MAP NO.:			
105 O 1	ASSESSMENT REPORT	X	DOCUMENT NO: 092924
	PROSPECTUS		MINING DISTRICT: Mayo
	CONFIDENTIAL	X	TYPE OF WORK: Diamond Drilling
	OPEN FILE		

REPORT FILED UNDER: Cominco Exploration Ltd.

DATE PERFORMED: May to September 1990 **DATE FILED:** January 1991

LOCATION: **LAT.:** 63°11'N **AREA:** Macmillan Pass

LONG.: 130°21'W **VALUE $:** 42,070.00

CLAIM NAME & NO.: NIDD Group (593 claims)

WORK DONE BY: D. Rhodes

WORK DONE FOR: Cominco Exploration Ltd.

DATE TO GOOD STANDING:

REMARKS: Minfile #1050-24
The 1990 program consisted of drilling six holes totalling 1352.3 metres. Three holes tested geological or geochemical targets in the Boundary creek area while others tested zinc anomalies in the Eleven Creek area. Recommendations included continuing drilling in the Boundary Creek hydrothermal system.

COMINCO LTD.

EXPLORATION

WESTERN DISTRICT

NTS 105-O-1

1990 ASSESSMENT REPORT - DRILLING

NIDD PROPERTY

MAYO MINING DISTRICT

YUKON TERRITORY

092924

LATITUDE: 63°11'N

LONGITUDE: 130°21'W

CLAIMS 100% OWNED BY COMINCO LTD.

OPERATOR: COMINCO LTD.

JANUARY, 1991

D. RHODES
SENIOR GEOLOGIST

ASSESSMENT REPORT - 1990
NIDD PROPERTY

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COMINCO LTD.EXPLORATION
NTS. 105-1

WESTERN DISTRICT
JANUARY 1990

ASSESSMENT REPORT - 1990

NIDD PROPERTY

1. SUMMARY

The 1990 program consisted of drilling six holes totalling 1352.3 metres. Four of these holes are reported on herein for assessment credits. These holes include NB 90-15 (161.0m.), NB 90-16 (256.0m.), NB 90-17 (236.3m.), and NB 90-18 (207.0m.). The first three of these holes tested geological and/or geochemical targets in the Boundary Creek area while NB 90-18 tested a zinc anomaly in the Eleven Creek area, about 6 kilometres west of Boundary Creek.

Of the Boundary Creek holes, two (NB 90-15 and 17) tested targets east of Boundary Creek and further east than any previous holes in the Boundary Creek area. NB 90-15, drilled to test a high, zinc, soil geochemistry anomaly, collared in, and was entirely drilled within unaltered and unmineralized, carbonaceous and calcareous mudstones of Unit R5M in the Upper Road River Group.

Hole NB 90-17, drilled to test the favourable geological contact and a gossanous area on the Boundary Creek road, collared in Tom Member carbonaceous mudstones and drilled through them into sand striped mudstones and then chert pebble conglomerates of the Macmillan Pass Member. The hole then passed through a fault zone into unaltered,carbonaceous and calcareous mudstones of Upper Road River Group (Unit R5M) that contained a few volcanic tuff beds. Barring 0.3 metres of abundant pyrite laminations just above the Tom/Macmillan Pass Member contact, the hole showed no mineralization or alteration.

NB 90-16 was drilled 150 metres east along strike of NB 82-1 which had encountered extensive, low grade, mineralization in several chert pebble conglomerate units. The hole was also drilled beneath a 2000 ppm. zinc, soil geochemical, anomaly that extended eastward from the area of NB 82-1. The hole was drilled for logistical reasons at an azimuth of 030 , directly opposite to the azimuth of NB 82-1. The hole collared in a thick, sideritic agglomerate that is believed to be correlateable with a similar unit at the base of NB 82-1. It then drilled through a thick sequence of tuffaceous mudstones, siderite impregnated mudstones and tuffs before encountering calcareous mudstones of Unit R5M of the Upper Road River Group. Toward the base of the hole and above the Road River Group lithologies, a distinctive, tuffaceous mudstone unit contains abundant pyrite, distributed as seemingly clastic grains, within strongly cross-bedded, scour and channel structures. This same texture is encountered toward the top of NB 82-1 and is thought to be a good stratigraphic marker. The agglomerate at the top and the pyritic scour unit at the base of the hole are believed to indicate that NB 90-16 traversed the same stratigraphic interval as NB 82-

1. Drastic lithofacies variations are indicated by the complete absence of chert pebble conglomerate, grit, and sand striped mudstones in NB 90-16, that were encountered by NB 82-1. The absence of the conglomerate and grit units that host nearly all the sphalerite mineralization in NB 82-1 results in NB 90-16 only having a few short (1-2 metre) intervals of sphalerite veined mudstones. The sediments and volcanics in NB 90-16 show strong siderite alteration and impregnation suggesting that the hole is still within the Boundary Creek hydrothermal system.

Hole NB 90-18 was drilled at Eleven Creek to test a very strong, zinc, soil geochemical, anomaly (maximum value 18,240 ppm.). This anomaly lies at or just down slope from the favourable Tom horizon (just above the Macmillan Pass Member chert pebble conglomerate) as projected from surface mapping. Mineralized chert pebble conglomerate and sideritic volcanic float, in the vicinity of the anomaly, further enhance the target's potential. The hole was drilled upslope beneath the zinc soil anomaly and intended to test its upslope cut off. The hole encountered a thick sequence of highly sheared, soft, micaceous mudstones interpreted to be Itsi Member - the Upper unit of the Portrait Lake Formation. Following the Itsi mudstones, the drill cored equally sheared,blacker, more carbonaceous and pyritic mudstones thought to be Tom Member. The highly sheared, clayey, character of the core resulted in the hole squeezing in.The hole was abandoned even though surface and core geology suggested it might be approaching the favourable Macmillan Pass/Tom Member contact.

It is concluded from the 1990 holes documented herein that:

i) The eastern areas of Boundary Creek show no evidence of alteration or significant mineralization and are probably beyond the influence of the Boundary Creek hydrothermal system.

ii) NB 90-16 drilled the same stratigraphy as NB 82-1,however, the complete absence of chert pebble conglomerates suggest that these conglomerates are laterally confined, channel or graben -fill features. The hole provides further evidence for drastic syndepositional tectonism and lateral facies variations at Boundary Creek.

iii) A major, regional fault was drilled by NB 90-18 that brings Itsi Member in contact with Tom Member. The geology and geochemistry are still supportive of the favourable horizon being upslope and potentially mineralized.

It is recommended that:

i) Drilling be continued at Boundary Creek to probe and map out mineralization associated with the extensive hydrothermal system.

ii) A second hole be drilled at Eleven Creek, higher upslope, and

drilled in the opposite direction to avoid the fault and test the favourable geological contact and associated geochemical anomaly.

2. LOCATION AND ACCESS

The Nidd property is located within the Mayo Mining District, Yukon Territory, approximately 390 km. northeast of Whitehorse. Access to the property is by the North Canol Road to Macmillan Pass and then on to a secondary road that crosses the Jason property and was extended by Cominco to the Boundary Creek camp, in the centre of the property. The Macmillan Pass airstrip, 24 km. west of the Boundary Creek base camp, is the closest fixed wing access. Access to the Eleven Creek area, six kilometres west of Boundary Creek, was by helicopter.

3. TENURE

The Nidd property comprises 593 contiguous claims, 100% owned by Cominco Ltd. The drilling in 1990 allowed the addition of four years' assessment credit to 525 claims. With the exception of 67 units on the western edge of the property, all of the claims are in good standing until at least the year 2000, with many in good standing until at least the year 2004. The 67 claims on the western edge of the property are in good standing until 1994.

4. HISTORY

The Nidd property was staked, between 1976 and 1981, to cover the westerly strike extension of the stratigraphy which hosts the nearby Tom and Jason lead-zinc-silver deposits. Since 1976 numerous development programs have been carried out. These programs have included some or all of the following: geology, soil and rock geochemistry, geophysics, diamond drilling, road building and trenching. Since 1982 detailed work has focussed on a mineralized area at about the midpoint of the claim group at Boundary Creek.

5. 1990 WORK

A. Objectives

The objectives of the 1990 work were to:

i) Test a number of geological and/or geochemical targets in the Boundary Creek area.

ii) Provide an initial drill test of a zinc soil geochemical anomaly at Eleven Creek that is coincident with favourable host rocks and scattered mineralized float.

B. Drilling

Six holes totalling 1352.3 metres were drilled in 1990. Four of

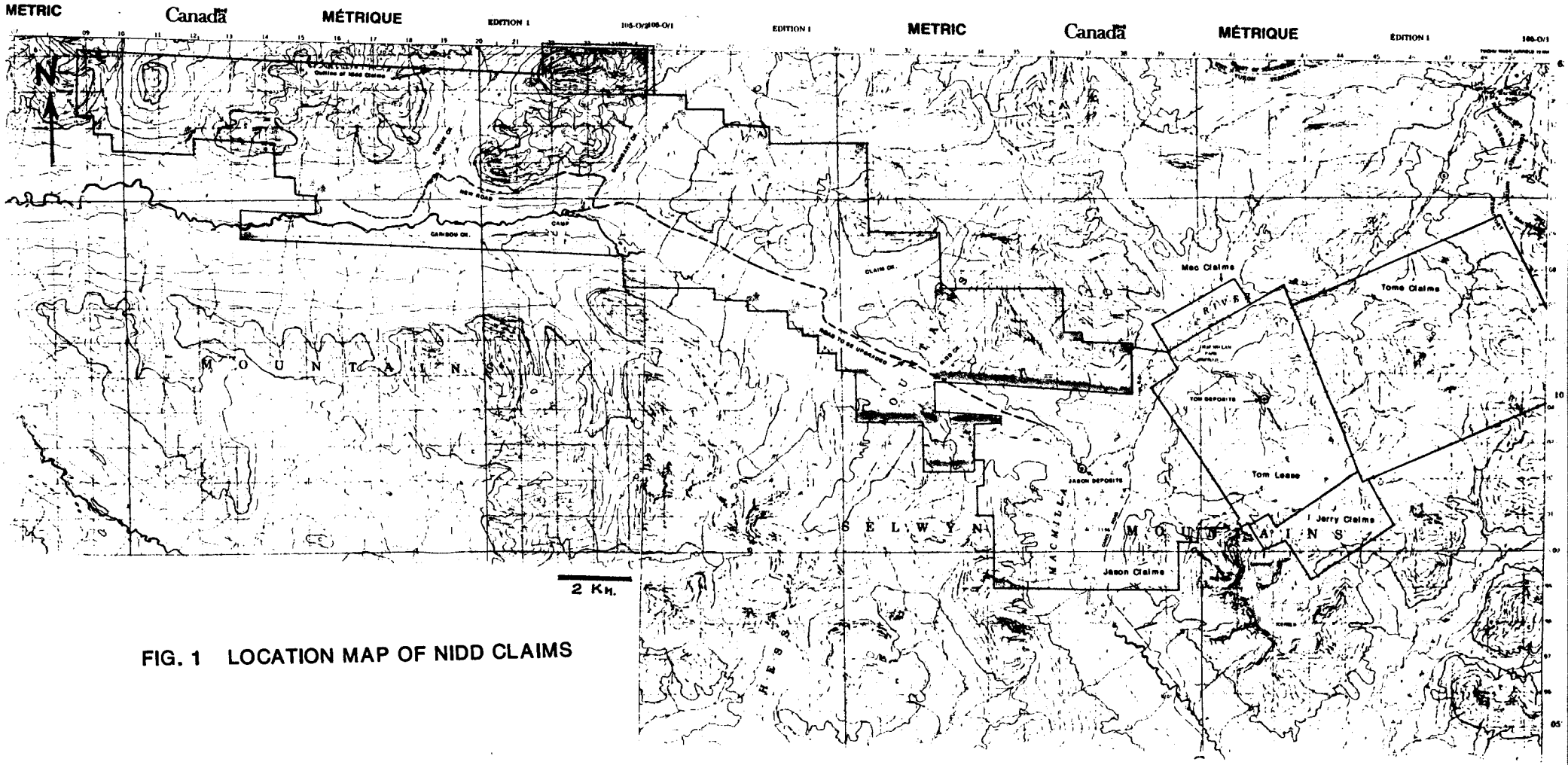


FIG. 1 LOCATION MAP OF NIDD CLAIMS

these holes totalling 860.3 metres are reported on in this report. The drilling, contracted to Connors Drilling Ltd., commenced June 17 and was completed by July 23. The four holes discussed here (NB90-15,16,17 and 18) were drilled between June 17 and July 9. The holes were all drilled with HQ rods by a Boyles 37A. Holes NB 90-15,16 and 17 were drilled with a Nodwell mounted drill rig using cat-constructed road access. Hole NB 90-18 was drilled using a helicopter supported Boyles 37A flown on to the site. The helicopter used was a TransNorth Air 206B. Recoveries in all of the holes were excellent barring some core loss in NB 90-18 due to the extensively sheared and faulted ground.

6. DRILL HOLE GEOLOGY

The appended drill logs and sections describe the geology in some detail. The geology of each hole is briefly discussed below:

NB 90-15

This hole is located at 24+00 East at 0+00 on the baseline using cut grid coordinates. The hole was drilled at a 020 azimuth and a -50 dip. The hole was drilled to test beneath a zinc, soil geochemical, anomaly located close to the projected surface trend of the Macmillan Pass Member.

The hole collared in black, carbonaceous, calcareous mudstones of Unit R5M of the Upper Road River Group and continued in this lithology to the end of the hole. In the top ten metres of the hole pyritic, tuffaceous beds were encountered. Apart from these pyritic beds, no mineralization was encountered in the hole and no apparent source for the geochemical anomaly was located. The calcareous mudstones showed no alteration or mineralization. This is unlike the same lithology in the footwall of the hydrothermal system at Boundary Creek and the Jason End Zone, where this unit is extensively silicified, impregnated by fine siderite crystals and stockworked with quartz, iron carbonate and variable amounts of pyrite, sphalerite and galena in fine veinlets. The lack of alteration, in this lithology, is thought to indicate that the hole is distal from the Boundary Creek hydrothermal system.

NB 90-16

This hole's collar is located at 13+80 East and 3+60 North using cut grid coordinates. The hole was drilled to test east along strike of NB 82-1 which had encountered thick, low grade, zinc mineralization in three chert pebble conglomerate horizons. The hole also tested beneath a zinc, soil geochemical anomaly that extended eastward from the vicinity of NB 82-1. The hole was drilled at a 030 azimuth and a dip of -50 .

The upper part of the hole down to 213.7 m. drilled basal Macmillan Pass Member lithologies that may be unique to the Boundary Creek area. These include black, carbonaceous mudstones with a weak calcareous component; iron carbonatized to sideritic,tuffs to

coarse lapilli tuffs; and tuffaceous mudstones and volcaniclastics. Strong impregnation of the mudstones with 60 to 90% fine, siderite crystals gives them a siltstone like aspect. A thick agglomerate unit at the top of the Macmillan Pass Member interval; and a distinctive, cross-bedded and scour channeled, tuffaceous mudstone with what looks like abundant clastic or syngenetic pyrite, at the base of the interval; can be correlated with similar lithologies in NB 82-1. These correlations establish the equivalency of the stratigraphy of these two holes even though NB 82-1 intersects substantial thicknesses of chert pebble conglomerates, chert grits and sand striped mudstones not encountered by NB 90-16. Because NB 90-16 failed to intersect any chert pebble conglomerates which host most of the sphalerite mineralization in NB 82-1, relatively little sphalerite mineralization was cored. Only two narrow (1-2 metre) intervals of mudstone veined with sphalerite were encountered.
From 213.7 - 256.0 metres the hole intersected black,carbonaceous mudstones typical of Unit R5M of the Road River Group. These mudstones showed no alteration or mineralization.

NB 90-17

This hole's collar is located at 26+50 East and 2+00 South using cut grid coordinates. The hole was drilled to test beneath the gossanous ground uncovered by the Boundary Creek road and upslope from several spot, zinc, soil geochemical anomalies. The hole was drilled at a 210 azimuth and a -50 dip.
The hole encountered successively, from the base of overburden at 25.9 metres, the following units: Tom Member Gritty radiolarian speckled mudstones down to 74.1 metres; Tom Member carbonaceous pyritic mudstones down to 120.0 metres including some diamictite at 99.4-105.5metres; Macmillan Pass Member fine silt and sand striped mudstones to 146.2 metres; Macmillan Pass Member chert pebble conglomerates and chert grits to 186.0 metres; and Road River Group Unit R5M calcareous, carbonaceous mudstones from 186.0 metres to the base of the hole at 263.3 metres. A strong fault zone ocurrs at the base of the chert pebble conglomerate and the top of the Road River Group and there is a strong possibility that some stratigraphy is absent in this interval. Minor volcanic tuffs ocurr at the top of the calcareous mudstones.

Barring the one significant fault, this hole has cored a complete and relatively undisturbed, stratigraphic section from the Tom Member through the Macmillan Pass Member and into the Upper Road River Group. No alteration or mineralization is evident in the Earn or Road River Gp. rocks unlike further west where the chert pebble conglomerates host abundant siderite/pyrite and sometimes significant sphalerite and the Road River Gp. calcareous mudstones are often extensively silicified and sideritized. One 0.3 metre interval of 30 - 40% fine pyrite laminations does ocurr just above the Tom/Macmillan Pass Member contact, at precisely the position of the Tom/Jason ore zones. It seems likely that this pyrite might be a very distal expression of Tom style syndepositional sulphides. The complete absence of any significant mineralization and/or

alteration in this hole probably indicates that the hole is well east of the extensive, strong, hydrothermal system at Boundary Creek.

7. CONCLUSIONS

It is concluded from the 1990 holes documented herein that:

i) The eastern areas of Boundary Ck. show no evidence of alteration or significant mineralization and are probably beyond the influence of the Boundary Ck. hydrothermal system.

ii) NB 90-16 drilled the same stratigraphy as NB 82-1, however, the complete absence of chert pebble conglomerates and sand striped mudstones from the hole suggests that these lithologies are laterally confined channel or graben fill features. The hole provides more evidence for drastic syndepositional tectonism and lateral facies variations at Boundary Ck.

iii) A major regional fault was drilled by NB 90-18 that brings Itsi Member in contact with Tom Member. The geology and geochemistry are still supportive of the favourable horizon being upslope and possibly mineralized.

8. RECOMMENDATIONS

It is recommended that:

i) Drilling be continued at Boundary Ck. to probe and map out mineralization associated with the extensive hydrothermal system.

ii) A second hole be drilled at Eleven Ck. higher up slope and drilled in the opposite direction to avoid the fault and test the favourable geological contact and associated geochemical anomaly.

Reported by: Derek Rhodes
D.Rhodes
Senior Geologist

Endorsed by: W. J. Wolfe
W.J. Wolfe
Manager, Exploration
- Western Canada

DR/dr

APPENDIX "A"

STATEMENT OF EXPENDITURES

TOTALS for spending at Nidd

Supplies	25,914.31
Staff	31,424.00
Groceries	7,102.16
Transport	12,962.42
Communications	500.00
Miscellaneous	400.00
Geochem	2,021.50
Expiditing	350.00
Drafting	603.68
Tenure	1,977.50
Drilling	258,946.79
Helicopter	23,632.20
TOTAL	365,834.56

Expenditures listed below are ascribed to each hole which is listed herein for assessment credits. Expenditures are prorated from total Nidd expenditures which include drilling two other holes not listed for assessment credit. Prorating was done on basis of ratio of individual hole's meterage to the total drilled.

NB90-15 161.0m

Supplies	3,083.80
Staff	3,739.46
Groceries	845.16
Transport	1,542.53
Communications	59.50
Miscellaneous	47.60
Geochem	240.56
Expediting	41.65
Drafting	71.84
Tenure	235.32
Drilling	31,159.80
Helicopter	0.00
TOTAL	41,067.21

NB90-16 256.0m

Supplies	4,897.80
Staff	5,939.14
Groceries	1,342.31
Transport	2,449.90
Communications	94.50
Miscellaneous	75.60
Geochem	382.06
Expediting	66.15
Drafting	114.10
Tenure	373.75
Drilling	46,771.11
Helicopter	0.00
TOTAL	62,506.41

NB90-17 236.3m

Supplies	4,535.00
Staff	5,499.20
Groceries	1,242.88
Transport	2,268.42
Communications	87.50
Miscellaneous	70.00
Expediting	61.25
Geochem	353.76
Drafting	105.64
Tenure	346.06
Drilling	45,297.93
Helicopter	0.00
TOTAL	59,867.65

NB90-18 207.0m

Supplies	3,964.89
Staff	4,807.87
Groceries	1,086.63
Transport	1,983.25
Communications	76.50
Miscellaneous	61.20
Geochem	309.29
Expediting	53.55
Drafting	92.36
Tenure	302.56
Drilling	39,676.80
Helicopter	6,995.13
TOTAL	59,410.03

APPENDIX "B"

AFFIDAVIT

I, Dereck Rhodes, of the District of North Vancouver, in the Province of British Columbia, make oath and say:

1. THAT I am employed as a Senior Geologist by Cominco Ltd., and such have a personal knowledge of the facts to which I hereinafter depose;

2. THAT annexed hereto and marked as Appendix "A" to this my affidavit is a true copy of expenditures incurred in connection with a drilling program carried out on the Nidd mineral claims;

3. THAT said expenditures were incurred between June 17 and July 9, 1990 for the purpose of mineral exploration on the noted claims.

Dereck Rhodes
Senior Geologist

DR/dr

January, 1991

APPENDIX "C"

STATEMENT OF QUALIFICATIONS

I, Dereck Rhodes, of the District of North Vancouver, in the province of British Columbia, hereby certify:

1. THAT I am a geologist residing at 2514 Bronte Road, North Vancouver, British Columbia with a business address at 700-409 Granville Street, Vancouver, British Columbia.

2. THAT I graduated with a B.Sc. in geology from McMaster University, Hamilton, Ontario in 1969.

3. THAT I have practiced geology with Cominco Ltd. from June, 1969 to the present.

Dereck Rhodes
Senior Geologist

DR/dr

January, 1991

APPENDIX "D"

1990 DRILL LOGS

Property: Nidd
Commenced:
Completed:
Coordinates: 0+00 N 24+00 E
Objective:
Date:
Logged by: D. Rhodes

District: Yukon
Location:
Core size:

Hole No.: NB90-15
Tests at:
Cor. dip:
True Brg.:
% Recov.:
Horiz. Comp.:
Vert. Comp.:

METERAGE FROM	TO	DESCRIPTION
0	21.3	CASING/OVERBURDEN PWL casing to 6.9m., NWL casing to 21.3m.
21.3	21.6	Sand and gravel - overburden still
21.6	161.0	ROAD RIVER GROUP
21.6	26.0	BLACK CARBONACEOUS CALCAREOUS MUDSTONE - UPPER ROAD RIVER UNIT R5M Black, calcareous mudstone relatively featureless with very slight, faint, light grey silt striping. Bedding at 15° to core axis. Thin 0.1 to 1.0mm. discontinuous calcite veinlets evident in core. @ 25.8 - 26.0 coarse calcite stringers and veining. Rock is relatively blocky due to low bedding to core axis angle and some low angle 15 to 30° fractures.
26.0	29.8	TUFFACEOUS, PYRITIC CALCAREOUS MUDSTONE WITH LOCAL INTERVALS OF TUFFACEOUS DIAMICTITE Slightly brassy, grey-green to dark grey mudstone that appears to owe colour both to very fine volcanic ash component and to very finely dissemminated <0.1mm pyrite. Distinct intervals of diamictite are evident at 26.5 - 26.7 and 27.5 - 28.8. Diamictite consists of dominantly (10 - 20%) light grey finely pyritic volcanic tuff clasts with some mudstone and pyritic calcareous siltstone clasts. 10 - 15% brassy pyrite is evident as coarse 2 - 20mm aggregates at 26.6 - 26.8m. Rock is blocky and fractured with some fault gouge evident between 26.9 and 27.4.
29.8	30.9	TUFFACEOUS VOLCANIC (R7VT) INTERBEDDED WITH BLACK, CALCAREOUS MUDSTONE (R5M) 60% of interval is light grey volcanic ash incorporating 5-10% pebbles and clasts 1 to 3mm of black mudstone that is interbedded in somewhat swirled (soft sediment deformation pattern) with black calcareous mudstones
30.9	34.0	BLACK,CALCAREOUS MUDSTONE (FAINTLY SILT STRIPED) - R5M Black, carbonaceous, calcareous mudstone that has a graphitic lustre on fracture and slip surfaces. Only

METER FROM	TO	DESCRIPTION
		very faint lighter silt laminations are evident. Bedding at 15° to core axis.
34.0	41.2	BLACK, CALCAREOUS MUDSTONE WITH DISTINCT, MEDIUM THICKNESS (1-20mm) CALCAREOUS SILT AND FINE SAND BANDS - TURBIDITE TEXTURE - R5M Typical Upper Road River Unit composed of black, carbonaceous, calcareous mudstone bands striped at 0.5 to 4.0cm intervals with light grey 1.0 mm to 3.0cm laminae and bands of calcareous silt to fine sand with distinct turbidite origin. In general bands seem to show grading up in hole with sharper contacts at base suggesting tops is up, but these features are not strong enough, consistent enough or so easily read as to be conclusive. Bedding varies slightly but is generally relatively consistent at 15 to 20° to the core axis.
41.2	161.0	BLACK,CALCAREOUS CARBONACEOUS MUDSTONE WITH VERY FINE 0.1 TO 1.0 mm. LAMINATIONS - R5M From 41.2 - 51.8 rock is very broken in 1 - 4cm pieces with some gouge locally evident. No recovery from 43.9 to 45.7m suggests washed away fault gouge zone. Coarse 5mm to 2.0cm white calcspar bands and veinlets cut mudstone forming 3-5% of rock. Rock is dark black,very carbonaceous quite calcareous mudstone with faint but distinct 0.1 - 1.0mm. laminations produced by lighter grey colouration probably due to higher calcite contents. Pyrite is common as <0.1mm. dissemminations and also fine wisps. 51.8 - 53.0 50% coarse calcspar veined mudstone with some gouge at 52.6 - 53.0 - this interval forms end of highly fractured ground. 53.0 - 74.0 Quite competent well-coring rock in 10 to 30cm cylindrical pieces. Occasional fractures at 30 to 60° to core axis. Bedding from 53.0-60.5 is 20° to core axis; from 60.5-74.0, 30° to core axis. 74.0 - 106.6 Somewhat more folded interval with a slight increase in calcspar veining - bedding variable from 5-30° to core axis - locally more distinct light grey bands at 82.5-86.0. Bedding averages about 15° to the core axis. Toward base, interval is more strongly calcite veined with short intervals of fault gouge. @63.0-64.6 lighter grey mudstone with coarse calcspar veins at top and sporadic stylolites at bottom is a

METER FROM	TO	DESCRIPTION

more calcareous interval approaching an argillaceous limestone in character.

@91.6 -91.7 Very rounded, bit-milled piece of volcanic tuff with 10 to 30% pyrite hosting 10-15% rounded, mudstone clasts (this might be from top of hole).

106.6 - 114.9 Interval of undeformed, black, calcareous, carbonaceous mudstone with delicate, faint 0.1 to 1.0mm laminae giving prominance to bedding @80° to core axis. Occassional lighter grey 1-10mm silty bands. Also occasionally 1 to 15mm horizons are abundantly speckled with 1-3mm white forms that are various sections of conical fossil - Tentaculites. Despite calcareous character rock seems quite hard and is very competent - partially silicified?

114.9 - 117.0 Zone of folding - 10 to 20% coarse white calcspar veins with slight gouge @ 116.5m - bedding is still generally at 70° to core axis.

117.0 - 120.8 Black,calcareous carbonaceous mudstones - slight calciteveining. Bedding at 60° to core axis - small shear/fault with minor gouge at 119.2m - faint lamination with lighter grey speckling some of which is probably Tentaculites.

120.8 - 123.9 Folded interval at 106.6 - 120.8 but with eye shaped fold closures evident in core. Bedding varies from 30 to 90° to core axis averaging about 60° - quite strong calcite veining is present.

123.9 - 140.2 Black, carbonaceous, calcareous mudstones - faintly laminated with light grey laminae and fine wispy white speckling. Rock is very competent with 30 - 50cm cylindrical pieces common - seems quite hard and may be relatively siliceous. Bedding from 123.9 - 131.0 is about 70° to core axis; from 131.0 - 140.2 is relatively consistent @ 45 - 50° to core axis.

140.2 - 142.3 Black carbonaceous mudstone with abundant white calcite forming a strong vein network - up to 50% of rock.

142.3 - 142.9 The previous interval grades into a fault gouge/broken rock zone.

142.9 - 145.7 Zone of broken up core with some graphitic zones - possible fault areas.

147.5 - 147.8 Area of strong calcite vein network

METER FROM	TO	DESCRIPTION
		and graphitic fault gouge.
		151.2 - 161.0 - Large zone of calcite vein network, broken core and graphitic fault gouge. The apparent fault angle is about 25° to the core axis. Specific areas of fault gouge are 151.2 -151.3; 152.8-153.0; 154.5-156.0; 156.3-156.4; 158.4-158.5; 160.9-161.0. END OF HOLE AT 161.0.

Property: Nidd
Commenced:
Completed:
Coordinates: 3+60 N 13+80 E
Objective:
Date:
Logged by: D. Rhodes

District: Yukon
Location:
Core size:

Hole No.: NB90-16
Tests at:
Cor. dip:
True Brg.:
% Recov.:
Horiz. Comp.:
Vert. Comp.:

METERAGE FROM	TO	DESCRIPTION
0	9.5	CASING/OVERBURDEN
9.5	15.2	ASH TUFF TO MEDIUM GRAINED LAPILLI ASH TUFF - SIDERITIZED This volcanic sequence is light green grey in colour and for the most part consists of fine grained ash tuffs and fine lapilli tuffs with some medium sized (0.5 - 1.5cm) lapilli occurring locally. The core is broken and on fractured surfaces is weathered to a rusty brown probably due to surficial weathering. The volcanics are now altered completely to siderite or a ferroan carbonate. Minor amounts of siderite and quartz veining are present. There are also some seams and rip-up clasts of black mudstone in the sequence. Where the volcanics are coarser grained the lapilli reach a size of 1.0cm but are on average 5mm. They are mostly a lighter green in colour and are composed of finely textured carbonate minerals pseudomorphing a felted or trachytic looking texture which was probably a mix of plagioclase laths and mafic minerals. The lapilli sit in a finer yellow vaguely granular "ash" matrix which is also now iron carbonate. None of this rock is calcareous. There is a crude, diffuse banding trending at 25° to the core axis. There is some pyrite locally (2%).
15.2	50.4	COARSE LAPILLI ASH TUFF Light grey in colour, this volcanic sequence differs from the previous one in that it is fairly coarse grained with some lapilli up to 5 cm. In places the rock has a greenish tinge. The lapilli do not appear squished but are rounded. Both the lapilli and the ground mass which is white to light yellow in colour are now composed of siderite. Occasionally there is a finer grained ash seam or bed which indicates a bedding at 20° to the core axis as at 26.1m. The lapilli are a steel grey colour sometimes greenish. This entire unit appears fairly uniform, except for some variance in coarseness. Towards the base of the unit, there are some 5cm sized mudstone fragments (subrounded).
50.4	54.5	BLACK MUDSTONE WITH VOLCANIC TUFF SEAMS AND ABUNDANT VEINING Rock is black in colour and fairly siliceous. Tuff

METER FROM	TO	DESCRIPTION
		seams 1-5 cm thick occur every 30 to 40 cm. The core has abundant veins of siderite/quartz/calcite. The volcanic tuff seams are olive green grey in colour, fine grained and contain fine grained pyrite. The mudstone is calcareous.
54.5	55.4	CALCAREOUS MUDSTONE/SILTSTONE This short interval appears to be a little coarser than the previous mudstone and is calcareous. It contains similar siderite/quartz veining. The upper contact is at 31° to the core axis.
55.4	57.9	VERY CARBONACEOUS MUDSTONE (MINOR SHEARING) Short interval of very black featureless mudstone. Bedding angles continue at 30° to the core axis. A sheared look appears over 56.4 - 56.7m. Minor calcareous content is evident at the bottom of the section.
57.9	64.0	CALCAREOUS,FINE GRAINED TUFF?FLOW? Light grey in colour, fine to medium grained massive rock in which a felted texture of light crystals on a dark groundmass is seen (70% crystals 30% ground mass). It is faintly calcareous from the crystal reaction to dilute HCl. Towards the bottom there are abundant siderite/quartz veining up to 2 cm thick. There is minor pyrite associated with the veining.
64.0	69.9	CALCAREOUS VERY FINE GRAINED TUFF/FLOW? WITH ABUNDANT VOLCANIC SEAMS The bulk of this section is much like the previous section with the exception that it is very fine grained. There are also abundant tuff and lapilli tuff bands up to 3cm thick. The lapilli are 2mm to 1cm and are accompanied by some mudstone fragments. The rock has abundant siderite/quartz veins with associated pyrite.
69.9	71.6	CARBONACEOUS WEAKLY CALCAREOUS MUDSTONE WITH VOLCANIC LAPILLI TUFF Mudstone is very black and occasionally calcareous. There is not a lot of siderite veining, but there is one seam of light green-grey lapilli tuff with associated pyrite.
71.6	84.4	PYRITIC, BANDED SANDSTONE/TUFF Light grey in colour this rock sparkles slightly due

METER FROM	TO	DESCRIPTION
		to its fine pyrite content. Banding/bedding is obvious but subtle. Occasionally coarser beds appear to be volcanic tuffs (grain size up to 2mm). Occasionally there are rounded fragments of mudstone which appear rolled. Bedding angle is 20° to the core axis. The rock is not calcareous. Towards the base of the interval there is an increased amount of pyrite and in-situ brecciation with pyrite / siderite / quartz infilling. Also some very microfractures truncating beautifully bedded pyritic tuffs and tuffaceous sandstones.
84.4	102.1	BLACK, CARBONACEOUS,WEAKLY CALCAREOUS MUDSTONES WITH CALCAREOUS PYRITIC CONCRETIONS This rock is very black. Of note are 5 to 25cm elliptical white concretions. The perimeter of the ellipse is composed of coarser white elongate crystals that effervesce with HCl (calcite?) The crystals diminish from 2-4mm lengths on the perimeter to much finer (< 1mm)crystals in the centre of the ellipse. Most of the concretions have a finer grained pyrite centre. The mudstone is also fairly calcareous and featureless except for the concretions.
102.1	161.7	BLACK CARBONACEOUS MUDSTONE - WEAKLY CALCAREOUS, OCCASIONALLY FAINTLY BANDED - SILICIFIED AT BASE This mudstone is very black. It is inconsistently calcareous and occasionally displays faint Road River like banding/striping. Bedding angles are about 20° to the core axis. Where not banded it is featureless. The mudstone is locally veined with siderite, pyrite and quartz. @146.3 - 146.7 coarser silt band @153.0 - 156.1 lighter grey mudstone with abundant siderite/quartz veining. This section has pyrite laminae @160.0 -161.7 more prominent Road River type banding. Bottom 1.5m of interval becomes harder and only slightly scratchable in contrast to most of interval that is readily scratchable - rock is likely partly silicified. Bedding angle at bottom 45° to core axis.
161.7	164.1	SILICIFIED, CARBONACEOUS MUDSTONE PARTLY FAULTED WITH STRONG QUARTZ, LESSER IRON CARBONATE/PYRITE STOCKWORK Interval consists of black carbonaceous mudstones similar to preceding that are relatively hard and seeming silicified. Mudstones are strongly fragmented but re-healed by a network of at least two generations of white quartz veins accompanied by much

METER FROM	TO	DESCRIPTION
		lesser yellow-white iron carbonate and 0.1 to 3.0mm crystals and crystal aggregates of bright brassy pyrite. Vein material accounts for about 20% of rock with 2 - 4% pyrite, 1 - 3% yellow white carbonate. Much of interval is healed to solid competent rock however section from 162.6 - 163.3 is mostly black fissile, carbonaceous fault gouge which at 163.2 - 163.25 incorporates a band of brassy fine grained pyrite.
164.1	164.4	VEINED/SHEARED PARTLY SILICIFIED PYRITIC VOLCANIC TUFF Bright, grey-green, distinct volcanic tuff. Strongly fractured and sheared with 5% fine white quartz stringers running through rock. Rock is hard and partly silicified. Rock shows yellow-green colouration typical of strongly iron carbonated volcanics. Rock is strongly pyritic (20 - 30%) with pyrite occurring as very fine pyrite in stringers and veinlets cutting rock and as coarser brassy pyrite crystals 1-3mm and 1-15mm aggregates.
164.4	165.0	"SILICIFIED" DARK GREY MUDSTONES STOCKWORKED WITH 20 - 30% QUARTZ VEINS WITH SIGNIFICANT SPHALERITE Interval of very hard mudstones that are quite siliceous probably due to silicification. Mudstones are cut by a network of 1 to 10mm (avg. 5mm) quartz veins containing some yellow-brown iron carbonate and relatively abundant red brown crystals and crystal aggregates of sphalerite. From 164.0 - 165.0 interval is estimated to grade 5% zinc.
165.0	177.3	COMPLEXLY TEXTURED SEQUENCE OF IRON CARBONATED PARTIALLY SILICIFIED VOLCANIC ASH TUFFS WITH MINOR SEDIMENTS AND VOLCANICLASTICS - LOCALLY HOSTS CONSIDERABLE PYRITE Very complexly textured succession of pale yellow-green iron carbonated volcanic tuffs. Dominant texture is one of light grey to yellow grey finely textured rock with faint granular texture accentuated by disseminations of yellow iron carbonate crystals and sometimes by fine 0.1 to 2.0mm black angular forms that might by volcanic glass shards. Much of this rock is relatively massive barring occasional darker wispy seams running through it. Rock is thought to most likely be tuff since it occurs with clearly bedded rocks (see below) but it is possible that some of rock could be flows 165.0 - 170.1 Interval in which laminated and banded textures are quite common with alternations of grey

METER FROM	TO	DESCRIPTION
		green fine 2 -20cm bands and yellow-green 1 - 5mm laminae rich in iron carbonate being most common. At 166.6 - 166.7 rock is more delicately laminated, tuffaceous mudstone. Pale, relatively hard and siliceous often somewhat contorted 0.5 to 20cm bands occur in 5 to 20cm zones in interval and may be cherts. Rock throughout is extensively iron carbonated (siderite?) and by weight gives impression of carrying abundant iron. Pyrite and pyrite aggregates are relatively common throughout interval averaging 3 - 5% and locally over 30cm zones 10 to 20%. Some bronze coloured iron sulphides looks like pyrrhotite but is non-magnetic. Iron sulphides are abundant at 166.3 -166.5 and 167.1 - 167.4. Bedding @ 165.6 is at 10° to core axis @167.0 bedding to core axis angle = 0-10° @167.7 bedding to core axis angle = 15° Elsewhere bedding is generally at very low angles to core axis but often seems somewhat contorted perhaps as a result of soft sediment deformation 170.0 - 177.3 Generally more uniform massive apple-green coloured rocks with in most areas indistinct banding. Locally, laminations and discontinuous bands along with distinct ash size grains in some intervals suggest tuff origin. Occasional lighter grey 5-10cm zones of more siliceous rocks - possibly cherts are present. Bedding is only occasionally measurable but seems much flatter in interval ie chert bands @171.6, 172-172.5 are at 50° to core axis. Finely laminated tuffs at base of interval are at 75° to the core axis.
177.3	181.6	DARK TO MEDIUM GREY SILICEOUS SIDERITIC "SILTSTONE" EXTENSIVELY STOCKWORKED AT TOP WITH QUARTZ VEINS AND LESSER FERROAN CARBONATE Rock is very unusual, distinctively textured, and appears to be a massive, highly competent relatively textureless rock barring irregular stylolite enhanced fractures cutting rock at 0 to 30° to core axis. These stylolite like features suggest rock might formerly have had a calcareous component and now be altered. Upon closer examination the rock can be seen to be composed of about 50 to 70% very fine (0.5mm) crystals of siderite evenly distributed in rock. The even distribution of this siderite is similar to the "buckshot" siderite seen in altered Road River calcareous mudstones and suggests that this rock may derive from a highly altered formerly calcareous rock. Occasional very fine light grey silt to fine sand laminae 1 - 10mm thick occur in rock. From 177.3 - 179.8 rock is extensively cut by a

METER FROM	TO	DESCRIPTION
		stockwork of quartz veinlets of at least 2 generations carrying some yellow white ferroan carbonate. Negligible sulphides are evident. Where laminations are present bedding can be read ie 181.0 - 45° to core axis, 181.5 - 45° to core axis.
181.6	182.7	SIDERITIZED MEDIUM TO COARSE ASH TUFF SANDWICHED BY THIN CONTORTED VOLCANICLASTIC MUDSTONES WITH ABUNDANT PYRITE Central interval from 181.8 -182.6 is yellow-green faintly laminated, iron carbonate replaced, medium to coarse ash tuffs with some 1 to 3mm grains in rock extensively speckled with yellow iron carbonate grains. Top (181.6 - 181.8) and bottom (182.6 - 182.7) consist of mixed tuff and mudstones that appear contorted and boudined and host 15 - 20% pyrite as 2 - 20mm wispy, pyrite aggregates partially aligned with the contorted bedding. Bedding in the central tuff interval is consistent at 50° to the core axis.
182.7	187.5	DARK TO MEDIUM GREY SILICIFIED SIDERITIZED "SILTSTONE" STOCKWORKED WITH IRON CARBONATE AND QUARTZ VEINLETS HOSTING MINOR TO LOCALLY SIGNIFICANT SPHALERITE Rock is as 177.3 - 181.6 - massive competent lithology with extensive impregnation with fine siderite crystals. Rock is strongly brecciated into subangular fragments 2 - 20cm that are not rotated and lie in a groundmass or system of veins 0.2 to 3 cm wide composed of white crystalline quartz and lighter grey ferroan carbonate (probably siderite). Red brown sphalerite forms 3-4% of rock with veins at 184.1 -184.15, 185.9 - 186.1. Minor (0.1%) sphalerite is evident at 187.1 - 187.3. Occasional 1-3cm ovoid nodular masses of fine grained pyrite occur in the rock. Bedding is not readily discernible in interval.
187.5	192.6	MEDIUM GREY SILICIFIED,SIDERITIZED "SILTSTONE" (AS ABOVE) WITH SWIRLED PLASTICALLY DEFORMED INTERBEDS OF PYRITIC GREY-GREEN ASH TUFF Similar rock to preceding two sections occurs interspersed at 10 to 50 cm intervals (avg. 30cm) with grey-green, fine iron-carbonated ash tuff. Tuff forms irregular pinching and swelling bands about "siltstone" probably due to strong competency contrasts between materials. Whole interval is still partly fragmented and brecciated with areas of crystalline iron carbonate and lesser quartz acting

METER FROM	TO	DESCRIPTION
		as matrix for fragments of "siltstone" and to a lesser extent the tuffs. Pyrite is common throughout the interval (5%) as fine 0.1 to coarse 3.0mm subhedral to euhedral disseminated crystals and crystal aggregates. At 190.5 -191.1 white radiating sheaves to acicular crystal 1 - 10mm long occur in the rock and about fractures. These crystals effervesce when scratched and touched with dilute HCl and may be carbonate or sulphate mineral. Bedding is not distinct in interval but general attitude of tuff layer suggests a 25° to core axis attitude.
192.6	193.8	BLACK,CARBONACEOUS, SLIGHTLY CALCAREOUS MUDSTONE WITH OVOID CONCRETIONS Similar to 84.4 to 102.1. Black carbonaceous relatively soft mudstones are slightly calcareous and host ovoid to rounded 1-3cm light grey calcareous forms that are probably diagenetic nodules or concretions. Irregular patches of fine grained pyrite are present in the rock.
193.8	199.0	FINE TO MEDIUM IRON CARBONATED LAPILLI TUFFS Sequence of 10 to 40 cm distinct lapilli tuff beds composed of apple green rock in which 1 to 20 mm avg.<10mm lapilli of felted iron carbonate rock with very fine black shard like forms lies in green fine grained iron carbonate ground mass. Light grey to yellow very fine iron carbonate is evident in both lapilli and fine ash matrix. Beds are evident by contrasting lapilli sizes between beds and relatively sharp contacts. Bedding is very consistent and undeformed at 70 - 75° to the core axis. Note at top of sequence 3cm splash of pyrrhotite with pyrite is associated with 2cm quartz vein.
199.0	213.7	INTERBEDDED BLACK CARBONACEOUS WEAKLY CALCAREOUS MUDSTONES, MEDIUM GREY SIDERITIZED"SILTSTONES" AND TUFFS AND TUFFACEOUS MUDSTONES Rapidly varying succession of mudstones all of which are probably slightly tuffaceous but some of which are distinctly so. Interval very much resembles succession at top of T88-1. Various beds are described below: @199.0 -199.9 Dark grey black "silicified"mudstone - quite hard - appears to be silicified - slightly calcareous. Cut by numerous fine quartz veinlets and two lensoidal patches of zoned carbonate. First 30cm shows abundant siderite and pyrite impregnations @199.9 - 200.1 grey iron carbonated ash tuff incorporating mudstone fragments at top. Bedding displayed by fine 1 - 2mm laminations at 40°to core

METER FROM	TO	DESCRIPTION
		axis @200.1 - 204.0 Black carbonaceous, weakly calcareous mudstones - short intervals are greyer and similar to previous sideritized "siltstones". 3-5% thin 1 to 5mm quartz veinlets with lesser calcite. Occasional 1-3cm irregularly ovoid nodule composed of very fine grained pyrite. @204.0 - 205.9 Tuffaceous mudstones - pyritic - dark black mudstones incorporate grey-green ash along planar and cross laminae. Ash laminations also appear to concentrate pyrite adding to accentuation of laminations. Bedding variable with cross laminations but generally at 45° to core axis. @205.9-206.3 Grey silicified siltstone - sideritized -similar lithology to that encountered higher in hole @206.3 - 208.0. Black slightly tuffaceous mudstones give way to massive tuff bed cut by 50% quartz and yellow white carbonate vein. Volcanic material is strongly iron carbonated and more laminated,banded material hosts 3-5% pyrite @208.8 - 213.7 Tuffaceous pyritic weakly calcareous mudstones with strong planar and ripple x-laminated scour and truncation features. DARK GREY TO BLACK MUDSTONES HOST LIGHTER GREY GREEN VOLCANIC ASH FORMING DISTINCT U-SHAPED SCOURS HIGHLIGHTED BY THE ASH LAMINAE WHICH FORM PLANAR TO RIPPLE X-LAMINATED U SHAPED FORMS IN MUDSTONE. ROCKS ARE STRONGLY PYRITIC 10 TO 20% AND PYRITE FORMS LAMINATIONS SIMILAR TO ASH-SYNDEPOSITIONAL OR REPLACING ASH. THESE PYRITE LAMINATIONS PRODUCE BEAUTIFULLY TEXTURED PYRITE SCOUR FEATURES THAT ARE IDENTICAL TO SIMILAR TEXTURES OBSERVED IN THE TOP OF NB 82-1. Average bedding about 40 -45° to the core axis.
213.7	246.0	BLACK VERY CARBONACEOUS,CALCAREOUS MODERATELY SILT STRIPED MUDSTONES - UPPER ROAD RIVER GROUP, UNIT R5M Typical Road River calcareous mudstones with 10 to 30% 5 to 30mm laminae and bands of light grey calcareous silt. Unit lacks coarser calcareous sand bands of very distinctly striped mudstones. Bedding shows some variability throughout section though no major folding nor faulting is suspected. Bedding 213.7 - 214.4 45°to core axis. 214.4 - 219.9 Zone of several faults with fault gouge and more fragmented rock- bedding appears to vary between 30 and 45°. 219.9 - 231.0 slight convolutions with local slight gouge but bedding generally at 45° to core axis. 231 - 233.3 bedding 30° to core axis 233.3 - 237.5 bedding 50 to 55°to core axis 237.5 - 246.0 bedding 25 to 40° to core axis.
246.0	256.0	BLACK,VERY CARBONACEOUS, CALCAREOUS MUDSTONES ONLY

METER FROM	TO	DESCRIPTION

WEAKLY TO NEGLIGIBLY STRIPED WITH CALCAREOUS SILTSTONES - UPPER ROAD RIVER GROUP - UNIT R5M

As above but dominantly black very carbonaceous, calcareous mudstones with only very occasional 5 to 20mm lighter grey calcareous silt bands striping rock. Rock shows local zones of shear with a few centimetres of gouge but is generally only slightly fractured. Much of rock cores well with bedding @45° to core axis throughout most of the interval.

END OF HOLE AT 256.0m.

Property: NIDD
Commenced:
Completed:
Coordinates: 2+00 S 26+50 E
Objective: To test geochem anomaly and road gossan
Date: July 5
Logged by: D. Rhodes

District: Yukon
Location: BOUNDARY CK.
Core size: HQ

Hole No.: NB 90-17
Tests at:
Cor. dip: 50°
True Brg.: 210°
% Recov.:
Horiz. Comp.:
Vert. Comp.:

METERAGE FROM	TO	DESCRIPTION
0	25.9	CASING/OVERBURDEN
25.9	26.3	TG - TOM MEMBER - GRITTY SUBMEMBER "GRITTY" RADIOLARIAN SPECKLED CARBONACEOUS MODERATELY SILICEOUS MUDSTONE WITH ABUNDANT DISSEMINATED FINE PYRITE - OFTEN STRIPED Very typical "gritty" mudstone unit - grey-black, but with bluish grey tint on core surface exhibiting gritty feel due to fine pockmarked core surface where radiolaria have been plucked by drill. Rock is abundantly speckled with white silt size spherules, often with central hole. Darker groundmass also appears to be composed of more or less spherical grains. These are believed to be radiolaria. Over much of interval lighter grey stripes and laminations 0.1 - 3.0mm are common imparting distinct planar striping and bedding to rock. Rock cleaves consistently along bedding. From 25.9 - 64.1 rock shows negligible deformation with bedding consistently at 50° to core axis throughout. Rock only occasionally breaks along sub-vertical fractures across bedding. Rock is quite pyritic averaging 3 - 5% pyrite mostly as very fine 0.1mm disseminations that add sparkle to rock and less commonly as wispily lensoid laminations or thin lenses 0.5 to 3.0mm aligned along bedding. In bottom 10m bedding flattens subtly to 45° to core axis. Nowhere in interval is folding evident and only intervals of any disturbance are from 56.4 - 57.2 where some shearing and minor gouge is evident and at 62.3 - 62.8 where rock is crackle brecciated with 5 - 10% quartz veining. From 62.8 to 74.1 - 1 to 3% 0.1 to 2mm irregular undulatory white quartz veinlets occur sporadically cutting rock at 70 - 85° to core axis.
74.1	99.4	CARBONACEOUS SUBMEMBER - BLACK CARBONACEOUS SMOOTH CORING, ONLY MODERATELY SILICEOUS PYRITIC MUDSTONE Interval consists of black, carbonaceous mudstones that are distinguishable from previous unit by their fine texture resulting in a smooth coring aspect in contrast to the speckled character and "gritty" core texture of the previous unit. The mudstones are only moderately siliceous and readily scratchable. Fine relatively subtle bedding laminations at 0.1 - 1.0mm

METER FROM	TO	DESCRIPTION
		intervals accentuated by slight dark grey to black colour contrasts result in rock commonly cleaving along bedding planes at 2 to 20cm intervals. Only rarely does the rock break along subvertical fractures at 0 to 30° to the core axis. Pyrite is relatively common in the interval 3.0 to 4.0%. It occurs as fine(less than 0.1mm) disseminations preferentially distributed in 0.1 to 3.0cm laminations and bands parallel to bedding occasionally throughout the interval. It also occurs as 1 to 5mm crinkly, occasionally gash like quartz veinlets that host 0.1 to 5.0mm pyrite crystals and crystal aggregates. These crinkly veinlets often parallel bedding but in other instances crosscut bedding at 10 to 20° angle. They comprise less than 1.0% of the rock. From 74.1 to 89.9 rock shows relatively little deformation with only sporadic subvertical fractures. Bedding is generally at 60° to the core axis. From 89.9 - 96.0 Rock is more strongly fractured with abundant near vertical fractures often reducing core to thin 2.0 to 15.0cm wedgy fragments. Signs of variable bedding along with an interference pattern between bedding laminations and cleavage both suggest a zone of folding. Slightly more fine quartz veinlets are evident (2 - 3%) in interval. 96.0 - 99.4 Bedding is fairly consistent at 75 - 80° to core axis - fairly competent rock barring short intervals of more fractured blocky core *Note: at 74.7 - 74.75 interval of coarse 2 - 10mm fine grained pyrite aggregates almost looking like fragments with thin white silica rims.
99.4	105.5	BROAD ZONE OF FAULTING AFFECTING TG/EMG - GRITTY MUDSTONES - LOCAL DIAMICTITE? Interval consists of blue grey rock with speckled, pockmarked and finely disseminated pyrite textures characteristic of Gritty Submember. Rock shows strong fracturing throughout however locally at 101.2 -101.6 and 103.4 - 103.8 distinct subangular to subrounded 0.5 to 5.0cm often pyritic clasts sit in a carbonaceous gritty textured matrix and look more like diamictites than any fault breccia. Distinct fault gouge is however evident at 101.6 - 102.1 and 105.0 - 105.2 and most of the strong fracturing in interval appears due to faulting.
105.5	120.0	CARBONACEOUS SUBMEMBER - BLACK, SMOOTH CORING ONLY MODERATELY SILICEOUS PYRITIC MUDSTONE

METER FROM	TO	DESCRIPTION
		as 74.1 -99.4 - Crinkly (enterolithic like folded) white silica bands 2 to 25mm thick (commonly only 2 to 4mm) hosting 50 -70% 0.1 - 1.0mm pyrite grains are more common in this interval. Planar 0.1 to 1.0mm pyrite laminations and fine bedding-planar wisps and disseminations of pyrite are also common (3 to 5% pyrite overall). Rock remains easily scratchable and hence only moderately siliceous. Rock is very competent cleaving almost entirely along distinct bedding plane fabric which is consistent from 105.5 to 120.0 at 45° to core axis. While clearly scratchable rock is more competent than the preceding carbonaceous section and may be more siliceous (ie approaching TCh in character) *Note at 119.4 - 119.7 a zone composed of 30 -40% pyrite distributed in fine 0.5 to 5.0mm bands and laminae interbedded with black mudstone is present. No lead or zinc sulphides could be observed however since it lies at almost precisely the Tom horizon it will be analyzed. It seems likely that it is a very distal equivalent of Tom style syndepositional sulphides at this horizon.
120.0	146.2	MACMILLAN PASS MEMBER - FINE SILT AND SAND STRIPED MUDSTONES EM1 (TOM CODE MMa1,2) Typical dark grey black only moderately siliceous non-calcareous mudstones striped at 1 - 4cm intervals with 0.5 to 5.0mm thick fine light grey sand bands and with laminae 0.1 to 15.0mm of silt. Pyrite is quite common disseminated in sand bands particularly in coarser ones - pyrite becomes less common in bottom 15.0 metres. Rock is not very much disturbed. From 120.0 to 133.6 rock cores extremely competently with bedding very consistent at 60° to the core axis. From 133.6 - 137.9 bedding steepens with zone of 60% quartz veining, between 136.9 -137.2 bedding is at 45 - 50° to core axis. From 137.2 - 146.2 bedding is consistent at 70 - 75° to core axis. At 140.5 - 141.1 zone of strong fracturing with some gouge marks small fault zone but without any significant displacement.
146.2	149.7	CHERT GRIT - EG (TOM NOMENCLATURE - MG) Typical light grey in core, darker grey on fresh surface chert grit composed of 0.5 to 5.0mm generally well rounded, well sorted chert grains in a silica matrix. Rock is partially silicified with 10 to 20% 2.0 to 20.0mm coarse quartz veins cutting core at 10 to 30° to core axis. 3 to 5 % pyrite also occurs in upper 1 metre as anastomosing/horsetailing veinlets 1 to 5mm wide.

METER FROM	TO	DESCRIPTION
149.7	172.5	CHERT PEBBLE CONGLOMERATE - MEDIUM TO RELATIVELY COARSE (ECG - MCG in TOM nomenclature) Very typical massive looking rock composed dominantly of medium to light grey less commonly darker grey to black,1 generally well rounded to sub-rounded chert pebbles in clast contact. Pebbles are cemented by dense light coloured silica cement producing highly siliceous and very hard rock. In some instances fine grit to pebble component forms part of matrix for larger pebbles. In most instances however pebbles are relatively well sorted. 1 to 4 % black mudstone clasts with more subangular habit occur sporadically in the conglomerate. Bedding is indistinguishable in massively bedded medium to coarse conglomerate. Irregular stylolite like sutures occur throughout core. No pyrite, siderite, or sphalerite is evident in core - it seems very dead and barren in contrast to much of the conglomerate cored at Boundary Creek
172.5	173.9	CHERT GRIT WITH 5 - 10% LARGER PEBBLE SIZE CLASTS Fine chert grit - typical lithology similar to 146.2 - 149.7 barring lack of quartz veins and pyrite. Imbrication of flatter mudstone pebbles and subtle bands indicates bedding at about 45° to the core axis.
173.9	179.9	CHERT PEBBLE CONGLOMERATE - COARSE As 149.7 - 172.5 - quite coarse 2 - 5cm pebbles in some places. Grit band at 177.4 - 177.6 gives bedding attitude at 45° to core axis
179.9	185.2	QUARTZ PEBBLE CONGLOMERATE - MEDIUM - SHEARED/QUARTZ VEINED Chert pebble conglomerate similar to preceding descriptions with fine to medium chert pebbles. Interval shows strong annealed fracturing and shearing at about 20° to core axis with two generations of quartz veins - one paralleling shear direction, and one at about 45°to core axis and near normal to other veins. Veins comprise 10 to 15% of rock. Very occasional pyritic clasts evident.
185.2	186.0	QUARTZ SANDSTONE - MEDIUM TO COARSE GRAINED Relatively coarse,light grey, quartz sandstone with fine 1 to 10mm laminations and bands with occasional (less than 10%) black mudstone interbeds. Bedding in bottom half at 50° to core axis. In top 0.3m rock is 10 -20% quartz veined as in preceding interval.

METER FROM	TO	DESCRIPTION
186.0	202.7	ZONE OF STRONGLY SHEARED/FAULTED BLACK, VERY CARBONACEOUS MUDSTONES WITH MINOR VOLCANIC COMPONENT LOCALLY - MUCH OF INTERVAL HAS CALCAREOUS COMPONENT AND IS GRAPHITIC - PROBABLY SHEARED CALCAREOUS ROAD RIVER MUDSTONES - UNIT R5M 186.0 - 189.8 very black carbonaceous, highly sheared rock with 10 to 20% qtz vein material - much of which appears to have been re-sheared to near gouge character. Intervals at 187.3 - 187.7 and 188.1 - 188.5 take on grey-green, talcose, clayey character with patches of red hematite and appear to be strongly sheared volcanic beds that probably incorporated some pyrite - now partially oxidized. Negligible calcareous content in interval. Most of slip and shear planes are highly graphitic 189.8 - 199.4 Zone of somewhat more competent but still sheared and fractured rock with short intervals of distinct fault gouge. Much of interval is black slightly to distinctly calcareous mudstone but with short 10 - 30cm intervals being harder and only slightly calcareous - silicified mudstones? At 194.1 -194.3, 195.1 - 195.4, 195.7 -196.1 pyritic and slightly hematitic,more grey-green mudstones indicate tuffs or tuffaceous mudstones. Strong fault gouge is evident from 197.9 to 199.4 with large milled 5 to 30mm rock chunks in finer rock flour. 199.4 - 202.7 Very black, carbonaceous calcareous mudstones similar to following unit. Rocks are strongly fractured into 2 to 30cm pieces with numerous thin 5-10cm intervals of rock gouge and flour.
202.7	219.5	BLACK, VERY CALCAREOUS, VERY CARBONACEOUS MUDSTONES - INDISTINCTLY TEXTURED FOR MOST PART - ROAD RIVER -R5M Interval consists of very dark black highly carbonaceous rocks that core into relatively smooth somewhat velvety/sooty competent pieces that generally show little textural definition barring subtle planar bedding, occasional pyrite/calcite laminae and lenses and following features: 202.7 - 203.3, 204.0 - 204.1 fine calcite fossil debris 0.1 - 5mm sporadically disseminated and in few 1 to 10mm laminae and bands. Debris includes Tentaculites sp., possible calcite replaced graptolite and possible crinoid, coral and brachiopod debris. 203.3 - 203.6 Scattered ovoid to lensoid, lighter grey 2 - 4cm long calcareous concretions are evident

METER FROM	TO	DESCRIPTION
		that appear to be fine calcite in middle and whiter coarser calcite crystals toward rims. These concretions resemble larger and more extensive concretions seen in NB 90 - 16. Bedding is only subtly suggested in much of interval by faint laminations, occasional more distinct pyrite laminations and common cleavage of rock along bedding. bedding to core axis angle = 70 to 75° in most of interval and seems consistent. Rock is commonly fractured but no folding or faulting is in evidence.
219.5	236.3	STRONGLY CALCAREOUS,SAND BANDED BLACK CALCAREOUS CARBONACEOUS MUDSTONES - UPPER ROAD RIVER GP. - R5M1 Typical turbidite sand banded mudstone of the Upper Road River Gp. Light grey 0.5 to 20cm (avg 3cm) bands composed of coarse calcareous sands to finer silts stripe black calcareous,carbonaceous mudstones producing very distinctive black,grey and white striped rock. Bedding is slightly variable from 219.5 - 225.6m but is generally at 55°to core axis with zone of fault gouge and fracturing from 223.1 - 224.1. From 225.6 - 230.0 Bedding varies from 20 to 60° to core axis with some folding evident. From 230.0 - 236.3m barring limited fracture zones rock is relatively competent with consistent bedding at 70° to core axis. *Note: this rock is characteristically silicified and sideritized at Jason South Zone, End Zone and to the west at Boundary Creek where proximal to and/or forming the footwall to hydrothermal systems. The absence of alteration in this hole is regarded as a discouraging sign. END OF HOLE AT 236.3M.

Property: Nidd
Commenced:
Completed:
Coordinates:
Objective:
Date:
Logged by: D. Rhodes
Comp.:

District: Yukon
Location:
Core size:
N E

Hole No.: NB90-18
Tests at:
Cor. dip:
True Brg.:
% Recov.:
Horiz. Comp.:
Vert.

METERAGE FROM	TO	DESCRIPTION
0	34.7	OVERBURDEN/CASING
34.7	190.9	ITSI MEMBER - EARN GROUP
34.7	121.3	MEDIUM GREY, VERY SOFT - MICACEOUS MUDSTONE WITH SILT STRIPES AND BANDS EXHIBITING PLANAR AND OCCASIONALLY CROSS-LAMINATED TEXTURES

Rock not previously encountered by drilling on either Nidd or Tom properties. Identified by G. Abbott as very probably Itsi Member (note Itsi Member in this area is much less arenaceous than on Tom or Tom East).

Rock consists of very thick section of rocks with very consistent uniform texture. Interval is composed of medium to dark grey, exceedingly soft mudstones (scratchable with finger nail) that host 0.1 to 20cm (avg. 3cm) beds of lighter grey, silt laminated rock. Most of laminations are planar - continuous to discontinuous but some cross laminations are evident. Very fine mica flakes are evident sparkling rock. Rock shows numerous intervals of shearing with variable fault gouge and is strongly fractured throughout.

34.7 - 40.5 Strongly fractured,wedgy pieces due to subvertical fractures - largest pieces about 10cm. Bedding where evident is at 30° to the core axis.

40.5 - 45.1 Thick zone of fault gouge with 2 to 30mm chunks of rock gouge in fine clayey rock flour matrix.

45.1 - 81.6 Relatively well coring rock despite relatively abundant fracturing and scattered 2 to 20cm zones of shear and fault gouge. Bedding seems to be relatively consistent at 40° to core axis throughout interval.

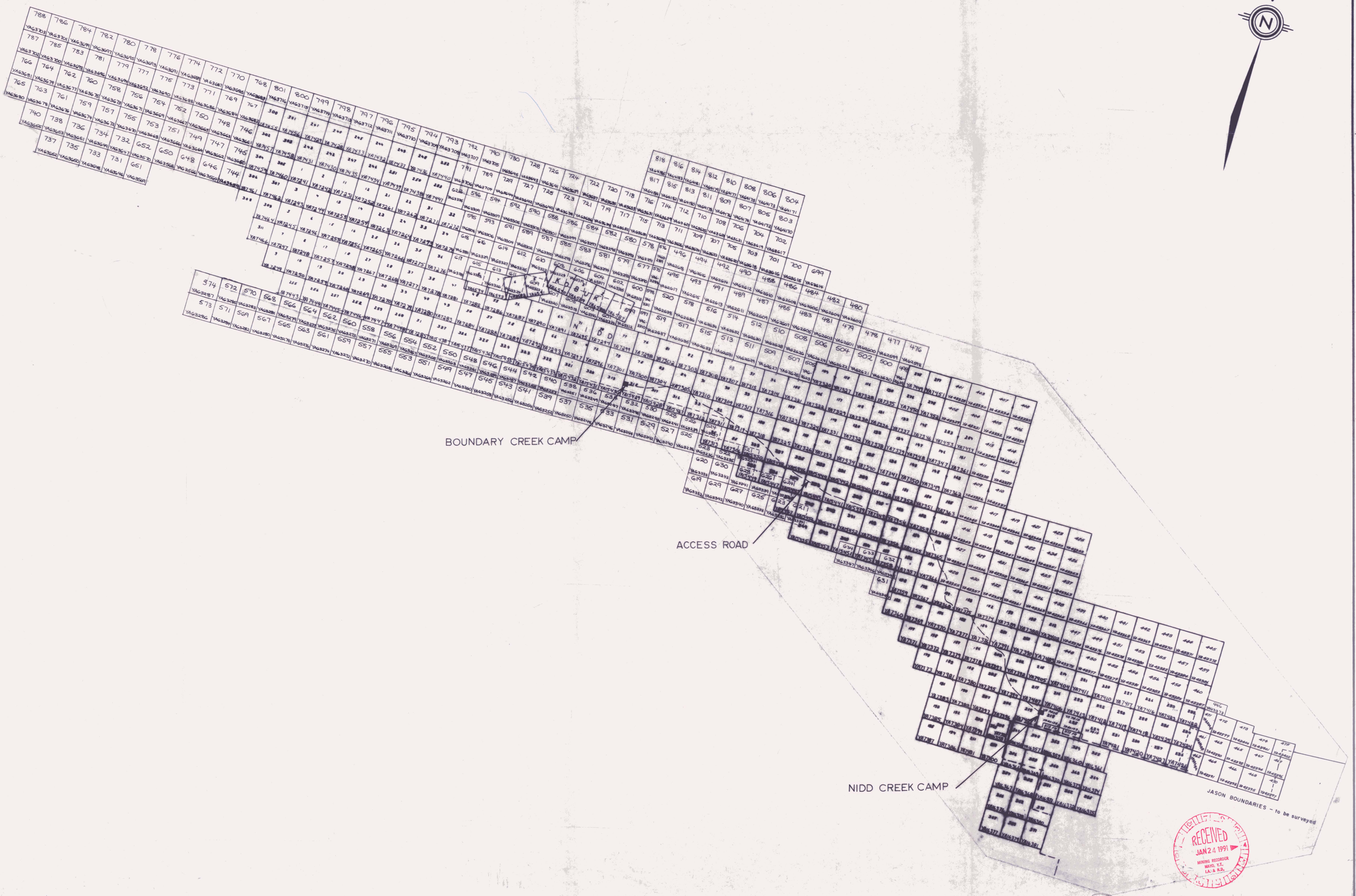
81.6 - 85.9 Zone composed of 30% strongly shattered, sheared rock(incipient fault gouge) but with little apparent movement. Bedding seems variable @82.7 60°to core axis, @83.4 20° to core axis

85.9 - 99.7 Zone of steep bedding angles between 0 - 20° to core axis (avg. 15°) with zones of shatter and

METER FROM	TO	DESCRIPTION
		near gouge. Interval is cut by 10% 1 to 5cm coarse white quartz veins with minor yellow ferroan carbonate. 99.7 - 101.5 Zone of strong fault gouge and shatter in 60 to 80% of interval with 20% coarse,white quartz veining 101.5 - 121.3 Interval of relatively competent, consistently bedded rock despite 5 to 30cm intervals of sheared and locally fault gouged rock down to 115.0. From 115.0 - 121.3 no sheared rock is evident. Bedding is consistent in interval at 45 - 55° to core axis.
121.3	127.7	MORE MASSIVE,LIGHT GREY, WEAKLY PLANAR LAMINATED FINELY MICACEOUS SILTSTONE Lithology is still part of Itsi Member but in interval composed dominantly of silts with little mud input. Rock is somewhat harder though still soft and very competent - coring in 20 to 40cm pieces. Weak discontinuous, planar laminations give bedding consistently at 30° to the core axis.
127.7	164.1	as 34.7 - 121.3 MEDIUM GREY, VERY SOFT, MICACEOUS, MUDSTONE - MUCH OF INTERVAL EXTREMELY SHEARED Rock is dominantly, medium grey, very soft, micaceous, clayey mudstone with only occasional lighter grey silt striping and occasionally more competent siltstone being present. Rock is non-calcareous, non-carbonaceous, lacking in pyrite. 127.7 - 140.9 Rock shows moderate shearing with 10 to 40cm intervals cut by abundant fractures at 30° to the core axis. These may parallel bedding but no firm bedding indicators are available. 140.9 - 164.1 Highly sheared rock - almost mylonitized. For most of interval shearing is extreme enough to have turned rock into insitu clay with only remnant chunks of mudstone sitting in clay. Occasionally more competent siltstone beds are less altered. Shear fabric is about 10 to 30° to the core axis. For the most part the interval cannot be called fault gouge because fracturing appears to have left rock in place. From 159.6 down to bottom of interval 60 - 70% of core is clay/rock gouge with some milled quartz and calcite fragments.
164.1	190.9	TOM SEQUENCE? EARN GROUP - EXTREMELY SHEARED BLACK, VERY CARBONACEOUS, NON-CALCAREOUS - MODERATELY PYRITIC MUDSTONES

METER FROM	TO	DESCRIPTION
		Interval consists of very black, very carbonaceous, non-calcareous mudstones that have character similar to CARBONACEOUS SUBMEMBER OF THE TOM SEQUENCE 164.1 - 182.8 Extremely sheared character of rock continues with 90% of interval consisting of rock reduced to rock flour and clay incorporating 1 - 20mm gravelly chunks of original rock which for most part seems to be smooth coring, very carbonaceous rock hosting abundant finely disseminated pyrite 2 -4% and occasional pyrite band. No distinct bedding can be identified in interval. 182.8 - 184.5 Predominantly coarse calcite vein and/or replacement of gouge with wispy, irregular seams of remnant carbonaceous mudstone preserved in calcite vein. Calcite appears to have formed upper boundary for interval "horse?" of fractured but not very sheared, carbonaceous mudstones. 184.5 - 189.0 Strongly fractured, wedgy core lacking strong shearing evident in preceding sections. Interval is composed of 5 to 30cm fragments of smooth coring, moderately siliceous, very black, carbonaceous mudstones hosting 3 - 4% pyrite - evenly disseminated and as laminations and bands in core. Bedding seems fairly consistent at 45° to the core axis. 180.9 - 190.9 Coarse calcite zone similar to 182.8 - 184.5m. - veins and seams of pyrite are common particularly at the top of the interval.
190.9	202.3	ITSI MEMBER? MEDIUM GREY, NON CALCAREOUS, RELATIVELY COMPETENT SILTSTONE - EXTREMELY SHEARED - SIMILAR TO 121.3 - 127.7 - AFFINITY UNCERTAIN Interval is composed of grey, competent massive siltstone with fine granularity evident on core surface. Blocks of siltstone remain sporadically through interval in highly sheared matrix. Interval at 198.8 - 200.3 is more carbonaceous interval resembling preceding and following rock. Bedding is not readily identifiable in the interval.
202.3	207.0	TOM MEMBER? EARN GROUP - EXTREMELY SHEARED, BLACK, CARBONACEOUS, MODERATELY SILICEOUS MUDSTONES Similar to 164.1 - 190.9 but slightly more siliceous. Interval is intensely sheared such that only 1 - 3cm angular, lenticular fragments occur in finer rock flour and gravel. 5 - 7% quartz veins cut rock, some of which also seems to be sheared and milled suggesting long lived history of shearing and

METER FROM	TO	DESCRIPTION
		movement on structure. END OF HOLE AT 207.0m. NOTE: Hole was terminated because extreme thicknesses of sheared and fault gouged rock with high clay component had pinched in on hole when rods were pulled. To continue would have required reaming back down several hundred feet and reducing. It was deemed better to wait for future program and drill a hole from higher on the slope and in opposite direction to test known Upper Road River Gp. and Lower Earn Gp. rocks.



(10T) MAP# 105-O-1 092924

NIDD

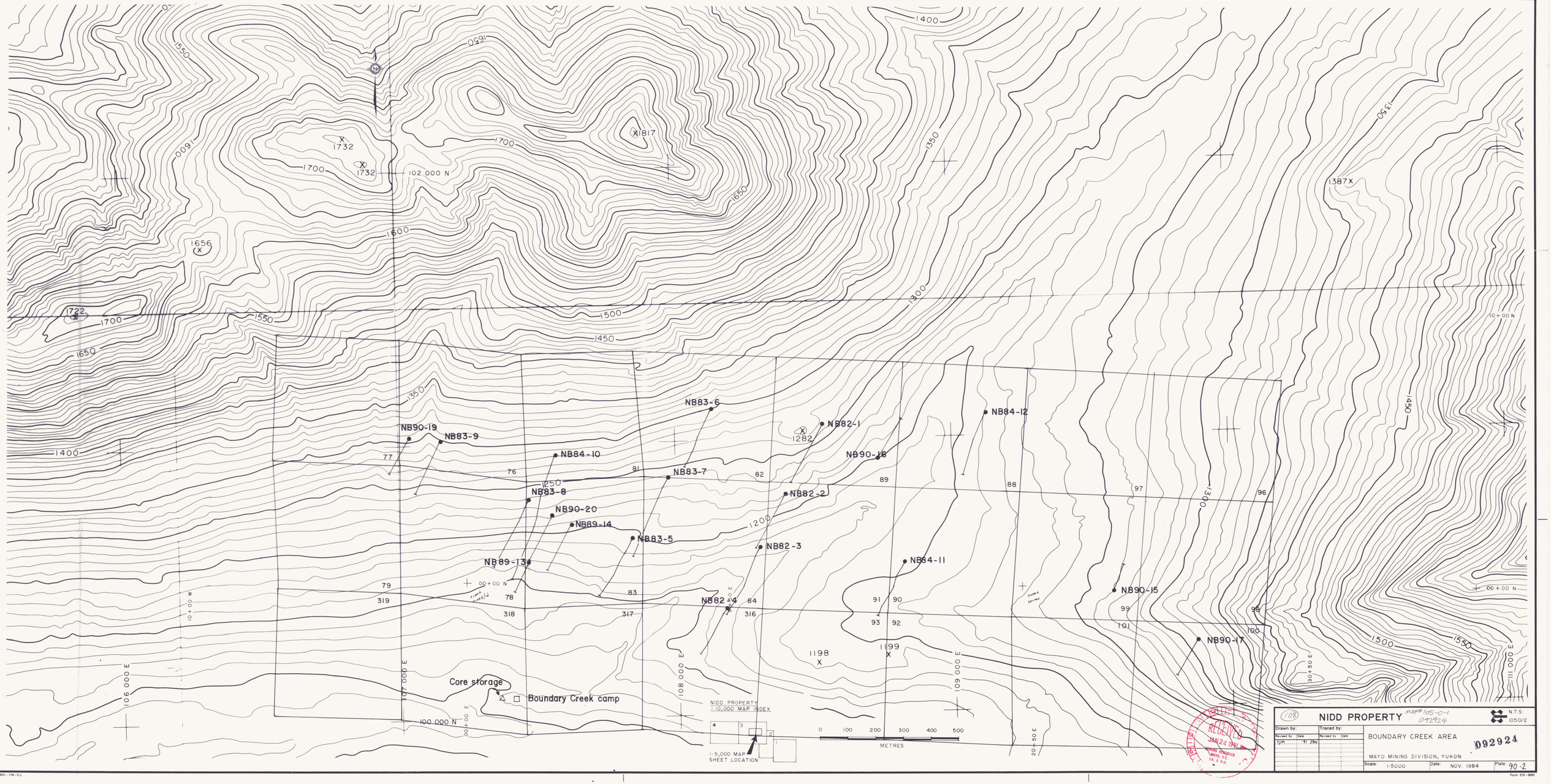
Drawn by:		Traced by: SAW	
Revised by	Date	Revised by	Date
JD PF	2 Dec 89		

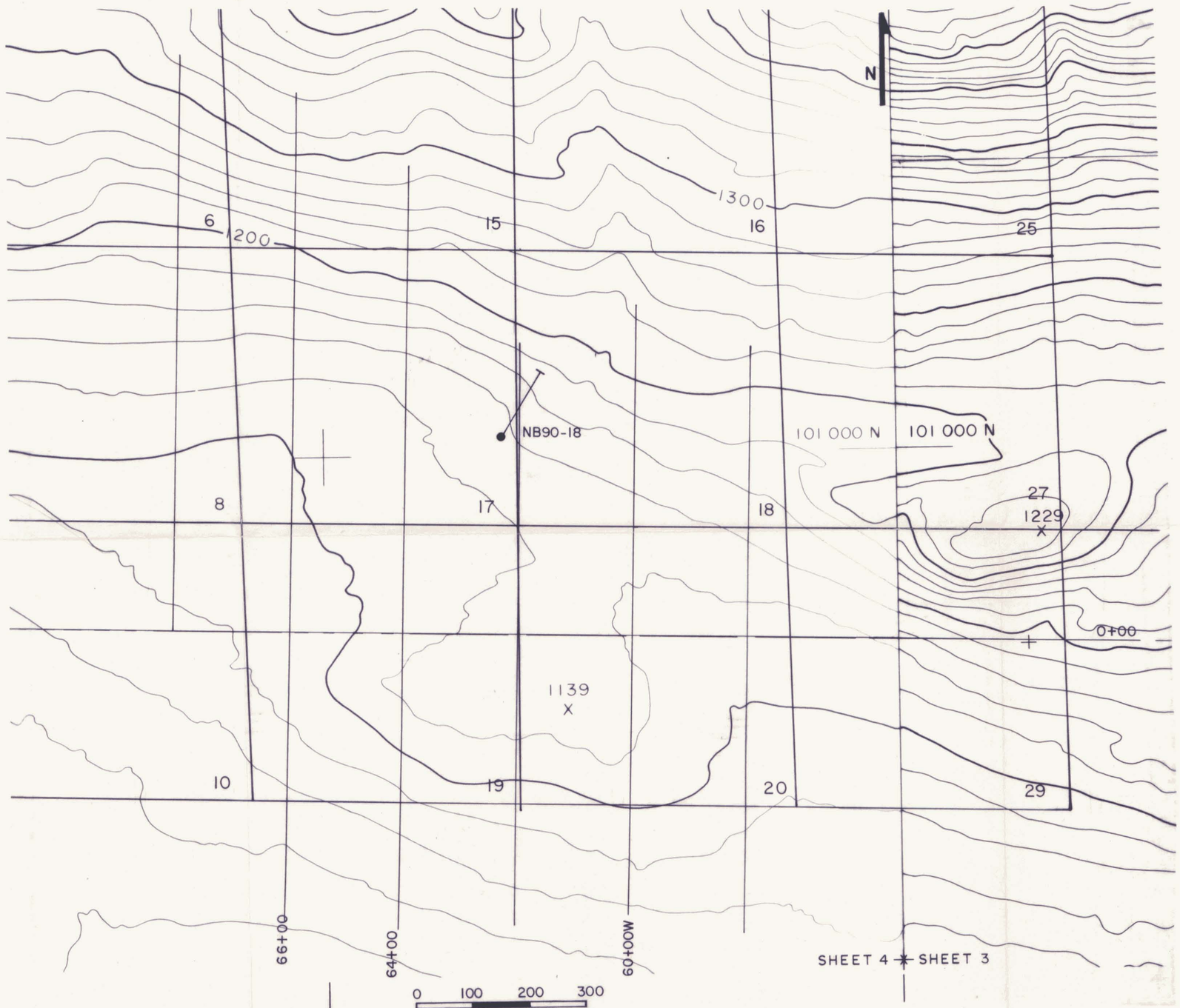
CLAIM MAP 092924

Scale: 1/2 mile = 1 " | Date: September 1981 | Plate: 90-1

NCI-119-C.L.

FORM 210-5M80


NB90-19
NB83-9
NB84-10
NB83-6
NB82-1
NB84-12
NB90-18
NB83-7
NB83-8
NB82-2
NB90-20
NB89-14
NB83-5
NB82-3
NB89-13
NB84-11
NB82-4
NB90-15
NB90-17
Core storage
Boundary Creek camp
102 000 N
100 000 N
106 000 E
107 000 E
108 000 E
109 000 E
110 000 E
111 000 E
00+00 N
10+00 N
00+00 E
10+00 W
20+50 E
1732
1817
1656
1722
1282
1387
1198
1199
NIDD PROPERTY
1:10,000 MAP INDEX
1:5,000 MAP SHEET LOCATION
0 100 200 300 400 500
METRES
RECEIVED
JAN 24 1985
MINING RECORDER
MAYO, Y.T.
(108) NIDD PROPERTY
MAP 105-O-1
092924
N.T.S. 105O/2
Drawn by:
Traced by:
Revised by Date
BOUNDARY CREEK AREA
092924
MAYO MINING DIVISION, YUKON
Scale: 1:5000
Date: NOV. 1984
Plate: 90-2



(109) MAP#105-0-1 092924

NIDD PROPERTY

COMINCO 1050-1/2

Drawn by: TJM		Traced by: tjm	
Revised by	Date	Revised by	Date

Eleven Creek area with claims

092924

Scale: 1:5000 | Date: Jan '91 | Plate: 90-3

R5M

R7VT

MMal,2

MMal,2

MCg

TC-G

25+50 E

1300 m.

STEEP

No outcrop, probably underlain by older Road River Group lithologies

2000 ppm Zn

1270m.

24+50 E

R5M

?

STEEP

?

R5M

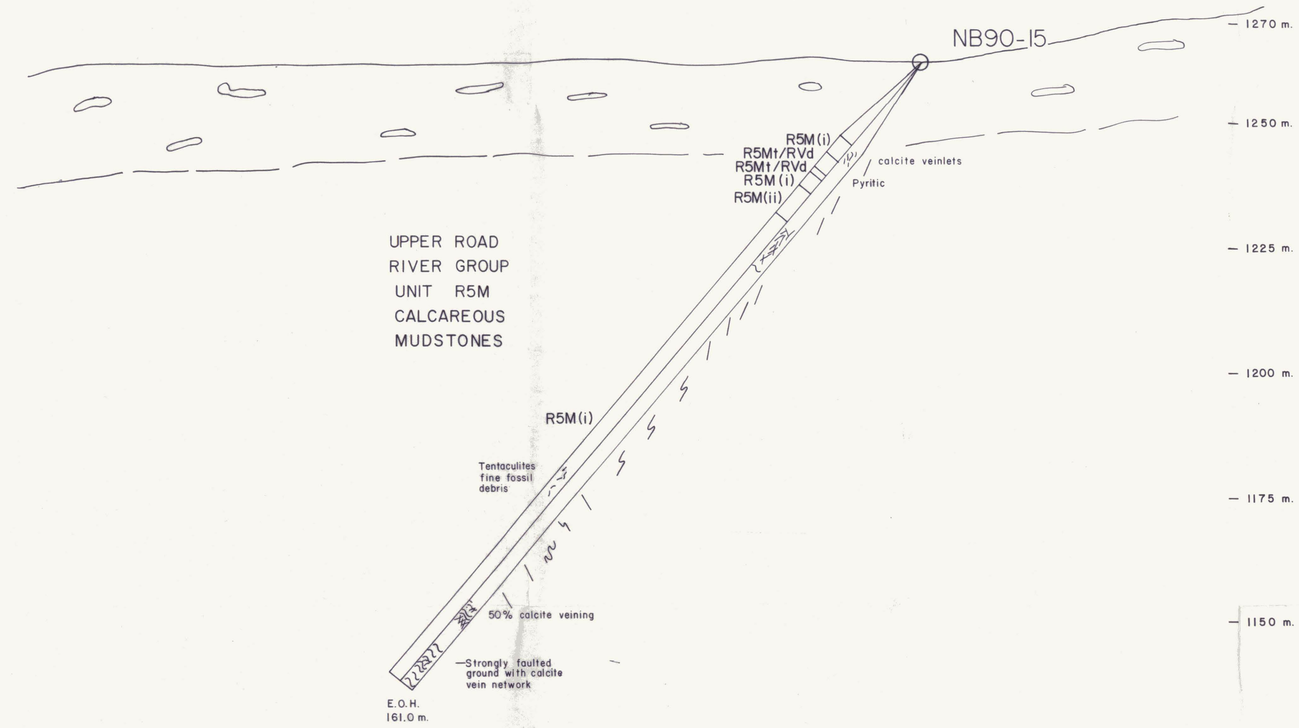
NB90-15
bearing 020°
dip -50°

No outcrop anywhere on plan, geology extrapolated from NB90-15 and NB90-17 and outcrop to east

Change in geology on North limb of syncline indicated by geophysics

23+50 E

0 10 20 30 40 50
Scale (metres)



LEGEND
STRATIGRAPHY

LOWER MIDDLE TO UPPER DEVONIAN
Earn Group
Portrait Lake Formation
I - Itsi Member
T - Tom Member
TG - Gritty Submember
TC - Carbonaceous Submember
TCh Cherty Carbonaceous Mudstone
TCd Diamictite -chert pebble and mudstone clasts
M - MacMillan Pass Member
MD - Diamictite (supported by mudstone matrix)
MDc Chert pebble clasts dominant
MDm Mudstone clasts predominant
MDv Volcanic clasts present
MG - Chert Grits
MCg- Chert Pebble Conglomerate (clast supported, silica cement)
MCgm Conglomerate with significant mudstone clasts
MCgv Conglomerate with volcanic clasts
MM - Mudstones
MMvt Tuffaceous mudstones
MMa Sand Banded Mudstones, 1-5 increasing in coarseness from silt to grit
MMx Carbonaceous mudstones - weakly calcareous
MV - Volcanics (carbonitized basalts)
MVa Agglomerates lapilli tuffs
MVt Volcanic tuffs
MVf Volcanic flows
MVf Sills/intrusions

ORDOVICIAN TO LOWER DEVONIAN
Road River Group
R7V Volcanics (carbonitized basalts)
R7Va - Agglomerates lapilli tuffs
R7Vt - Volcanic tuffs
R7Vf - Volcanic flow
R7Vs - Sills/intrusions
R5M Black calcareous mudstone sometimes speckled with fine fossil debris Tentaculites sp. Often striped with calcareous sand and silt bands of turbidite origin.
(i) - fine sand and silt bands evident
(i) - coarse sand bands and beds evident
RRM Black non-calcareous variably siliceous mudstones of uncertain stratigraphic affinity - thought to be Road River Group
R4 Silurian Siltstone, dolomitic siltstone with distinctive wispy laminations

SYMBOLS

outcrop

geologic contact - definite

geologic contact - probable

fault (normal)

soil sample site (zinc, lead values)

diamond drill hole

road

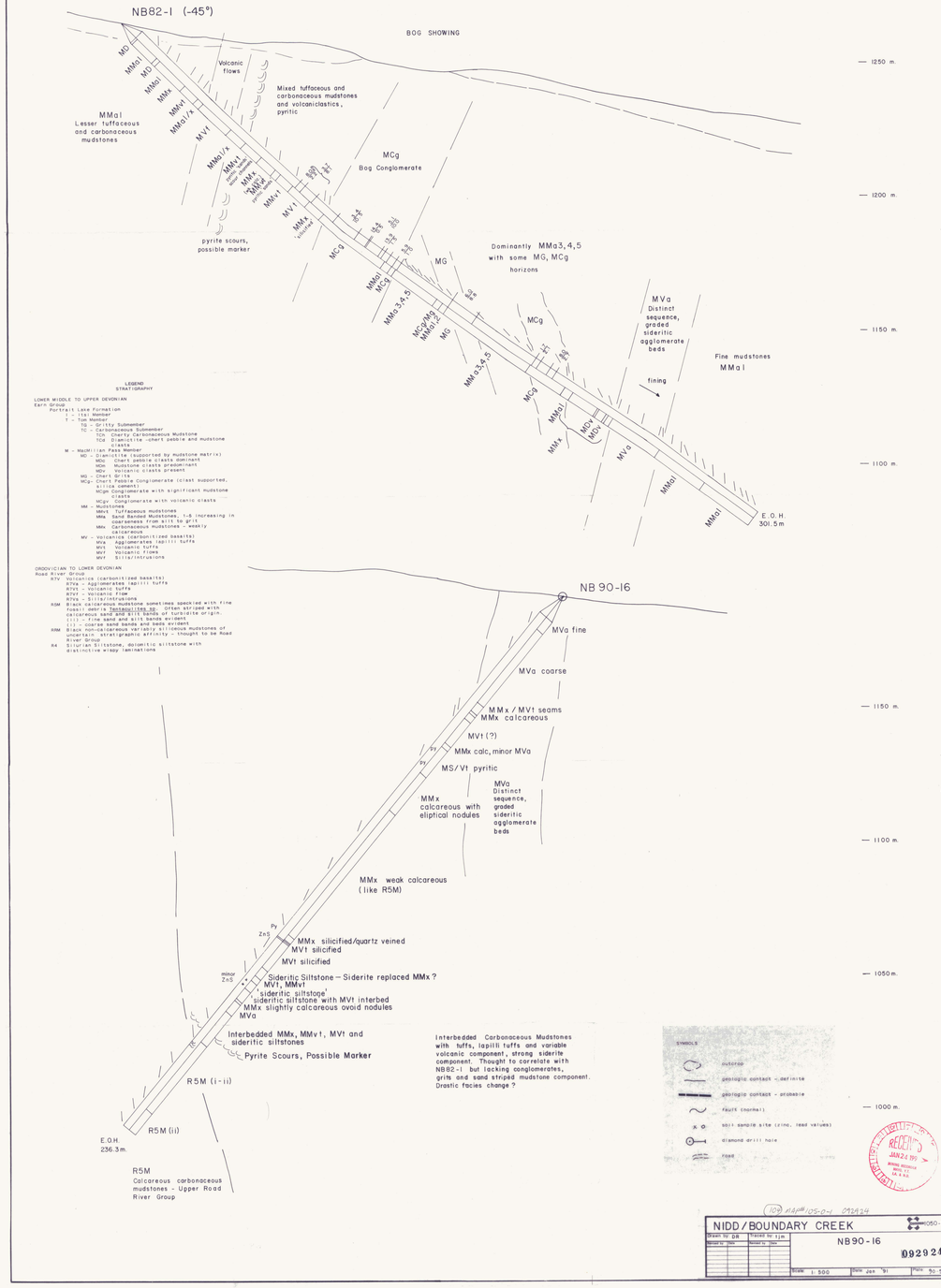
(103) MAP# 105-0-1 092924

NIDD / BOUNDARY CREEK 105 0-1/2

NB 90-15

092924

Drawn by: DR	Traced by: tjm		
Revised by / Date	Revised by / Date	Scale: 1:500	Date: Jan '91
			Plate: 90-4



10@ MAP# 105-0-1 092924

NIDD / BOUNDARY CREEK
NB90-16
092924
105O-1/2

Drawn by DB	Traced by tjm		
Revised to: Date	Revised to: Date		

Scale 1:500 Date Jan '91 Plate No. 5

N

NB90-17
-50°

1300

MCg

MMa1,2

MMa 1,2

TC/G

MMa 1,2

MCg

GOSSAN

ROAD TO BOUNDARY CK. CAMP

1250

GOSSAN

R5M

R7Vt

R5M

26+50

Note: No outcrops on plan anywhere, geology is extrapolated from NB90-17 outcrops several hundred metres to east and drill holes NB90-15 and NB84-11 to west 300 and 1000 m. respectively.

0 10 20 30 40 50
SCALE (metres)

Geological contact defined

Possible geological contact

Gossan outline (approx.)

LEGEND
STRATIGRAPHY

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MVa Agglomerates lapilli tuffs
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MVf Volcanic flows
MVf Sills/intrusions

ORDOVICIAN TO LOWER DEVONIAN
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R4 Silurian Siltstone, dolomitic siltstone with distinctive wispy laminations

SYMBOLS

- outcrop
- geologic contact - definite
- geologic contact - probable
- fault (normal)
- soil sample site (zinc, lead values)
- diamond drill hole
- road

NB90-17

TG

TG

TC

TC

MMa1,2

TG minor Td

TC

MCg (minor MG, MS)

Laminated Pyrite Horizon - Distal Ore Horizon?

MMa1,2

60% qtz vein

MG

R5M

MCg

MG

MCg

MS

R5M minor R5VT

strongly sheared rock

Fine fossil debris, tentaculites

R5M(ii)

Strongly sheared, fractured zone, red hematite pyritic tuffaceous beds

ovoid calcareous concretions

R5M(i)

— 1340 m.
— 1330 m.
— 1320 m.
— 1310 m.
— 1300 m.
— 1290 m.
— 1280 m.
— 1270 m.
— 1260 m.
— 1250 m.
— 1240 m.
— 1230 m.
— 1220 m.
— 1210 m.
— 1200 m.
— 1190 m.
— 1180 m.
— 1170 m.
— 1160 m.
— 1150 m.

105 MAP# 105-O-1 092924

NIDD/ BOUNDARY CREEK 1050-1/2

Drawn by: D.R. Traced by: tjm

NB90-17

092924

Scale: 1:500 Date: Jan '91 Plate: 90-6

TRENCH:

Volcaniclastic grit/sst

R7?

TRENCH:
R5/R8?

R5

MMa1,2

MCg

MCg

MCg

TC?

I

Itsi Member

BROAD MAJOR FAULT ZONE

1000 ppm Zn

2000 ppm Zn

1000 ppm Zn

1200 m.

70°

N

0+00N
1+00N
1+50N
2+00N
2+50N
3+00N
3+50N
4+00N
4+50N
5+00N
5+50N
6+00N
6+50N
7+00N
7+50N

1210
1570
1350
1560
1470
874
515
574
173
1230
3000
2160
1040
1280
1250
5980
18240
7160
3040
3400
3260
275
62+00W
11+00E

NB90-18

0 10 20 30 40 50
METRES

LEGEND
STRATIGRAPHY

LOWER MIDDLE TO UPPER DEVONIAN
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Portrait Lake Formation
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TG - Gritty Submember
TC - Carbonaceous Submember
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SYMBOLS

outcrop
geologic contact - definite
geologic contact - probable
fault (normal)
soil sample site (zinc, lead values)
diamond drill hole
road

NB90-18

Fault gouge
Scattered 2-20cm fault gouge
Im
Micaceous soft mudstone
10% qtz veins
Fault gouge
Is
TOM MEMBER?
ITSI MEMBER
Im
Strongly sheared rock—mostly clay
TC?
Strongly sheared
Calcite veining
Is?
Coarse calcite
TC(h)?
Strong shearing with blocks of remnant stratigraphy
DOLOMITE
E.O.H
207.0 m.

MAJOR ZONE OF FAULTING ENCOMPASSING ENTIRE HOLE

(106) MAP# 105-O-1 092924

NIDD/BOUNDARY CREEK

Drawn by: DR	Traced by: tjm	NB90-18
Revised by / Date	Revised by / Date	092924
		Scale: 1:500 · Date: Jan '91 · Plate: 9(