

FROM Mining Recorder at MAYO

TO Supervising Mining Recorder at Whitehorse, Y.T.



FOR ACTION ARE:

NEW APPL'N for PLACER LEASE to PROSPECT: Name: \_\_\_\_\_ Lease No. ....

RENEWAL APPL'N PLACER LEASE to PROSPECT: Name: \_\_\_\_\_ Lease No. ....

AFFIDAVIT of EXPENDITURE on PLACER LEASE. Name: \_\_\_\_\_ Lease No. ....

ASSIGNMENT of PLACER LEASE No. ....  
From: \_\_\_\_\_ To: \_\_\_\_\_

GROUPING APPL'N UNDER SEC. 52(2) PLACER MINING ACT.  
- Owner: \_\_\_\_\_

DIAMOND DRILL LOGS:  
Claims: NIDD R18, R25 Claim sheet no. 105-0-1

QUARTZ ASSESSMENT REPORT  
Claims: \_\_\_\_\_ Claim sheet no. \_\_\_\_\_

Type of report: \_\_\_\_\_ Submitted by: COMINCO LTD

Cls. work performed on: \_\_\_\_\_ \$ Req. for ren. application \_\_\_\_\_

5 HOLES  
878.13 METRES  
CORE STORED ON PROPERTY?

[Signature]  
Signature

REPLY ACTION

Date Ret

090924

~~090923~~

Signature



Exploration

BY COURIER

Mr. R. G. Ronaghan  
Mining Recorder  
Mayo, Yukon  
YOB 1MO



December 11, 1981

Dear Mr. Ronaghan

On October 16, 1981 we applied assessment work credits to certain Nidd mineral claims located in the Mayo M.D.

At that time we requested a 60 days extension of time for the submission of the technical report which we now enclose (in duplicate) for your approval.

We like to thank the Department once again for the permission of late filing of the attached drilling report.

*Season's Greetings!*

Yours very truly,

A handwritten signature in black ink, appearing to read 'S.S. Selke'.

S.S. Selke,  
Senior Technician,  
Exploration.

SSS/mar

COMINCO LTD.

EXPLORATION

NTS: 105 0-1

WESTERN DISTRICT



ASSESSMENT REPORT

DIAMOND DRILLING

ON

NIDD CLAIM GROUP

MAYO MINING DISTRICT, YUKON TERRITORY

LATITUDE: 63°10' and LONGITUDE: 130°20'



WORK UNDERTAKEN DURING THE PERIOD:

AUGUST 7 to OCTOBER 4, 1981

ON NIDD CLAIMS 218 and 225

10 DECEMBER 1981

R.W. LANE

090924



This report has been examined by  
the Geological Examination Unit  
under Section 53 of the Yukon Quartz  
Mining Act and is allowed as  
reproducible work to the amount  
of \$ \_\_\_\_\_.

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

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- Appendix III - Certification

ATTACHMENTS

- Plate A - Location Map, Nidd Property, MacMillan Pass, Yukon, scale 1:500,000
- Plate B - Claim Map - NiddProperty, scale 1" = ½ mile
- Plate C - Location Map of diamond drill holes 79-1, 79-2, 81-1, 81-2, 81-3 and 81-4, scale 1:2,000
- Plate D - DDH 81-1, Nidd Creek area, scale 1:1,000
- Plate E - DDH 81-2, Nidd Creek area, scale 1:1,000
- Plate F - DDH 81-3, Nidd Creek area, scale 1:1,000
- Plate G - DDH 81-4, Nidd Creek area, scale 1:1,000
- Plate H - Log of DDH 81-1
- Plate I - Log of DDH 81-2
- Plate J - Log of DDH 81-3
- Plate K - Log of DDH 81-4

ASSESSMENT REPORT

DIAMOND DRILLING

ON

NIDD CLAIM GROUP

MAYO MINING DISTRICT, YUKON TERRITORY

I. LOCATION - refer to plate A.

The Nidd Claim Group occurs within the Mayo Mining District, and is situated in the MacMillan Pass area of the Yukon, 380 km NE of Whitehorse, Yukon. The diamond drilling referred to in this report was centered on latitude 63°10' and longitude 130°20'. Access to the property is via the Canol Road from Whitehorse and Ross River, or alternatively, by air to the MacMillan Pass airstrip. The easternmost end of the property, where the 1981 diamond drilling was undertaken, is serviced by a 4x4 road which traverses the Jason property.

II. INTRODUCTION - refer to plates B and C

The 1981 diamond drilling was undertaken in an area covered by Nidd Claims 218 and 225. The claims overlie lower Devonian age Road River Formation and middle Devonian age Canol Formation stratigraphy. The Road River Formation stratigraphy consists predominantly of siliceous calcareous grey to black, carbonaceous mudstone, which in places contains appreciable amounts of ankerite and/or siderite, and sand sized fossiliferous carbonate detritus. The succeeding Canol Formation unconformably overlies the Road River Formation. The Canol Formation consists mainly of laminated to very thin bedded carbonaceous grey to black mudstones to siltstones, which in places are ankeritic to sideritic. In some locations the Canol Formation also contains laminae and thin to thick beds of chert grain sandstones and conglomerates, which are cemented by silica and/or siderite.

Galena and sphalerite mineralization occurring within the Road River and Canol Formations constitutes the exploration target. Massive Pb-Zn-Py sulphides have been defined in Canol Formation stratigraphy, approximately 25 stratigraphic meters above the Road River/Canol Formation contact, 500 meters along strike to the east of where the 1981 drilling was undertaken.

III. WORK UNDERTAKEN - refer to plates C to K

The camp and diamond drill were mobilized to the property by E. Caron Diamond Drilling of Whitehorse, and set-up during the period August 7 to August 13, 1981. Diamond drilling commenced on August 14 and continued until October 1, 1981. The drill was demobilized from the property during the period October 2 to October 4, 1981. Five holes totalling 878.13 meters were drilled. Sections and logs for four holes Nos. 81-1 to 81-4, are attached to this report as plates D to K. The fifth hole 81-1a, drilled from the same location as 81-1, was abandoned at 12.2 meters due to severe rod deflection. No log exists for 81-1a. The holes were logged by R.W. Lane.

Report by: *R.W. Lane*  
R.W. Lane, Geologist

Endorsed by: *A.B. Mawer*  
A.B. Mawer, Senior Geologist

Approved for  
Release by: *G. Harden*  
*for* G. Harden, Manager  
Exploration,  
Western District

RWL/skg  
Distribution  
Mining Recorder (2)  
Western District (1)  
RWL (1)

APPENDIX I

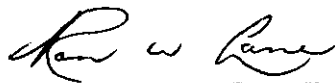
IN THE MATTER OF THE ACT RESPECTING QUARTZ MINING IN THE YUKON TERRITORY,  
AND IN THE MATTER OF A DIAMOND DRILLING PROGRAM CARRIED OUT ON NIDD  
CLAIMS 218 and 225, ON THE NIDD PROPERTY, LOCATED IN THE MACMILLAN  
PASS AREA, MAYO M.D., AT LATITUDE 63<sup>0</sup>10' and LONGITUDE 130<sup>0</sup>20', NTS:  
105 0-1

S T A T E M E N T

I, RONALD W. LANE, OF THE CITY OF NORTH DELTA, IN THE PROVINCE OF  
BRITISH COLUMBIA, MAKE OATH AND SAY:

1. THAT I am employed as a geologist by Cominco Ltd., and as such,  
have a personal knowledge of the facts to which I hereinafter de-  
pose;
2. THAT annexed hereto and marked as "Appendix II" to this statement is  
a true copy of expenditures incurred on a diamond drilling program  
on Nidd claims 218 and 225;
3. THAT the said expenditures were incurred between the 7th day of  
August and the 4th day of October, 1981, for the purpose of mineral  
exploration on the above claims.

Signed: \_\_\_\_\_

  
R.W. Lane, Geologist  
Exploration

APPENDIX II

NIDD CLAIMS

Statement of Expenditures for the period August 7 to October 4, 1981  
(diamond drilling program on Nidd Claims 218 and 225)


Diamond drilling - contact	\$149,690.83
Diamond drilling - supplies	25,100.97
Domicile - contacted and equipment	14,316.93
Cat - D6, for drill moves, mobilization and demobilization	8,500.00
Salaries	<u>5,000.00</u>
	<u>\$202,608.73</u>

APPENDIX III

C E R T I F I C A T I O N

I, Ronald W. Lane, of 7673 Sutton Place, in the City of North Delta,  
in the Province of British Columbia, do hereby certify that:

1. I graduated from the University of Alberta in 1971 with a  
B.Sc., specializing in geology;
2. I have been practising my profession on a continuous basis  
for the last 10 years.

Signed:   
\_\_\_\_\_  
R.W. Lane, Geologist  
Exploration

## Drill Hole Record



Property	NIDD	District	Mayo	Hole No.	DDH-81-1
Commenced	August 15, 1981	Location	MacMillan Pass	Tests at	250.24 m
Completed	August 27, 1981	Core Size	HQ	Corr. Dip	60° @ 250.24 m
Co-ordinates	Grid Co-ordinates: 39 + 73.5 W & 12 + 51.5 S	Latitude	7,005,120	True Brg.	225°
Objective	Pb-Zn sulphides in Road River and Canal Formations	Departure	432,725	Logged by	R.W. Lane
		% Recov.	89.7%	Date	September 1981

Claim

T Brg. 225°

Collar Dip 65°

Elev. 1383 m

Length 250.24 m

Hole No. DDH-81-1  
Sheet 1

Footage From To	Description	Sample No.	Length	Analysis
0.00 - 10.00m	Overburden - boulders of sandstone and chert pebble conglomerate.			
10.00 - 20.12m	Unit 81-1-1 Siliceous, strongly calcareous greyish black to black mudstone, containing well laminated beds of white carbonate every 10 to 50 cm. Some replacement of calcareous beds by siderite occurs near the bottom of the unit. Bedding is thin, except for the internally laminated nature of the carbonate beds. Pyrite: Pyrite occurs as scattered disseminated euhedral crystals. Grain size varies from very fine to 3 mm in diameter. It occurs mainly in the carbonate rich sections. Mineralization: 14.0m - a few grains of sphalerite in laminated calcareous bed. Estimated grade << 1% Zn/5 cm. 18.8m - shear zone within calcareous mudstone which contains approximately 40% pyrite.			
20.12 - 50.90m	Unit 81-1-2 Siliceous, very weakly calcareous to non calcareous, weakly sideritic mudstone containing 1% disseminated euhedral medium to coarse grained pyrite. The overall color of the mudstone is greyish black. Very fine grained siderite in portions of the mudstone give it an olive green-grey tint, while ankerite within some of the mudstone gives it a medium grey color. Bedding is laminated to very thin, beds average 0.5 cm thick. Pyrite: 20.12 - 47.0 - disseminated fine to coarse pyrite constitutes 1% of the rock. 47.0 - 50.9 - fine discontinuous laminae of pyrite constitutes 2% of the rock.			

RWL



## Drill Hole Record



Property	NIDD	District	Hole No.	
Commenced		Location	Tests at	Hor. Comp.
Completed		Core Size	Corr. Dip	Vert. Comp.
Co-ordinates			True Brg.	Logged by
Objective			% Recov.	Date

Footage From To	Description	Sample No.	Length	Analysis					
				Claim	T Brg.	Collar Dip	Elev.	Length	
79.75-80.0	Unit 81-1-4 Siliceous, moderately calcareous, fossiliferous (Tentaculites) mudstone. The Tentaculites are partially replaced by sphalerite. Mineralization 79.75-80.0 - estimated grade is 3% Zn/20 cm.								
80.0 to 85.0m	Unit 81-1-5 Siliceous, weakly calcareous mudstone containing 25% fine hair like laminae of ankerite. (Similar to Unit 81-1-3). Mineralization 80.4 m - trace amount of galena intercrystallized with pyrite in fracture. Est. << 1/2% Pb/5cm. Breccia: 60% of the unit consists of sedimentary and tectonic breccia fragments. Graphite is formed along some shear planes.								
85.0 to 94.25m	Unit 81-1-6 Siliceous, moderately calcareous, sideritic fossiliferous (tentaculites and crinoids) mudstone. In places the fossils are partially replaced by pyrite and/or sphalerite. The rocks are medium grey, to greyish black to black, depending on their fossil content. In general the upper portion of the unit contains mainly Tentaculites and only a few crinoids, while the lower section contains significantly more crinoids, although Tentaculites fossils still predominate. Section 85.10 m to 86.10 m is only weakly fossiliferous. Between 89.5 m and 92 m the fossils are extensively replaced by siderite, and to a lesser extent, by pyrite.								

## Drill Hole Record



Property	NIDD	District	Hole No.
Commenced		Location	Tests at
Completed		Core Size	Hor. Comp.
Co-ordinates		True Brg.	Vert. Comp.
Objective		% Recov.	Logged by
			Date

Foolage		Description	Sample No.	Length	Analysis	Claim	FT Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
From	To											
		<u>Mineralization:</u>										
		85.0m: Very fine grained sphalerite is disseminated within mudstone clast containing fine white laminae, which are weakly calcareous. Estimated grade: 1% Zn/5 cm.										
		86.10m: Galena occurs associated with pyrite across a 5 cm wide shear zone. Estimated 2% Pb across 5 cm.										
		86.15m: Sphalerite replaces Tentaculites across a 2 cm thickness. Estimated 1/2% Zn/5 cm.										
		87.15m: Galena occurs intercrystallized with pyrite along fine fractures. Estimated << 1/2% /5 cm.										
		87.3m: Sphalerite replaces Tentaculites and crinoids across a 10 cm thickness. Estimated 2% Zn/10 cm.										
		<u>Breccia</u>										
		Sixty percent of the unit consists of sedimentary and tectonic breccia. Graphite occurs along some shear planes.										
94.25	138.38m	Unit 81-1-7										
		Non siliceous, non calcareous, laminated, color banded mudstone, containing laminae and beds of sandstone, which are cemented by silica and/or siderite. The unit contains disseminated to finely laminated pyrrhotite throughout the unit, but mainly between 128 m - 138.38 m. In places pyrrhotite also occurs in lenses 1 cm wide by 1-3 cm long. The lenses appear to represent bondinaged thin beds of pyrrhotite. The mudstone laminae are medium grey, dark grey and black in color. The sandstone occurs from 94.25 m to 128 m. Beyond 128 m to 138.38 m there is an insignificant amount of sandstone laminae, ie. only 2 or 3 laminae. From 94.25 to 106.2 m the sandstone occurs in fine laminae to discontinuous bondinaged laminae, and constitutes 2% of the section. Siderite usually cements the sandstone in this section, and can constitute 30 to 50%										



Scale

Colour Plot  
& Dips

## Drill Hole Record



Property	NIDD	District	Hole No.
Commenced		Location	Tests at
Completed		Core Size	Hor. Comp.
Co-ordinates			Vert. Comp.
Objective		% Recov.	Logged by
			Date

Claim

T Brg.

Collar Dip

Elev.

Length

Hole No.  
DDH-81-1Sheet  
6

Footage From	To	Description	Sample No.	Length	Analysis
		Pyrite & Pyrrhotite: The unit contains 1-2% fine disseminated to fine laminated pyrite and pyrrhotite. 139.4m - a 4 cm thick bed of lacey pyrrhotite occurs by partially replacing carbonate in a calcareous mudstone.			
140.7	145.80m	Unit 81-1-9 Siliceous, interbedded weakly to strongly calcareous, color bonded mudstone. The unit consists of strongly calcareous medium grey mudstone which is thinly interbedded (1-5 cm beds) with weakly to moderately calcareous black mudstone. Pyrrhotite: Pyrrhotite occurs as knots, disseminations and very thin laminae, and constitutes approximately 1% of the rock.			
145.80	150.9m	Unit 81-1-10 Siliceous, weakly calcareous, sideritic/ankeritic mudstone. The mudstone is thin bedded, with the bedding defined by white to light brown beds of ankerite and/or siderite, which are internally laminated.			
150.9	168.0m	Unit 81-1-11 Siliceous, cherty, non calcareous, sideritic (buckshot, fine disseminated to laminated to thin bedded and vein type) color banded mudstone. Unit contains trace to minor amounts of galena and sphalerite, usually at least every 0.5 to 1.0 m. The mineralization occurs in fine disseminations,			

## Drill Hole Record



Property	NIDD	District	Hole No.
Commenced		Location	Tests at
Completed		Core Size	Hor. Comp.
Co-ordinates			Vert. Comp.
Objective			True Brg.
			Logged by
			% Recov.
			Date

Claim

T Brg.

Collar Dip

Elev.

Length

Hole No.  
DDH-81-1  
Sheet  
7

Footage From	To	Description	Sample No.	Length	Analysis
		<p>knots along bedding planes, laminae to discontinuous laminae and veinlets. The unit is characterized by its buckshot siderite and color banding (thinly interbedded light grey, medium grey, dark grey and black). The light grey beds are very siliceous and in places can be observed to contain ghosts of sandsized grains of chert ? or carbonate ?, and minor black argillite. It seems likely the beds represent highly silicified chert sandstone or possibly calcareous sandstone. Similar beds were encountered in DDH-81-4 at 164.4 m to 190.75 m, where it appears the original sandsized material may have been calcareous. The 81-1 light grey siliceous beds often contain intercrystalline siderite, and constitute approximately 15% of the unit. The mudstones containing the buckshot siderite constitute 20% of the unit, while mudstones containing fine disseminated to laminated siderite constitute 25% of the unit. The remaining 40% of the unit consists of black mudstone with a minor siderite and/or ankerite content. The unit is non calcareous from 150.9 m to 165 m, and weakly calcareous from 165 m to 168 m. Pyrrhotite and pyrite occurs in veins and knots, and in small patches where it replaces mudstone and siderite. The combined Py-Po content of the unit is 1-2%. In places the pyrrhotite and pyrite are intermixed with Pb and Zn.</p> <p><b>Mineralization:</b> The previously indicated mineralization, which occurs throughout most of unit 81-1-11, is estimated to grade <math>\frac{1}{2}</math>-<math>\frac{1}{2}</math>% combined Pb-Zn across a width of approximately 15 metres (true width). At individual mineralized locations within the unit grades are estimated to range from <math>&lt; \frac{1}{2}</math>% to 5% combined Pb-Zn across a true thickness of 5 cm. The grade across any 1 meter interval within the unit 81-1-11 is estimated to not exceed 1% combined Pb-Zn.</p>			

## Drill Hole Record



Property	NTDD	District	Hole No.						
Commenced		Location	Tests at	Hor. Comp.					
Completed		Core Size	Corr. Dip	Vert. Comp.					
Co-ordinates			True Brg.	Logged by					
Objective			% Recov.	Date					

Claim

T Brg.

Collar Dip

Elev.

Length

Hole No. DDH-81-1  
Sheet 8

Footage		Description	Sample No.	Length	Analysis				
From	To								
168.0	171.45m	Unit 81-1-12 Siliceous, weakly calcareous mudstone containing fine hair-like laminae of ankerite(?) and siderite. The hair-fine laminae were white when first cored, but soon altered to a yellowish color, therefore they must contain a significant amount of siderite. Unit also contains a few 1-5 cm thick beds of sideritic mudstone with fine internal laminae. The bedding is offset by shearing in numerous places. Mineralization: 170.6 m - Galena occurs in a 3 mm wide by 4 cm long lens within a laminated siderite bed.							
171.45	178.7m	Unit 81-1-13 Siliceous, strongly calcareous mudstone, containing a few 1-2 cm thick beds of white laminated CaCO <sub>3</sub> , and minor disseminated euhedral pyrite. Quartz Veining: 173.74 to 173.90 m : 5 cm thick quartz vein. 177.39 m : 4 cm thick white quartz vein. Shearing: Considerable amounts of graphite is developed along shear planes from 173.15 to 174.95 m. The cone is quite broken in this interval.							
178.7	183.4m	Unit 81-1-14 Siliceous, weakly to moderately calcareous mudstone containing a few 1-2 cm thick beds of white laminated CaCO <sub>3</sub> , and 1/4% disseminated euhedral pyrite.							

Scale

Colour Plot  
& Dip

## Drill Hole Record



Property	NIDD	District	Hole No.	Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
Commenced		Location	Tests at	Hor. Comp.					DDH-81-1	9
Completed		Core Size	Corr. Dip	Vert. Comp.						
Co-ordinates			True Brg.	Logged by						
Objective			% Recov.	Date						
Footage		Description	Sample No.	Length	Analysis					
From	To									
183.4	206.50m	Unit 81-1-15								
		Siliceous, weakly to non calcareous mudstone, containing variable amounts of very fine siderite and/or ankerite intercrystallized with the mudstone. The ankerite and/or siderite content varies from almost nil to a few tens of percent, to give the rock a faint to distinct color banded appearance. A tectonic breccia zone occurring from 193.9 to 194.1 m is cemented by medium to coarse grained siderite. A tectonic breccia zone occurring from 198.10 to 204.22 m contains extensive siderite. The siderite occurs in the form of fine disseminations, buckshot and veins.								
		<u>Mineralization:</u>								
		191.6 to 191.8m - Sphalerite, pyrite and pyrrhotite occurs in veins within a tectonic breccia. Estimated 3% Zn/10 cm.								
		193.2 - Sphalerite occurs in a 0.5 cm x 2.0 cm knot along a fracture.								
		198.10 to 204.22m - Sphalerite occurs filling a small fracture, occurs as grains rimming tectonic breccia fragments, and replaces some sideritic tectonic breccia fragments. Estimated grade over the 198.10 to 204.22 interval is < 1/2% Zn.								
		<u>Quartz Veins:</u>								
		184.75 - 5 cm thick quartz-calcite vein.								
		200.4 to 202 m - Extensive zone of white quartz - likely a fault zone.								
		<u>Breccia:</u>								
		191.4 to 193.9 - Tectonic breccia developed in shear zone.								
		198.10 to 204.2 - Tectonic breccia developed in shear zone.								

## Drill Hole Record



Property	NIDD	District	Hole No.
Commenced		Location	Tests at
Completed		Core Size	Hor. Comp.
Co-ordinates			Vert. Comp.
Objective			True Brg.
			Logged by
			% Recov.
			Date

Claim

T Brg.

Collar Dip

Elev.

Length

Hole No.  
DDH-81-1  
Sheet 10

Footage From	To	Description	Sample No.	Length	Analysis
206.50	240.1m	<u>Unit 81-1-16</u>			
		Siliceous, weakly calcareous mudstone containing patches of very fine siderite and/or ankerite intercrystallized with the mudstone. The mudstone is generally greyish black with a yellowish-brown cast in some sections due to the altered siderite content. Bedding varies from faint laminated to thin bedded to massive. In several places the mudstone contains fine hair-like laminae of ankerite. At 230 m there occurs a 20 cm thick section of tectonic breccia cemented by siderite and pyrite. Minor amounts of coarse grained disseminated euhedral pyrite occur in some sections.			
		<b>Mineralization:</b>			
		Sphalerite occurs every 1-3 metres either by infilling fine fractures, as knots within fractured areas, or by replacing laminae in tectonic breccia clasts or beds. Estimated grade over the whole interval is $\ll \frac{1}{2}\%$ Zn. Locally the Zn content sometimes ranges up to a few percent Zn over a width of 5 cm. Pyrrhotite occurs throughout the section in minor amounts (est. $\frac{1}{4}\%$ ) as cross-cutting veinlets, knots, laminae along bedding planes, or infilling in breccia zones.			
240.1	241.4m	<u>Unit 81-1-17</u>			
		Siliceous, moderately calcareous, fossiliferous (Tentaculites) mudstone, which is partially replaced by siderite and sphalerite. The rock is a medium yellowish-grey. The Tentaculites are very abundant. Minor amounts (1-2%) of coarse grained euhedral pyrite occurs.			
		<b>Mineralization:</b> Estimated grade of zinc replacing Tentaculites is 5%/30 cm.			



## Drill Hole Record



Property	NIDD	District	Mayo	Hole No.	DDH-81-2			
Commenced	August 28, 1981	Location	MacMillan Pass	Tests at	None	Hor. Comp.	62.5 m	
Completed	September 5, 1981	Core Size	HQ, NQ, BQ	Corr. Dip		Vert. Comp.	110.5 m	
Co-ordinates	Grid Co-ordinates 39 + 70 W, 14 + 00 S	Latitude	7,004,913	True Brg.	225°	Logged by	R.W. Lane	
Objective	Pb-Zn sulphides in Road River and Canal Formation stratigraphy		Departure	433,098	% Recov.	40.2%	Date	September 1981

Claim NIDD 218

T Brg. 225°

Collar Dip 60

Elev. 1353 m

Length 126.49

Hole No. DDH-81-2  
Sheet 1

Footage		Description	Sample No.	Length	Analysis					
From	To									
0.00	35.97m	Overburden - boulders of chert pebble conglomerate.								
35.97	39.97m	81-2-1 Non siliceous, non calcareous mudstone containing abundant disseminated medium crystalline siderite. The mudstone is greyish black and very thin bedded (0.5 to 1.0 cm). The core is sheared, partially oxidized, and frequently coated with iron and manganese oxides. Euhedral, disseminated, medium to coarse crystalline pyrite constitutes a few percent of the rock near the beginning of the unit.								
39.97	44.0m	81-2-2 Non siliceous, non calcareous mudstone containing 25% ankerite (?) and siderite in laminae and very thin beds, which are generally boudinaged into small lenses. The mudstone is greyish black to black, weakly phyllitic and quite soft. The ankerite (?) and siderite laminae are light greyish-green in color and fairly hard - but can be scratched. Quartz veining: 41.0 to 41.45 - white quartz, containing some host rock fragments. The quartz likely marks a fault zone.								
44.0	48.4m	81-2-3 Non siliceous, non calcareous mudstone containing 25%, (but up to 50%) ankerite (?) with minor siderite in laminae and very thin beds. The mudstone is greyish black, quite soft, and often phyllitic along numerous shear planes. The ankerite is light greenish grey and quite hard, but can be scratched. The unit has undergone a lot of folding, shearing and faulting.								

## Drill Hole Record



Property	NIDD	District	Hole No.
Commenced		Location	Tests at
Completed		Core Size	Corr. Dip
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Footage		Description	Sample No.	Length	Analysis				
From	To				Claim	T Brg.	Collar Dip	Elev.	Length
48.4	126.49m	81-2-4							
		Non siliceous, non calcareous, weakly phyllitic and sericitic mudstone containing 10% ankerite (?) with minor siderite in laminae and very thin beds, and 5% sandstone cemented by siderite in laminae and in beds up to a few tens of centimeters thick. The mudstone is greyish-black and contains some very fine black laminae. The ankerite (?) and minor siderite are light greenish-grey. The sandstone consists of fine grained quartz grains, and it is light green in color. The siderite cementing the sandstones can range up to 30% of the rock.							
		Mineralization:							
		94.40m - Red-brown sphalerite fills vein in quartz sandstone. Estimated grade - 1% Zn/5 cm.							
		103.10m - Knots of red-brown sphalerite occur along a 0.5 cm thick bed of the ankerite (?)/siderite. Estimated grade - 2% Zn/5 cm.							
		104.0 m - Disseminated red-brown sphalerite occurring within a 0.5 cm thick quartz sandstone bed. Estimated grade - 3% Zn/5 cm.							
		109.12m - Knots of red-brown sphalerite along contact of ankerite/siderite bed and black mudstone. Estimated grade - 1%/5 cm.							
		Quartz veins:							
		80.20m - 15 cm thick section of white quartz containing host rock fragments.							
		88.90m - 10 cm thick section of white quartz and an additional 5 cm thick section containing white quartz stringers.							
		108.51m - 7 cm thick interval of white quartz contains some fragments of host rock.							
		115.50m - 7 cm thick interval of white quartz.							



Scale

Colour Plot  
& Dips

## Drill Hole Record



Property	NIDD	District	Mayo M.D.	Hole No.	DDH-81-3
Commenced	September 6, 1981	Location	MacMillan Pass	Tests at	85.34m - 57.5 <sup>0</sup>
Completed	September 16, 1981	Core Size	HQ & NQ	Corr. Dip	176.13m - 57 <sup>0</sup>
Co-ordinates	Grid Co-ordinates 38 + 75 W, 12 + 65 S	Latitude	7,005,045	True Brg.	225 <sup>0</sup>
Objective	Pb-Zn sulphides in Road River and Canal Formations		Departure	432,783	% Recov. 53.7%
				Logged by	R.W. Lane
				Date	September 1981

Claim  
NIDD 218 & 225T Brg. 225<sup>0</sup>Collar Dip  
60<sup>0</sup>

Elev. 1368 m

Length 177.7 m

Hole No.  
DDH-81-3

Sheet

1

Footage	Description	Sample No.	Length	Analysis
From	To			
0.00m	39.62m			
	Overburden - boulders of sandstone and chert pebble conglomerate.			
39.62m	65.53m			
	Unit 81-3-1			
	Non siliceous, non calcareous mudstone, containing 5% fine sandstone laminae that are cemented with siderite. Mudstone is laminated and color banded (med. grey to greyish black), with a composite color of medium grey. Minor amounts of pyrite and subordinate amounts of pyrrhotite occur intercrystallized or as laminae within the sandstone.			
65.53m	68.88m			
	Unit 81-3-2			
	Siliceous, weakly calcareous mudstone. Mudstone is greyish black and faintly laminated.			
	Fine white ankerite occurs intercrystallized with the mudstone.			
	Mineralization: at 65.6m there occurs a 2 cm x 3 mm knot of sphalerite, pyrite and galena along a fracture within a 2 cm thick bed of ankeritic mudstone.			
68.88m	75.29m			
	Unit 81-3-3			
	Siliceous, moderately to strongly calcareous mudstone. Mudstone is color banded and consists of interbedded (2-5 cm beds) black and medium grey siliceous mudstone.			
	Mineralization: Trace amounts of dess. sphalerite in a medium grey colored bed at 72.75 m.			

RwL

## Drill Hole Record



Property	NIDD	District	Hole No.	Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
Commenced		Location	Tests at	Hor. Comp.					DDH-81-3	2
Completed		Core Size	Corr. Dip	Vert. Comp.						
Co-ordinates			True Brg.	Logged by						
Objective			% Recov.	Date						
Footage From	To	Description	Sample No.	Length	Analysis					
75.29	142.58m	Unit 81-3-4 Siliceous, non calcareous, sideritic mudstone. Mudstone is medium grey to greyish black to black, and laminated to thin bedded - bedding is generally not too pronounced. The sideritic mudstone beds constitute approximately 25% of the unit, and siderite constitutes about 25% of the rock in these beds. The siderite occurs: (1) as v. fine grained disseminated crystals within mudstone, (2) as fine blebby laminae, (3) as discrete disseminated medium to coarse grained crystals (buckshot texture), and (4) by replacement, outwards from fractures, or in tectonic breccia zones. Some of the siderite occurs in discrete 1-5 cm thick beds, but in general it does not occur in well defined beds.  Ankerite occurs in large sections of the mudstone as very fine disseminated crystals or fine hair-like laminae.  Disseminated euhedral pyrite occurs scattered throughout, but it constitutes less than 1% of the unit.  A purplish-red fibrous mineral of unknown composition coats a few shear zones in the lower 1/3 of the unit.  Quartz veining occurs at the following locations: 97m - 5 cm thick vein, 98.5m - 10 cm thick vein plus veinlets, 103.33 to 105.16m, and 107.7 to 107.85 - 15 cm thick vein.								

## Drill Hole Record



Property	NTDD	District	Hole No.	Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
Commenced		Location	Tests at	Hor. Comp.						
Completed		Core Size	Corr. Dip	Vert. Comp.						
Co-ordinates			True Brg.	Logged by						
Objective			% Recov.	Date						
Footage	Description	Sample No.	Length	Analysis						
From To										
142.58 to 177.7m	Unit 81-3-5									
	Non siliceous, non calcareous, weakly phyllitic and sericitic mudstone containing 25% fine sandstone cemented with siderite in laminae and in beds up to 20 cm thick. Mudstone is greyish-black, the sandstone is grey-green. The sandstones are laminated to massive, often have sericite along parting planes, and contain minor disseminated euhedral pyrite.									
	Mineralization: (a) 143.75m - a few disseminated grains of sphalerite in sideritic sandstone. Estimated grade << 1/2% Zn/5 cm.									
	(b) 163.98m - small knots of sphalerite along a vein. Estimated grade << 1/2% Zn/5 cm.									
	(c) 165.81m - small knots of sphalerite along a vein. Estimated grade << 1/2% Zn/5 cm.									
	Quartz vein: (a) 142.5 to 143.2m - major quartz vein plus veinlets. The quartz separates two units and likely occurs along a fault zone.									
177.7m - end of hole										

## Drill Hole Record



Property	NIDD	District	MAYO, M.D.	Hole No.	DDH-81-4
Commenced	SEPT. 17, 1981	Location	MACMILLAN PASS	Tests at	76.2m-54, 152.4m-41.5°
Completed	OCT. 1, 1981	Core Size	H.Q. & N.Q.	Corr. Dip	282.24m -37° 309.67m -37°
Co-ordinates	7,005,197 (latitude)	Grid Co-ord.	38+20W 10+55S	True Brg.	225°
Objective	432,918 (departure)	Pb-Zn sulphides in Road River and Canal Formations		% Recov.	86.6%
				Date	OCTOBER 1981

Footage From To	Description	Sample No.	Length	Analysis
0.00 - 12.0 m	Overburden			
12.0 - 23.16	Unit 81-4-1 Non siliceous non calcareous mudstone containing disseminated crystalline ankerite and 10% light grey ankeritic mudstone in laminae and very thin beds. The ankeritic mudstone contains minor amounts of medium to coarse grained euhedral pyrite. Over-all, the unit contains only trace amounts of pyrite. Colour is greyish black with a rusty tint, except for thin beds of light grey ankeritic mudstone.			
23.16 - 28.7 m	Unit 81-4-2 Moderately siliceous to non siliceous, very weakly to weakly calcareous mudstone which is characterized by containing sections of laminated pyrite. Unit contains fine white blebs to discontinuous laminae of ankerite along bedding planes. Over-all colour is greyish black. Pyrite occurrences: 23.75 to 23.85 m - section contains a 7cm thick bed of very finely laminated pyrite, where over 90% of the rock consists of pyrite. Quartz occurs in tension fractures perpendicular to bedding. 23.85 to 24.70 m - pyrite content is trace to nil. 24.70 to 25.45 m - laminated to disseminated pyrite constitutes 5% of the rock. Interval also contains fine white blebs along bedding planes which may be barite. Rock feels a bit heavy. 25.45 - 27.0 - pyrite content is trace to nil. 27.0 - 28.7 - a few percent of pyrite is fine laminae. At 27.5 the unit contains a 5 cm thick interval of laminated pyrite which consists of over 90% pyrite.			
28.7 - 29.10	Unit 81-4-3 Quartz vein - white massive quartz			

Claim  
NIDD 225

T Brg. 225°

Collar Dip 61.5°

Elev. 1410 m

Length 309.68 m

Hole No.  
DDH-81-4

Sheet 1

RWL

Scale

Colour Plot  
& Dip

## Drill Hole Record



Property	NIDD	District		Hole No.	DDH-81-4	Claim		T Brg.		Collar Dip		Elev.		Length		Hole No.	
Commenced		Location		Tests at		Hor. Comp.		Vert. Comp.		Logged by		Date		% Recov.			
Completed		Core Size		True Brg.													
Co-ordinates		Objective															
Footage From	To	Description	Sample No.	Length	Analysis												
29.10 - 67.97		<u>Unit 81-4-4</u> Siliceous, weakly to moderately calcareous mudstone containing fine hair-like laminae of ankerite. The rock is greyish black and faintly laminated - with the laminated character usually defined by hair-fine laminae of ankerite. However a few dark grey laminae or beds occur in places. The core is strongly jointed from 29.10 m to 47.0 m. <u>CaCO<sub>3</sub> content</u> 29.10 - 31.09 - moderately calcareous, a 10 cm thick bed containing Tentaculites fossils occurs at 31.0 m. 31.09 - 34.14 - very weakly to weakly calcareous with some non calcareous sections. 34.14 - 34.75 - moderately calcareous 34.75 - 47.0 - very weakly to weakly calcareous with some non calcareous sections. 47.0 - 60.35 - weakly to moderately calcareous 60.35 - 67.97 - moderately calcareous - very fine laminae of CaCO <sub>3</sub> <u>Pyrite content</u> 29.10 - 49.07 - trace to nil 49.07 - 67.97 - very fine disseminations and discontinuous very fine laminae of pyrite. Over short intervals the pyrite can constitute 5-10% of the rock, but over-all it only constitutes 2% of the rock. <u>Quartz veins</u> 54.34 - one 5 cm thick white quartz vein.															
67.97 - 106.38		<u>Unit 81-4-5</u> Siliceous, very weakly to moderately calcareous mudstone that is characterized by containing															

## Drill Hole Record



Property	NIDD	District	Hole No.	DDH-81-4
Commenced		Location	Tests at	Hor. Comp.
Completed		Core Size	Corr. Dip	Vert. Comp.
Co-ordinates			True Brq.	Logged by
Objective			% Recov.	Date

Claim

T Brq.

Collar Dip

Elev.

Length

Hole No.

Sheet

3

Footage		Description	Sample No.	Length	Analysis				
From	To								
		abundant hair-like laminae of ankerite in several sections, which constitute approx. one-third of the unit. The over-all colour is light grey to greyish black. Many sections are light grey due to the abundant laminae of ankerite. The remaining two-thirds of the unit, which does not contain the fine ankerite laminae consists of laminated to very thin bedded light grey to black mudstone, with muted colour banding.							
		<u>CaCO<sub>3</sub> content</u>							
		67.97 - 95.71 - weakly to moderately calcareous, except only weakly to very weakly calcareous just before 95.71 m							
		95.71 - 102.15 m - moderately calcareous							
		<u>Pyrite content:</u>							
		67.97 to 106.38 - very fine disseminations and discontinuous very fine laminae of pyrite. Over short intervals pyrite can constitute 5-10% of the rocks, but over-all it only constitutes 2% of the rock.							
		<u>Quartz veins:</u>							
		86.8 - 87.40 m - Quartz veins constitute one-third of the interval. There is one 25 cm thick section consisting of 90% qtz and 10% mudstone. The remaining thinner quartz veins are cross-cutting. There is no apparent change in rock type on opposite sides of the main quartz vein so faulting is not likely associated.							
		92.0 m - 5 cm thick cross-cutting white quartz vein. Faulting not likely associated.							
		94.9 m - 3 cm thick cross-cutting white quartz vein. Faulting not likely associated.							
		103.0 m - 3 cm thick quartz and calcite vein. Faulting not likely associated.							

Scale

Colour Plot  
& Dip

## Drill Hole Record



Property	NIDD	District	Hole No.	DDH-81-4																
Commenced		Location	Tests at	Hor. Comp.																
Completed		Core Size	Corr. Dip	Vert. Comp.																
Co-ordinates			True Brg.	Logged by																
Objective			% Recov.	Date																
Footage		Description	Sample	Length	Analysis															
From	To		No.																	
		Unit 81-4-6																		
106.38	136.86	Siliceous, moderately to very strongly calcareous, weakly sideritic (buckshot), CaCO <sub>2</sub> banded, laminated to thin bedded mudstone. The rock is generally medium grey, and in places light grey. It contains subordinant amounts of greyish black laminae. The colour banding is distinct but not pronounced. The grey colouration reflects CaCO <sub>3</sub> content. Bedding widths vary from 1mm to 5 cm. The unit contains the first siderite intersected by 81-4.																		
		<u>Siderite occurrences:</u>																		
		106.45 m - 1 cm thick bed of coarse euhedrally crystalline (buckshot) siderite.																		
		107.60 m - 10 cm thick knot of coarse grained euhedrally crystalline light grey (buckshot) siderite.																		
		A 1 mm x 2 cm long vein filled with pyrite and galena occurs within the siderite.																		
		109.0 m - 2 cm thick bed of medium grey mudstone containing coarse grained euhedral crystals of (buckshot) siderite.																		
		115.0 - 115.50 m - mudstone containing coarse grained disseminated (buckshot) siderite across 5 cm, and a 5 cm thick section of fine grained siderite.																		
		122.40 - 5 cm thick bed of coarse grained euhedrally crystalline (buckshot) siderite.																		
		128.8 m - 2 cm thick bed of mudstone containing disseminated euhedral coarse grained (buckshot) siderite.																		
		<u>Quartz veins:</u>																		
		112.17 - 112.60 m - 40 cm thick vein of white quartz that contains host rock fragments. Occurrence likely represents a fault.																		
		113.08 - 113.30 m - 25 cm thick vein of white quartz.																		
		129.84 - 136.86 m - quartz veins and veinlets constitute 20% of the section. Core is very broken																		

## Drill Hole Record

DDH-81-4, )



Property	District	Hole No.	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim

T Brg.

Collar Dip

Elev.

Length

Hole No.

Sheet 5

Footage		Description	Sample No.	Length	Analysis					
From	To									
		through this interval.								
		<u>Unit 81-4-7</u>								
136.86	164.4	Siliceous, moderately to strongly calcareous buckshot sideritic mudstone, thinly interbedded with siliceous muddy limestone. The unit is distinctly colour banded, and consists of beds which range in colour from light grey to black. The beds average 0.5 to 2.0 cm thick, and most are internally thinly laminated.								
		<u>Composition of the unit:</u>								
		30% muddy limestone, light to medium grey in colour, generally crystalline, occasional sandsized clastic carbonate component.								
		20% black mudstone containing buckshot siderite. The siderite constitutes 1 - 95% of the mudstone, averages 70%.								
		50% moderately to strongly calcareous mudstone, medium to dark grey in colour								
		100%								
		<u>CaCO<sub>3</sub></u>								
		136.86 - 160.20 m - strongly to very strongly calcareous								
		160.20 - 161.90 m - very weakly calcareous to non calcareous.								
		161.90 - 164.4 m - moderately to strongly calcareous.								
		<u>Siderite</u>								
		136.86 - 144.5 m - major concentration of buckshot siderite. Minor very fine grained inter-crystalline siderite.								
		144.5 - 164.4 - a few minor occurrences of buckshot siderite, and minor amounts of very fine grained intercrystalline siderite.								

## Drill Hole Record

DDH-81-4



Property	District	Hole No.	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim

T Brg.

Collar Dip

Elev.

Length

Hole No.

Sheet  
6

Footage From To	Description	Sample No.	Length	Analysis						
	<u>Pyrite:</u>									
	Occurs by replacement of the buckshot siderite crystals, or in laminae along contacts between sideritic mudstones and calcareous mudstones.									
	<u>Mineralization</u>									
	139.10 - 139.15 m - 3 laminae of red-brown sphalerite 1-2mm thick occur along bedding planes within very calcareous mudstones. Est. grade 2% Zn/5 cm									
	<u>Quartz veins</u>									
	139.60 - 139.85 - Two, 7 cm long sections of white quartz separated by mudstone.									
	Unit 81-4-8									
164.4 - 190.7	Siliceous, non calcareous, strongly sideritic mudstone, characterized by 5-10% thin light grey beds of laminated silica and siderite. Colour varies from light grey to greyish black, the overall composite colour is medium grey. Colour banding is muted, and is considerably less pronounced than in the preceding unit (136.86 to 164.4 m). The rocks are generally thin bedded, except for the light grey beds which are internally thinly laminated. The light grey laminated siliceous and sideritic beds look very similar to the light grey laminated limestone beds of the preceding unit. There is a good possibility that they represent calcareous beds that have been completely replaced by silica and siderite. In a few places one can see ghosts of translucent grains in the beds, in addition to fine chips of black argillite.									
	<u>Siderite content:</u>									
	Siderite constitutes over 50% of the unit. It occurs uniformly and finely inter crystallized within mudstones, or as fine to medium grained disseminations and laminae.									

Scale

Colour Plot  
& Dips

## Drill Hole Record



Property	District	Hole No.	DDH-81-4			
Commenced	Location	Tests at	Hor. Comp.			
Completed	Core Size	Corr. Dip	Vert. Comp.			
Co-ordinates	True Brg.		Logged by			
Objective	% Recov.		Date			
Footage From To	Description	Sample No.	Length	Analysis		
	<u>Pyrite/Pyrrhotite content:</u>					
	164 - 174 m - Disseminated euhedral coarse grained pyrite occurs in a few places. Some pyrite also occurs along fractures or bedding planes. Est. pyrite grade <math>4\%</math>					
	166.25 - large knot of pyrrhotite localized along fracture cross-cutting mudstone.					
	<u>Mineralization</u>					
	Galena and sphalerite occurs in trace to minor amounts approximately every meter in the upper half of the unit, and approximately every two meters in the lower half of the unit. The mineralization occurs in: (1) disseminations, discontinuous laminae and knots within the white laminated silica/siderite beds; (2) in veinlets; and (3) in sheared or brecciated zones. Grades of combined Pb-Zn are estimated to usually range from $4\%$ up to $5\%$ across 5 cm widths. Grades across any 1 m thick interval are generally much less than $4\%$ , but occasionally up to $4 - 1\%$ combined Pb/Zn.					
	<u>Quartz veins:</u>					
	178 m - 15 cm thick vein of white quartz, not fault associated.					
	180.6 - 5 cm thick vein of white quartz, not fault associated.					
	182.2 - 15 cm thick vein of white quartz, not fault associated.					
	191.1 - 15 cm thick vein of white quartz, not fault associated.					
	<u>Unit 81-4-9</u>					
190.7 - 240.1 m	Siliceous, very weakly to weakly calcareous mudstone, characterized by fine hair-like laminae of ankerite throughout. Medium grey in colour. The light colouration is a reflection of approx. 25% ankerite in the rock.					

Claim

T Brg.

Collar Dip

Elev.

Length

Hole No.

Sheet

7

Scale

Colour Plot  
& Dip

## Drill Hole Record



Property	NIDD	District	Hole No.	DDH-81-4	Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
Commenced		Location	Tests at								8
Completed		Core Size	Corr. Dip								
Co-ordinates			True Brg.								
Objective			% Recov.								
Footage From To	Description				Sample No.	Length	Analysis				
	<p><u>Pyrite/Po:</u></p> <p>Unit contains the occasional 0.5 - 2.0 cm thick bed of mudstone containing 10% disseminated to laminated pyrite. In one location there occurs a 2-3 cm thick bed containing 75% laminated pyrite. The over-all pyrite content of the unit is 1/2%. A few knots of pyrrhotite occur.</p> <p><u>Siderite:</u></p> <p>The uppermost few meters of the unit contains approx. 25% siderite.</p> <p><u>Mineralization</u></p> <p>190.7 - 195 - Galena in cross-cutting veinlets in association with pyrite and siderite occurs every 0.5 to 1.0 m. The estimated grade across 5 m is 1% Pb.</p> <p>237 m - Sphalerite occurs as matrix in a breccia zone. Estimated grade is 5% Zn across 10 cm.</p> <p><u>Unit 81-4-10</u></p>										
240.1 - 242.93	<p>Siliceous, weakly calcareous, fossiliferous (Tentaculites) mudstone, containing fine hair-like laminae of ankerite. Medium grey in colour. Tentaculites constitute approx. 5% of the rock, some are well preserved.</p> <p><u>Pyrite:</u></p> <p>The unit contains approx. 5% disseminated euhedral pyrite.</p> <p><u>Mineralization</u></p> <p>Sphalerite partially replaces Tentaculites fossils in one 15 cm thick section. Estimated grade is 2% over 5 cm.</p> <p>Galena and sphalerite associated with siderite occurs in a 25 cm wide sheared and brecciated zone. Estimated grade is 3% cmbd Pb-Zn across 25 cm.</p>										

Scale

Colour Plot  
& Dips

## Drill Hole Record



Property	District	Hole No.	DDH-81-4
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim

T Brg.

Collar Dip

Elev.

Length

Hole No.

Sheet 9

Footage From	To	Description	Sample No.	Length	Analysis
		Unit 81-4-11			
242.93	272.8	Siliceous, weakly calcareous mudstone containing sections with abundant hair-fine laminar of ankerite. The rocks are light to medium grey in colour; with the light colouration a reflection of the ankerite content. Where abundant, ankerite continues up to 75% of the rock. These ankerite rich rocks make up 35% of the unit. The remaining 65% of the unit consists of dark grey to greyish black mudstones containing ly 4-10% hair-fine laminar of ankerite. Scattered disseminated euhedrally crystalline pyrite occurs occasionally. Pyrite constitutes 4% of the rock.			
		<b>Mineralization</b>			
		249.5 to 252.6 m - Galena and/or sphalerite occurs in fractures every 10 cm to 50 cm. The overall grade of the interval is estimated to be 1% combined Pb/Zn. The best mineralized section with in the interval occurs from 252.45 m to 252.60 m, where fractures in a shear zone sub-parallel to bedding are filled with galena, sphalerite, quartz, siderite and pyrite. The estimated grade for this interval across 15 cm is 5% combined Pb-Zn.			
		259 to 270 m - Galena and sphalerite occur in cross-cutting fractures every 1 to 2 m. Estimated grade is < 4% Pb-Zn.			
		Unit 81-4-12			
272.8	288.0	Siliceous, weakly to moderately to strongly calcareous mudstone, characterized by containing buckshot siderite and by being distinctly colour banded. Bedding is thin (0.5 to 5.0 cm) but often is internally laminated. Beds range in colour from white through grey to black. The white to light grey beds constitute 35% of the upper half of the unit and 10% of the lower unit. They are calcareous and laminated, and appear to represent a chemical precipitation of			

## Drill Hole Record

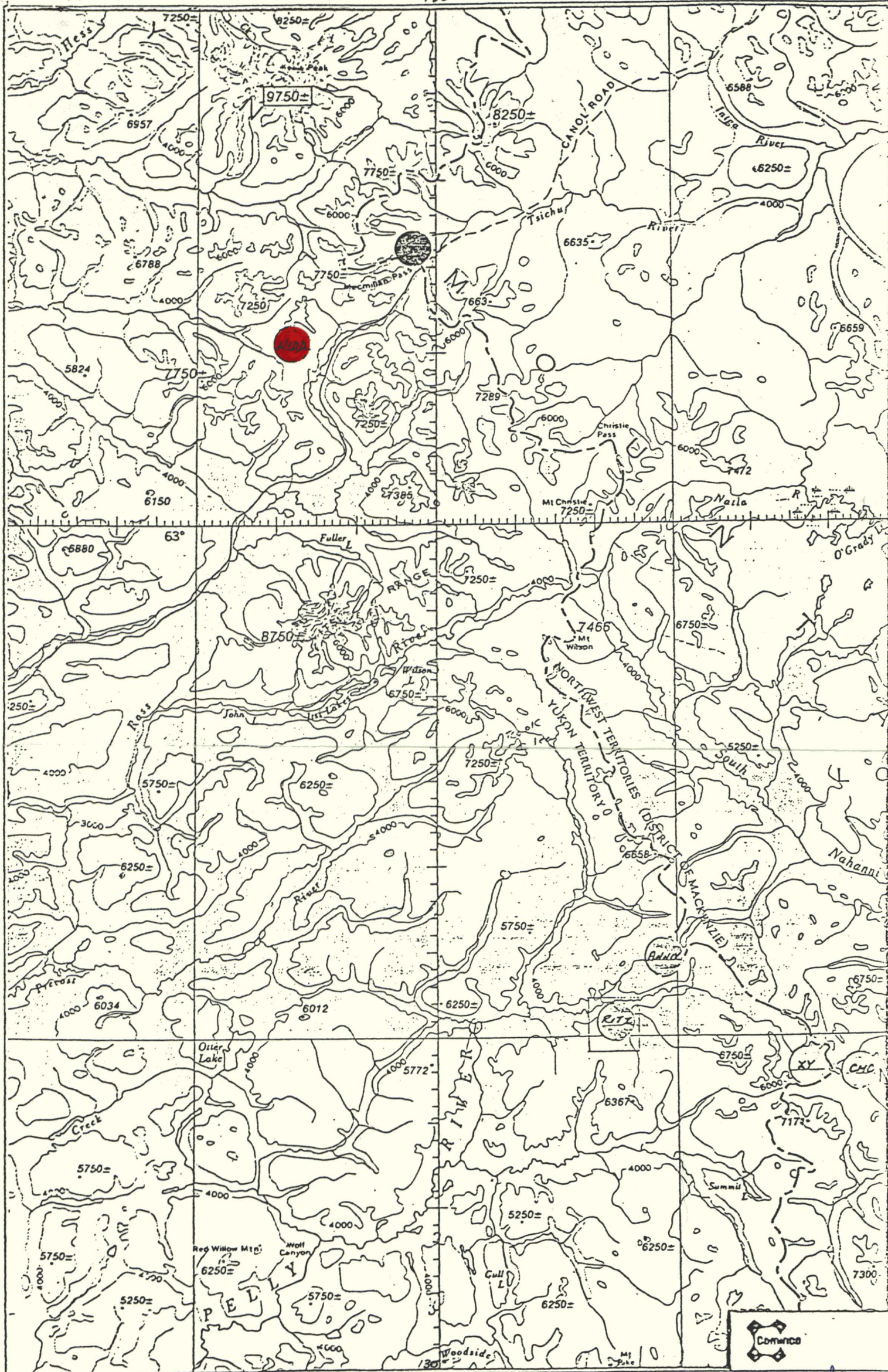


Property	NIDD	District	Hole No.	DDH-81-4
Commenced		Location	Tests at	Hor. Comp.
Completed		Core Size	Corr. Dip	Vert. Comp.
Co-ordinates			True Brg.	Logged by
Objective			% Recov.	Date

Claim  
T Brg.  
Collar Dip  
Elev.  
Length  
Hole No.

Footage From	To	Description	Sample No.	Length	Analysis
		CaCO <sub>3</sub> in a muddy environment.			
		The buckshot siderite beds constitute 35% of the upper half of the unit and 1-2% of the lower half of the unit. The buckshot siderite generally occurs disseminated within black calcareous mudstones. Near the top of the unit the disseminated siderite constitutes 90% of the host bed, while near the middle of the unit it constitutes only 5% or less of the host bed.			
		<u>Mineralization</u>			
		Trace to minor amounts of Pb-Zn occur throughout the unit as disseminations, knots, laminae and in fractures. Estimated grade across any 1 m thick section is approx. 4 - 1% combined Pb-Zn.			
		<u>Unit 81-4-13</u>			
288.0	300.75 m	Siliceous, moderately to strongly calcareous mudstone containing minor amounts of hair-fine laminae of ankerite. Greyish-black, generally thin bedded where white laminated calcareous beds define the bedding. Minor amounts of siderite are associated with a few of the calcareous beds.			
		<u>Mineralization</u>			
		Minor amounts of disseminated sphalerite occurs in a few of the calcareous mudstone beds.			
		<u>Unit 81-4-14</u>			
300.75	309.68	Siliceous, moderately to strongly calcareous mudstone which is characterized by containing some laminated to thin bedded colour banded sections. The rocks are generally dark grey to black, but minor amounts are light grey. The unit contains approx. 10% ankerite in hair fine laminae.			
309.68m		END OF HOLE			

Sheet  
10



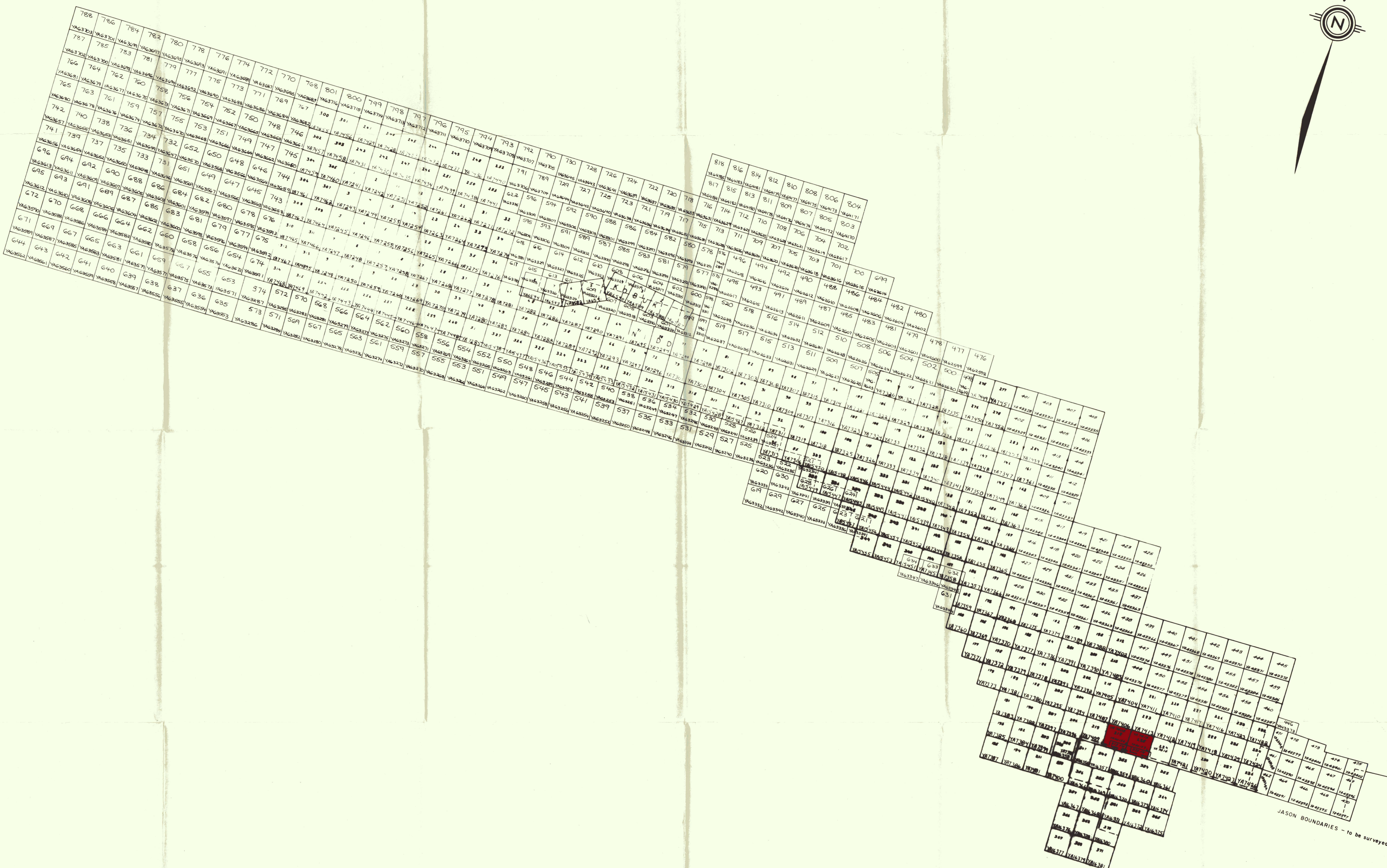
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Revised by	Date
Revised by	Date

090924 *RWL*

LOCATION MAP

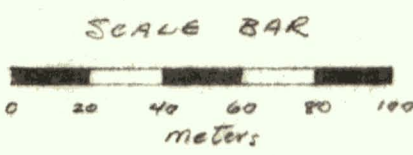
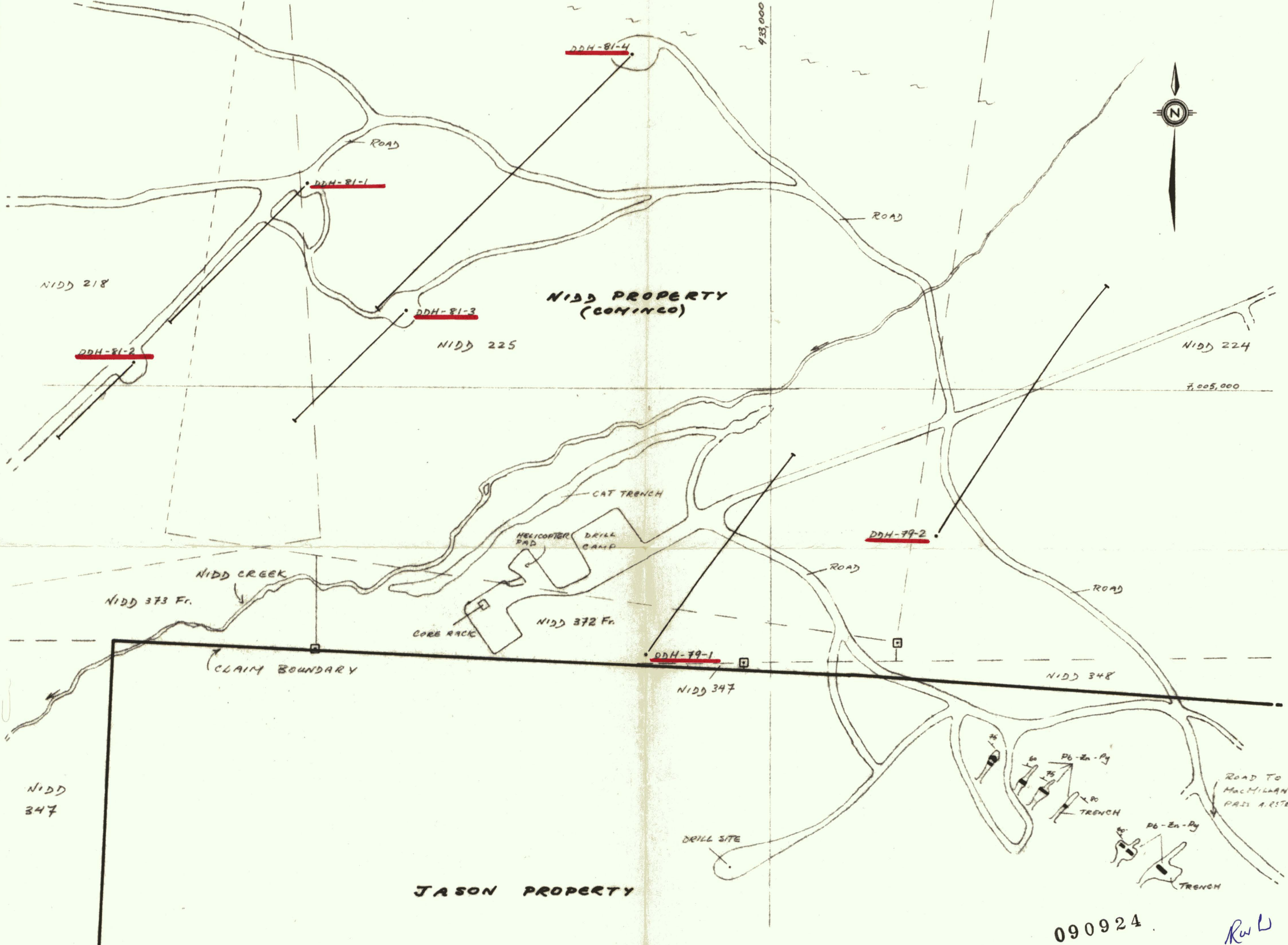
NIDD PROPERTY Mac MILLAN PASS, YUKON

Scale: 1:500,000      Date: FEB 1979      Plate: **A**



090924 *Real*

NIDD		
Drawn by:	Traced by: SAW	
Revised by:	Revised by:	
CLAIM MAP		
Scale: 1/2 mile = 1"	Date: September 1981	Plate: B



**NIDD PROPERTY, MacMILLAN PASS, YUKON**

Drawn by: Rwl		Traced by: Rwl	
Revised by	Date	Revised by	Date

**LOCATION MAP OF DIAMOND DRILL HOLES**

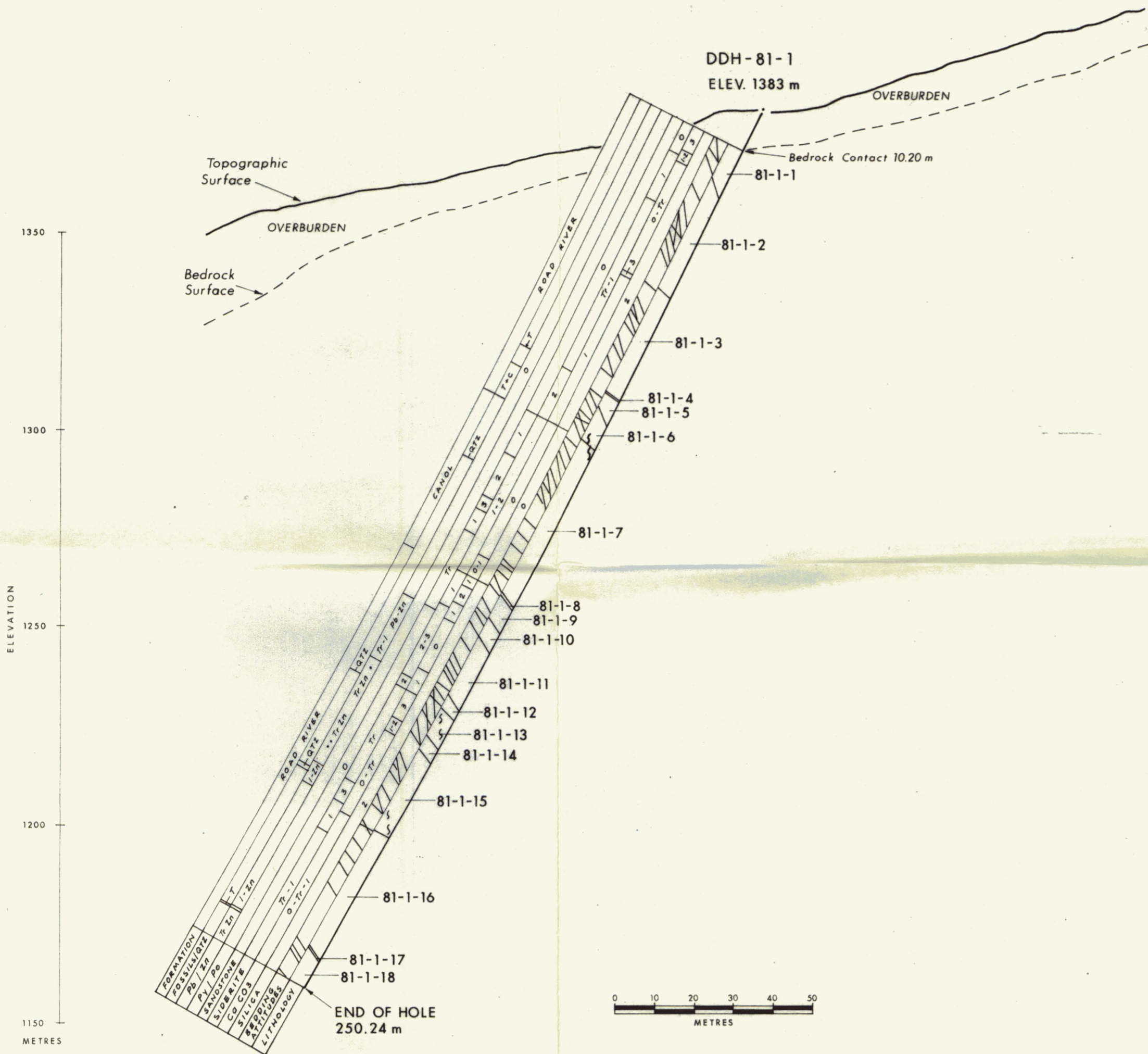
**79-1, 79-2, 81-1, 81-2, 81-3, 81-4**

Scale: 1:2,000	Date: DEC, 1981	Plate: C
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090924 Rwl

SW

NE



GEOLOGICAL LEGEND

- 81-1-1 (10.0m to 20.12m)  
Siliceous, strongly calcareous mudstone, containing well laminated beds of white carbonate every 10 to 50 cm.
- 81-1-2 (20.12m to 50.90m)  
Siliceous, very weakly calcareous, weakly sideritic mudstone containing 1% disseminated euhedral medium to coarse grained pyrite.
- 81-1-3 (50.90m to 79.75m)  
Siliceous, weakly calcareous mudstone containing 25% fine hair-like laminae of ankerite(?).
- 81-1-4 (79.75m to 80.0m)  
Siliceous, moderately calcareous, fossiliferous (tentaculites) mudstone. Tentaculites are partially replaced by sphalerite.
- 81-1-5 (80.0m to 85.0m)  
Siliceous, weakly calcareous mudstone containing 25% fine hair-like laminae of ankerite(?).
- 81-1-6 (85.0m to 94.25m)  
Siliceous, moderately calcareous, fossiliferous (tentaculites and crinoids) mudstone. In places the fossils are partially replaced by pyrite and/or sphalerite.
- 81-1-7 (94.25m to 138.38m)  
Non siliceous, non calcareous, laminated, color banded mudstone containing laminae and beds of sandstone, which are cemented by silica and/or siderite. Unit contains disseminated to fine laminated pyrrhotite, mainly between 128-138m.
- 81-1-8 (138.38m to 140.7m)  
Siliceous, weakly calcareous mudstone, containing disseminated to finely laminated pyrrhotite.
- 81-1-9 (140.7m to 145.8m)  
Siliceous, interbedded, color banded, weakly to strongly calcareous mudstone.
- 81-1-10 (145.8m to 150.9m)  
Siliceous, weakly calcareous, sideritic/ankeritic mudstone.
- 81-1-11 (150.9m to 168.0m)  
Siliceous, cherty, non calcareous, sideritic (buckshot, fine disseminated, laminated to thin bedded and vein type) mudstone. Unit contains trace to minor amounts of galena and sphalerite throughout, in fine disseminations, knots, laminae and veinlets.
- 81-1-12 (168.0m to 171.45m)  
Siliceous, weakly calcareous mudstone containing fine hair-like laminae of ankerite(?) and siderite.
- 81-1-13 (171.45 to 178.7m)  
Siliceous, strongly calcareous mudstone, containing a few 1-2 cm thick beds of white laminated CaCO<sub>3</sub>, and minor disseminated pyrite.
- 81-1-14 (178.7m to 183.4m)  
Siliceous, weakly to moderately calcareous mudstone containing a few beds of white laminated CaCO<sub>3</sub>.
- 81-1-15 (183.4m to 206.50m)  
Siliceous, weakly to non calcareous mudstone, containing variable amounts of very fine siderite and/or ankerite intercrystallized with mudstone.
- 81-1-16 (206.50m to 240.1m)  
Siliceous, weakly calcareous mudstone containing patches of very fine siderite and/or ankerite intercrystallized with the mudstone.
- 81-1-17 (240.1m to 241.4m)  
Siliceous, moderately calcareous, fossiliferous (tentaculites) mudstone, which is partially replaced by siderite and/or ankerite.
- 81-1-18 (241.4m to 250.24m)  
Siliceous, weakly calcareous, weakly sideritic and/or ankeritic mudstone. Unit contains one 4 cm thick bed of fossiliferous (tentaculites) mudstone.

- SYMBOLS
- 0 - None
  - Tr. - Trace
  - 1 - Minor
  - 2 - Moderate
  - 3 - Abundant

090924 *RWB*

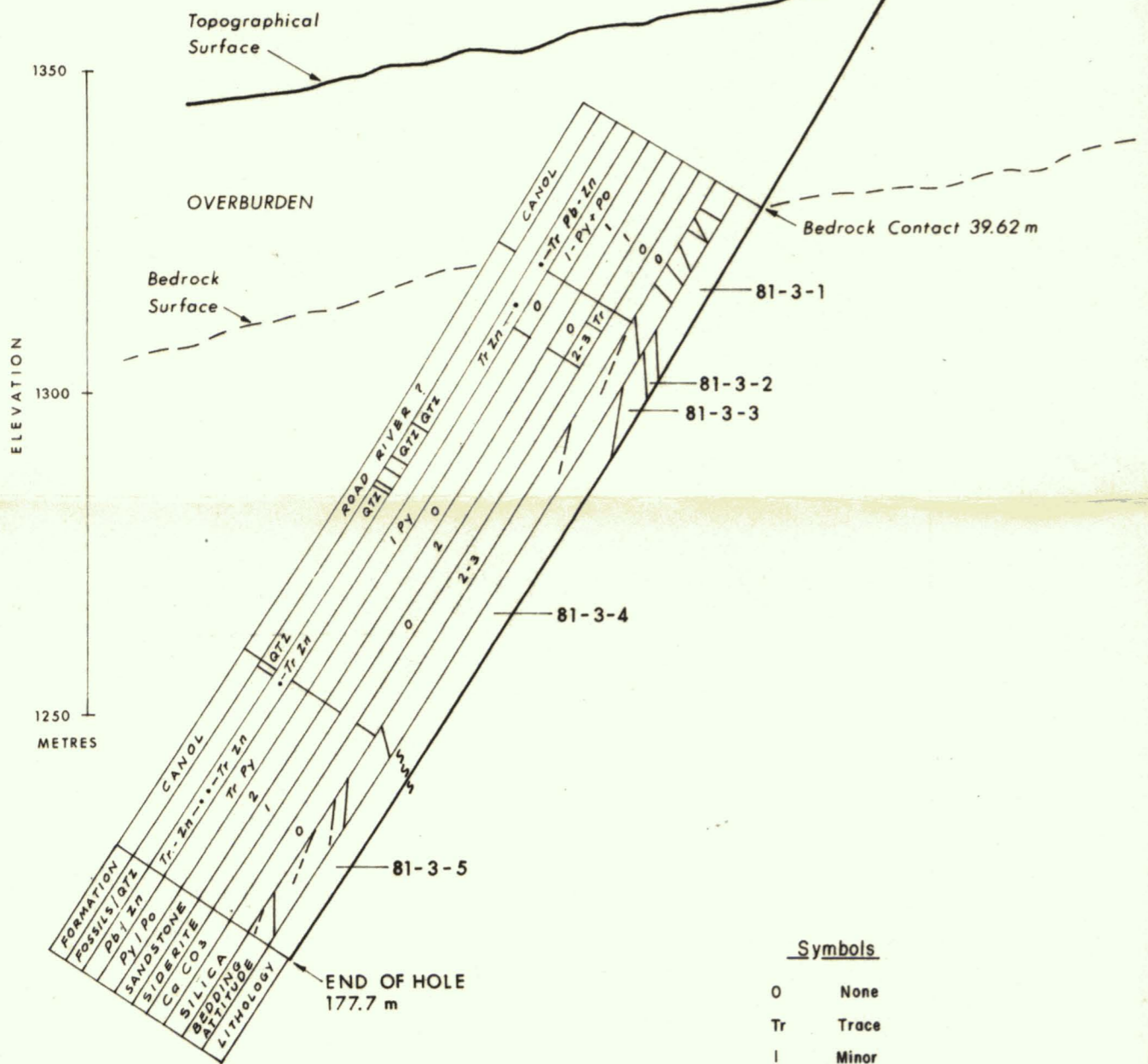
<b>NIDD PROPERTY, MacMILLAN PASS, YUKON</b>					
Drawn by: R.W.L.		Traced by: H.H.		<b>NIDD CREEK AREA</b> <b>DDH - 81 - 1</b>	
Revised by	Date	Revised by	Date		
Scale: 1 : 1,000		Date: DEC. 19 81		Plate: <b>D</b>	



SW

NE

DDH-81-3  
ELEV. 1368 m



GEOLOGICAL LEGEND

81-3-1 (39.62m to 65.53m)  
Non siliceous, non calcareous mudstone, containing 5% sandstone in fine laminae cemented with siderite.

81-3-2 (65.53m to 68.88m)  
Siliceous, weakly calcareous mudstone

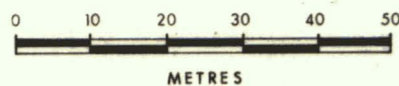
81-3-3 (68.88m to 75.29m)  
Siliceous, moderately to strongly calcareous mudstone

81-3-4 (75.29m to 142.50m)  
Siliceous, non calcareous, sideritic mudstone

81-3-5 (142.50m to 177.70m)  
Non siliceous, non calcareous, weakly phyllitic and sericitic mudstone containing 25% fine sandstone cemented with siderite in laminae and in beds up to 20 cm thick

Symbols

- 0 None
- Tr Trace
- 1 Minor
- 2 Moderate
- 3 Abundant



090924

RWL

NIDD PROPERTY, MacMILLAN PASS, YUKON



Drawn by: R.W.L. Traced by: H.H.

Revised by	Date	Revised by	Date

NIDD CREEK AREA

DDH-81-3

Scale: 1:1,000

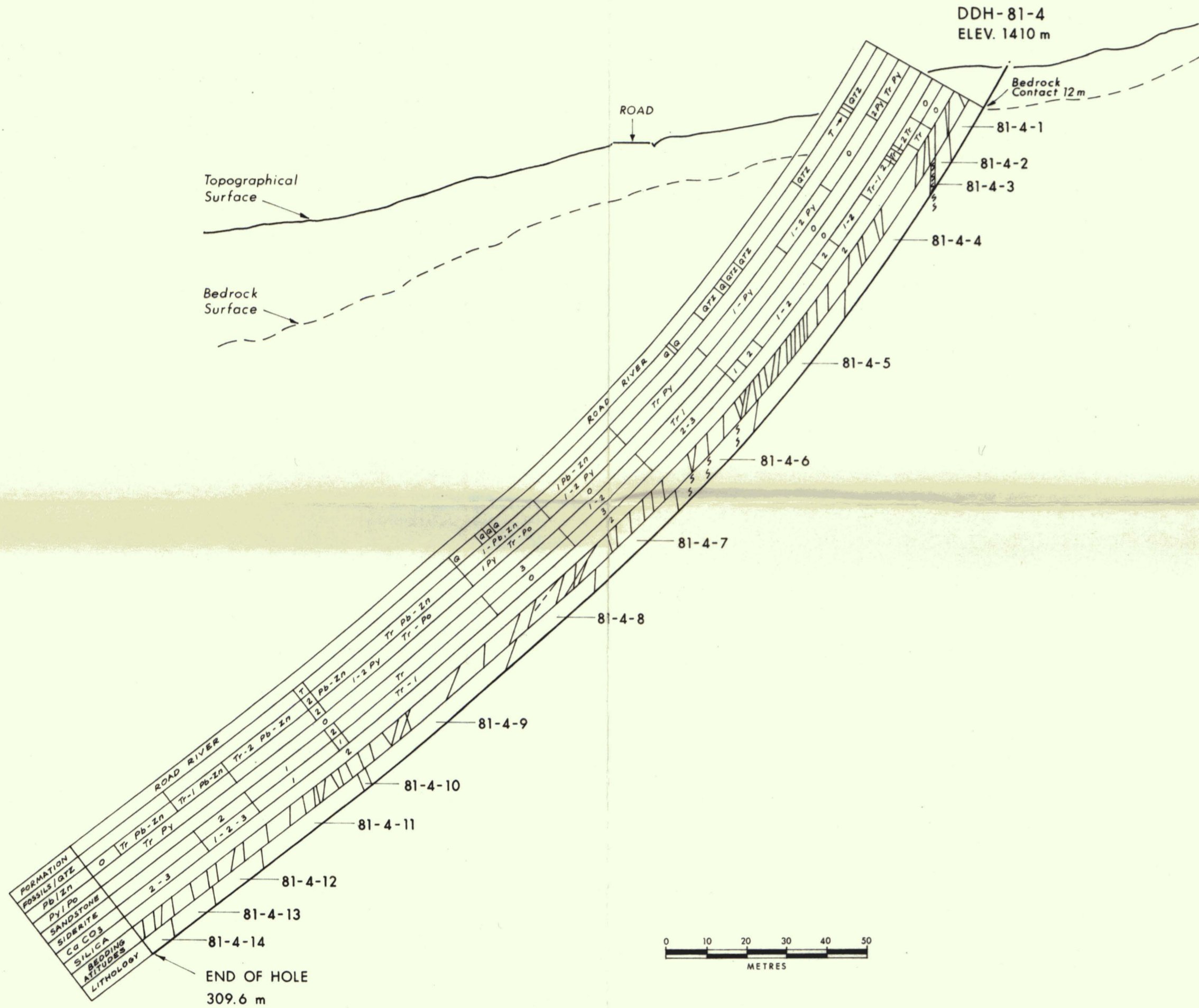
Date: DEC. 1981

Plate: F

SW

NE

GEOLOGICAL LEGEND



- 81-4-1 (12.0m to 23.16m)  
Non siliceous, non calcareous mudstone containing disseminated crystals of ankerite and 10% light grey ankeritic mudstone in laminae and very thin beds.
- 81-4-2 (23.16m to 28.70m)  
Moderately siliceous, very weakly to weakly calcareous mudstone, which is characterized by containing beds of laminated pyrite. The unit contains a 7 cm thick bed of laminated pyrite (90% + pyrite) at 23.75m, and a 5 cm thick bed of laminated pyrite (90% + pyrite) at 27.5m. Unit is also characterized by fine white blebs to discontinuous laminae of ankerite along bedding planes.
- 81-4-3 (28.7m to 29.10m)  
Quartz vein.
- 81-4-4 (29.10m to 67.97m)  
Siliceous, weakly to moderately calcareous mudstone containing fine hair-like laminae of ankerite.
- 81-4-5 (67.97m to 106.38m)  
Siliceous, very weakly to moderately calcareous mudstone that is characterized by containing abundant hair-like laminae of ankerite in several sections, which constitute approximately 1/3 of the unit.
- 81-4-6 (106.38m to 136.86m)  
Siliceous, moderately to strongly calcareous, weakly sideritic mudstone, which is color banded and laminated to thin bedded.
- 81-4-7 (136.86 to 164.4m)  
Siliceous, moderately to strongly calcareous sideritic mudstone which is thinly interbedded with siliceous muddy limestone. The siderite occurs as coarse disseminated crystals (buck shot texture) within black mudstones. The sideritic mudstone beds constitute 20% of the unit. Pyrite partially replaces the buck shot siderite. Minor amounts of Pb+Zn occur within the unit.
- 81-4-8 (164.4m to 190.7m)  
Siliceous, non calcareous, strongly sideritic mudstone, characterized by containing 5-10 thin beds of light grey laminated silica and siderite.
- 81-4-9 (190.7m to 240.1m)  
Siliceous, very weakly to weakly calcareous mudstone, characterized by fine hair-like laminae of ankerite throughout.
- 81-4-10 (240.1m to 242.93m)  
Siliceous, weakly calcareous, fossiliferous (tentaculites) mudstone, containing fine hair-like laminae of ankerite.
- 81-4-11 (242.93m to 272.8m)  
Siliceous, weakly calcareous mudstone containing sections with abundant hair-fine laminae of ankerite.
- 81-4-12 (272.8m to 288.0m)  
Siliceous, weakly to moderately to strongly calcareous mudstone, characterized by containing disseminated buck shot siderite and by being distinctly color banded.
- 81-4-13 (288.0m to 300.75m)  
Siliceous, moderately to strongly calcareous mudstone containing minor amounts of hair-fine laminae of ankerite.
- 81-4-14 (300.75m to 309.68m)  
Siliceous, moderately to strongly calcareous mudstone which is characterized by containing laminated to thin bedded color banded sections.

SYMBOLS

- 0 - None
- Tr. - Trace
- 1 - Minor
- 2 - Moderate
- 3 - Abundant

090924 RWL

<b>NIDD PROPERTY, MacMILLAN PASS, YUKON</b>					
Drawn by: R.W.L.		Traced by: H.H.		<b>NIDD CREEK AREA</b> <b>DDH - 81 - 4</b>	
Revised by	Date	Revised by	Date		
Scale: 1 : 1,000		Date: DEC. 1981		Plate: 9	