

DESIGNATION NO. EIP 86 - 041

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

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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.

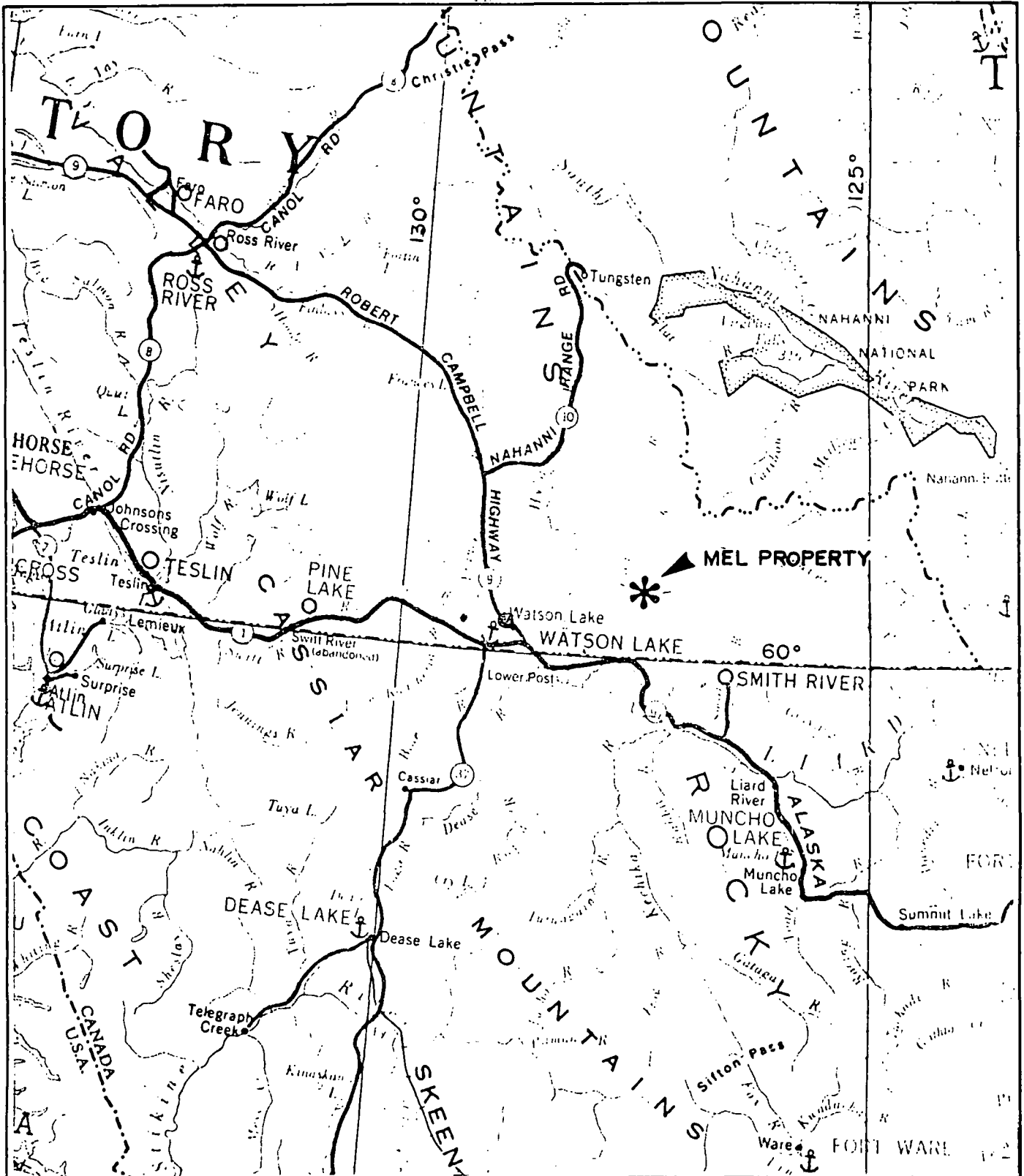
During February to March 1987, 7 B.Q. diamond drill holes totalling 2011.99 m were completed on the Jean 1, 4 and 19 claims. Actual drilling commenced on February 21 and was completed on March 21. The drilling programme was designed to test two areas: (1) down-dip of previously tested mineralization 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,



NOVAMIN RESOURCES INC.

LOCATION MAP
MEL PROPERTY

Drawn by: D.C.M.

N.T.S.: 95D/6

Date: APRIL 30, 1987

Figure No.: 1

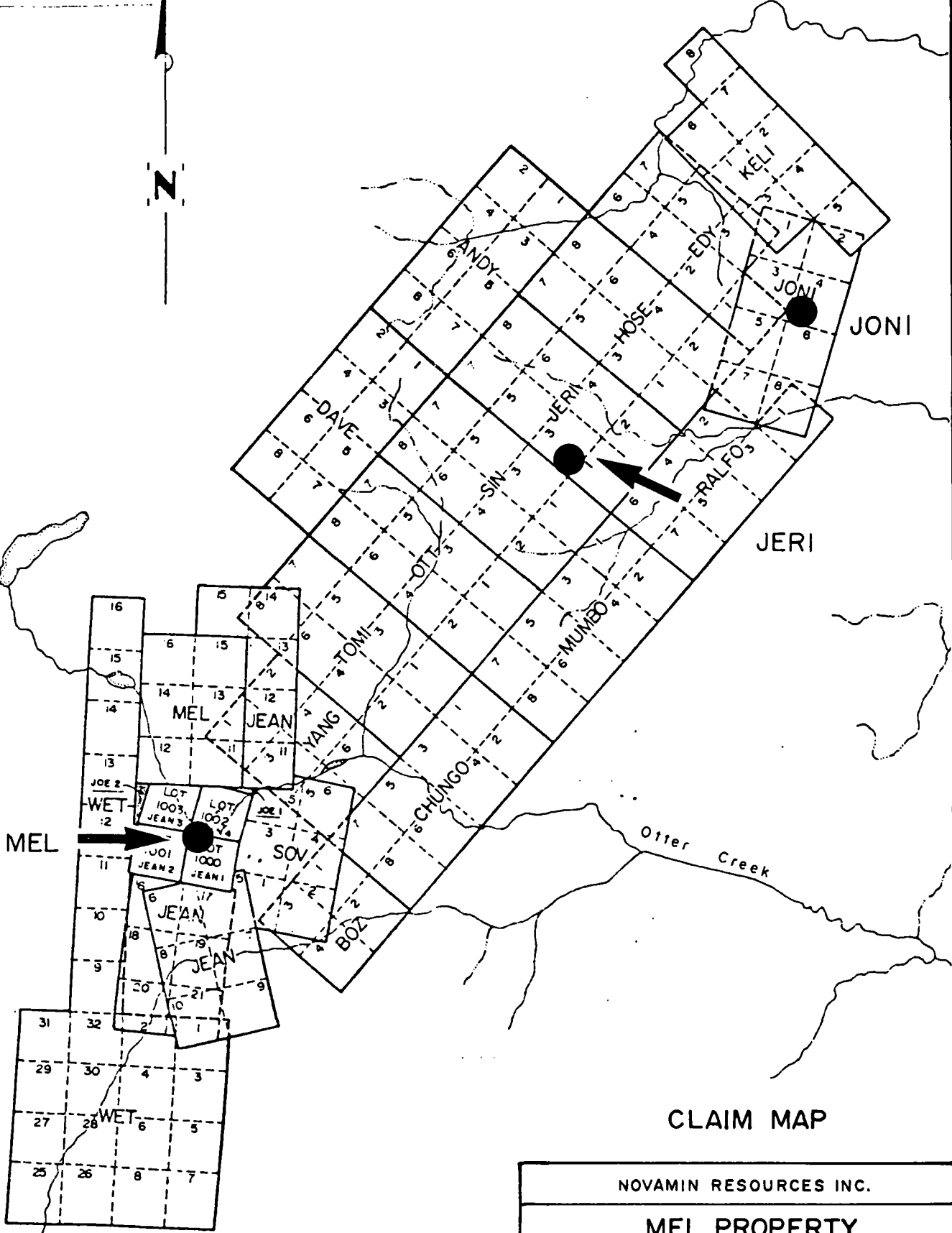
Yukon. Access to the property is provided by a 52 km winter road leading from the Alaska Highway at a point 7.6 km eastward of Contact Creek. During recent operations this road was utilized and travel time between the property and the Alaska Highway was about 2 hours. Alternative access is provided by 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'

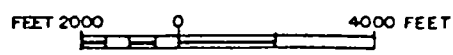
127° 25'



60° 20'

127° 25'

SCALE 1" = 4000'



CLAIM MAP

NOVAMIN RESOURCES INC.

MEL PROPERTY YUKON TERRITORY

DRAWN BY:
D.C.M.

NTS
95D/6

FIGURE

REPORT DATE
APRIL 30/87

PROJECT NO.
6250

2

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 theodolite 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 (57.91m) 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>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 AZIMUTH DEGREES</u>	<u>DIP DEG.</u>	<u>OVERBURDEN DEPTH (M)</u>	<u>TOTAL DEPTH</u>	<u>DATE STARTED/ COMPLETED 1987</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
TOTAL						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

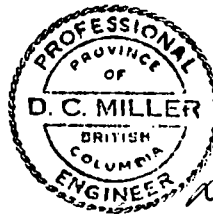
D. C. Miller, P. Eng.

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

MEL PROJECT 6250 ORE RESERVE CALCULATION

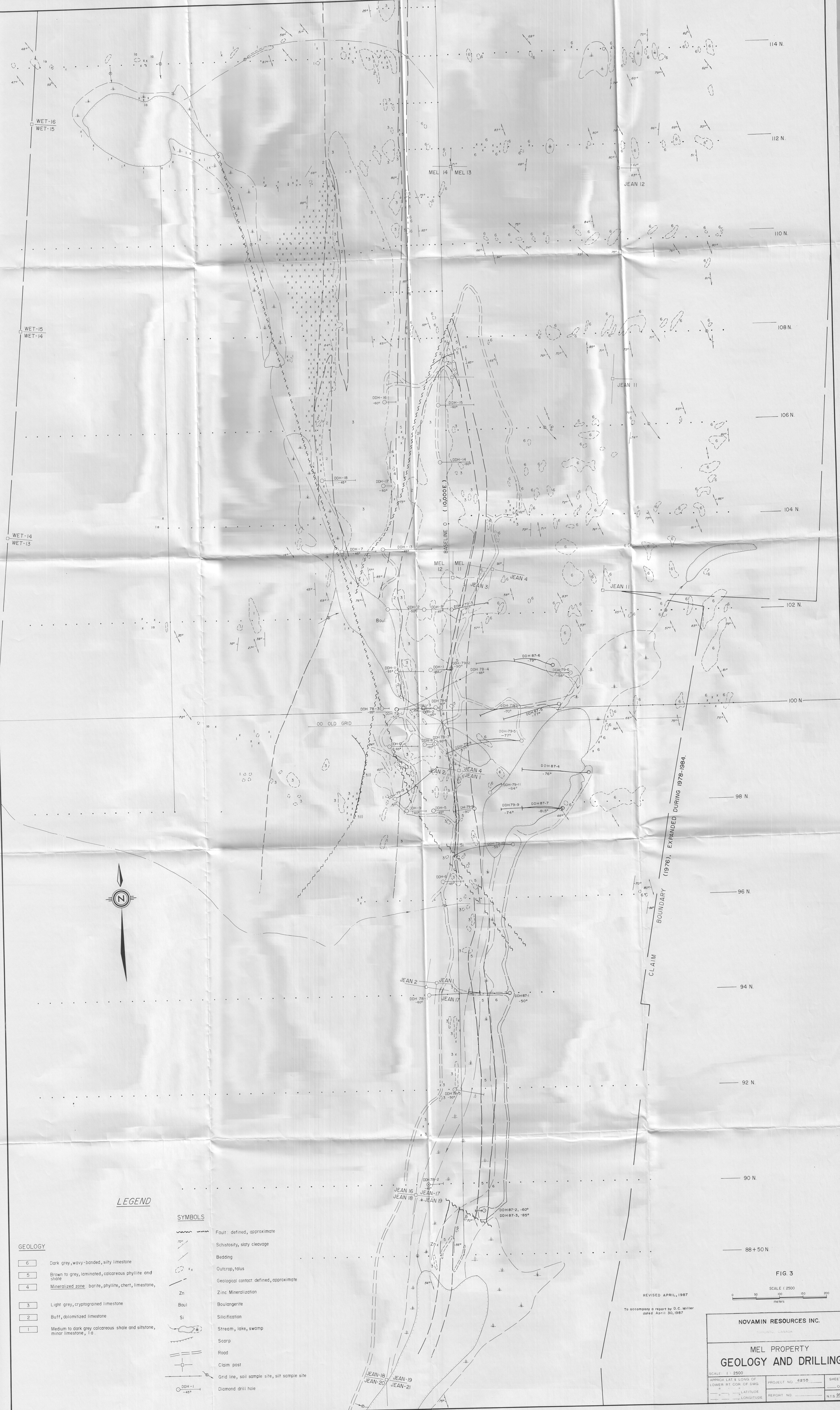
April 1979

SECTION	HOLE NO.	TRUE WIDTH (m)	STRIKE LENGTH (m)	DIP LENGTH (m)	SPECIFIC GRAVITY	TONNES	% Pb	% Zn	% BaSO ₄
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



LEGEND

GEOLOGY

- 6 Dark grey, wavy-banded, silty limestone
- 5 Brown to grey, laminated, calcareous phyllite and shale
- 4 Mineralized zone: barite, phyllite, chert, limestone
- 3 Light grey, cryptograind limestone
- 2 Buff, dolomitized limestone
- 1 Medium to dark grey calcareous shale and siltstone, minor limestone, f.a.

SYMBOLS

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

FIG 3

SCALE 1:2500
0 50 100 200
meters

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

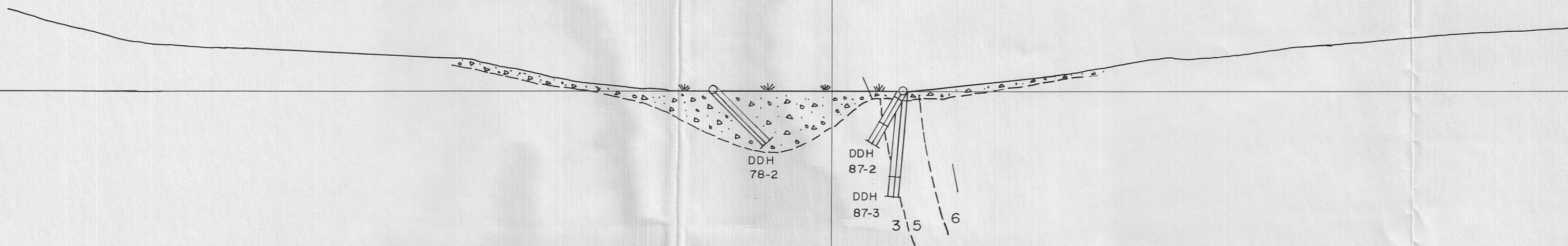
NOVAMIN RESOURCES INC.
TORONTO, CANADA

**MEL PROPERTY
GEOLOGY AND DRILLING**

SCALE 1:2500	PROJECT NO. 6210	SHEET NO. 06
APPROX. LAT. & LONG. OF LOWER RT. COR. OF DWG.	REPORT NO.	N.T.S. 25.0/16

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, 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

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

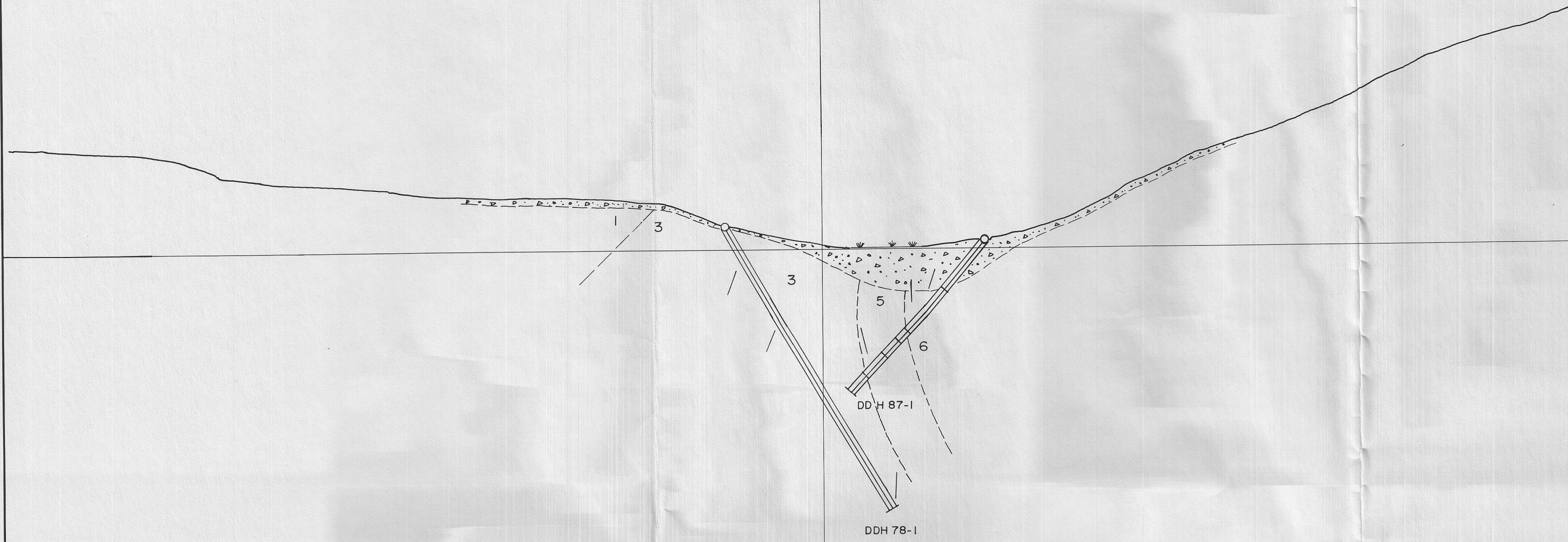
PROJECT NO. 6250

DATE: APRIL, 1987

NTS 95D/6

Baseline 10,000 E

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, cryptograined limestone.
- 2** Buff, dolomitized limestone.
- 1** Medium to dark grey calcareous shale and siltstone, minor limestone, ls.

~~~~~ Fault: defined, approximate.

Pb, Zn, BaSO₄
True thickness in metres

FIG. 5

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

NOVAMIN RESOURCES INC.

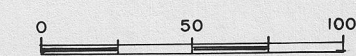
TORONTO, ONTARIO

MEL PROJECT

COAL RIVER AREA, Y.T.

SECTION 94 N

SCALE: 1:2500



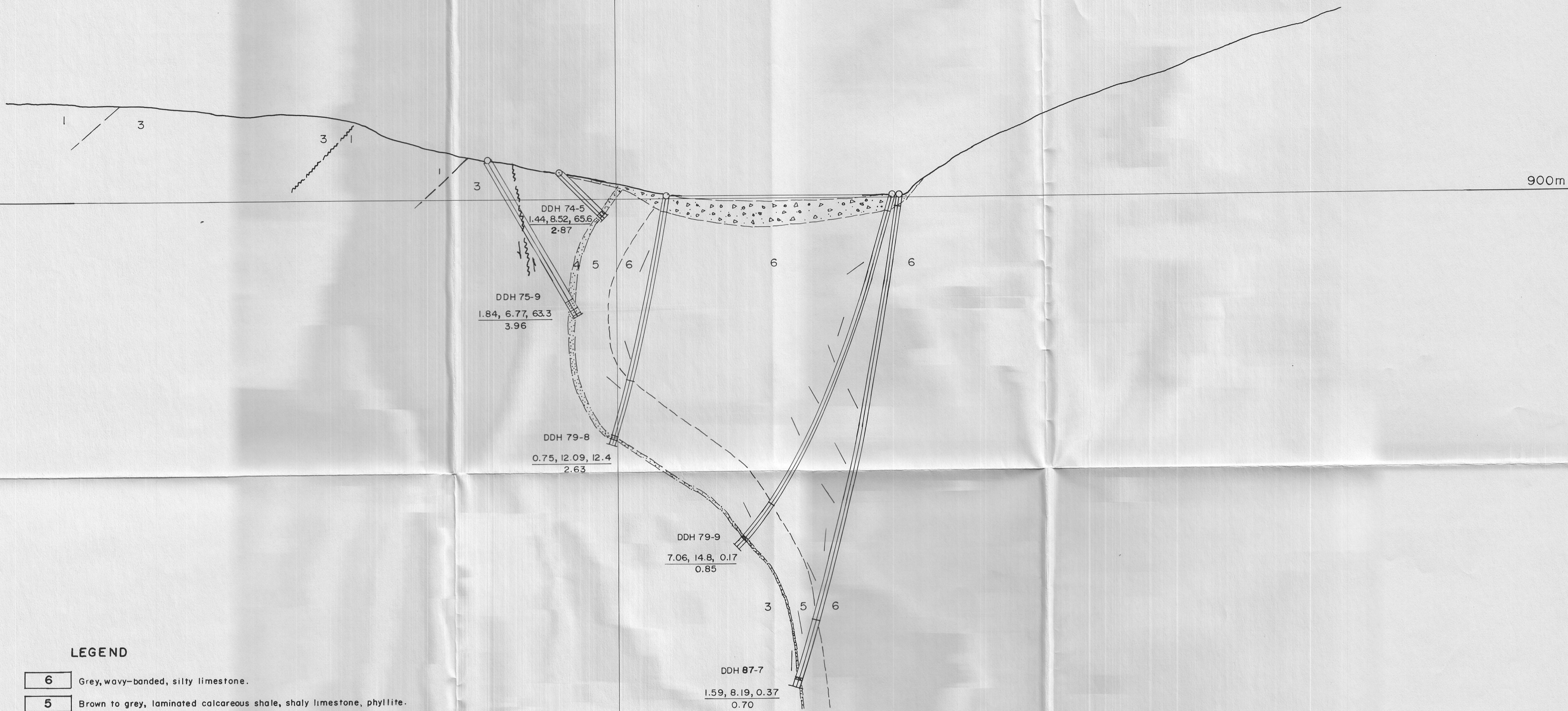
DRAWN BY: D.C. MILLER

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, cryptogained limestone.
- 2 Buff, dolomitized limestone.
- 1 Medium to dark grey calcareous shale and siltstone, minor limestone, la.

~~~~~ Fault: defined, approximate.

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

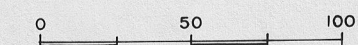
FIG. 6

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 97+90N

SCALE: 1:2500



DRAWN BY: D.C. MILLER

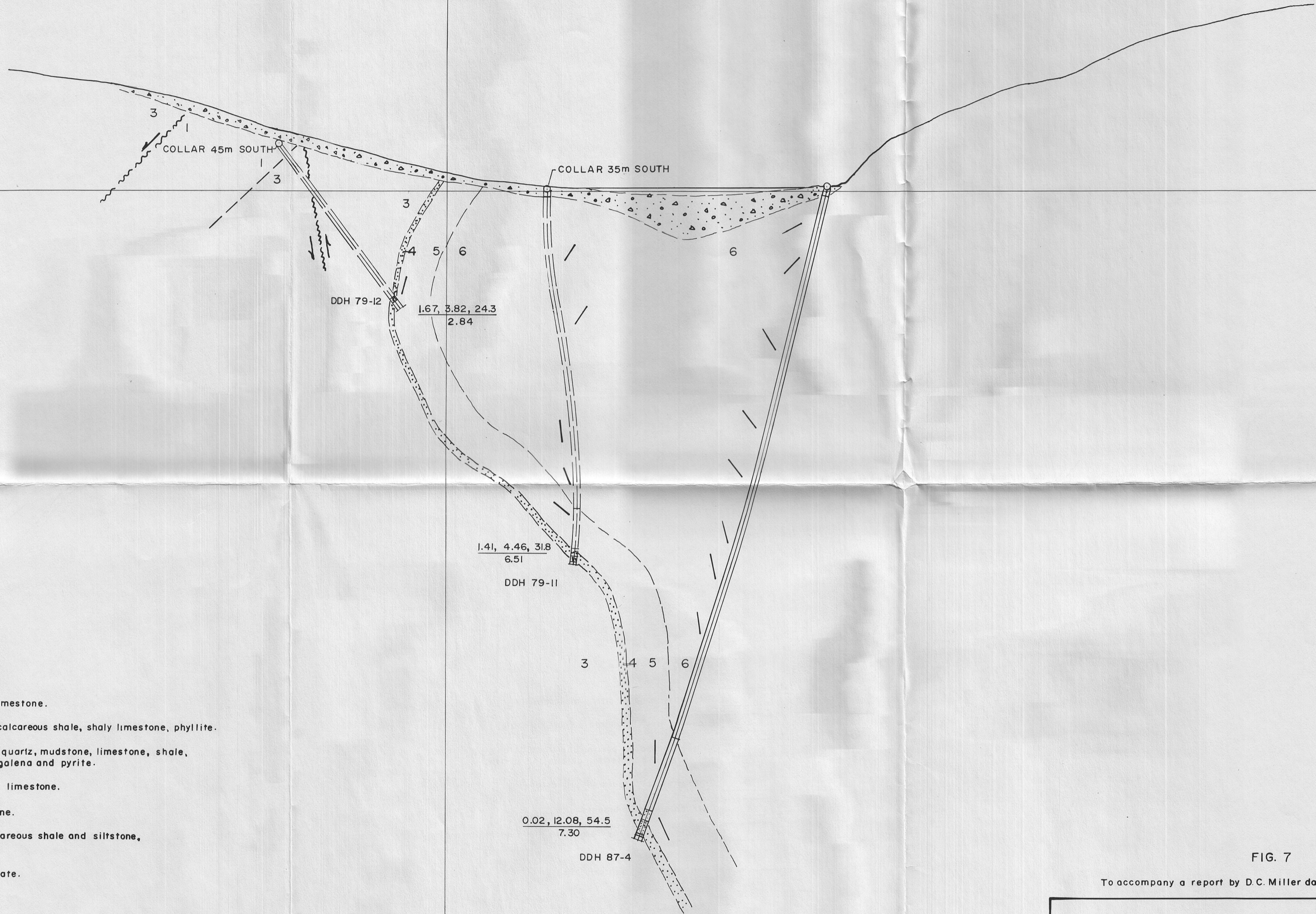
PROJECT NO. 6250

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, BaSO₄
True thickness in metres

FIG. 7

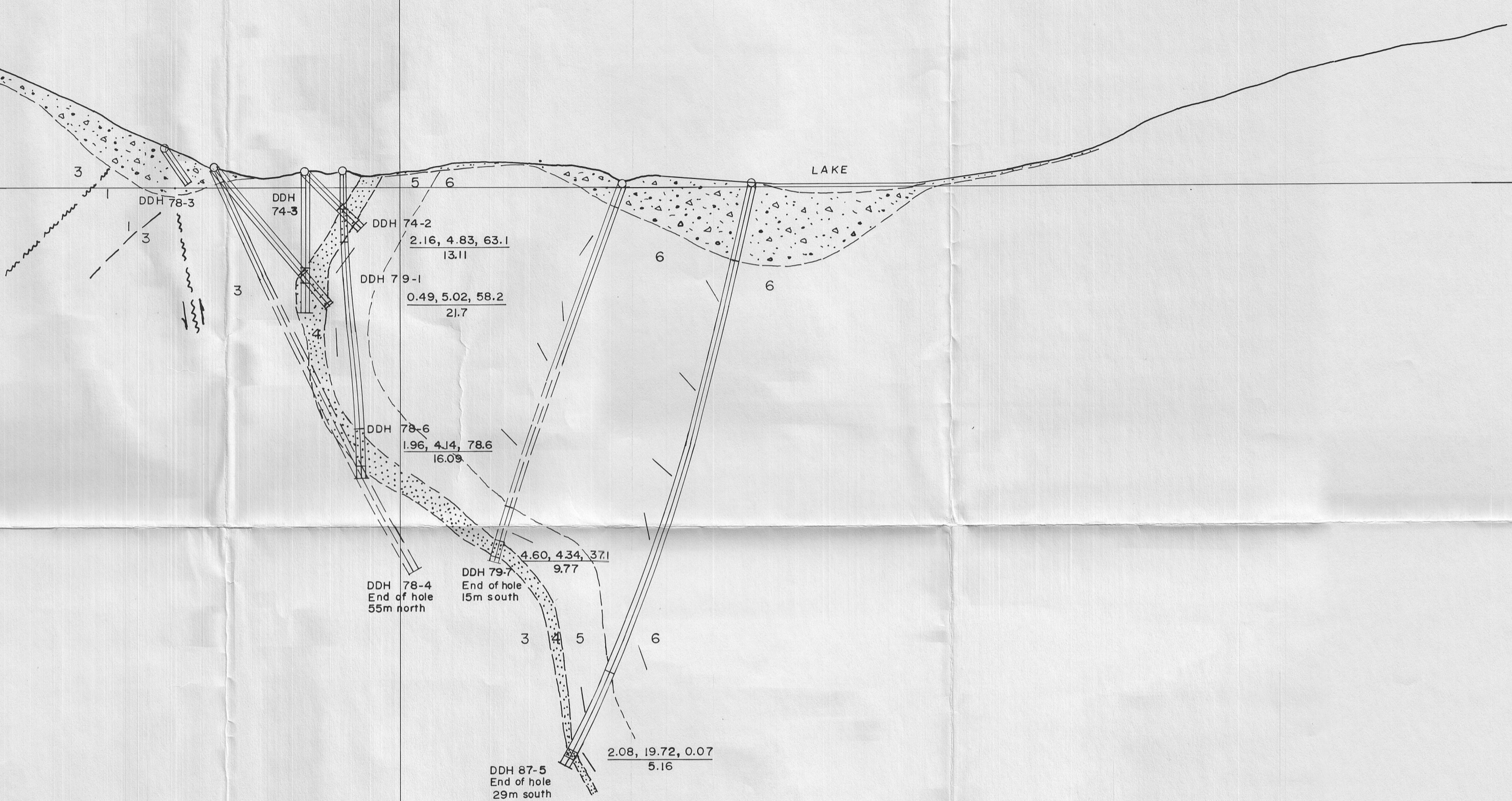
To accompany a report by D.C. Miller dated April 30, 1987

| | |
|--|-------------------------|
| <p>NOVAMIN RESOURCES INC.
TORONTO, ONTARIO</p> | |
| <p>MEL PROJECT
COAL RIVER AREA, Y.T.
SECTION 98+59 N</p> | |
| <p>SCALE: 1: 2500</p> | |
| <p>DRAWN BY: D.C. MILLER</p> | <p>PROJECT NO. 6250</p> |
| <p>DATE: APRIL, 1987</p> | <p>NTS 95D/6</p> |

Baseline 10,000E

900m

LAKE



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, ls.

~~~~~ Fault: defined, approximate.

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

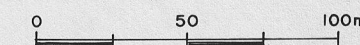
FIG. 8

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

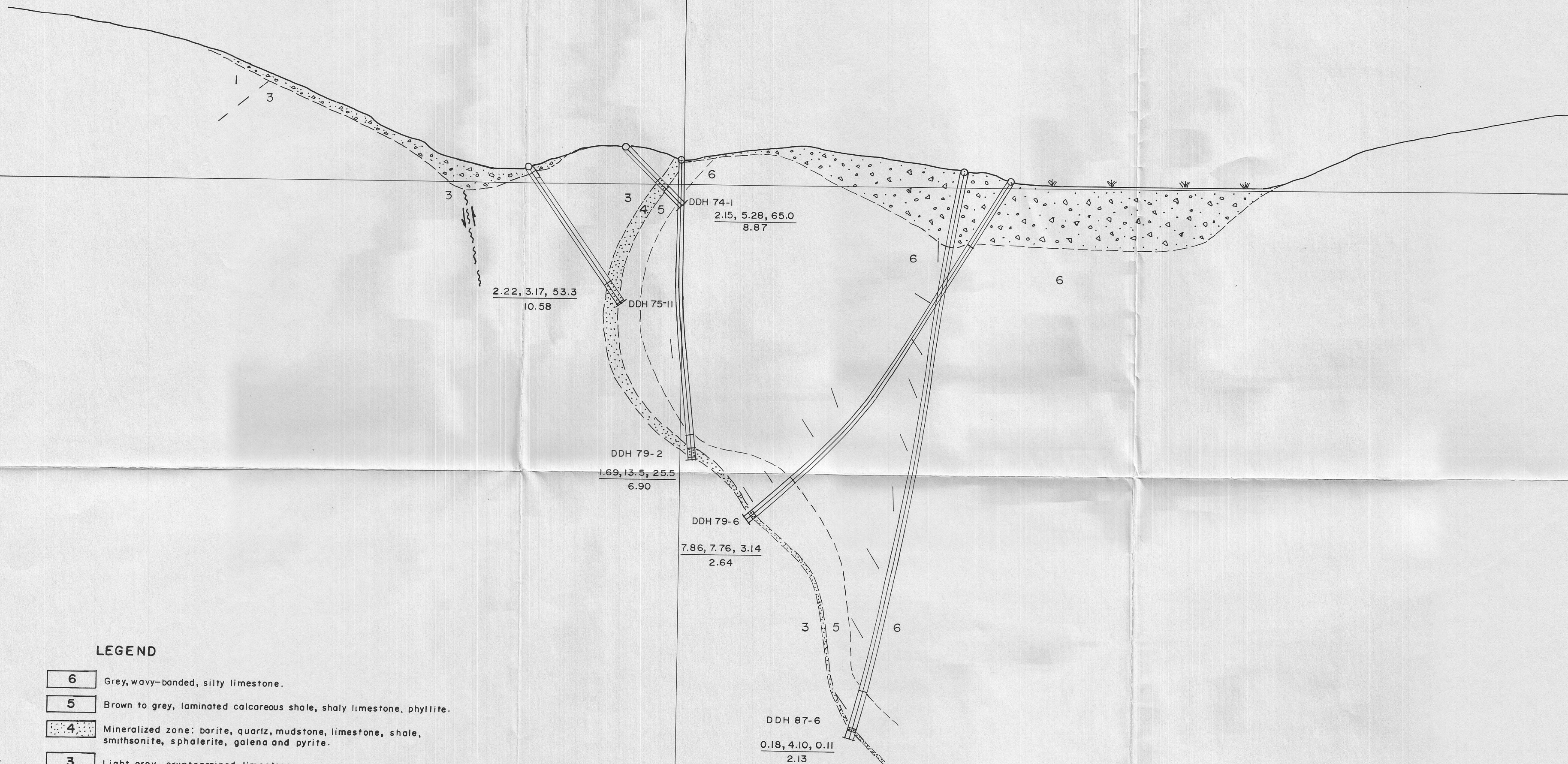
PROJECT NO. 6250

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, cryptograined limestone.
- 2** Buff, dolomitized limestone.
- 1** Medium to dark grey calcareous shale and siltstone, minor limestone, la.

~~~~~ Fault: defined, approximate.

Pb, Zn, BaSO₄
True thickness in metres

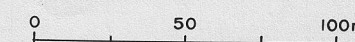
FIG. 9

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

| | | | | | | | | |
|---------------------|--------------------------|-----------------------------|---------------------------------|---------------------|-------|-----|------|---|
| PROPERTY
MEL | NTS 95 D-6, YUKON | AZIMUTH
GRID WEST (273°) | DATE STARTED
FEB. 21, 1987 | CORRECTED DIP TESTS | | | | TESTS LOCATION SKETCH OF HOLE
(SPERRY-SUN B SINGLE SHOT) |
| PROJECT
G250 | SECTION 94N | DIP
-50° | DATE COMPLETED
FEB. 22, 1987 | 12GM | 46.2' | AZE | 279° | |
| CLAIM NO.
JEAN-1 | CO-ORDINATES
9399.1 N | LENGTH
133.20 M | DRILLED BY
D.J. PRALLING LTD | | | | | |
| GRID NO. | 10107.1 E | COLLAR ELEV.
905.4 | LOGGED BY
D.C. MILLER | | | | | |
| | | | | | | | | |

| METRES | | SECTION | B Q CORE DESCRIPTION | ASSAYS | | | |
|--------|-------|---------|--|------------|------|----|--------|
| FROM | TO | | | SAMPLE NO. | FROM | TO | LENGTH |
| | | | OBJECTIVES:- TEST WEAK GRAVITY - IP ANOMALIES SOUTH OF MAIN ZONE. | | | | |
| 0 | 42.67 | | Casing, no core; overburden mostly silty fill with few large boulders. | | | | |
| 42.67 | 78.00 | | WAXY BANDED LIMESTONE:
Light to dark grey; comprises alternating light and dark grey bands ranging from a few mm to over 1cm in width; banding - 50° @ 45.60, 35° @ 49.00, 15° @ 55.0, 20° @ 58.5; generally good core. | | | | |
| | | | (51.40 - 51.50) - broken with some clay. | | | | |
| | | | (53.04 - 53.60) - minor light brown clay filling low angle 15° open fracture. | | | | |
| | | | (55.00 - 55.50) - Bedding plane fault @ 15° filled with thin (1mm) brown clay. | | | | |
| | | | (42.67 - 44.81) - core recovery - 90%. | | | | |
| | | | (44.81 - 50.90) - " " - 95%. | | | | |
| | | | (50.90 - 55.17) - " " - 40%. | | | | |
| | | | DRILLERS REPORT CORE LOSS AT 53.04 M | | | | |
| | | | (55.17 - 78.00) - 99% core recovery. | | | | |
| | | | (42.98 - 58.52) - Average about 1 fracture per 15cm, mainly tight and parallel to banding. | | | | |
| | | | (58.52 - 72.75) - Average about 1 fracture per 30cm, mainly tight and parallel to banding. | | | | |
| | | | Banding: 25° @ 60.0, 20° @ 69.0, 5° @ 72.0
36° @ 74.0, 25° @ 78.0 | | | | |

| | | | | | | | |
|-----------------------|--------------------------------|-----------------------------|---------------------------------|---------------------|-------|--|-------------------------|
| PROPERTY
MEL | TP OR AREA
NTS 95D-6, YUKON | AZIMUTH
GRID WEST (273°) | DATE STARTED
FEB. 23, 1987 | CORRECTED DIP TESTS | | | LOCATION SKETCH OF HOLE |
| PROJECT
6250 | LOT & CONC.
SECTION 90 N | DIP
-60° | DATE COMPLETED
FEB 23, 1987 | No | Tests | | |
| CLAIM NO.
JEAN 19 | CO-ORDINATES.
89 43.0 N | LENGTH
38.71 m | DRILLED BY
D.J. DRILLING LTD | | | | |
| GRID NO.
10045.4 E | | COLLAR ELEV.
900.2 | LOGGED BY
D.C. MILLER | | | | |

| METRES | | SECTION | DESCRIPTION | ASSAYS | | | |
|--------|-------|---------|---|------------|------|----|--------|
| FROM | TO | | | SAMPLE NO. | FROM | TO | LENGTH |
| | | | B. Q CORE | | | | |
| 0 | 6.10 | | OBJECTIVES:- Test south of Mel Deposit.
Casing, no core; overburden mostly silty fill. | | | | |
| 6.10 | 23.77 | | <u>CALCAREOUS SHALE</u>
Light to dark gray with alternating lighter and darker bands; bedding tends to be finely laminated, however beds are locally up to 3 cm thick; occasional calcite quartz vein mainly less than 5mm thick cross-cutting bedding; generally fair core with about 90% recovery; includes some wavy banded limestone.
(6.10 - 9.00) - 35-40° banding, bowditch structure well developed (wavy banded limestone).
(9.00 - 9.15) - Quartz-calcite vein, broken at contacts.
(9.15 - 14.02) - Finely laminated with many core breaks, core pieces average 5cm; core breaks along bedding planes @ 0-70°; soft, broken pitted core at (11.53 - 12.70).
(14.02 - 23.77) - Similar to preceding; bedding 0-25° @ (14.02 - 17.30) and 45-70° @ (17.30 - 23.77); good core in pieces to 45cm; broken core at (15.70 - 15.90), (19.10 - 19.50) and (21.45 - 21.64); crushed core at (21.93 - 23.77) with 20% core recovery (otherwise 95% core recovery). | | | | |

| | | | | | | |
|---------------------|---------------------------------|-----------------------------|--------------------------------|---------------------|--------|---------|
| PROPERTY
MEL | TP OR AREA
NTS 95D-6, YUKONE | AZIMUTH
273° (GRID WEST) | DATE STARTED
FEB. 24, 1987 | CORRECTED DIP TESTS | | |
| PROJECT
6250 | LOT & CONC.
SECTION 9B+9N | DIP
-76° | DATE COMPLETED
MAR. 3, 1987 | DEPTH | DIP | AZIMUTH |
| CLAIM NO.
JEAN 4 | CO-ORDINATES.
9861.1 N | LENGTH
515.72 | DRILLED BY
D.J. DRILLING | 180M | -76° | 282° |
| GRID NO. | 10287.2 E | COLLAR ELEV.
902.2 | LOGGED BY
D.C. MILLER | 350M | -72.2° | 275° |
| | | | | 504M | -70.0° | 279° |

LOCATION SKETCH OF HOLE

TESTS:
(SPERRY SUN-CORRECTED 30°)
FOR DECLINATION

| METRES | | SECTION | B.Q. CORE DESCRIPTION | ASSAYS | | | |
|--------|--------|---------|--|------------|------|----|--------|
| FROM | TO | | | SAMPLE NO. | FROM | TO | LENGTH |
| 0 | 6.10 | | OBJECTIVES:- TEST MEL DEPOSIT AT DEPTH.
Casing - no core. | | | | |
| 6.10 | 212.45 | | <p><u>WAVY BANDED LIMESTONE</u>
 Light and dark gray alternating bands with bedding 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.
 (6.10 - 16.15) - pale brown colored because of surface oxidation; 0-70° banding broken core, 97% recovery.
 (15.90 - 16.50) - massive; good core.
 (16.50 - 20.90) - 10-40° banding, good core, 99% recovery.
 (20.90 - 23.00) - pale brown, broken, 90% recovery.
 (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.
 (25.50 - 26.50) - nearly massive, good core.
 (26.50 - 30.00) - occasional white quartz-calcite vein to 3 cm cross-cutting bedding.
 (26.50 - 28.50) - 25° banding, minor oxidation, good core.
 (28.50 - 36.40) - oxidized, broken, leached core in pieces 1cm to 20cm, about 90% core recovery; 30° banding.
 (36.40 - 49.90) - mostly unoxidized with 30-40° banding; broken @ (43.50 - 43.60) 95% core recovery.</p> | | | | |

| METRES | | SECTION | DESCRIPTION | ASSAYS | | | |
|--------|--------|---------|---|------------|------|----|--------|
| FROM | TO | | | SAMPLE NO. | FROM | TO | LENGTH |
| CONT'D | | | <u>WAVY BANDED LIMESTONE (CONT'D)</u> | | | | |
| 6.10 | 712.45 | | (49.90 - 51.10) - Nearly massive, good core. | | | | |
| | | | (51.10 - 54.00) - Banded @ 30-45°, good core. | | | | |
| | | | (54.00 - 54.90) - White quartz-calcite vein @ 0-15° | | | | |
| | | | (54.90 - 56.20) - Banded at 0-35°, broken core. | | | | |
| | | | (56.20 - 58.10) - White quartz-calcite vein @ 0-15°. | | | | |
| | | | (58.10 - 59.70) - wavy banded at 0-30°, good core. | | | | |
| | | | 59.55 - 1cm of fine grained pyrite. | | | | |
| | | | (59.70 - 60.50) - 50% white quartz-calcite veining @ 0-45°. | | | | |
| | | | (60.50 - 61.26) - Badly broken core, oxidized vein zone about 30% recovery. | | | | |
| | | | (61.26 - 67.90) - 15% quartz-calcite veining with veins @ 0-90°, minor brown discoloration; good core. | | | | |
| | | | (67.90 - 71.80) - unaltered, wavy banded @ 15-40° excellent core in pieces to 110cm. | | | | |
| | | | (71.90 - 80.80) - slightly brownish colored with 5% white quartz-calcite veining to 2cm thick; good core but broken @ (73.10-73.46), (74.70-75.20), (76.40-76.50), (77.40-78.30) - 95% core recovery; 25-50° banding. | | | | |
| | | | (80.80 - 84.00) - more intensely altered with 10% brown patches of siderite? and 10% quartz calcite veins to 10cm thick, some semi-open vuggy fractures, good core 99% recovery. | | | | |
| | | | (84.00 - 100.50) - unaltered, banded @ 55-70°, fair core, broken @ (93.00-100.50) with core breaks parallel to banding and 2cm-10cm pieces; core recovery (84.00-96.93) - 95%, (96.33-100.50) - 90%. | | | | |

| METRES | | SECTION | DESCRIPTION | ASSAYS | | | |
|--------|--------|---------|--|------------|------|----|--------|
| FROM | TO | | | SAMPLE NO. | FROM | TO | LENGTH |
| 6.10 | 212.45 | | <p><u>WAVY BANDED LIMESTONE</u> (Cont'd)</p> <p>(164.70 - 212.45) Similar to preceding, occasional quartz-calcite vein to 20 cm; banding mainly @ 45-60°, but @ 0-60° @ 164.70 (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 - 90°; fold axis axes @ 192.3, 192.70 & 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 are 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>
 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.
 (278.89 - 279.00) Brecciated with minor soft grey clay.</p> <p>Broken core @ (279.40 - 279.50), (279.73 - 280.30), (281.10 - 281.35), (286.90 - 287.00) & (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>
 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>
 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 | SAMPLE NO. | FROM | TO | LENGTH | ASSAYS | | | |
|--------|--------|---------|--|------------|--------|--------|--------|---------|------|---------|--------|
| FROM | TO | | | | | | | PERCENT | | | |
| | | | | | | | | ZINC | LEAD | BARITUM | BARITE |
| 433.00 | 452.50 | | <p><u>CALCAREOUS SHALE</u> volume ratio of
 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 @ 30-25°; banded bedding structure weakening; partings parallel to banding increasing to 1 per 10 cm locally; 99% recovery; 2% calcite-quartz veins to 10cm thick.
 (448.50 - 452.50) Banding @ 0-15°, light grey bands increasing.</p> | | | | | | | | |
| 452.50 | 457.00 | | <p><u>WAVY-BANDED LIMESTONE</u>
 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 blebs; 2% quartz calcite veins to 4cm.</p> | | | | | | | | |
| 457.00 | 463.15 | | <p><u>CALCAREOUS SHALE</u> alternating
 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>
 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.
 466.40 = bedding plane fault @ 20° with 1 cm clay gouge.
 (474.70 - 476.20) - Bedding structure with ratio of dark to light bands 1:2.
 (476.20 - 489.60) - Becomes increasingly more finely laminated; dark to ^{light} 2:1.
 (488.60 - 489.60) - Became 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 | 0.45 | |

| METRES | | SECTION | DESCRIPTION | SAMPLE NO. | FROM | TO | LENGTH | ASSAYS | | | |
|--------|--------|---------|--|------------|--------|--------|--------|---------|------|--------|--------|
| FROM | TO | | | | | | | PERCENT | | | |
| | | | | | | | | ZINC | LEAD | BARIUM | BARITE |
| 489.60 | 496.92 | | <p><u>MINERALIZED CALCAREOUS SHALE</u>
 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 2.0% with about 1% galena.</p> <p>(2) Barite and barite quartz veins containing minor heavy 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 | 492.95 | 495.00 | 2.05 | 2.20 | 0.21 | 19.39 | 32.95 |
| | | | | 42855 | 495.00 | 496.92 | 1.92 | 2.90 | 0.35 | 14.83 | 25.20 |

| METRES | | SECTION | DESCRIPTION | | | | | ASSAYS | | | | |
|--------|--------|---------|---|------------|--------|--------|--------|---------|--------|--------|-------|--|
| FROM | TO | | | SAMPLE NO. | FROM | TO | LENGTH | PERCENT | | | | |
| | | | | | | | ZINC | LEAD | BARIUM | BARITE | | |
| 496.92 | 498.30 | | <u>MINERALIZED SLICK ZONE</u>
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 blots to 1cm with lesser amounts of galena and pyrite; sphalerite ranges from honey colored to brown; excellent case, 99% recovery. | 42856 | 496.92 | 498.30 | 1.38 | 0.68 | 0.02 | 15.75 | 26.77 | |
| 498.30 | 499.60 | | <u>BARITE</u>
white to grey, coarse grained, minor sphalerite near contacts, excellent case 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 | 70.63 | 35.06 | |
| 499.60 | 509.93 | | <u>MAIN MINERALIZED ZONE</u>
consists of masses and individual blots of brown and honey colored sphalerite in a matrix of barite, mudstone and quartz; excellent case 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).
(499.60 - 501.60) - approximately 25% sphalerite, 10% barite
(501.60 - 503.60) - " " 5% " " 70% "
(503.60 - 505.60) - " " 12% " " " "
(505.60 - 507.20) - " " 12% " " " "
(507.20 - 508.00) " " Trace " " 90% "
(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 | 39.92 | 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>
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 | |

| | | | | | | |
|----------------------------|--|-----------------------------------|--|---------------------|---------------|--------------|
| PROPERTY
<u>MEL</u> | TP OR AREA
<u>N.T.S. 95D-6, YUKON</u> | AZIMUTH
<u>273° (610 WEST)</u> | DATE STARTED
<u>MAR. 4/87</u> | CORRECTED DIP TESTS | | |
| PROJECT
<u>6250</u> | LOT & CONC.
<u>SECTION 100+06N</u> | DIP
<u>-77°</u> | DATE COMPLETED
<u>MAR. 10/87</u> | DEPTH | DIP | AZIMUTH |
| CLAIM NO.
<u>JEAN 4</u> | CO-ORDINATES
<u>10,006.1 N</u> | LENGTH
<u>399.59</u> | DRILLED BY
<u>D.J. DRILLING LTD</u> | <u>152</u> | <u>-75.8°</u> | <u>257°</u> |
| GRID NO. | <u>10,227.9 E</u> | COLLAR ELEV.
<u>902.5</u> | LOGGED BY
<u>DC MILLER</u> | <u>300</u> | <u>-67.2°</u> | <u>258°</u> |
| | | | | <u>396</u> | <u>-63°</u> | <u>258½°</u> |

LOCATION SKETCH OF HOLE
TESTS:
(SPERRY-SUM B SINGLE SHOT
CORRECTED 30° FOR MAGNETIC
DECLINATION.)

| METRES | | SECTION | DESCRIPTION | ASSAYS | | | |
|--------|----|---------|-------------|------------|------|----|--------|
| FROM | TO | | | SAMPLE NO. | FROM | TO | LENGTH |

| FROM | TO | SECTION | DESCRIPTION | SAMPLE NO. | FROM | TO | LENGTH |
|-------|--------|---------|---|------------|------|----|--------|
| | | | BQ CORE | | | | |
| | | | OBJECTIVES:- TEST MEL DEPOSIT AT DEPTH | | | | |
| | | | overburden | | | | |
| 0 | 51.82 | | casing, no core; mostly silty till with few large boulders. | | | | |
| 51.82 | 331.80 | | <u>WAVY Banded LIMESTONE</u> | | | | |
| | | | (51.82 - 75.80) - Light and dark grey alternating bands; light bands average 1cm or more in width and dark bands average less than 5mm; dark bands are anastomosing and may enclose light bands creating boudinage structure; occasional light bands range up to 25cm in width; rare slab or veinlet of fine grained pyrite associated with calcite; about 5% white calcite and calcite-quartz veinlets ranging from less than 1mm to 2cm at various angles; also some parallel 1mm discontinuous calcite veinlets cutting darker bands at nearly right angles causing a striped texture; core tends to be blocky and breaks into pieces generally less than 10cm; core recovery mainly 90-95%. | | | | |
| | | | (63.70 - 64.62) Broken, ground core 20% recovery | | | | |
| | | | Banding: (52.40 - 67.00) 30-40° | | | | |
| | | | (67.00 - 75.80) 50-70° | | | | |
| | | | (75.80 - 97.20) - similar to preceding; banding 40-45° @ (76.80 - 80.50), 60-80° @ (80.50 - 94.00) 50-65° @ (94.00 - 97.20); local strong boudinage structure; blocky & broken core; breaks average 10cm; 95% recovery; Fold axis or drag fold @ 93.50°. | | | | |

| METRES | | SECTION | DESCRIPTION | ASSAYS | | | |
|--------|----|---------|--|------------|------|----|--------|
| FROM | TO | | | SAMPLE NO. | FROM | TO | LENGTH |
| | | | <p><u>WAVY BANDED LIMESTONE, CONID</u>
 (97.20 - 119.50) similar to preceding; banding
 75-50° @ (97.20 - 99.00), 25-30° @ (99.00 - 102.00)
 40-70° @ (102.00 - 113.00), 60° @ (113.00 - 119.40).</p> <p>siliceous, pyritic limestone @ (111.90 - 112.05);
 generally fair core with 95% recovery;
 broken core @ (97.60 - 98.76) with 30% recovery;
 also at (107.63 - 107.80) and (112.20 - 119.50), but with 90% recovery;
 core breaks along bedding plane partings;
 core ranges from pieces up to 40cm
 to finely crushed pieces in broken areas.</p> | | | | |
| | | | <p>(119.50 - 133.20) similar to preceding; banding
 ranges from 50-70° and averages 65°; fair
 core in pieces averaging 5cm; breaks
 along smooth partings parallel to banding;
 broken @ (121.40 - 121.70) & (122.90 - 123.30);
 occasional thicker light colored bed to 15cm
 thick; light colored bands average more
 than 2cm thick with weak bedding
 structure; rare blob of fine pyrite associated
 with calcite; 5% white calcite - quartz
 veining mainly as fine 1-2 mm veinlets
 at various angles, but some larger veins
 ranging up to 10cm; core recovery 95%.</p> | | | | |
| | | | <p>(133.20 - 155.00) similar to preceding but light bands
 are now thinner averaging 1cm;
 banding ranges from 30 to 10° and
 averages 65°; minor fine pyrite associated
 with calcite blobs up to 1cm in size;
 5% quartz calcite - quartz veining; fair core
 generally in pieces more than 5cm long
 but broken into smaller pieces @
 (141.20 - 142.95) & (147.40 - 147.60).</p> <p>90% calcite - quartz veining @ (147.60 -
 149.35)
 Several tight folds @ (149.80 - 155.00)
 with some bracciation.</p> | | | | |

| METRES | | SECTION | DESCRIPTION | ASSAYS | | | |
|--------|--------|---------|--|------------|------|----|--------|
| FROM | TO | | | SAMPLE NO. | FROM | TO | LENGTH |
| 51.82 | 331.80 | | <p><u>WAVY BANDED LIMESTONE CONTD</u></p> <p>(245.10 - 247.47) Light grey bands range up to 2cm with strong bedding structure, dark grey bands range up to 1cm; 40° banding, excellent core, 99% recovery.</p> <p>(247.47 - 260.00) Finer laminations with light grey bands 1cm or less and dark grey bands 1 to 6mm; excellent core, 99% recovery; banding 40° - 30°.</p> <p>calcite-quartz vaining 2% as preceding; coarser bands @ (254.40 - 256.00).</p> <p>(260.00 - 264.00) Relatively coarse bands of light grey and dark grey limestone; light bands up to 3cm, dark bands up to 2cm; uniform banding at 35-45°; excellent core; 99% recovery; 1cm blob pyrite-calcite @ 262.20.</p> <p>(264.00 - 267.31) Coarse light bands to 5cm with very fine dark bands; 45-50° banding, excellent core, 99% recovery.</p> <p>(267.31 - 281.50) Light bands mainly 1cm or less, occasionally up to 10cm; dark bands 1-5mm; excellent core, 99% recovery; uniform 40-50° banding; 2% calcite-quartz vaining; traces of pyrite associated with calcite.</p> <p>(281.50 - 298.50) Sharp increase in percentage and thickness of dark grey bands to 40%; dark grey bands range up to 2cm. as do light grey bands; uniform 40-50° banding; most bands or laminations are only a few mm thick, however; light grey bands becoming thicker and dark grey bands thinner towards 298.50; 2% white calcite-quartz vaining with some striped texture @ (285.00 - 294.00) (several quartz-calcite veinlets 1-2mm long cutting darker bands at right angles).</p> | | | | |

| 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> | | | | | | | | | | | |
| | | | (370.00 - 387.95) 50 - 64° banding | | | | | | | | | | | |
| | | | (359.00 - 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. | | | | | | | | | | | |
| | | | (387.95 - 387.95) Very minor (less than 1/2% galena associated with fine pyrite veining; minor brecciation and silicification. | 42867 | 387.95 | 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 1cm breaking parallel to bedding planes; breaks with smooth talcy surfaces
talcy | | | | | | | | | | | |

L = Less than

| | | | | | | |
|---------------------|--------------------------------|-----------------------|----------------------------------|---------------------|--|-----------------------------------|
| PROPERTY
MEL | TR-OR-AREA
NFS 95D-6 YUKON | AZIMUTH
273° | DATE STARTED
MARCH 10, 1987 | CORRECTED DIP TESTS | | |
| PROJECT
6250 | LOT & CONC.
SECTION 100+87N | DIP
-79 | DATE COMPLETED
MARCH 16, 1987 | DEPTH
140 | DIP
-80 ³ / ₄ | AZIMUTH
304° |
| CLAIM NO.
JEAN 4 | CO-ORDINATES
10089.6 N | LENGTH
448.06 | DRILLED BY
D.J. DRILLING LTD | 305 | -79 | 276° |
| GRID NO. | 10216.3 E | COLLAR ELEV.
912.7 | LOGGED BY
D.C. MILLER | 443 | -74 ³ / ₄ | 264 ¹ / ₂ ° |

LOCATION SKETCH OF HOLE
(TESTS: SPERRY SUN SINGLE SHOT;
MAGNETIC CORRECTION
30°)

| METRES | | SECTION | DESCRIPTION | ASSAYS | | | |
|--------|----|---------|-------------|------------|------|----|--------|
| FROM | TO | | | SAMPLE NO. | FROM | TO | LENGTH |

| FROM | TO | SECTION | DESCRIPTION | SAMPLE NO. | FROM | TO | LENGTH |
|-------|--------|---------|--|------------|------|----|--------|
| 0 | 57.91 | | <p><u>B.Q. CORE</u></p> <p>OBJECTIVES:- TEST MEL DEPOSIT AT DEPTH</p> <p>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 - 74.60); 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 - 89.39) 95% core recovery</p> <p>(65.00 - 73.00) minor fine pyrite, less than 1/10% 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 boudinage 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 @ 109.40, 109.80, 114.70, 115.20, 115.80, 121.20 $\frac{d}{d}$ 122.00. Broken core at (106.00 - 106.20). | | | | |
| | | | (107.90 - 108.40), (110.70 - 111.40), $\frac{d}{d}$ (117.90 - 120.10). | | | | |
| | | | Large light grey bands ranging up to 50cm @ (103.57 - 104.00) and between 114.90 $\frac{d}{d}$ 116.75. Further fold axes at 124.40, 124.70, 129.00, 129.70 and 135.30. | | | | |
| | | | (131.60 - 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 |
| 163.95 | 410.30 | | <p><u>(WAVY BANDED LIMESTONE (CONT'D))</u>
 (144.00 - 163.00) Blocky core in pieces averaging 4cm and breaking along bedding planes; uniform banding at 60-75° except for tight fold at 154.10; minor pyrite; less than 2% fine calcite veins less than 1cm thick at various angles; 95% core recovery.</p> | | | | |
| | | | <p>(163.00 - 171.30) Similar but better core in pieces averaging 15cm; 99% recovery; banding @ 45-50°; rare pyrite associated with calcite nodules to 2cm size.</p> | | | | |
| | | | <p>170.40 - Fold axis with 45° limbs.
 (171.30 - 179.00) Blocky core in pieces averaging about 5cm; banding @ 30-45°; fold axis at 173.60 with 60° limbs; 3% calcite - quartz veining ranging up to 4cm but generally 2mm; 99% core recovery.</p> | | | | |
| | | | <p>(179.00 - 209.40) Now generally excellent core in pieces ranging up to 1m; many breaks cut across bedding planes; rare pyrite associated with calcite veining. 99% recovery.</p> | | | | |
| | | | <p>(185.20 - 187.20) - 20% calcite-quartz veins up to 10cm thick. mainly @ 60°.
 Banding: 50° at (179.00 - 187.00)
 25° at (192.00 - 194.00), 20-15° @ (154.00 - 209.40).</p> | | | | |
| | | | <p>(180.00 - 183.00) occasional light grey band ranging up to 20cm thick.</p> | | | | |
| | | | <p>(187.20 - 202.60) - 1% calcite-quartz veins
 (202.60 - 204.60) - 30% calcite-quartz veins up to 20cm with some brecciation; also brecciation at (207.90 - 208.40).</p> | | | | |

| METRES | | SECTION | DESCRIPTION | ASSAYS | | | |
|--------|--------|---------|--|------------|------|----|--------|
| FROM | TO | | | SAMPLE NO. | FROM | TO | LENGTH |
| 63.95 | 410.30 | | <p><u>WAXY BANDED LIMESTONE CONT'D</u></p> <p>(709.40 - 215.00) - Large light grey bands to 80 cm with very fine dark grey bands (1 mm thick); 2% calcite-quartz veins to 3 cm up to 3 cm thick at various angles; excellent core; 99% recovery; 25-45° banding; rare fine grained pyrite with calcite.</p> <p>(215.00 - 227.00) - Relatively thin light grey bands, mainly less than 1 cm with very fine dark grey bands averaging 1 mm in thickness; rare fine grained pyrite with calcite.</p> <p>Good core in pieces averaging 10 cm; core breaks parallel to banding; 5% calcite-quartz veining up to 10 cm thick; folded at (219.80 - 220.07); banding at 35-55° except near fold where banding ranges from 0 to 70°.</p> <p>(227.00 - 236.30) - Medium sized light grey bands ranging from 1 to 7 cm with strong bedding structure, dark grey bands averaging 3 mm; fairly uniform banding averaging 2.5°; excellent core in pieces to 90 cm; some core breaks across bedding; 2% calcite-quartz-veining to 3 cm thick; rare fine pyrite with calcite nodules to 2 cm. This section the same as (179.00 - 209.40).</p> <p>(236.30 - 248.80) As (215.00 - 227.00) above; banding averages 40°; some folding with fold axes at 238.80 and 239.65; 3% calcite-quartz veining; core breaks along smooth bedding plane slips in pieces averaging 10 cm; broken at (243.20 - 245.60); rare fine pyrite-calcite nodule to 1 cm size.</p> | | | | |

| METRES | | SECTION | DESCRIPTION | ASSAYS | | | |
|--------|--------|---------|--|------------|------|----|--------|
| FROM | TO | | | SAMPLE NO. | FROM | TO | LENGTH |
| 6345 | 410.30 | | <p>WAVY BANDED LIMESTONE (CONT'D)</p> <p>(248.80 - 253.65) - Thicker banding as (227.00 - 236.30) strong bedding structure; excellent core in pieces to 50cm; 25-0° banding; 2% calcite-quartz veining to 2cm thick.</p> <p>(253.65 - 304.00) - Finer banding as (215.00 - 227.00) preceding; fair core in 10cm pieces; banding at 0-65°; 1% calcite-quartz veining to 3cm thick; rare pyrite. Banding: (253.65 - 262.00); 0-15°; (262.00 - 267.00) 25-40°; (267.00 - 278.00) 70-0° with folding at 271.00, and (272.00 - 273.50). Thicker light grey bands to 20cm at (266.80 to 270.70); slightly thicker banding at (268.00 - 273.60); core recovery, 99%.</p> <p>(264.3 - 279.5) - 5% calcite-quartz veining to 4cm.</p> <p>(279.5 - 304.00) - 2% calcite-quartz veining to 2cm.</p> <p>(278.00 - 304.00) - Good core in pieces averaging 20cm; core breaks mainly along bedding planes but there are also some which cut across bedding.</p> <p>(279.5 - 291.5) occasional pyrite-calcite nodules to 1cm size.</p> <p>Banding: 15° - 25° @ (279.00 - 304.00).</p> <p>(304.00 - 306.55) Large light grey bands to 5cm thick, excellent core.</p> <p>306.55 - 320.70) Thicker banding as (227.00 - 236.00), light grey bands average about 1cm thick and range up to 3cm; dark grey bands average about 2mm but range up to 3cm; many fine short discontinuous white calcite veins cut dark bands nearly at right angles locally causing striped appearance; other calcite-quartz veins parallel or cut across bedding; minor fine pyrite is present with calcite veining locally; total about 5% calcite-quartz veining. Banding: (306.55 - 313.00) - 40-35° (313.00 - 320.70) - 30°</p> | | | | |

| METRES | | SECTION | DESCRIPTION | ASSAYS | | | |
|--------|--------|---------|---|------------|------|----|--------|
| FROM | TO | | | SAMPLE NO. | FROM | TO | LENGTH |
| 63.95 | 410.30 | | <p>WAVY BANDED LIMESTONE (CONT'D)</p> <p>(306.55 - 320.70) cont'd.</p> <p>Large quartz - calcite vein @ (314.15 - 314.30) parallel to banding.</p> <p>320.70 - <u>Fract</u> 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; rare ^{rare} 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 - 339.15).</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 - 362.46)</p> | | | | |

| METRES | | SECTION | DESCRIPTION | | | | | ASSAYS | | | |
|--------|--------|---------|--|------------|--------|--------|--------|---------|---------|--------|------|
| FROM | TO | | | SAMPLE NO. | FROM | TO | LENGTH | PERCENT | | | |
| | | | | | | | ZINC | LEAD | BARIIUM | BARITE | |
| 439.30 | 439.80 | | <u>MINERALIZED CALCAREOUS SHALE</u>
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 1mm 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>
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. | 42874 | 439.80 | 440.40 | 0.60 | 8.65 | 0.14 | 0.06 | 0.10 |
| | | | | 42875 | 440.40 | 441.70 | 1.30 | 0.20 | 0.02 | 0.05 | 0.08 |
| | | | | Average | 439.30 | 440.40 | 1.10 | 8.72 | 0.38 | 0.08 | 0.14 |
| | | | (441.65 - 441.70) Fault with 2cm of gouge followed by 5cm of fractured, leached, pitted silicified limestone with 2% pyrite mineralization. | Average | 439.30 | 441.70 | 2.40 | 4.10 | 0.18 | 0.07 | 0.11 |
| 441.70 | 444.06 | | <u>CRYPTOGRAINED LIMESTONE</u>
light grey 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. | | | | | | | | |
| | | | (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 10% pyrite as fine discontinuous veins and disseminated grains. | 42876 | 441.70 | 443.00 | 1.30 | 0.12 | 0.04 | 0.12 | 0.20 |
| | | | | 42877 | 443.00 | 444.45 | 1.45 | 0.11 | 0.01 | 0.10 | 0.17 |

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

LOCATION SKETCH OF HOLE
(TEST: SPERRY SUM SINGLE SHOT
CORRECTED 30°)

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

| METRES | | SECTION | DESCRIPTION | ASSAYS | | | |
|--------|--------|---------|--|------------|------|----|--------|
| FROM | TO | | | SAMPLE NO. | FROM | TO | LENGTH |
| 9.14 | 353.50 | | <u>WAVY BANDED LIMESTONE CONT'D</u> | | | | |
| | | | (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 bowdinite 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 bowdinite 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 1/4 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 bowdinite structure; occasional fine pyrite-calcite veins and nodules (less than 1cm); occasional larger calcite-quartz vein to 3cm thick; both cutting and parallel to banding. | | | | |
| | | | Blocky and broken core at (224.30 - 225.60), (229.20 - 229.92), (232.50 - 232.87), & (234.30 - 235.70). | | | | |
| | | | Drillers 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 bands. | | | | |
| | | | (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 (362.00 - 364.20) associated with 10° fractures and brecciation. | | | | |
| | | | Bandings 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 blots to 1.5mm 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 | SAMPLE NO. | FROM | TO | LENGTH | ASSAYS | | | |
|--------|--------|---------|--|------------|--------|--------|--------|---------|------|-------|--------|
| FROM | TO | | | | | | | PERCENT | | | |
| | | | | | | | | ZINC | LEAD | BARUM | BARITE |
| 353.50 | 406.5 | | <u>CALcareous SLIcke CONTD</u> | | | | | | | | |
| | | | (387.80 - 390.00) Recrystallized with minor silicification; contains minor brown and honey colored sphalerite (less 1%) associated with pyrite; sulphide grains are smaller than 3 mm; 90% core recovery. | 42878 | 387.80 | 390.00 | 1.20 | 0.05 | 0.03 | 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°; approx-imately 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 |

