with many pieces less than 2cm; core recovery 60%; approximately 2% white calcite-quartz veins ranging from 1mm to 2cm at various angles; larger veins tend to parallel banding.</p>   |            |    |        |        |
| 63.95  | 410.90 |         | <p><u>WAVY BANDED LIMESTONE</u></p> <p>similar to preceding, but better core, broken sections at (67.20-67.97), (69.00-69.20), (74.20-74.68); variable banding: 65° @ (63.95-66.00), 0-35° @ (66.00-72.00), 35-60° @ (72.00-80.00). approximately 2% calcite-quartz veining at various angles but mainly parallel to banding; veins range from less than 1mm to 1cm; fair core with breaks parallel to banding, breaks average about one per 10 cm; (65.00-83.00) Increase in thickness of dark grey bands to an average of 5mm</p> <p>(63.95 - 69.20) 90% core recovery</p> <p>(69.20 - 88.39) 95% core recovery</p> <p>(65.00 - 73.00) minor fine pyrite, less than 1% associated with calcite veining.</p> |            |    |        |        |

| METRES |        | SECTION | DESCRIPTION   | ASSAYS     |      |    |        |
|--------|--------|---------|---|------------|------|----|--------|
| FROM   | TO     |         |   | SAMPLE NO. | FROM | TO | LENGTH |
| 63.95  | 410.30 |         | <u>WAVY BANDED LIMESTONE</u> (CONT'D)   |            |      |    |        |
|        |        |         | (74.00 - 94.70) - Strong podding structure.   |            |      |    |        |
|        |        |         | (83.00 - 334.00) - Thickness and volume of dark grey bands decreases; dark grey bands average 3mm and light grey bands average about 1.5cm.   |            |      |    |        |
|        |        |         | (80.00 - 94.70) Uniform banding at 65-70°.  |            |      |    |        |
|        |        |         | (88.39 - 90.22) - 70% core recovery - broken core @ (89.61 - 90.22).  |            |      |    |        |
|        |        |         | (90.22 - 118.86) - 95% core recovery; broken core @ (92.25 - 92.45).  |            |      |    |        |
|        |        |         | (88.00 - 126.00) - Core tends to blocky and is broken into pieces averaging less than 5cm; breaks are parallel to banding.  |            |      |    |        |
|        |        |         | (118.86 - 144.00) 90-95% core recovery.   |            |      |    |        |
|        |        |         | (94.70 - 107.00) - Uniform 65-85° banding.  |            |      |    |        |
|        |        |         | (107.00 - 135.30) - Folding with banding @ 0-80°, averages about 30°; fold axes @ 108.40, 109.80, 114.70, 115.20, 115.80, 121.20 & 122.00. Broken core at (106.00 - 106.20).  |            |      |    |        |
|        |        |         | (107.90 - 108.40), (110.70 - 111.40), & (117.90 - 120.10). Large light grey bands ranging up to 50cm @ (103.57 - 104.00) and between 114.80 & 116.75. Further fold axes at 124.40, 124.70, 129.00, 129.70 and 135.30. |            |      |    |        |
|        |        |         | (131.00 - 139.00) - Section with relatively thick light grey bands averaging 4cm.   |            |      |    |        |
|        |        |         | (125.00 - 144.00) - Core improving with breaks parallel to banding, averaging 1 per 10 cm; rare pyrite associated with calcite.   |            |      |    |        |
|        |        |         | (135.30 - 144.00) Banding uniform @ 45-50°.   |            |      |    |        |







| METRES |        | SECTION | DESCRIPTION  | ASSAYS     |      |    |        |
|--------|--------|---------|--|------------|------|----|--------|
| FROM   | TO     |         |  | SAMPLE NO. | FROM | TO | LENGTH |
| 63.95  | 410.30 |         | <p>WAVY Banded LIMESTONE (CONT'D)</p> <p>(366.55 - 320.70) cont'd.</p> <p>Large quartz-calcite vein @ (314.15 - 314.30) parallel to banding.</p> <p>320.30 - Fault fold over 20 cm.</p>  |            |      |    |        |
|        |        |         | <p>(320.70 - 334.00) Thinner banding as (215.00 - 227.00); banding: 25° @ 320.70, 0-5° @ (322.00 - 327.00), 0-40° @ (327.00 - 334.00); good core but with many breaks along smooth bedding planes; 3 cm band of brecciation along bedding from (325.30 - 326.70); approximately 1% fine calcite veining; rare pyrite-calcite nodule to 1/2 cm size.</p>  |            |      |    |        |
|        |        |         | <p>(334.00 - 362.41) Thicker bands with a higher percentage of dark grey bands, similar to (227.00 - 236.00); 5% fine discontinuous calcite veins cutting dark bands mainly to form weak striped appearance; sharp fold at 341.00 over 20 cm with 70-60° limbs; <sup>rare</sup> pyrite-calcite nodules. (rare)</p> <p>Banding: 35° @ 334.00, 45° @ 336.50, 60° @ 337.00, 70° @ 341.00, 45° @ 341.30.</p> <p>Generally good core in pieces averaging 10 cm, shattered at (334.60 - 338.15).</p> |            |      |    |        |
|        |        |         | <p>(342.00 - 344.00) 15% calcite-quartz veining with veins to 15 cm; this section contains several thick light grey bands.</p>   |            |      |    |        |
|        |        |         | <p>(348.40 - 354.00) - 15% calcite-quartz veining as above.</p> <p>Banding: 0-40° at (342.00 - 358.50) with minor folding and strong boudinage structure; 30-60° @ (358.50 - 362.41)</p>   |            |      |    |        |





| METRES |        | SECTION | DESCRIPTION  | SAMPLE NO.                           | FROM                                 | TO                                   | LENGTH                       | ASSAYS                       |                              |                              |                              |
|--------|--------|---------|--|--------------------------------------|--------------------------------------|--------------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| FROM   | TO     |         |  |                                      |                                      |                                      |                              | PERCENT                      |                              |                              |                              |
|        |        |         |  |                                      |                                      |                                      |                              | ZINC                         | LEAD                         | BARIUM                       | BARITE                       |
| 439.30 | 439.80 |         | <u>MINERALIZED CALCAREOUS SHALE</u><br>medium to dark grey, silicified with remnant laminations at 50-75°; contains approximately 10% fine grained brown to honey-colored sphalerite as single grains and masses of fine grains; less than 1% galena as fine mm or less veinlets; traces of pyrite; 15% white calcite-quartz veins at various angles; core broken in pieces from 2-5cm; 95% recovery.  | 42873                                | 439.30                               | 439.80                               | 0.50                         | 8.80                         | 0.66                         | 0.11                         | 0.19                         |
| 439.80 | 441.70 |         | <u>MINERALIZED SILICA ZONE</u><br>light to dark grey silica matrix; brecciated and cut by a branching network of fine calcite and calcite-quartz veins ranging from less than 1 to 3mm in width; contains good grade fine brown and honey colored sphalerite from (439.80 - 440.40) with minor galena and pyrite as blebs to 3mm and as fine veinlets; weakly mineralized with disseminated very fine grained brown to honey colored sphalerite from (440.40 - 441.65); good core in pieces to 40cm; 95% recovery.<br><br>(441.65 - 441.70) Fault with 2cm of gouge followed by 5cm of fractured, leached pitted silicified limestone with 2% pyrite mineralization. | 42874<br>42875<br>Average<br>Average | 439.80<br>440.40<br>439.30<br>439.30 | 440.40<br>441.70<br>440.40<br>441.70 | 0.60<br>1.30<br>1.10<br>2.40 | 8.65<br>0.20<br>8.72<br>4.10 | 0.14<br>0.02<br>0.38<br>0.18 | 0.06<br>0.05<br>0.08<br>0.07 | 0.10<br>0.08<br>0.14<br>0.11 |
| 441.70 | 444.06 |         | <u>CRYPTOGRAINED LIMESTONE</u><br>light gray to white, contains 5% brown mudstone clasts, massive, fair core but tends to break along fine fractures at various angles filled with calcite; 95% core recovery.<br><br>(441.70 - 444.45) Altered to a medium grey color, brecciated and cut by 10% mainly fine calcite-veins at various angles; contains traces of galena and brown sphalerite with approximately 1% pyrite as fine discontinuous veins and disseminated grains.  | 42876<br>42877                       | 441.70<br>443.00                     | 443.00<br>444.45                     | 1.30<br>1.45                 | 0.12<br>0.11                 | 0.04<br>0.01                 | 0.12<br>0.10                 | 0.20<br>0.17                 |



|                     |                                  |                             |                                  |                     |          |         |  |
|---------------------|----------------------------------|-----------------------------|----------------------------------|---------------------|----------|---------|--|
| PROPERTY<br>MEL     | TP OR AREA<br>NTS 95.D-6, YUKON. | AZIMUTH<br>273° (GRID WEST) | DATE STARTED<br>MAR 17, 1987     | CORRECTED DIP TESTS |          |         | LOCATION SKETCH OF HOLE<br>(TEST: SPERRY 50W SINGLE SHOT<br>CORRECTED 30°) |
| PROJECT<br>6250     | LOT & CONC.<br>SECTION 97+90N    | DIP<br>81 1/2°              | DATE COMPLETED<br>MAR 21, 1987   | DEPTH               | DIP      | AZIMUTH |  |
| CLAIM NO.<br>JEAN-1 | CO-ORDINATES<br>9787.1 N         | LENGTH<br>409.96            | DRILLED BY<br>D.J. DRILLING LTD. | 144                 | -80      | 285°    |  |
| GRID NO.            | 10229.9 E                        | COLLAR ELEV.<br>902.3       | LOGGED BY<br>D.C. MILLER         | 305                 | -74 3/4° | 270°    |  |
|                     |                                  |                             |                                  | 407                 | -73°     | 267°    |  |

| METRES |        | SECTION | DESCRIPTION   | CORRECTED DIP TESTS |      |    | ASSAYS |
|--------|--------|---------|---|---------------------|------|----|--------|
| FROM   | TO     |         |   | SAMPLE NO.          | FROM | TO |        |
|        |        |         | OBJECTIVES:- TEST MEL DEPOSIT AT DEPTH.   |                     |      |    |        |
| 0      | 9.14   |         | CASING, NO CORE   |                     |      |    |        |
| 9.14   | 353.50 |         | <u>WAVY BANDED LIMESTONE</u><br>Alternating light and dark grey bands;<br>light grey bands up to 4cm and average 1cm thick;<br>dark grey bands up to 2cm and average 3mm thick;<br>local strong bowdwinage structure; minor calcite-<br>quartz veining; rare pyrite calcite nodule or veinlet<br>to 2cm size.   |                     |      |    |        |
|        |        |         | (9.14 - 24.62) Banding mainly 30-40°, folded<br>at 24.50 with 30° limbs; minor<br>rusty discolored core; core tends<br>to be blocky and broken with breaks<br>parallel to bedding; approximately 90%<br>core recovery.  |                     |      |    |        |
|        |        |         | (24.62 - 45.11) Variable folded banding: 0°<br>@ 24.62, 70° @ 25.20, 0° @ 25.80,<br>30° @ 27.00, 0° @ 29.00, 30° @ 31.00<br>50-85° @ (32.00 - 40.00), 0-65° @ (41.00<br>45.11); core recovery generally about 90%<br>(29.60 - 32.61) - large light grey band<br>(32.61 - 42.70) - strong bowdwinage structure<br>with broken and blocky core; brecciated at<br>(38.10 - 38.70); shattered core at (42.90 -<br>44.20) with 50% recovery. |                     |      |    |        |

| METRES |        | SECTION | DESCRIPTION   | SAMPLE NO. | ASSAYS |    |        |
|--------|--------|---------|---|------------|--------|----|--------|
| FROM   | TO     |         |   |            | FROM   | TO | LENGTH |
| 9.14   | 358.50 |         | <p><u>WAVY BANDED LIMESTONE CONT'D</u><br/>                     (45.11 - 88.50) Similar to preceding; blocky and broken core; uniform banding at 50-70°; (45.11 - 57.25) - core broken into pieces averaging 2cm; (57.25 - 71.60) - better core with pieces averaging 5cm; breaks along bedding planes; (65.90 - 71.60) larger light grey bands averaging 4cm; rare pyrite calcite nodule; 70% calcite-quartz veining; approximately 85% core recovery.<br/>                     Banding: 50-65° @ (72.50 - 79.00), 30-40° @ (79.00 - 88.50)<br/>                     (71.60 - 81.30) - Shattered core in pieces averaging 3cm.<br/>                     (81.30 - 88.50) Fair core associated with thick light grey bands (10cm).<br/>                     (87.17 - 87.48) Ground core, 30% recovery, possible water course, drillers report increase in water in this section.</p> |            |        |    |        |
|        |        |         | <p>(88.50 - 121.30) Strong bedding structure; light grey bands gradually decrease in width from 2cm to 1cm; dark grey bands up to 5mm in width; fair core, 99% recovery; rare calcite-pyrite nodule to 1cm.<br/>                     Banding: 40-60° @ (88.50 - 96.70), 0-15° @ (96.70 - 110.00), 0-40° @ (110.00 - 115.00), 0-20° @ (115.00 - 118.00), 40-70° @ (118.00 - 121.30); 30% calcite-quartz veining, mainly at (110.00 - 121.30)<br/>                     Excellent core @ (98.00 - 121.30) in pieces to 50 cm.</p>  |            |        |    |        |
|        |        |         | <p>(121.30 - 129.20) Large light grey bands to 4cm; dark grey bands to 1cm; 5% white calcite-quartz veining at various angles; generally excellent core; banding @ 15-45°; broken core @ (127.40 - 128.02).</p>   |            |        |    |        |
|        |        |         | <p>(129.20 - 178.00) Light grey bands 2-1cm; dark grey bands average 3mm; 5% calcite-quartz veining (up to 12cm); strong bedding structure; good core; 99% recovery; rare calcite-pyrite nodule to 1cm; occasional light grey band to 5cm thick.<br/>                     Banding: 45-35° @ (129.20 - 132.70), 0-20° @ (132.70 - 136.00), 25-40° @ (136.00 - 159.00), 40-50° @ (159.00 - 162.55), 85° @ (162.55 - 163.30)<br/>                     Excellent core @ (142.5 - 178.00) pieces to 50cm<br/>                     some core breaks across bedding.</p>   |            |        |    |        |

| METRES |        | SECTION | DESCRIPTION   | ASSAYS     |      |    |        |
|--------|--------|---------|---|------------|------|----|--------|
| FROM   | TO     |         |   | SAMPLE NO. | FROM | TO | LENGTH |
| 9.14   | 353.50 |         | <del>WAVY BANDED LIMESTONE CONT'D</del>   |            |      |    |        |
|        |        |         | (178.00 - 184.20) - Large light grey bands to 4cm with very fine (less than 1mm) dark grey bands; 50-55° banding; excellent core; 20% calcite veining to 2cm width.   |            |      |    |        |
|        |        |         | (184.20 - 190.80) Light grey bands to 2cm, dark grey bands to 2mm; 30° banding; excellent core; 40% calcite veining and an occasional pyrite-calcite nodule to 2cm; weak boudinage structure  |            |      |    |        |
|        |        |         | (190.80 - 191.80) Large light grey bands, very fine dark grey bands (as 178.00 - 184.20) 30° banding @ 190.00; excellent core; 30% calcite-quartz veins to 3cm.   |            |      |    |        |
|        |        |         | (191.80 - 197.40) - strong boudinage structure, 10-25° banding; excellent core; several small pyrite-calcite nodules (less than 1cm) 30% fine calcite veins (less than 5mm).  |            |      |    |        |
|        |        |         | (197.40 - 199.10) - Large light grey bands, very thin dark grey bands (less than 1mm); excellent core; minor fine pyrite veins (less than 1mm thick, less than 1% total); 20-30° banding; minor calcite veins as preceding.   |            |      |    |        |
|        |        |         | (199.10 - 263.50) Light grey bands 1-2cm; grey bands 1-4mm; banding 30-45°; good core in pieces averaging 10cm with breaks mainly along bedding planes but also across beds; moderate to weak boudinage structure; occasional fine pyrite-calcite veins and nodules (less than 1cm); occasional large calcite-quartz vein to 3cm thick; both cutting and parallel to banding. |            |      |    |        |
|        |        |         | Blocky and broken core at (224.80 - 225.60), (229.20 - 229.92) (232.50 - 232.87), & (234.30 - 235.70).  |            |      |    |        |
|        |        |         | Probers report increase in water near 214.00.   |            |      |    |        |





| METRES |        | SECTION | DESCRIPTION   | ASSAYS     |      |    |        |
|--------|--------|---------|---|------------|------|----|--------|
| FROM   | TO     |         |   | SAMPLE NO. | FROM | TO | LENGTH |
| 353.50 | 401.05 |         | <u>CALCAREOUS SHALE</u>   |            |      |    |        |
|        |        |         | (353.50 - 355.00) Finely laminated light and dark bands at 0-65°, folded; percent of dark bands about 50%.  |            |      |    |        |
|        |        |         | (355.00 - 356.55) Thick light grey limestone band.  |            |      |    |        |
|        |        |         | (356.55 - 375.82) Dark bands average about 5mm in width and range up to 2cm; light bands about the same width; approximately 60% dark bands; weak to strong bedding structure; occasional pyrite-calcite nodules; 3% calcite-quartz veins to 4cm wide; generally good core in pieces to 50cm long.  |            |      |    |        |
|        |        |         | Broken core at (362.80 - 364.20) associated with 10° fractures and brecciation.   |            |      |    |        |
|        |        |         | Banding uniform @ 20-30° @ (356.55 - 361.00), 0-40° @ (361.00 - 364.00), 25-35° @ (364.00 - 375.82).  |            |      |    |        |
|        |        |         | (375.82 - 387.80) Dark bands average 2cm; light bands less than 1cm, uniform. 35-55° banding; approximately 1/2% pyrite as blocks to 15mm associated with calcite and as fine 1mm or less veins parallel to banding; 4% calcite veins to 5cm at various angles; fair core but tends to break along bedding plane slips; approximately 80% dark laminations. |            |      |    |        |

| METRES |        | SECTION | DESCRIPTION  |            |        |        | ASSAYS |         |       |           |
|--------|--------|---------|--|------------|--------|--------|--------|---------|-------|-----------|
| FROM   | TO     |         |  | SAMPLE NO. | FROM   | TO     | LENGTH | PERCENT |       |           |
|        |        |         |  |            |        |        | ZINC   | LEAD    | BARUM | BARITE    |
| 353.50 | 401.05 |         | <u>CALCAREOUS SHALE COMD</u>   |            |        |        |        |         |       |           |
|        |        |         | (387.80 - 390.00) Brecciated with minor silicification contains minor brown and honey colored sphalerite (less 1%) associated with pyrite; sulphide grains are smaller than 3mm; 90% core recovery.  | 42878      | 387.80 | 390.00 | 1.20   | 0.05    | 0.08  | 0.06      |
|        |        |         | (390.00 - 401.05) Finely laminated 70% dark bands; banding 50° @ 390.00, 40° @ 398.00, 30° @ 395, 25° @ 398.00 folded at 400.85 @ 0 - 25°; generally excellent core, but is broken over 5cm at 401.00 associated with 2 tight fractures at 40°; approximately 1% fine pyrite (less than 1mm) as fine veinlets parallel to bedding; and also cross-cutting bedding. |            |        |        |        |         |       |           |
| 401.05 | 403.10 |         | <u>MINERALIZED ZONE</u>  |            |        |        |        |         |       |           |
|        |        |         | Consists of approximately 12% brown and honey colored sphalerite in grains ranging from less than 1mm to over 1cm associated with about 2% fine grained galena; minor pyrite in grains up to 5mm is also present; matrix is calcareous shale and silicified calcareous shale; 99% core recovery; good core in pieces to 50cm.                                      |            |        |        |        |         |       |           |
|        |        |         | (401.05 - 402.00) - 50% quartz alteration with some weakly altered shale; banding at 0 - 30°; fair mineralization; core breaks at 10-30°   | 42879      | 401.05 | 402.00 | 0.95   | 2.44    | 0.84  | 0.35      |
|        |        |         | (402.00 - 403.10) - 80% quartz alteration; faint remnant banding @ 0 - 35° good grade mineralization; contact at 403.10 sharp along 45° fracture; core breaks at 30-80°.   | 42880      | 402.00 | 403.10 | 1.10   | 13.15   | 2.23  | 0.10      |
|        |        |         | Average  |            | 401.05 | 403.10 | 2.05   | 8.19    | 1.59  | 0.22 0.37 |

