

82-#732 - 10744

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ARCHER, CATHRO

& ASSOCIATES (1981) LIMITED

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REPORT ON DIAMOND DRILLING

on the

PIE 1,3,11 to 15 CLAIMS (P182 GROUP),

PIE 2,4,7,8,9,19Fr,21,22,25 AND 26 CLAIMS (P282 GROUP)

and the

PIE 5,6,10,16,17,18 and 20 CLAIMS (P682 GROUP)

NTS 94F/7W AND 94F/6E

Latitude: 57°28'N

Longitude: 124°58'W

by

R.C. Carne

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

for

RIOCANEX INC. (OWNER AND OPERATOR)

November 12, 1982

GEOLOGICAL BRANCH
ASSESSMENT REPORT

10,744

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LIST OF CLAIMS

<u>Group Name</u>	<u>Claim Name</u>	<u>Record Number</u>	<u>Record Date</u>	<u>No. of Units</u>	
P182	Pie 1*	1296	July 25, 1978	18	
	Pie 3	1298	July 25, 1978	6	
	Pie 11	1415	September 15, 1978	6	
	Pie 12	1416	September 15, 1978	6	
	Pie 13	1955	August 13, 1978	6	
	Pie 14	1956	August 13, 1978	20	
	Pie 15	1957	August 13, 1978	<u>20</u>	82
P282	Pie 2*	1297	July 25, 1978	18	
	Pie 4	1299	July 25, 1978	8	
	Pie 7	1302	July 25, 1978	12	
	Pie 8	1303	July 25, 1978	8	
	Pie 9	1304	July 25, 1978	15	
	Pie 19 Fr	2289	November 9, 1979	1	
	Pie 21	2291	November 9, 1979	3	
	Pie 22	2300	November 15, 1979	5	
	Pie 25	2890	July 2, 1980	6	
	Pie 26	2891	July 2, 1980	<u>6</u>	82
P682	Pie 5	1300	July 25, 1978	20	
	Pie 6*	1301	July 25, 1978	12	
	Pie 10	1414	September 15, 1978	6	
	Pie 16	1958	August 13, 1979	20	
	Pie 17	1959	August 13, 1979	4	
	Pie 18	1960	August 13, 1979	20	
	Pie 20	2290	November 9, 1979	<u>3</u>	85
				<u>249</u>	

* claim on which 1982 work was performed

All claims lie within the Omineca Mining District

REPORT ON DIAMOND DRILLING
on the
PIE 1 to 26 CLAIMS

Introduction

The Pie 1 to 26 claims were staked in 1978, 1979 and 1980 by Riocanex Inc. Work on the claims by Riocanex between 1978 and 1981 has consisted of geochemical soil and rock chip sampling, geological mapping, hand trenching and diamond drilling. Results of that work outlined a baritic horizon in Devonian black shales and clastic rocks. This horizon was correlated with stratiform baritic lead-zinc-silver mineralization on the nearby Cirque claims of Cyprus Anvil and Hudson's Bay Oil and Gas.

Riocanex Inc. entered into a joint venture with B.P. Minerals Ltd. (Sikanni Project) early in 1982 to perform further diamond drilling on the Pie 1 to 26 claims. Riocanex Inc., operator of the joint venture, contracted Archer, Cathro & Associates (1981) Limited to manage the field program.

Drill sites were established by R.C. Carne, using results of earlier Riocanex work supplemented by some detailed mapping of the claims. Drill core was logged by M.P. Phillips who was assisted by M. Wong. Diamond drill core is stored in core racks located at the informally named Pretzel Lake (N.T.S. 94F/6W; Lat. 57°19'N, Long. 125°20'W). The program was supervised by R.C. Carne, author of this report.

Location and Access

The Pie 1 to 26 mineral claims are located on N.T.S. Map Sheets 94 F/6 and 94 F/7 at Latitude 57°28'N and Longitude 124°58'W (Figure 1). They lie in the Akie River area of the northern Rocky Mountains, about 300 km NW of Fort St. John, 200 km SW of Fort Nelson and 30 km east of the native settlement of Ware. The area is served by a 2000 m gravel airstrip located at the Cyprus Anvil/HBOG camp 25 km southwest of the claim group. The 1982 work was carried out from a campsite at Pretzel Lake located 22 km southwest of the claims. The drill program was supported by a contract Bell 206B Jet Ranger helicopter based at camp. Drill moves were carried out with a Bell 204 helicopter based at the Cyprus Anvil/HBOG camp. Logistical support was provided by float-equipped and wheel-equipped aircraft from Watson Lake, Yukon Territory, Fort St. John and Mackenzie.

Geology

Geology of the claims has been previously reported on for assessment credit. General geology of the region has been described by D.G. MacIntyre (1980, 1981a, 1981b, 1982a, 1982b). Stratigraphy of the region is described in Table I.

The Akie River area is situated at the southernmost end of Kechika Trough, a southeasterly extension of the much larger Selwyn Basin tectonic province. Sedimentary rocks range in age from Cambrian to lower Mississippian. Prior to Devonian, easterly derived clastic sedimentary assemblages and limestone reef build-ups reflect normal sedimentation patterns while the westerly derivation of Devonian and Mississippian resulted apparently from block faulting and uplift along the continental margin.

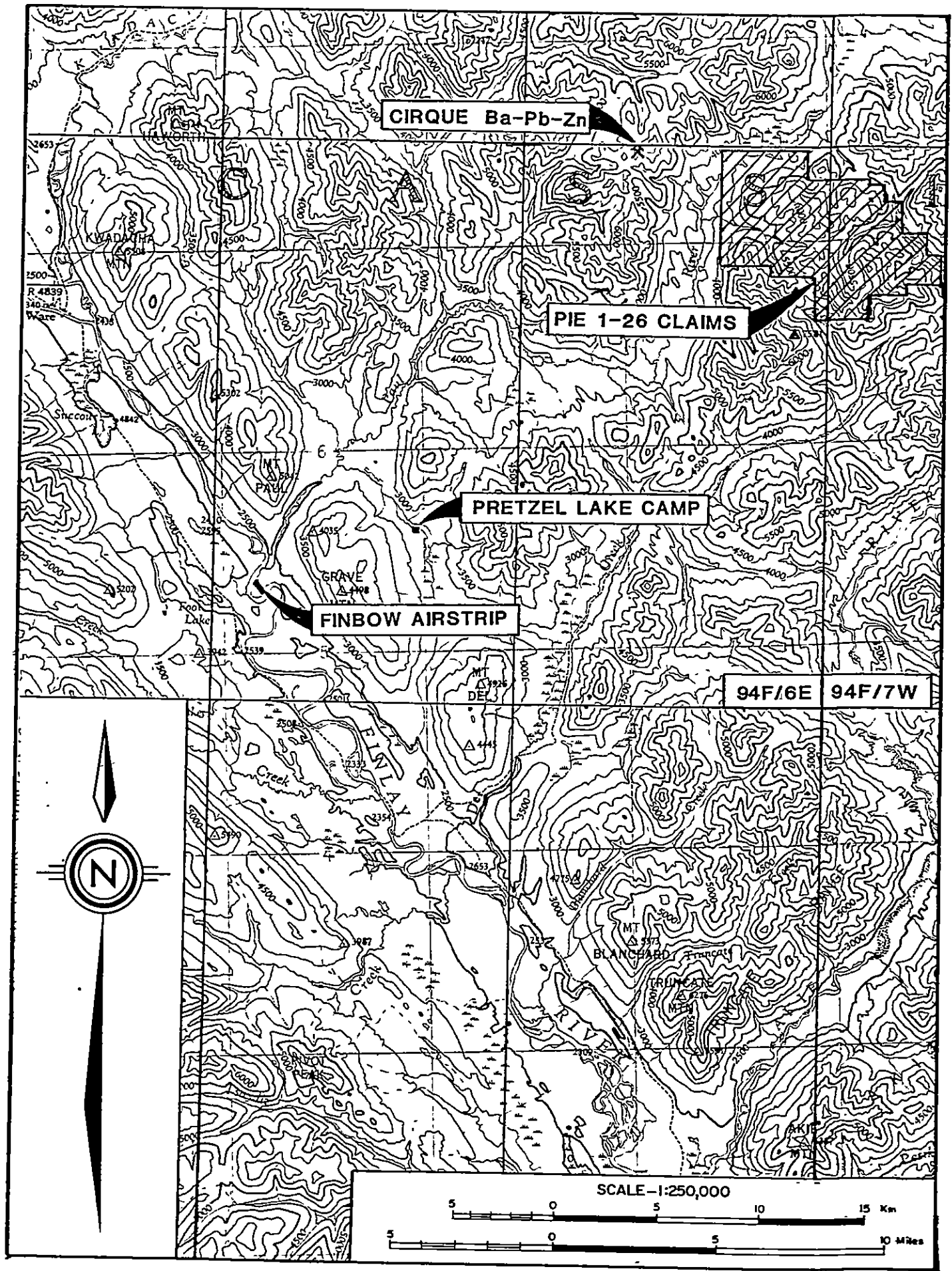


Figure 1: Part of Ware map sheet (94F/6) showing location of Pie 1-26 claims

Table I
TABLE OF FORMATIONS

DEVONIAN AND MISSISSIPPIAN (EARN GROUP)

UPPER DEVONIAN: Gunsteel Formation

- uDsb siliceous, carbonaceous fine-grained black shale and cherty argillite
- uDex exhalite horizon; cherty argillite, siliceous mudstone, bedded and nodular or blebby barite; pyrite
- uDns non-siliceous, carbonaceous, gritty, grey weathering, dark grey shale with pyrite-silica and barite nodules; thin siltstone interbeds
- uDex exhalite horizon; cherty argillite, siliceous mudstone, bedded and nodular or blebby barite; pyrite
- uDrb ribbon-banded, black cherty argillite and chert with thin carbonaceous partings
- uDic intraformational conglomerate; angular chert and cherty argillite clasts in a carbonaceous mudstone matrix

MIDDLE DEVONIAN: Akie Formation

- mDv widely scattered volcanoclastic debris and tuffaceous horizons
- mDtb dark grey weathering, black, carbonaceous siltstones, chert granule conglomerate, debris flows and silty mudstone
- mDex exhalite horizon; cherty argillite, siliceous mudstone, bedded and nodular or blebby barite
- mDss brown weathering, silty mudstone and siltstone, thin to medium bedded

LOWER TO MIDDLE DEVONIAN: Kwadacha Limestone

- lmDls grey weathering, medium to thick bedded, fossiliferous limestone and limestone conglomerate
- lmDst light grey to brown weathering silty limestone, limestone turbidites and thin graptolitic shale

**MIDDLE ORDOVICIAN TO UPPER SILURIAN
(ROAD RIVER GROUP)**

- SsL silty, platy, tan weathering, calcareous and dolomitic siltstone, bioturbated in sections
- Sct grey weathering limestone turbidites
- SLs grey weathering, medium bedded limestone
- Osh dark to bluish grey weathering, black shale and mudstone; graptolitic; cherty near top in some areas
- Ov orange weathering, lithic and lapilli tuff and microdiorite flows

**CAMBRIAN AND LOWER ORDOVICIAN
(KECHIKA GROUP)**

- EOcp beige and cream weathering, phyllitic mudstone and calcareous siltstone

Structural geology of the area is dominated by northwesterly-trending, easterly-directed thrust faults. Pelitic sedimentary rocks and thin volcanic members are complexly deformed into upright to slightly overturned isoclinal folds.

Upper Devonian silicious and pyritic black shales are host to numerous stratiform barite and barite-lead-zinc deposits in the area, notably those at the Cyprus Anvil/HBOG Cirque claims, about 20 km west-northwest, and at Driftpile Creek, about 120 km to the northwest.

Diamond Drilling

Drilling contractor for the 1982 drilling program on the Pie 1 to 26 claims was D.J. Drilling Co. Ltd. of Surrey, B.C. A Hydrostatic Longyear 38 drill was used with NQ-sized wireline equipment. Hole inclination and azimuth was surveyed at regular depths using a Sperry Sun magnetic survey instrument. D.J. Drilling supplied much of the camp equipment, all camp supplies including food, a cook and a first aid attendant as part of the contracted price per metre.

Diamond drilling on the claims consisted of 1116.7 m of drilling in three holes during July and August. Pertinent details are given below in Table II. Descriptions of core recovered, as well as survey data, are given in drill logs in Appendix III. Cross-sections of the holes are shown on Figures 3 to 5.

TABLE II
SUMMARY OF DIAMOND DRILLING

<u>Hole</u>	<u>Depth (m)</u>	<u>Size</u>	<u>Inclination</u>	<u>Azimuth</u>	<u>Elevation</u>	<u>Date Started</u>	<u>Date Completed</u>	<u>Claim</u>
82-1	370.9	NQ	-60°	045°	1495 m	July 8/82	July 15/82	Pie 1
82-2	381.0	NQ	-60°	045°	1730 m	July 16/82	July 28/82	Pie 2
82-3	364.8	NQ	-70°	045°	1620 m	July 29/82	Aug. 9/82	Pie 6

Results

Hole 82-1 was collared in Silurian rocks thrust over the Devonian shales. The Devonian rocks are folded beneath this fault into an overturned northwesterly-trending syncline. Hole 82-1 penetrated the southwest limb of this structure, drilling stratigraphically up through middle Devonian to upper Devonian shales, mudstones and siltstones. An 18 m true thickness correlative with map unit uDex₁ was encountered at the base of the upper Devonian Gunsteel Formation at a depth of 343 m in the hole.

The exhalite-bearing unit here consists of thin-to thick-bedded, very carbonaceous and variably siliceous mudstone with minor limestone and dark grey siltstone interbeds. Pyrite disseminations decrease down the intersection from 5% of the rock to trace amounts. Barite occurs as blebs or flattened nodules which range from 1-2 mm in size and occur in bedded segregations up to 4 cm thick. Quantity of blebby barite decreases rapidly from 40% at the structural top of the intersection to trace amounts at the base.

The overturned aspect of the stratigraphy encountered in the hole was confirmed by orientation of sedimentary features such as graded bedding and flame structures. Thus, the exhalite horizon consists of nearby massive blebby barite at its stratigraphic base, giving way up-section to trace amounts at the top of the interval. No signs of lead or zinc mineralization were seen.

Hole 82-2 was designed to prospect the opposite (northeasterly) limb of the syncline intersected by Hole 82-1. The target was a southwesterly-dipping sequence of middle Devonian shales and clastic rocks which includes a baritic interval identified on surface as unit mDex. The hole cut down-section through unit mDtb, intersecting the top of mDex at 244.6 m depth. The exhalite-bearing interval has a true thickness of about 88 m in the hole although examination of the core suggests that the interval may be structurally thickened by small-scale isoclinal folding. Unit mDex here consists of thin-to thick-bedded, carbonaceous, variably siliceous mudstone and lesser calcareous siltstone. Disseminated pyrite in mudstone ranges from trace amounts to an estimated 5% of the rock. Blebby barite content is erratic, ranging from trace to 20%. No signs of lead or zinc mineralization were seen in the core.

Hole 82-3 was drilled to test the mineralized potential of the south part of the claim group, 1700 m southeast of Hole 82-2. The hole was collared within unit uDns of Gunsteel Formation occurring in the northeast limb of the major syncline. Top of the target exhalite horizon was intersected at a depth of 221.4 m. The 2.0 m true thickness of uDex₁ here consists of thick-bedded, very siliceous and carbonaceous black mudstone with cherty argillite intervals. Minor blebby barite (less than 5% overall) occurs near the base of the intersection. Disseminated pyrite comprises up to 10% of the interval. No signs of lead or zinc mineralization were seen.

Summary and Recommendations

The Pie 1 to 26 claims were staked by Riocanex Inc. to cover galena and sphalerite mineralization discovered in 1978. Bedded barite, located near the sphalerite and galena showings, was correlated with commercially important deposits of baritic, stratiform lead and zinc mineralization on the nearby Cyprus Anvil/Hudson's Bay Oil and Gas Cirque property. Geological mapping, soil sampling and diamond drilling carried out between 1978 and 1981 demonstrated that the northeast part of the claims was underlain by Devonian rocks which contained substantial thicknesses of barite. However, the galena and sphalerite was found to be in crosscutting epigenetic, rather than syngenetic, structures.

The 1982 exploration program on the claims was performed under a joint venture agreement between Riocanex Inc. and B.P. Minerals Limited. Field management was contracted to Archer, Cathro & Associates (1981) Limited. The program was supervised by R.C. Carne.

Three holes were drilled for a total of 1116.7 m. Objective of this work was to test potential of the bedded barite occurrences in the southern part of the property to determine if they were mineralized at depth. Baritic shales, at two separate stratigraphic intervals, were intersected in three locations. Although thicknesses of the intersections vary considerably, barite content is low. Sulphide mineralization, as pyrite, is generally negligible. No signs of lead or zinc mineralization were seen in the 1982 drilling.

Results of earlier work demonstrate that northerly and central parts of the claims group have very low potential for economic accumulations of stratiform baritic lead and zinc mineralization. The 1982 work tested the southeastern

part of the Devonian shale belt on the claims with equally negative results.
No further work is recommended for the property.

Respectfully submitted,

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED



R.C. Carne

References

Hodgson, G.D.

1978: Report on 1978 Exploration on Pie Claims,
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MacIntyre, D.G.

1980: Driftpile Creek - Akie River Project, B.C.
Min. Mines Petrol. Res., Geological Fieldwork, 1979,
Paper 1980-1, pp.55-67

1981a: Akie River Project, B.C. Min. Mines Petrol. Res.,
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1981b: Geology of the Akie River Ba-Pb-Zn Mineral District, B.C.
Min. Mines Petrol. Res., Preliminary Map 44

1982a: Akie River Project, B.C. Min. Mines Petrol. Res.,
Geological Fieldwork 1981, Paper 1982-1, pp.142-148

1982b: Geologic setting of recently discovered stratiform barite-
sulphide deposits in northeast British Columbia,
Can. Inst. Min. Metall., Bull. vol. 75, pp.99-113

APPENDIX I

STATEMENT OF QUALIFICATIONS

STATEMENT OF QUALIFICATIONS

I, Robert C. Carne, geologist, with business addresses in Whitehorse, Yukon Territory and Vancouver, British Columbia and residential address in Burnaby, British Columbia, hereby certify that:

1. I graduated from the University of British Columbia in 1974 with a B.Sc. and in 1979 with an M.Sc. majoring in Geological Sciences.
2. I am a member of the Geological Association of Canada.
3. From 1974 to the present, I have been actively engaged as a geologist in mineral exploration in British Columbia and Yukon Territory and on June 1, 1981 became a partner of Archer, Cathro & Associates (1981) Limited.
4. I have personally participated in or supervised the field work reported herein and have interpreted all data resulting from this work.



Robert C. Carne, B.Sc., M.Sc.

APPENDIX II

SUMMARY OF COSTS

SUMMARY OF COSTS

on work performed on the

PIE 1 TO 26 CLAIMS
(Groups P182, P282 and P682)

between July 4 and August 10, 1982

Geological Supervision (salaries and wages)

R.C. Carne, M.P. Phillips, M. Wong \$ 20,000

Drilling

Direct payments to contractor - D.J. Drilling Co. Ltd
(includes camp and camp supplies) \$ 130,197
Drill supplies (Diesel, drilling mud, etc.) 6,068 136,265

Helicopter

Highland Helicopters Bell 206B 29,770
Maple Leaf Helicopters Bell 204 30,485 60,255

Fixed Wing

B.C. Yukon Air Service and Watson Lake Flying Service 31,374

Travel, Freight and Expediting

4,606
\$252,500

N.B. Total expenditures for the drill program were split between Groups P182, P282 and P686 on the basis of footage drilled.

APPENDIX III

DIAMOND DRILL HOLE LOGS

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

DDH 82-1

PROJECT SIKANNI

PROPERTY PIE 4 CLAIM

Page 1 of 6

COORD. 369,570 N. 380,940 E. DIP-60° AZIM. 045° ELEV. 1495 m SIZE NO STARTED JULY 8, 1982 COMPLETED JULY 15, 1982 LOGGED BY M.P. PHILLIPS

VISUAL LOG	MAP UNIT	FROM - TO (ft) (m)	PRIMARY LITHOLOGY	% PRIMARY	SECONDARY LITHOLOGIES	% SECONDARY	CORE ANGLE			PYRITE		BARITE		CO ₃		OTHER		CORE REC. (%)	ANALYSES (ppm unless shown)							
							Bedding W	Structure E W		Lam. Thickness	Diss. % Size	Bed. % Thickness	Bleb. % Size	Type % Size	Type % Size	Pb	Zn		Ag	Cu	Ba					
								E	W													E	Mn	Sample Number		
		60.5	CASING																							
		18.3	SHALE - BLK, THIN-MED BEDDED MOD-STRONG SILIC, STRONG CARB.		SLSN-PYRITIC OCC. CALC. <3mm	2			20°		LAM TR	DISS 2			BEDS TR											
		50.3			SHALE-BLK, CALC <2cm.	TR.			20°		<2mm	VFG			LMSN-4 1"-2cm											
		24.4	SHALE - A.P.		SLSN-PYRITIC <1cm, AV 1-2mm	2	0-20°	0°	20°		LAM 1	DISS 1			BEDS TR											
		150.0							20°		1-5mm, AV 1-2mm	VFG.			LMSN 1-3cm.											
		30.5	SHALE - AP.		SLSN - AP	5	70°	35°	30°		LAM 1	DISS 1			BEDS TR											
		120.0							20-35°		1-5mm AV <1mm	VFG			<1cm											
	SsL	36.6	SHALE - BLK FINE DARK GREY LENSES, NON SILIC MOD. CARB, TR SILTY		SLSN-PYRITIC <1cm, AV 2-3mm.	2		15°	35°			DISS 2			BEDS TR											
		140.0			SHALE-BLK, STRONG SILIC	TR.			20°			VFG			LMSN & DOLM <2 cm AV 1cm											
		42.7	SHALE-BLK THIN BEDDED NON SILIC MOD-STRONG CARB., WEAK SILTY		SLSN-PYRITIC 1-3cm	TR.		30°	30°			DISS 5			BEDS TR											
		160.0			SHALE-BLK SILICIOUS	TR.			10°			VFG			LMSN & DOLM <1cm											
		48.8	SHALE - AP		SLSN-PYRITIC <1cm.			10°	10°			DISS 5			BEDS TR											
		180.0			SHALE-BLK SILIC	10.			20°			<1mm			DK GREY LMSN, DOLM <1cm.											
		54.9	SHALE - BLK - DARK GREY, THIN BEDDED, STRONG SILIC CARB, WEAK SILTY		SLSN - AP	TR.			20°		LAM TR	DISS 3														
190.0	35°-50°	200.0			SHALE-BLK STRONG CALC	3					<2mm	VFG														
203.0		61.0	MUDSTONE DARK GREY-BLACK THICK BEDDED, WEAK CARB		SLSN-OCC CALC 2-3cm	TR.	20°	15°	15°																	
		220.0			SHALE-BLACK CALC	TR.	SLSN-TOPS DIS		15°																	
	mDtb	67.1	MUDSTONE BLACK, THICK, BEDDED, MOD-STRONG CARB		SLSN-CALC <5mm	TR.			15°																	
		240.0			MUDSTONE-CALC <10cm	5			15°																	
		73.2	MUDSTONE - AP		MUDSTONE - BLACK CALC, BANDED <3cm	10			15°			DISS TR														
		260.0			COAL - SHINY BRITTLE 247-251	20	20°		25°			VFG														
SURVEY		79.2	DRILLING CONTRACTOR DJ DRILLING										COMMENTS													
TYPE:			DRILL TYPE LONGYEAR 38																							
DEPTH DIP AZIM.			DRILLING TIME																							
HOLE DEPTH																										
ASSAY LAB																										
ASSAY CERT.																										

DDH 82-1

PROJECT

PROPERTY

Page 2 of 6

COORD. _____ DIP _____ AZIM. _____ ELEV. _____ SIZE _____ STARTED _____ COMPLETED _____ LOGGED BY _____

VISUAL LOG	MAP UNIT	FROM - TO (ft) (m)	PRIMARY LITHOLOGY	SECONDARY LITHOLOGIES	CORE ANGLE		PYRITE		BARITE		CO ₃		OTHER	CORE REC. (%)	ANALYSES (ppm unless shown)										
					Bedding W E	Structure W E	Lam. % Thickness	Diss. % Size	Bed. % Thickness	Bleb. % Size	Type % Size	Type % Size			Pb	Zn	Ag	Cu	Ba						
		3800	MUDSTONE BLK THICK BEDDED MOD CARB, WEAK CALC	MUDSTONE-BLK STRONG CALC SILTY <10cm SLSN-CALC, 1mm-2cm AV 3mm	TR	20°	20°																		
		85.3	MUDSTONE-AP	MUDSTONE-AP	25	20°	25°																		
		3000	OCC SILTY PARTING	SLSN-AP 1cm-30cm	10																				
		91.4	MUDSTONE-AP INCREASING CARB DIS	MUDSTONE-AP <45cm AV 30cm	25																				
		3200		SLSN-AP <10cm AV 3cm	TR																				
		97.5	MUDSTONE-AP																						
		3400		SLSN-CALC <5mm.	TR																				
		103.6	MUDSTONE-AP	MUDSTONE-BLK CALC, SILTY 3-30cm	5	20°	15°	15°	30°	25°															
		3500		SLSN-AP PYRITIC <2cm	TR																				
		109.7	MUDSTONE AP STRONG CARB	MUDSTONE-AP	20	35°	35°	35°	35°																
		3800		SLSN-AP <2cm AV 5mm	TR																				
		115.8	MUDSTONE-AP MOD. CARB	MUDSTONE-AP 10-20cm	5	45°	30°	35°	35°																
		4000		SLSN-CALC <10cm AV 3cm	5																				
		121.9	MUDSTONE AP MOD-STRONG CARB.	MUDSTONE-AP 3-30cm	7																				
		4200		SLSN-AP <2cm AV 5mm.	5																				
		128.0	MUDSTONE-AP MOD CARB.	MUDSTONE-AP 4-20cm	7																				
		4400		SLSN-PYRITIC CALC 3mm-4cm	TR																				
		139.1	MUDSTONE AP STRONG CARB OCC SILTY LAM	MUDSTONE-AP 6cm-60cm	15																				
		4600		SLSN-AP <3cm AV 1cm.	TR																				
		140.2	MUDSTONE A.P FAIR-MOD. CARB	MUDSTONE-AP 5cm-20cm	5	20°																			
		4800																							

3400
3420

mDtb

mDtb

SURVEY		
TYPE: SPERRY-SUN	HOLE DEPTH	
DEPTH	DIP	AZIM.
425	56°	046°

DRILLING CONTRACTOR _____
DRILL TYPE _____ DRILLING TIME _____
ASSAY LAB _____
ASSAY CERT. _____

COMMENTS

DDH 82-1

PROJECT

PROPERTY

Page 3 of 6

COORD. _____ DIP _____ AZIM. _____ ELEV. _____ SIZE _____ STARTED _____ COMPLETED _____ LOGGED BY _____

VISUAL LOG	MAP UNIT	FROM -TO (ft) (m)	PRIMARY LITHOLOGY	% SECONDARY LITHOLOGIES	CORE ANGLE				PYRITE		BARITE		CO ₂ Type %	OTHER Type %	CORE REC. (%)	ANALYSES (ppm unless shown)							
					Bedding W	Structure E	W	E	Lam. %	Diss. %	Bed. %	Bleb. %				Pb	Zn	Ag	Cu	Bo			
		500.0	INFORM. BRECCIA CLAST SUPPORTED 390° BLACK CARB MDSN; 10-20% SILTY	MUDSTONE-CALC SILTY CLASTS <3cm	20	20°	40°	30°	LAM TR	DISS TR													
		152.4	MDSN; SILTY CALC BANDED MDSN AND CALC SILTY	SLSN-CALC <2cm	TR				<2mm WEAK	VFG													
509.0		520.0	INFORM. BRECCIA AP	MUDSTONE-AP LIGHT-DARK GRAY	TR	55°	50°	60°					NOD TR		70								
517.0		158.5	INFORM. BRECCIA AP	SLSN-CALC <4cm.	TR	55°	25°	50°		DISS TR			NOD TR		65								
532.0	mDtb	540.0	INFORM. BRECCIA AP SHEARED APPEARANCE	SLSN-CALC <4cm.	TR	55°	25°	50°		VFG.			<3cm CALC-DALM										
		164.6	INFORM. BRECCIA AP - BLACK & DARK GRAY CLASTS 2-3cm	SLSN-CALC, BEDS & LENSES <2cm	5	30°	30°	45°		DISS TR			NOD TR										
		567.0	INFORM. BRECCIA AP - BLACK & DARK GRAY CLASTS 2-3cm	SLSN-CALC, BEDS & LENSES <2cm	5	30°	30°	45°		VFG			<3cm CALC-DALM										
		172.8	INFORM. BRECCIA AP. STRONG CARB. FLOW BANDING?	CLASTS-LMSN <5mm; SILTY MDSN PYRITIC CALC SLSN <1cm.	50	30°	35°	35°	BED TR	DISS 5			BED TR										
		580.0	INFORM. BRECCIA AP. STRONG CARB. FLOW BANDING?	CLASTS-LMSN <5mm; SILTY MDSN PYRITIC CALC SLSN <1cm.	50	30°	35°	35°	1-2cm BED	VFG.			<5cm BLK LMSN										
		176.8	INFORM. BRECCIA AP CLASTS-LENSE LIKE, PATCHY, BANDED APPEARANCE	CLASTS-LMSN & SLSN 1-10cm	30	25°	35°	25°	LAM TR	DISS 3													
		500.0	INFORM. BRECCIA AP CLASTS-LENSE LIKE, PATCHY, BANDED APPEARANCE	CLASTS-LMSN & SLSN 1-10cm	30	25°	35°	25°	2 GRAY LMSN 1-2 mm	VFG													
		182.9	INFORM. BRECCIA AP - BLK. DARK GRAY MUDSTONE. CRUDE BANDING	SLSN-CALC, PYRITIC CLASTS <2cm	TR	25°	15°	25°	LAM TR	DISS 5			NOD 5										
	mDtb	520.0	INFORM. BRECCIA AP - BLK. DARK GRAY MUDSTONE. CRUDE BANDING	SLSN-CALC, PYRITIC CLASTS <2cm	TR	25°	15°	25°	<1cm	VFG			<5cm CALC, SILIC										
		189.0	INFORM. BRECCIA AP - ROCK LOSES BRECCIATED LOOK. CLASTS LARGER?	SLSN-CALC & PYRITIC <2cm	TR			25°	LAM TR	DISS 7			NOD 10										
		540.0	INFORM. BRECCIA AP - ROCK LOSES BRECCIATED LOOK. CLASTS LARGER?	SLSN-CALC & PYRITIC <2cm	TR			25°	<1cm.	VFG.			DK GRAY SILIC <5cm										
		195.1	INFORM. BRECCIA AP. <1cm CLASTS NOT COMMON	SLSN-CALC & PYRITIC <5cm	TR	15°		20°	LAM TR	DISS 3			NOD 5										
		540.0	INFORM. BRECCIA AP. <1cm CLASTS NOT COMMON	SLSN-CALC & PYRITIC <5cm	TR	15°		20°	<5mm WEAK	VFG.			<7cm, AV 3cm CALC										
		201.2	INFORM. BRECCIA AP AT 4cm CLASTS BLACK STRONG CARB MUDSTONE	SLSN-CALC <2cm	TR	15°	25°	30°	LAM TR	DISS 5			CLAST TR										
		580.0	INFORM. BRECCIA AP AT 4cm CLASTS BLACK STRONG CARB MUDSTONE	SLSN-CALC <2cm	TR	15°	25°	30°	<1cm WEAK	VFG			LMSN <2 cm.										
		207.3	INFORM. BRECCIA AP CLASTS 2 30cm, MINOR SILTY CALC MDSN CLASTS	SLSN-CALC <5cm	TR	30°	20°	15°	BEDS TR	DISS 5			NOD TR										
		500.0	INFORM. BRECCIA AP CLASTS 2 30cm, MINOR SILTY CALC MDSN CLASTS	SLSN-CALC <5cm	TR	30°	20°	15°	TO 3cm	VFG.			CALC < 3cm										
		213.4																					
SURVEY			DRILLING CONTRACTOR _____		DRILLING TIME _____		COMMENTS																
TYPE: SPERRY-SUN	HOLE DEPTH		DRILL TYPE _____																				
DEPTH	DIP	AZIM.	DEPTH																				
625	-52°	046°																					
ASSAY LAB _____			ASSAY CERT. _____																				

DDH 82-1

PROJECT _____

PROPERTY _____

COORD. _____ DIP _____ AZIM. _____ ELEV. _____ SIZE _____ STARTED _____ COMPLETED _____ LOGGED BY _____

VISUAL LOG	MAP UNIT	FROM - TO (ft) (m)	PRIMARY LITHOLOGY	% SECONDARY LITHOLOGIES	CORE ANGLE			PYRITE		BARITE		CO ₃ Type %	OTHER Type %	CORE REC. (%)	ANALYSES (ppm unless shown)					
					Bedding W E	Structure E	E	Lam. % Thickness	Diss. % Size	Bed. % Thickness	Bleb. % Size				Pb	Zn	Ag	Cu	Sample Number	
	mDtb	150.0	INFORM BRECCIA CLASTS BLK. CARB MDSN AV 3cm; MINOR SILTY, CALC. MDSN	SLSN - PYRITIC CALC. DOLM CLASTS - 6.3cm	TR		15° / 15° 25° /	BLEB TR DISS 3				NOD 5								
		219.5	INFORM BRECCIA AP CLAST AV 1cm MINOR LIGHT GRAY CLASTS; SHEARED LOOK	SLSN - AP	TR	30° / 20°	20° / 20° 25° /	LAM TR DISS 3					NOD TR CLAST							
		225.6	INFORM BRECCIA AP - STRONG SILICIOUS, OCC. CALC. STRONG CARB.				20° / 20° 25° /	LAM TR BLEB DISS TR					NOD 5	CLAST TR						
		231.6	INFORM BRECCIA AP LENSE CLAST AV 1-2cm; CLAST SUPPORTED	SLSN - AP <1cm AV 5mm	TR	30° / 20°	30° / 15° 20° /	LENSE 3 LAM DISS 3					NOD TR CLAST							
		237.7	INFORM BRECCIA AP	SLSN - AP <5mm	TR	20° /	15° / 10° 20° /	LAM 3 DISS 3												
		243.8	INFORM BRECCIA AP AFTER BOBF BLK. NON SILIC. OCC. CALC.	SLSN - AP <1cm	TR		10° / 15° 15° /	LAM 3 DISS 3					NOD TR	CLAST TR						
		250.0	INFORM BRECCIA AP DECREASE SILIC. DIS	SLSN - AP <1cm	TR		25° / 25°	LENSE TR DISS TR					BED TR							
		254.5	MUDSTONE - BLK. THICK BEDDED MOD-STRONG CARB. FAIR CALC. MOD SILIC. FINE CALCITE SPECKLED	MUDSTONE - CALC 1-3cm	TR															
		255.6	MUDSTONE - AP			20° /	20° / 25° /		DISS TR				NOD 5 BED?							
		261.8	MUDSTONE - MED GRAY, THICK BEDDED WEAK CARB, STRONG SILIC. TR CALC.	SLSN - CALC 6cm BED	TR	15° /	30° / 35° 25° /						NOD TR							
	268.2	MUDSTONE - AP MINDR DARK GRAY BLACK BANDING DECREASE SILIC. DIS			25° / 20°	20° / 15° /	LAM TR					NOD TR	BED 10							

SURVEY
 TYPE: SPERRY-SUN
 DEPTH DIP AZIM.
 800 -45° 046°

DRILLING CONTRACTOR _____
DRILL TYPE _____ **DRILLING TIME** _____

ASSAY LAB _____
ASSAY CERT. _____

COMMENTS

DDH 82-1

PROJECT _____

PROPERTY _____

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COORD. _____ DIP _____ AZIM. _____ ELEV. _____ SIZE _____ STARTED _____ COMPLETED _____ LOGGED BY _____

VISUAL LOG	MAP UNIT	FROM-TO (ft) (m)	PRIMARY LITHOLOGY	% SECONDARY LITHOLOGIES	CORE ANGLE				PYRITE		BARITE		CO ₃		OTHER	CORE REC. (%)	ANALYSES (ppm unless shown)				
					Bedding		Structure		Thickness	Size	Thickness	Size	Type	Size			Type	Size	Pb	Zn	Ag
					W	E	W	E									Mn				Sample Number
		915.0	MUDSTONE-AP INCREASING BLK MDSN <2FT D/S	LMSN-MOTTLED ORANGE 5-15cm	5	10°	15°	15°	20°	LAM TR	DISS TR			NOD TR							
		279.8	MUDSTONE-BLK THICK BEDDED STRONG CARB. FAIR SILIC. TR CALC	LMSN-DK GRAY BLACK <1cm LENSE				25°	25°		DISS TR			NOD 5							
		286.5	MUDSTONE AP WEAK CALC. DECREASE D/S			20°	15°	20°	15°	LAM TR	DISS TR										
	mDtb	960.0								<1cm LENSY	V.F.G.										
		292.6	MUDSTONE-AP FAIR-MOD CALC (10-25%)			15°	20°	15°	15°	LENSE TR	DISS TR										
	mDtb	988.5								<1cm	V.F.G.										
		298.7	MUDSTONE-AP DECREASE SILIC & INCREASE CALC D/S	MUDSTONE-BLK CARB BED 12FT	5	15°		15°	15°	LENSE TR	DISS TR										
		1000.0								<1cm	V.F.G.										
		304.8	MUDSTONE-AP NON CALC. FAIR SILIC. DECREASE CARB. D/S	LMSN-LAM, DK GRAY 2cm BED	TR	30°	20°	30°	30°		DISS TR										
		1020.0									V.F.G.										
		310.9	MUDSTONE-LIGHT MED GRAY THICK BEDDED WEAK CARB STRONG SILIC. CARBONATE SAND GRAINS	MUDSTONE-BLK CARB <4cm	TR	40°	40°	25°	35°		DISS TR										
	mDtb	1038.0		SLSN-DOL <3 cm.							V.F.G.										
		316.4	MUDSTONE-AP BLACK MDSN CLASTS <1cm COMMON.			40°		30°	40°		DISS TR			NOD 5							
		1050.0									V.F.G.			CALC-DOLM <5cm BEDS? SILTY							
		320.1	MUDSTONE-BLK THICK BEDDED FAIR-MOD SILIC			20°	20°	20°	25°	LENSE TR	DISS TR			NOD BEDS? 5							
		1071.0								<1cm	V.F.G.			CALC, 4-25cm							
		326.4	MUDSTONE-LIGHT GRAY 2 DARK GREY BEDS, STRONG SILIC. WEAK CARB. 10-25% CARBONATE SAND			25°	30°		35°		DISS TR			NOD 5							
		1090.0									V.F.G.			LIGHT GRAY CALC <12cm							
		334.1	MUDSTONE-BLK THICK BEDDED MOD CARB 2 SILIC TR CALC	SLSN-CALC DOLM	40	25°	30°	40°	25°	LAM TR	DISS TR										
		1115.0								<3 mm IN SLSN	V.F.G.										
SURVEY		339.8	DRILLING CONTRACTOR _____																		
TYPE: SPEER-SON		HOLE DEPTH	DRILL TYPE _____ DRILLING TIME _____																		
DEPTH DIP AZIM.			ASSAY LAB _____																		
1000 -46° 046°			ASSAY CERT. _____																		
			COMMENTS _____																		

DDH 82-1

PROJECT

PROPERTY

Page 6 of 6

COORD. _____ DIP _____ AZIM. _____ ELEV. _____ SIZE _____ STARTED _____ COMPLETED _____ LOGGED BY _____

VISUAL LOG	MAP UNIT	FROM -TO (ft) (m)	PRIMARY LITHOLOGY	% SECONDARY LITHOLOGIES	CORE ANGLE				PYRITE		BARITE		CO ₃		OTHER	CORE REC. (%)	ANALYSES (ppm unless shown)				
					Bedding W	Structure E	W	E	Lam. % Thickness	Diss. % Size	Bed. % Thickness	Bleb. % Size	Type % Size	Type % Size			Pb	Zn	Ag	Cu	Ba
	mDtb	1123.5	MUDSTONE-BLK THK BEDDED STRONG CARB, INCREASING SILIC D/S TRACE SILTY		20° 15°	35° 20°		LAM TR	DISS 3				NOD TR		100						
		342.4	MUDSTONE BLK THIN BEDDED STRONG CARB & SILIC	LMSN-DARK GRAY BEDS 3-13cm	15° 15°				DISS 5			BLEB 40			100						
		345.5	MUDSTONE AP THICK BEDDED		15° 15°				DISS 5			BLEB 15	NOD 3		100						
		1142.0							IN BLEB BARITE			1-2mm IN 4cm BEDS									
		348.1	MUDSTONE-AP MOD-STRONG SILIC	SLSN-CALC < 1cm	20° 15°	35°			DISS TR			BLEB 5	NOD 5		100						
	UDex1	1160.0							AP			< 1cm BANDS < 1cm.	DK GRAY CALC - 8 cm								
		353.5	MUDSTONE-AP D/S DECREASE SILICIOUS	LMSN-BLACK CARB BED 2FT	10	20° 25°		LAM TR	DISS TR			BLEB TR	NOD TR		90						
		1186.6							< 3mm AP DECREASE DIS			1-2mm IN 2mm BEDS	CALC - 15cm BED								
		359.6	MUDSTONE-AP MOD. SILIC	SLSN - < 1cm.		35° 40°	30° 35°	LAM TR	DISS TR			BEAD TR			100						
		1202.5							< 5mm VFG			DECREASE & PYRITIC									
		366.5	MUDSTONE BLK THICK BEDS MOD-STRONG CARB & SILIC					LAM TR	DISS TR				NOD TR		100						
	UDns	1217.0							VFG				CALC & SILIC 410 cm								
		370.9																			
		1217.0	-END-																		
		370.9																			

SURVEY			HOLE DEPTH	DRILLING CONTRACTOR _____	
TYPE: SPEERX-30N	DEPTH	DIP		DRILL TYPE _____	DRILLING TIME _____
1200	-43°	050°		ASSAY LAB _____	ASSAY CERT. _____

COMMENTS

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

DDH 82-2

PROJECT SIKANNI

PROPERTY PIE 2 CLAIM

Page 1 of 6

COORD. 369,160N
382,290E

DIP 60° AZIM. 045° ELEV. 1730m

SIZE NQ

STARTED JULY 16 1982 COMPLETED JULY 28, 1982

LOGGED BY M.P. PHILLIPS

VISUAL LOG	MAP UNIT	FROM - TO (ft) (m)	PRIMARY LITHOLOGY	% SECONDARY LITHOLOGIES	CORE ANGLE				PYRITE		BARITE		CO ₃		OTHER		CORE REC. (%)	ANALYSES (ppm unless shown)				
					Bedding W E	Structure E W	Lam. % Thickness	Diss. % Size	Bed. % Thickness	Bleb. % Size	Type % Size	Type % Size	Pb	Zn	Ag	Cu		Ba				
																			Mn	Sample Number		
		140.0	CASING																			
		42.7 160.0	CALCARENITE LIGHT-MED GRAY MED BEDDED, WEAK SILTY	MUDSTONE-BLK CARB, SLIGHT SILTY INTER BEDS < 1cm	40	20° / 15°																
		48.8 176.0	MUDSTONE-BLK THK BEDDED WK MOD CARB, MOD SILIC WK CALC	MUDSTONE-BLK SILTY BEDS < 1cm	TR	10° /	30° / 55°															
		53.6 200.0	CALCARENITE MED-DK GRAY BANDED, WK SILTY INCREASE DIS	MUDSTONE-BLK < 1cm	5	15° / 20°																
	mDtb	61.0 220.0	MUDSTONE-BLK THK BEDDED MOD CARB, WK SILTY MOD SILIC	SLSN-CALC LENSES < 1mm	TR	25° / 25°	55° /	LAM BLEB TR	DISS 3													
		67.1 242.0	MUDSTONE-AP	SLSN-PYRITIC CALC NOD < 3cm	TR	20° / 5°	50° / 55°	LAM BLEB TR	DISS 3				NOD 5									
		73.8 260.0	CALCARENITE LIGHT GRAY, LAM THIN BEDDED, WEAK STRONGLY SILTY			20° / 20°																
		79.2 274.5	CALCARENITE AP-BANDED	BLK MUDSTONE GRIT SPECKLING	TR	30° / 20°																
	mDtb	83.5 290.0	MUDSTONE-DK GRAY-BLACK THIN BEDDED BANDED, WK STRONG SILTY, WK CALC	CALCARENITE- LAM, NOD BEDS 2.5cm-2ft	20	10° / 10°	55° / 35°															
		88.4 310.0	MUDSTONE-BK THK BEDDED STRONG CARB, STRONG SILTY, QZ-CALCITE SAND SIZE GRAINS	CALC. SAND GRAINS	TR																	
		94.5 336.0	MUDSTONE AP DIS DECREASE QZ-CALCITE SAND	LIGHT GRAY, CALC LAM, LENSES < 3cm		20° / 20°	50° /	BLEB TR	DISS 3				NOD TR									
		103.0																				
SURVEY			DRILLING CONTRACTOR <u>D.J. DRILLING</u>																			
TYPE: SPERRY-SUN			DRILL TYPE <u>LONGYEAR 38</u> DRILLING TIME _____																			
DEPTH DIP AZIM.			ASSAY LAB _____																			
300 62° 055°			ASSAY CERT. _____																			
			COMMENTS <u>CALCARENITE - WEATHERS ORANGE ON FRACTURES - ANKERITE</u>																			

DDH 82-2

PROJECT

PROPERTY

Page 2 of 6

COORD. _____ DIP _____ AZIM. _____ ELEV. _____ SIZE _____ STARTED _____ COMPLETED _____ LOGGED BY _____

VISUAL LOG	MAP UNIT	FROM - TO (ft) (m)	PRIMARY LITHOLOGY	% SECONDARY LITHOLOGIES	CORE ANGLE $\frac{W}{E}$			PYRITE		BARITE		CO ₃		OTHER		CORE REG. (%)	ANALYSES (ppm unless shown)				
					Bedding	Structure	Lam. Thickness	Diss. Size	Bed. Thickness	Bleb. Size	Type Size	Type Size	Pb	Zn	Ag		Cu	Ba			
																			W	E	W
	mDtb	360.0	MUDSTONE-BLK THICK BEDDED MOD-STRONG CARB SILIC, STRONG CALC (30%)		10° PY LAM	45°	LAM TR	DISS 3				NOD TR									
		109.7	MUDSTONE-AP DECREASE SILIC DIS		30° PYRITE LENSES	25° 45°	50°	BLEB TR	DISS 3				NOD TR								
		115.8	MUDSTONE-AP FAIR-MOD SILIC SAND SIZE CALC		25° PYRITE LENSES	20° 45°	40°	BLEB TR	DISS 3												
		121.9	MUDSTONE AP MOD-STRONG SILIC, CALC DECREASE DIS		25° PYRITE LENSES	25° 45°	40°	LAM LENSE TR	DISS 3				NOD TR	NOD TR							
417.8		128.0	MUDSTONE STRONG CALC	CALC PARTINGS <2mm	20° PYRITE LENSES	25° 60°	65°	LAM TR	DISS TR				NOD TR								
		134.1	MUDSTONE-AP SLIGHTLY LIGHTER COLOR DECREASE SILIC, CALC DIS	LMSN-LIGHT GRAY LAM-BEDS <5mm	30° PYRITE LENSES	30° 50°	50°		DISS 3				NOD TR								
		140.2	MUDSTONE-DK GRAY, THK BEDDED BANDED WK CARB MOD-STRONG SILIC CALC	LMSN-AP AV 1cm	30° PYRITE LENSES	20° 55°	60°	LAM TR	DISS 3				NOD TR								
		146.3	MUDSTONE-AP WEAK CALC	LMSN AP SILTY <3cm	20° PYRITE LENSES	55° 55°	55°		DISS TR				NOD TR								
		152.4	MUDSTONE AP	SLSN-CALC PYRITIC <2cm			50°		DISS TR				NOD TR								
		158.5	MUDSTONE-AP FAINT BANDING WK-MOD CARB.	LMSN 5mm-6 cm	20° PYRITE LENSES	25°			DISS TR				NOD TR								
	164.6	MUDSTONE-AP LIGHTER COLOR PATCHY WK-MOD CALC FAIR-MOD. SILIC				50°		DISS TR				NOD TR									
	170.7																				

COMMENTS

SURVEY
 TYPE: SPERRY-SUN
 DEPTH DIP AZIM.
 500 -52° 058°

DRILLING CONTRACTOR _____
DRILL TYPE _____ **DRILLING TIME** _____

ASSAY LAB _____
ASSAY CERT. _____

DDH 82-2

PROJECT SIKANNI

PROPERTY PIECLAIMS

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COORD. _____ DIP _____ AZIM. _____ ELEV. _____ SIZE _____ STARTED _____ COMPLETED _____ LOGGED BY _____

VISUAL LOG	MAP UNIT	FROM - TO (ft) (m)	PRIMARY % LITHOLOGY	SECONDARY % LITHOLOGIES	CORE ANGLE				PYRITE		BARITE		CO ₃		OTHER CORE REC. (%)	ANALYSES (ppm unless shown)				
					Bedding		Structure		Lam. %	Diss. %	Bed. %	Bleb. %	Type %	Type %		Pb	Zn	Ag	Cu	Ba
					W	E	W	E	Thickness	Size	Thickness	Size	Size	Size		Mn				Sample Number
		580.0	MUDSTONE - DK. GRAY, THK. BEDDED FAIR - MOD SILIC. MOD - STRONG CALC. (TR ANKERITE)							DISS TR			NOD TR							
		167.7	MUDSTONE - AP FAINT BEDDED WEAK CARB & CALC. FAIR - MOD SILIC.			25°	25°	50°	60°	DISS TR			NOD BEDS 5							
		600.0	MUDSTONE - AP FAIR - MOD SILIC. MOD - STRONG CALC. FAIR - MOD SILIC.							V.F.G.			1-20 cm CALC.							
	mDtb	182.9	MUDSTONE AP MOD - STRONG SILIC FAIR - MOD CALC.	MUDSTONE CALC GRITTY 21cm	TR	20°	20°	40°	45°	DISS TR			NOD TR							
		620.0	MUDSTONE - A.P. FAIR, CALC, FAIR MOD SILIC, FINE YELLOW ANKERITE SPECKLING	MUDSTONE AP	TR	20°	15°			DISS TR			NOD TR	LENSE TR						
		189.0	MUDSTONE - A.P. FAIR, CALC, FAIR MOD SILIC, FINE YELLOW ANKERITE SPECKLING	MUDSTONE AP	TR	20°	15°			V.F.G.			<5cm AV 3cm CALC	<5mm YELLOW ANKERITE						
		640.0	MUDSTONE AP LIGHT - MED GRAY WK - MOD CALC, MOD SILIC, DOLOMITIC? ANKERITE?	MUDSTONE AP		20°	15°	55°		LENSE TR	DISS TR		NOD TR	LENSE TR						
		195.1	MUDSTONE AP LIGHT - MED GRAY WK - MOD CALC, MOD SILIC, DOLOMITIC? ANKERITE?	MUDSTONE AP		20°	15°	55°		<3mm	V.F.G.		1-4cm AV 3cm	<3mm ANKERITE						
		660.0	MUDSTONE AP FAIR SILIC, MOD - STRONG CALC.	LMSN - LIGHT & DARK GRAY <2cm	TR	15°	10°			LAM TR	DISS TR		NOD TR	LENSE TR						
		201.2	MUDSTONE AP FAIR SILIC, MOD - STRONG CALC.	LMSN - LIGHT & DARK GRAY <2cm	TR	15°	10°			<2mm	V.F.G.		1-3cm CALC.	<3mm ANKERITE						
		680.0	MUDSTONE AP FAIR SILIC, MOD - STRONG CALC.	LMSN - LIGHT & DARK GRAY <2cm	TR	15°	10°						NOD TR	LENSE TR						
		207.3	MUDSTONE LIGHT & MED GRAY BANDED, THK BEDDED WK SILIC, STRONG CALC.			10°	10°						NOD TR							
		700.0	MUDSTONE AP LIGHT & MED GRAY BANDED, THK BEDDED WK SILIC, STRONG CALC.			10°	10°			DISS TR			NOD TR							
		213.4	MUDSTONE AP WK - MOD SILTY 20% CALC POSSIBLE CALCARENITE - DOLM & ANKERITE	CLASTS - MDSN <1cm (NO.5 FT BEDS)	TR	10°	5°			LENSE TR	DISS TR		NOD TR							
		720.0	MUDSTONE AP WK - MOD SILTY 20% CALC POSSIBLE CALCARENITE - DOLM & ANKERITE	CLASTS - MDSN <1cm (NO.5 FT BEDS)	TR	10°	5°			<3mm	V.F.G.		3cm AV 1cm							
		219.5	MUDSTONE AP LIGHTER COLOR			10°	10°						NOD TR							
		740.0	MUDSTONE AP LIGHTER COLOR			10°	10°			DISS TR			NOD TR							
		225.6	MUDSTONE - A.P. LIGHT & DARK GRAY, INCREASE CARB DIS	CLASTS - MDSN <2mm IN 3cm BEDS	TR	15°							2-15cm							
		760.0	MUDSTONE - A.P. LIGHT & DARK GRAY, INCREASE CARB DIS	CLASTS - MDSN <2mm IN 3cm BEDS	TR	15°				DISS 3			NOD TR							
		770.0	MUDSTONE - A.P. LIGHT & DARK GRAY, INCREASE CARB DIS	CLASTS - MDSN <2mm IN 3cm BEDS	TR	15°							2-15cm							
		232.4	MUDSTONE BLK THK BEDDED STRONG CARB, WK - OCC STRONG SILIC	CLASTS - MDSN <1cm	TR	30°	25°	40°		LAM TR	DISS TR		NOD TR							
		780.0	MUDSTONE BLK THK BEDDED STRONG CARB, WK - OCC STRONG SILIC	CLASTS - MDSN <1cm	TR	30°	25°	40°		<1mm	V.F.G.		3-5cm SILIC.							
		237.7	MUDSTONE BLK THK BEDDED STRONG CARB, WK - OCC STRONG SILIC	CLASTS - MDSN <1cm	TR	30°	25°	40°					3-5cm SILIC.							
SURVEY			DRILLING CONTRACTOR _____																	
TYPE: SPECKY-SON			DRILL TYPE _____ DRILLING TIME _____																	
DEPTH DIP AZIM.			ASSAY LAB _____																	
700 -48° 057°			ASSAY CERT. _____																	
			COMMENTS _____																	

7110
7650
7800
7800

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

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PROJECT

PROPERTY

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COORD: _____ DIP _____ AZIM. _____ ELEV. _____ SIZE _____ STARTED _____ COMPLETED _____ LOGGED BY _____

VISUAL LOG	MAP UNIT	FROM -TO (ft) (m)	PRIMARY LITHOLOGY	% SECONDARY LITHOLOGIES	CORE ANGLE			PYRITE		BARITE		CO ₃	OTHER	CORE REC. (%)	ANALYSES (ppm unless shown)								
					Bedding W E	Structure W E	Lam. Thickness	Diss. Size	Bed. Thickness	Bleb. Size	Type Size				Type Size	Pb	Zn	Ag	Cu	Bo			
												Sample Number											
	mDtb	788.5	MUDSTONE AP BLK-DK GRAY, MED BEDDED, MOD CARB INCREASE SILIC DIS L. CARBONATE																				
		2403	MUDSTONE-BLK THK BEDDED, STRONG CARB, WK, INCREASE SILIC DIS	ICARBONATE-BAND ED LIGHT-DK GRAY BED. 1.5cm SLSN-CALC, PYRIT- IC 1-3cm	45	20° 20°	20° 20°	LAM TR	DISS 5			NOD TR		100									
		244.6	MUDSTONE-BLK DK GRAY, THK BEDDED, MOD CARB WKSILTY	SLSN-X BEDDED 5mm-2cm	5	20° 20°	20° 20°	LAM TR	DISS 5			BLEB 15	NOD TR	100									
		820.0	MUDSTONE AP MOD CARB, SILIC WEAK CALC	SLSN-CALC 1mm-1cm AV 3mm	TR	20° 25°	25° 30°	LAM TR	DISS 3			BLEB TR	NOD TR	BED 5	100								
838.0		256.0	MUDSTONE AP NON SILIC, WK SILTY	SLSN-CALC <3cm AV 3-6mm	TR	20° 30°	20° 30°	LENS TR	DISS TR			BLEB TR	NOD TR		100								
		860.0	MUDSTONE AP DARK GRAY, MOD CARB, TRACE CALC WEAK SILIC	SLSN <2cm AV 2cm	3	35° 35°	35° 35°		DISS TR			BLEB TR		BED 15	100								
	mDex	268.2	MUDSTONE AP INCREASE CARB DIS	SLSN-CALC <1cm AV 2mm	3	30° 35°	40° 40°		DISS TR				NOD TR	BED 5	100								
		880.0	MUDSTONE AP PATCHY CALC- DOLM, WEAK SILIC	SLSN <2cm AV 3mm	TR	40° 40°	35° 40°	LAM TR	DISS 3			BLEB TR	NOD TR		100								
		280.4	MUDSTONE AP	SLSN-CALC 3mm-3cm AV 3mm	TR	45° 45°	40° 40°		DISS 3			BLEB TR	NOD 5		95								
938.0		890.0	MUDSTONE LIGHT GRAY COLOR, NON SILIC	SLSN <1cm AV 1-3mm	TR	45° 25°	25° 25°		DISS TR			BLEB TR			95								
948.0		292.6	MUDSTONE AP	SLSN <1cm AV 2-5mm	TR	20° 40°	30° 45°		DISS TR			BLEB TR			100								
978.5		890.0										AP											
SURVEY		298.7	DRILLING CONTRACTOR _____																				
TYPE: SPECTRY-SUN		HOLE DEPTH	DRILL TYPE _____ DRILLING TIME _____																				
DEPTH DIP AZIM.			ASSAY LAB _____																				
900 -18° 059°			ASSAY CERT. _____																				
																		COMMENTS					

COORD. _____ DIP _____ AZIM. _____ ELEV. _____ SIZE _____ STARTED _____ COMPLETED _____ LOGGED BY _____

VISUAL LOG	MAP UNIT	FROM - TO (ft) (m)	PRIMARY LITHOLOGY	% SECONDARY LITHOLOGIES	CORE ANGLE				PYRITE		BARITE		CO ₃		OTHER	CORE REC. (%)	ANALYSES (ppm unless shown)				
					Bedding W	Structure E	W	E	Lam. Thickness	Diss. Size	Bed. Thickness	Bleb. Size	Type Size	Type Size			Pb	Zn	Ag	Cu	Bo
		304.0	MUDSTONE-AP RARELY SILIC, OCC CALC PARTINGS	SLSN-CALC&PY <1cm AV 2mm	TR	5°	15°	5°	20°		DISS TR		BLEB TR	NOD 5		85					
		304.8	MUDSTONE-BLK THK, BEDDED, MOD CARB	SLSN-AP <7cm AV 3mm MUDSTONE-STRONG CALC <0.5FT	TR	20°	20°	20°	20°	LAM TR	DISS 5		BLEB TR	NOD 15		100					
		310.1	MUDSTONE-BLK THK BEDDED, STRONG CARB, MOD. SILIC	SLSN-AP <1.5cm AV 5mm	TR	25°	20°	15°	15°		DISS 3					100					
		314.7	MUDSTONE-AP			CONTORTED							BLEB 60			100					
		315.5	MUDSTONE-AP	SLSN-AP <2mm	TR	10°		20°			DISS TR		BLEB 20			100					
	mDex	316.1	MUDSTONE-BLK THK BEDDED STRONG CARB, WK SILIC.	SLSN-AP <3cm AV 1-3mm	TR	15°	20°	15°	15°		DISS TR	BED TR	BLEB TR			100					
		320.0	MUDSTONE-AP FAIR CARB, WK MOD SILIC, OCC NARROW SILTY BEDS	SLSN-CALC&PY <2.5cm AV 1-3mm	TR	25°	25°	25°	20°		DISS TR		BLEB TR	NOD TR		100					
		326.1	MUDSTONE AP WK SILIC, RARE SILTY	SLSN AP <1cm AV 1-3mm	TR	25°	20°	10°	10°	LAM TR	DISS TR		BLEB TR	NOD TR		90					
		332.8	MUDSTONE AP MOD CARB, WK SILIC (SILTY), OCC WK. CALC	SLSN-AP <2.5cm AV 1cm	TR	15°	15°	20°	20°	PIN TR	DISS TR		BLEB TR	NOD 5		91					
		338.3	MUDSTONE AP BLK-DK GRAY NON SILIC & CALC.	SLSN-CALC <1cm AV 1-2mm	TR	35°	25°	15°	30°	PIN TR	DISS TR		BLEB TR	NOD 5		100					
		344.4	MUDSTONE AP	SLSN-CALC <4cm AV 3mm	5	TOPS D/S	40°	25°	20°		DISS TR			NOD TR		100					
	mDss	350.5				TOPS U/S					VFG			3cm IN 10cm BEDS							
SURVEY			DRILLING CONTRACTOR _____													COMMENTS					
TYPE: SPERRY-SUN			DRILL TYPE _____ DRILLING TIME _____																		
DEPTH DIP AZIM.																					
1125 -48 055°			ASSAY LAB _____ ASSAY CERT. _____																		

DDH 82-2

PROJECT _____

PROPERTY _____

COORD. _____ DIP _____ AZIM. _____ ELEV. _____ SIZE _____ STARTED _____ COMPLETED _____ LOGGED BY _____

VISUAL LOG	MAP UNIT	FROM - TO (ft) (m)	PRIMARY % LITHOLOGY	SECONDARY % LITHOLOGIES	CORE ANGLE <input checked="" type="checkbox"/>				PYRITE		BARITE		CO ₃		OTHER		CORE REC. (%)	ANALYSES (ppm unless shown)				
					Bedding		Structure		Lam. %	Diss. %	Bed. %	Bleb. %	Type %	Type %	Pb	Zn		Ag	Cu	Ba		
					W	E	W	E	Thickness	Size	Thickness	Size	Size	Size	Mn					Sample Number		
		1170.0	MUDSTONE-DK GRAY, THK BEDDED MOD CARB, WK SILIC	SLSN-CALC 1mm-4cm AV 2mm TR	10° 15°	10° 25°	LENSE TR	DISS TR														
		356.6	MUDSTONE-AP	SLSN-CALC-DOLM 1mm-2cm MUDSTONE-PYE SILIC	5 15° 20°	25° 25°	LENSE TR	DISS TR														
	m Das	362.7	MUDSTONE-AP WK SILIC	SLSN-AP <3cm TR AV 1-3mm	3 20° 35°	15° 30°	LAM TR	DISS TR														
		368.8	MUDSTONE AP	SLSN-AP <5mm DECREASE DIS MUDSTONE-CALC DOLM <3cm TR	35° 10°	10° 5°	LAM TR	DISS TR														
		374.9	MUDSTONE AP NON CALC		15° 20°																	
		381.0	- END -																			

SURVEY			DRILLING CONTRACTOR _____		
TYPE: SPERRY-SUN	HOLE DEPTH		DRILL TYPE _____ DRILLING TIME _____		
DEPTH DIP AZIM.					
1230 -47° 054°			ASSAY LAB _____		
			ASSAY CERT. _____		

COMMENTS

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

DDH 82-3

PROJECT SIKANNI

PROPERTY PIE 6 CLAIM

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COORD. 367,590 N
383,060 E

DIP -70° AZIM. 045° ELEV. 1620m

SIZE NQ

STARTED JULY 29, 1982 COMPLETED AUGUST 9, 1982

LOGGED BY M.P. PHILLIPS

VISUAL LOG	MAP UNIT	FROM - TO (ft) (m)	PRIMARY LITHOLOGY	% SECONDARY LITHOLOGIES	CORE ANGLE				PYRITE		BARITE		CO ₃		OTHER		CORE REC. (%)	ANALYSES (ppm unless shown)										
					Bedding W E	Structure W E	Lam. % Thickness	Diss. % Size	Bed. % Thickness	Bleb. % Size	Type % Size	Type % Size	Pb	Zn	Ag	Cu		Bo										
		60.0	-CASING-																									
	uDns	10.3	INFORM BRECCIA	CLASTS-SOFT MDSN LIGHT-MED GRAY		55°/40°		CLAST TR	DISS TR																			
		80.0	50% CLASTS 2mm -4cm AV 1cm MED GRAY IN BLK STRONG CARB SOFT MUDSTONE					<1cm	VFG																			
		24.3	INFORM BRECCIA AP	CLASTS-AP		40°/45°		CLAST TR	DISS TR																			
		56.0						<1cm AV 5mm	VFG																			
		20.3	INFORM BRECCIA A.P. CLASTS-RDED ANGULAR <4cm AV 5mm-1cm	CLASTS-BLK MDSN-DK SILIC		30°/35°			DISS S																			
		15.0		SLSN-CLASTS <30cm AV 1cm	30				VFG																			
		36.6	INFORM BRECCIA AP CLASTS MOSTLY BLK CARB MDSN	SLSN-CLASTS <4cm AV 1cm	30		35°/35°		DISS S																			
		40.0		CLASTS-SILTY MDSN	10				FG IN SLSN																			
		42.7	INFORM BRECCIA AP TIGHT PACKED CLASTS? BLK STRONG CARB MDSN	SLSN-CLASTS PYRITIC <4cm AV 1cm	25		35°/35°	CLAST TR	DISS 3																			
		45.0						<5mm LAM <1cm	FG IN SLSN																			
		49.7	INFORM BRECCIA A.P. CLASTS-LIGHT GRAY-BLACK CARB MDSN 1mm-2cm	SLSN-CLASTS	TR		25°/25°	CLAST TR	DISS TR																			
		181.0						<3mm	VFG																			
182.0 190.0 203.0		25° 0.5FT	55.2	INFORM BRECCIA? CLASTS? BLK STRONG CARB, NON SILIC TO FAIR SILTY	SLSN-CLASTS <20cm AV 1-2cm 20-20FT <1cm MDSN CLASTS	30		40°/30°		DISS S																		
			208.0						FG IN SLSN																			
			63.4	INFORM BRECCIA? AP TIGHT PACKED CLASTS? SHEARED BRECCIATED LOOK	SLSN-PY-CLASTS 1mm-2cm AV 5mm	30		40°/30°		DISS 3																		
		240.0						VFG																				
232.0 236.0	0.2-0.3A	70.1	INFORM BRECCIA? AP STRONG CARB & SILIC, NON CALC	SLSN-AP 115cm MUDSTONE-BLK CALC-DOLM CLASTS	15 10		25°/35° 45°/20°		DISS 3																			
		250.0					TOPS U/S		VFG																			
		76.2	INFORM BRECCIA? FAIR-MOD SILIC TR CALC.	SLSN-DK GRAY	TR		35°/25°		DISS 3																			
		270.0						VFG																				

SURVEY 82.3

TYPE: _____

DEPTH DIP AZIM. HOLE DEPTH

DRILLING CONTRACTOR DJ DRILLING

DRILL TYPE LONG YEAR 38 DRILLING TIME _____

ASSAY LAB _____

ASSAY CERT. _____

COMMENTS

DDH 82-3

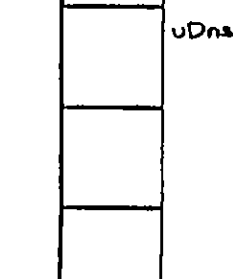
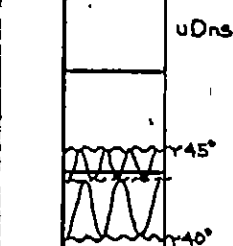
PROJECT

PROPERTY

Page 2 of 6

COORD. _____ DIP _____ AZIM. _____ ELEV. _____ SIZE _____ STARTED _____ COMPLETED _____ LOGGED BY _____

VISUAL LOG	MAP UNIT	FROM - TO (ft) (m)	PRIMARY LITHOLOGY	% SECONDARY LITHOLOGIES	CORE ANGLE				PYRITE		BARITE		CO ₂		OTHER	CORE REC. (%)	ANALYSES (ppm unless shown)				
					Bedding W	Structure E	W	E	Lam. % Thickness	Diss. % Size	Bed. % Thickness	Bleb. % Size	Type % Size	Type % Size			Pb	Zn	Ag	Cu	Ba
		290.0	MUDSTONE (INFORM. BRECCIA) BLK. THK BEDDED STRONG CARB. WK - STRONG SILIC	SLSN-CALC & PY <5cm AV 3cm	5	10°	25°	25°		DISS 5											
		88.4	MUDSTONE AP MOD-STRONG SILIC	SLSN-AP 1mm-5cm	TR	25°	30°	20°		DISS 5											
		94.5	MUDSTONE AP	SLSN-AP <5cm	10		20°	25°		DISS 5											
		330.0								VFG IN SLSN											
		100.6	MUDSTONE-A.P STRONG SILIC OCC. SLIGHTLY SILTY	SLSN-AP <3cm AV 5mm	5	35°	35°	30°	NOD TR	DISS 5											
		350.0		BRECCIA-1-2mm CHERT CLASTS IN CALCARENITE	20				<2mm IN SLSN	VFG											
		106.7	MUDSTONE-A.P. HIGHLY SILIC	SLSN-AP <1mm-6cm AV 3mm	15		55°	55°	NOD TR	DISS 5											
		310.0							<2mm IN SLSN	VFG TO 20% IN SLSN											
		112.8	MUDSTONE ALMOST CHERTY	SLSN-Non CALC <5mm	TR		30°			DISS 10											
		350.0								VFG											
		118.9	MUDSTONE AP	SLSN <5mm	TR		35°	40°	PIN BLEB TR	DISS 10											
		410.0							<5mm AV. 2mm	VFG OOLITIC?											
		125.0	MUDSTONE AP NON INCREASE SILIC DIS, TR SILTY			35°	25°	35°	BLEB PIN TR	DISS 5				NOD TR							
		430.0								VFG				<3cm IN 10cm BED DK GRAY							
		131.1	MUDSTONE AP STRONG SILIC & CARB.	MUDSTONE-V CARB NON SILIC <1FT	20	25°	35°	35°	LAM NOD TR	DISS 5											
		450.0							<2cm	VFG											
		131.2	MUDSTONE-AP	MUDSTONE-AP <1FT BEDS	10	25°	20°	45°	LAM NOD TR	DISS 7				NOD TR							
		470.0							<2cm LAM 2-3 mm	VFG				<3cm IN 10cm BED							
		143.3	MUDSTONE AP	MUDSTONE-AP <2FT BEDS	40		45°	35°	LAM LENSE TR	DISS 3											
		490.0		SLSN-Non CALC <1cm LENSES & BEDS	3					VFG.											
		149.4																			
SURVEY			DRILLING CONTRACTOR _____																		
TYPE: SPERRY-SUN			DRILL TYPE _____ DRILLING TIME _____																		
DEPTH DIP AZIM.			ABGAY LAB _____																		
300 -61° 045°			ABGAY CERT. _____																		
			COMMENTS _____																		



DDH 82-3

PROJECT

PROPERTY

Page 3 of 6

COORD. _____ DIP _____ AZIM. _____ ELEV. _____ SIZE _____ STARTED _____ COMPLETED _____ LOGGED BY _____

VISUAL LOG	MAP UNIT	FROM - TO (ft) (m)	PRIMARY LITHOLOGY	% SECONDARY LITHOLOGIES	CORE ANGLE			PYRITE		BARITE		CO ₂		OTHER	CORE REC. (%)	ANALYSES (ppm unless shown)				
					Bedding W E	Structure W E	E	Lam. %	Diss. %	Bed. %	Bleb. %	Type %	Type %			Pb	Zn	Ag	Cu	Bo
		515.5	MUDSTONE-BLK THK BEDDED, V CARB, WK-STRONG SILIC, WK SILTY	SLSN-PY < 8cm AV < 1cm	15	30°	40°	35°		DISS	5									
		155.5	MUDSTONE-AP NON-SILIC, WK PATCHY SILTY	SLSN-PYMIC < 15cm AV 1-3cm	40	25°	25°	30°		DISS	10									
		161.5	MUDSTONE AP	SLSN-AP DECREASE D/S	40	20°	35°	50°		DISS	10									
	uDns	167.6	MUDSTONE-AP	SLSN-AP < 3cm AV < 5mm	35	30°	25°	25°	LENSE TR	DISS	5									
		173.7	MUDSTONE-AP OCC STRONG SILIC BEDS.	SLSN-AP < 6cm AV 1cm	35	30°	30°	30°		DISS	7									
		179.8	MUDSTONE-AP	SLSN-AP < 20cm AV 1-5cm	30			35°		DISS	5									
	uDns	185.9	MUDSTONE-AP INCREASE SILIC (SILTY) D/S	SLSN-AP < 4cm AV 0.5-1cm	35			40°		DISS	5									
		190.0	MUDSTONE-BLK THK BEDDED, V CARB, WEAK INCREASE SILIC D/S, TR-SILTY	MUDSTONE-BLK CALC < 2cm BEDS	TR			35°	BLEB TR	DISS	5									
		195.1	MUDSTONE AP OCC WK SILIC	CHERTY AECILLITE 1.3 FT BED	5			35°	BLEB TR	DISS	5									
		201.2	MUDSTONE AP NON-WK SILIC	MUDSTONE-BLK CALC < 2cm BED	TR				< 1cm AV 5mm	FG					100					
		207.3	MUDSTONE AP WEAK-FAIR SILIC	MUDSTONE-STRONG SILIC, PY	7	35°	40°	40°	LAM BLEB	DISS	5									
		213.4	MUDSTONE-AP	MUDSTONE-SILIC CALC - 1 FT BED	5	15°	20°	30°	LAM BLEB	DISS	5									

SURVEY
 TYPE: SPECTRY-SUN HOLE DEPTH _____
 DEPTH DIP AZIM. _____
 700 -49° 044°
DRILLING CONTRACTOR _____
DRILL TYPE _____ **DRILLING TIME** _____
ASSAY LAB _____
ASSAY CERT. _____

COMMENTS _____

DDH 82-3

PROJECT

PROPERTY

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COORD. _____ DIP _____ AZIM. _____ ELEV. _____ SIZE _____ STARTED _____ COMPLETED _____ LOGGED BY _____

VISUAL LOG	MAP UNIT	FROM - TO (ft) (m)	PRIMARY LITHOLOGY	% SECONDARY LITHOLOGIES	CORE ANGLE $\frac{D}{S}$			PYRITE		BARITE		CO ₃		OTHER	CORE REC. (%)	ANALYSES (ppm unless shown)				
					Bedding W E	Structure W E	Lam. % Thickness	Diss. % Size	Bed. % Thickness	Bleb. % Size	Type % Size	Type % Size	Pb			Zn	Ag	Cu	Ba Sample Number	
	u Dns	720.5 - 219.5	MUDSTONE - BLK THK BEDDED STRONG CARB. FAIR TO MOD SILIC, WK SILTY	BLK CHERTY ARGILLITE BEDS 2.5 FT	17	10°/15°	35°/30°	LAM TR	DISS 7					100						
		726.5 - 221.4	MUDSTONE AP STRONG SILIC & INCREASE PYRITIC				15°/20°		LAM S	DISS 7					100					
	u Dex ₁	733.5 - 221.4	MUDSTONE - BLK THK BEDDED STRONG SILIC & CARB.	MUDSTONE - BLK CALC < 2cm	TR	20°	25°	BLEB TR	DISS 10		BLEB 5			100						
		750.0 - 223.6	MUDSTONE - AP VEEY SILIC - CHERTY	BLK CHERTY ARGILLITE < 1 FT SILSN - < 2.5cm	TR	7	20°/20°	30°/25°	LAM TR	DISS 10					100					
	m Dtb	750.0 - 228.6	MUDSTONE - AP STRONG SILIC DECREASING DS	MUDSTONE - CALC DOLM < 1.5cm x 10	5		35°/40°		DISS 5			NOD TR								
		770.0 - 234.7	MUDSTONE - DK GRAY - BLK THK BEDDED MOD CARB FAIR - MOD SILIC	MUDSTONE - AP SILIC < 1.5cm x 2-1.5cm	5		35°/35°	LENSE TR	DISS TR				NOD TR							
		790.0 - 240.8	MUDSTONE - AP FAIR SILIC FAIR CARBONATE? - DOLM ANKERITE	MUDSTONE AP 1.5-3.0cm	7		45°/35°	BLEB TR	DISS TR				NOD TR.							
		830.0 - 246.9	MUDSTONE - AP MOD CARB WK SILIC & INCREASING DS	MUDSTONE - AP 1-3 FT	30		30°/25°	LAM TR	DISS TR											
		850.0 - 253.0	MUDSTONE AP DECREASING SILIC DS	MDSN - DK GRAY SILIC, CALC < 3 FT	70		35°/30°	LENSE TR	DISS TR				NOD TR							
		870.0 - 259.1	MUDSTONE - MED DARK GRAY, WK SILIC, SLIGHT BANDED CARBONATE STRONG?	CALC - DOLM SILIC BEDS < 1.5cm	5		35°/25°		DISS TR				NOD TR							
		890.0 - 265.2	MUDSTONE - AP	LIGHT GRAY SILIC BEDS < 5mm	TR					VFG			< 2cm							
				SLSN - VFG 1-2mm	TR		50°	25°/25°	BLEB TR	DISS TR			NOD TR							
									< 1cm	VFG.			< 7cm SILIC & CALC							
SURVEY		271.3	DRILLING CONTRACTOR _____			COMMENTS														
TYPE:		HOLE DEPTH	DRILL TYPE _____ DRILLING TIME _____																	
DEPTH	DIP	AZIM.	ASSAY LAB _____																	
			ASSAY CERT. _____																	

DDH 82-3

PROJECT

PROPERTY

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COORD. _____ DIP _____ AZIM. _____ ELEV. _____ SIZE _____ STARTED _____ COMPLETED _____ LOGGED BY _____

VISUAL LOG	MAP UNIT	FROM -TO (ft) (m)	PRIMARY LITHOLOGY	% SECONDARY LITHOLOGIES	CORE ANGLE			PYRITE		BARITE		CO ₃		OTHER		CORE REC. (%)	ANALYSES (ppm unless shown)				
					Bedding W E W E	Structure W E	Lam. % Thickness	Diss. % Size	Bed. % Thickness	Bleb. % Size	Type % Size	Type % Size	Pb	Zn	Ag		Cu	Ba			
		270.0	MUDSTONE-MED GRAY-LIGHT GRAY BANDED THK BEDDED SOFT, WK CARB, WK SILTY	SLSN-WHITE, OCC CALC 2-20cm AV 5cm MUDSTONE-SILIC <1 FT.	5	75°/40°	45°/40°	BLEB TR	DISS TR			NOD TR									
		277.4	MUDSTONE-INTER BEDDED DARK LIGHT GRAY, NON SILIC CALCARENITE?				25°/35°	BLEB TR	DISS TR			NOD TR									
		283.5	MUDSTONE-MED DARK GRAY THK BEDDED WEAK-MOD CARB, SILIC	CALCARENITE-SILTY LIGHT GRAY 1cm-5 FT. SLSN-CALC 6-20cm	30	40°/50°	45°/35°		DISS TR			NOD 5									
	miDtb	289.6	MUDSTONE-DK-LIGHT GRAY, WK BANDED WK CARB, TR-MOD SILIC (SILTY)	SLSN-60% CALC WK PY 5-12cm	5		40°/45°		DISS TR			NOD 5									
		295.7	MUDSTONE-MED DARK GRAY THK BEDDED, TR-SILIC WK CARB	SLSN-AP	5	20°/20°	40°/35°		DISS TR			NOD TR									
		301.8	MUDSTONE-MED GRAY, WK CARB & SILIC, <10cm SILIC BEDS	SLSN-CALC APY 2-20 AV 8cm	10	25°/20°	25°/35°		DISS TR			NOD TR									
		307.8	MUDSTONE-AP LIGHTER COLORED	SLSN-AP BEDS NOD 2-15cm	5		40°/40°		DISS TR			NOD TR									
		313.9	MUDSTONE-AP INCREASE SILIC (SILTY),	CALCARENITE SILTY 2 FT BED	10	45°/30°	40°/30°		DISS TR			NOD 5									
	miDtb	320.0	MUDSTONE AP. MED GRAY, BANDED THIN BEDDED, WK CARB, WK-MOD SILTY	SLSN-CALC-DOLM 5-25cm CARBONATE-LIGHT GRAY 1mm-1cm	5 15	35°/40°	45°/40°		DISS TR			NOD TR									
		326.0	MUDSTONE-LIGHT-MED GRAY, SOFT WEAK SILTY	CARBONATE-1mm 1cm	10	40°/45°	45°/40°		DISS TR			NOD TR									
		332.2	MUDSTONE-AP LIGHT-MED GRAY WK SILIC (SILTY) WEAK CARB.	CARBONATE-AP	7	35°	40°/30°		DISS TR			NOD 5									
		338.3							DISS TR			2-10cm.									

COMMENTS

SURVEY
 TYPE: SPERRY-SUN
 DEPTH DIP AZIM.
 900 -49° 044°

DRILLING CONTRACTOR _____
DRILL TYPE _____ **DRILLING TIME** _____

ASSAY LAB _____
ASSAY CERT. _____

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PROJECT

PROPERTY

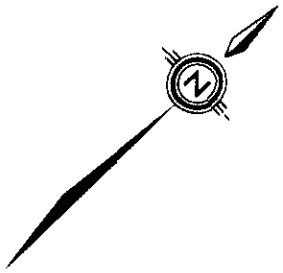
Page 6 of 6

COORD. _____ DIP _____ AZIM. _____ ELEV. _____ SIZE _____ STARTED _____ COMPLETED _____ LOGGED BY _____

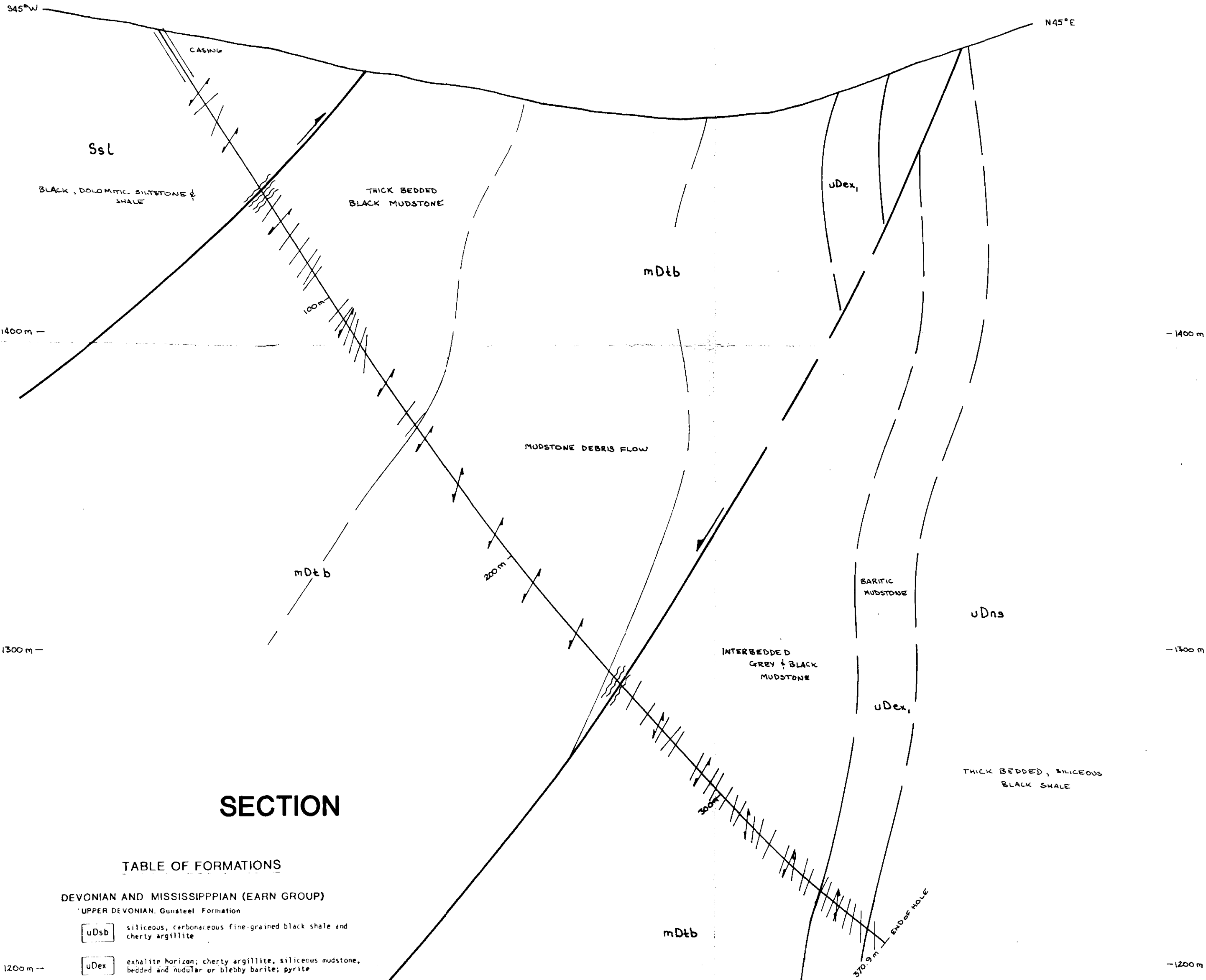
VISUAL LOG	MAP UNIT	FROM - TO (ft) (m)	PRIMARY % LITHOLOGY	SECONDARY % LITHOLOGIES	CORE ANGLE \angle		PYRITE		BARITE		CO ₃		OTHER CORE REC. (%)	ANALYSES (ppm unless shown)						
					Bedding W E	Structure W E	Lam. % Thickness	Diss. % Size	Bed. % Thickness	Bleb. % Size	Type % Size	Type % Size		Pb	Zn	Ag	Cu	Ba Sample Number		
	mDtb	130.0	MUDSTONE-MED LIGHT GRAY, THIN BEDDED SLIGHT SILTY, WEAK CARB CALCARENITE?	CARBONATE-WHITE 5 CALC-ANK 2mm-1cm	30°	35°		DISS TR			NOD TR									
		344.4	MUDSTONE-AP LIGHTER COLOR	CARBONATE-AP 5	40°	35°		VFG				1-2cm LIGHT GRAY								
		1150.0				35°	30°		DISS TR			NOD TR								
		350.5	MUDSTONE-AP BANDED LOOK	CARBONATE-AP 25	40°	35°		DISS TR				NOD 5								
		1150.0				25°	30°		VFG			1-10cm LIGHT OR GRAY								
		362.7	MUDSTONE-AP FINE BANDED WK SILTY CALCARENITE?	CARBONATE-AP 1-3mm	25°	30°		DISS TR				NOD 5								
		1150.0				30°	25°		DISS TR			NOD 5								
		364.8	MUDSTONE-AP						VFG			2-10cm								
		1150.0	- END -																	
		364.8																		

SURVEY			HOLE DEPTH	DRILLING CONTRACTOR _____
TYPE:				DRILL TYPE _____ DRILLING TIME _____
DEPTH	DIP	AZIM.		ASSAY LAB _____
				ASSAY CERT. _____

COMMENTS _____



PLAN



SECTION

TABLE OF FORMATIONS

DEVONIAN AND MISSISSIPPIAN (EARN GROUP)

UPPER DEVONIAN: Gunsteel Formation

uDsB siliceous, carbonaceous fine-grained black shale and cherty argillite

uDex exhalite horizon; cherty argillite, siliceous mudstone, bedded and nodular or blebby barite; pyrite

uDns non siliceous, carbonaceous, gritty, grey weathering, dark grey shale with pyrite, silica and barite nodules; thin siltstone interbeds

uDex exhalite horizon; cherty argillite, siliceous mudstone, bedded and nodular or blebby barite; pyrite

uDrb ribbon bedded, black cherty argillite and chert with thin carbonaceous partings

uDic intraformational conglomerate, angular chert and cherty argillite clasts in a carbonaceous mudstone matrix

MIDDLE DEVONIAN: Akie Formation

mDv widely scattered volcanoclastic debris and tuffaceous horizons

mDtb dark grey weathering, black, carbonaceous siltstones, chert granule conglomerate, debris flows and silty mudstone

mDex exhalite horizon; cherty argillite, siliceous mudstone, bedded and nodular or blebby barite

mDss brown weathering, silty mudstone and siltstone, thin to medium bedded

LOWER TO MIDDLE DEVONIAN: Kwadacha Limestone

lmDls grey weathering, medium to thick bedded, fossiliferous limestone and limestone conglomerate

lmDst light grey to brown weathering silty limestone, limestone turbidites and thin graptolitic shale

MIDDLE ORDOVICIAN TO UPPER SILURIAN (ROAD RIVER GROUP)

Ssl silty, platy, tan weathering, calcareous and dolomitic siltstone, bioturbated in sections

Scf grey weathering limestone turbidites

SLs grey weathering, medium bedded limestone

Osh dark to bluish grey weathering, black shale and mudstone; graptolitic; cherty near top in some areas

Ov orange weathering, lithic and lapilli tuff and microdiorite flows

CAMBRIAN AND LOWER ORDOVICIAN (KECHIKA GROUP)

EOcp beige and cream weathering, phyllitic mudstone and calcareous siltstone

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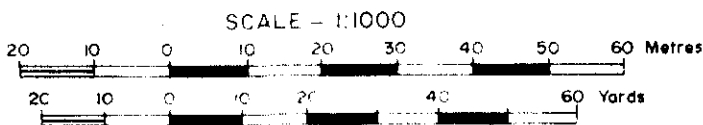
Figure 3

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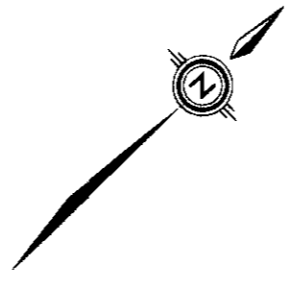
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PLAN

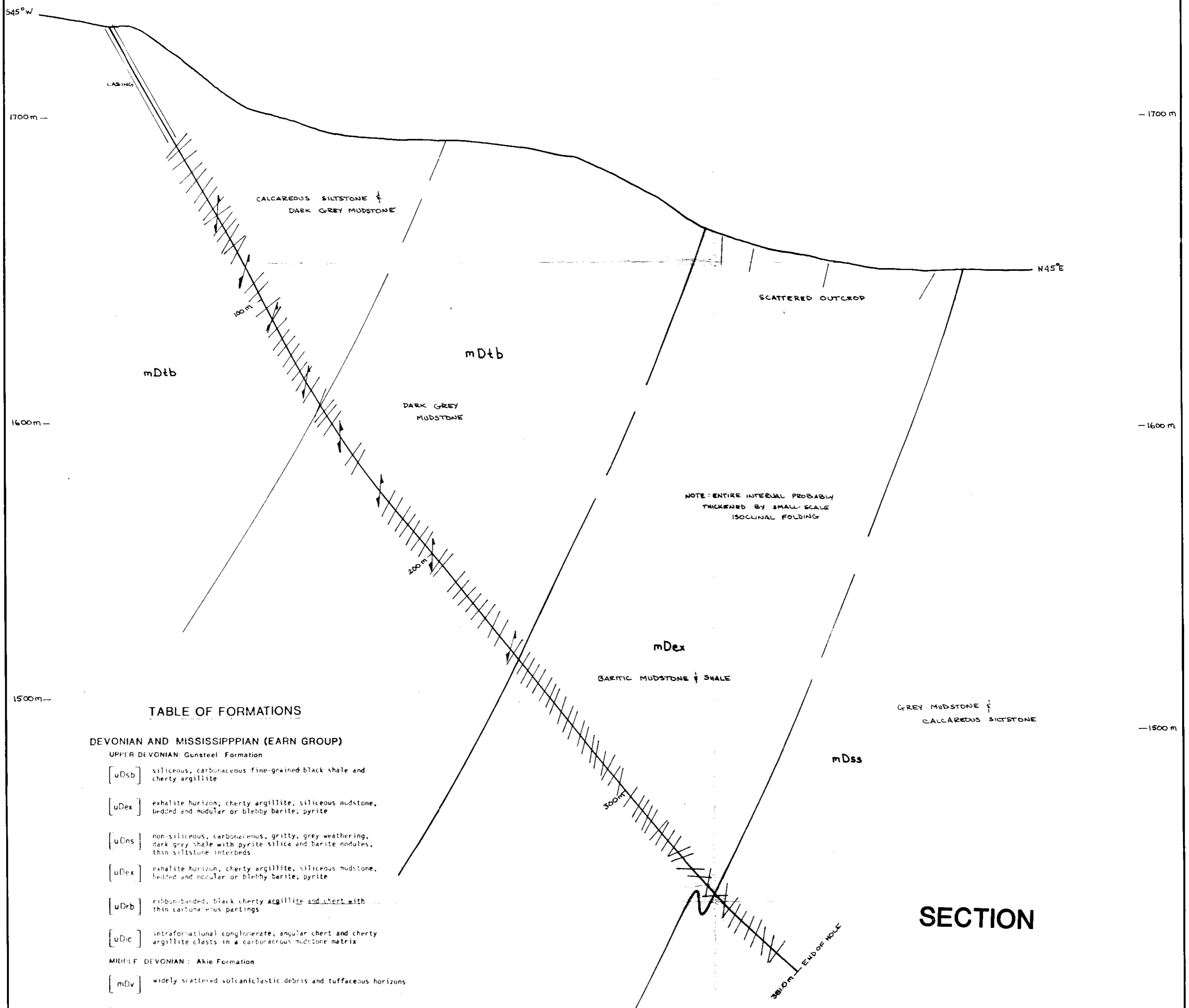


TABLE OF FORMATIONS

- DEVONIAN AND MISSISSIPPIAN (EARN GROUP)**
- UPPER DEVONIAN: Gunsteel Formation
- [uDsb] siliceous, carbonaceous fine-grained black shale and cherty argillite
 - [uDex] exhalite horizon; cherty argillite, siliceous mudstone, bedded and nodular or blebby barite, pyrite
 - [uOns] non-siliceous, carbonaceous, gritty, grey weathering, dark grey shale with pyrite, silica and barite nodules, thin siltstone interbeds
 - [uDex] exhalite horizon, cherty argillite, siliceous mudstone, bedded and nodular or blebby barite, pyrite
 - [uDrb] ribbon-banded, black cherty argillite and chert with thin carbonaceous partings
 - [uDic] intraformational conglomerate, angular chert and cherty argillite clasts in a carbonaceous mudstone matrix
- MIDDLE DEVONIAN: Akie Formation
- [mDv] widely scattered volcanoclastic debris and tuffaceous horizons
 - [mDtb] dark grey weathering, black, carbonaceous siltstones, chert granule conglomerate, debris flows and silty mudstone
 - [mDex] exhalite horizon; cherty argillite, siliceous mudstone, bedded and nodular or blebby barite
 - [mDss] brown weathering, silty mudstone and siltstone, thin to medium bedded
- LOWER TO MIDDLE DEVONIAN: Kwadacha Limestone
- [lmDls] grey weathering, medium to thick bedded, fossiliferous limestone and limestone conglomerate
 - [lmDsl] light grey to brown weathering silty limestone, limestone turbidites and thin graptolitic shale
- MIDDLE ORDOVICIAN TO UPPER SILURIAN (ROAD RIVER GROUP)**
- [Ssl] silty, platy, tan weathering, calcareous and dolomitic siltstone, bioturbated in sections
 - [Scl] grey weathering limestone turbidites
 - [Sls] grey weathering, medium bedded limestone
 - [Osh] dark to bluish grey weathering, black shale and mudstone; graptolitic; cherty near top in some areas
 - [Ov] orange weathering, lithic and lapilli tuff and micrudstonite flows
- CAMBRIAN AND LOWER ORDOVICIAN (KECHIKA GROUP)**
- [COcp] beige and cream weathering, phyllitic mudstone and calcareous siltstone

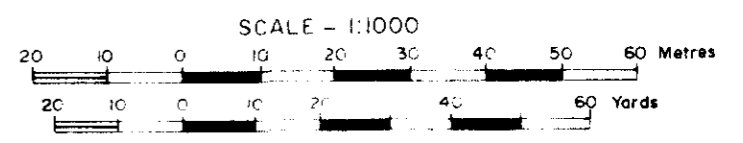
SECTION

GEOLOGICAL BRANCH ASSESSMENT REPORT

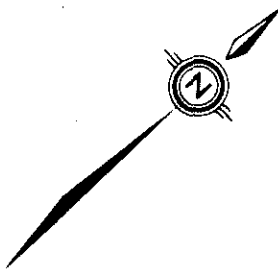
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Figure 4

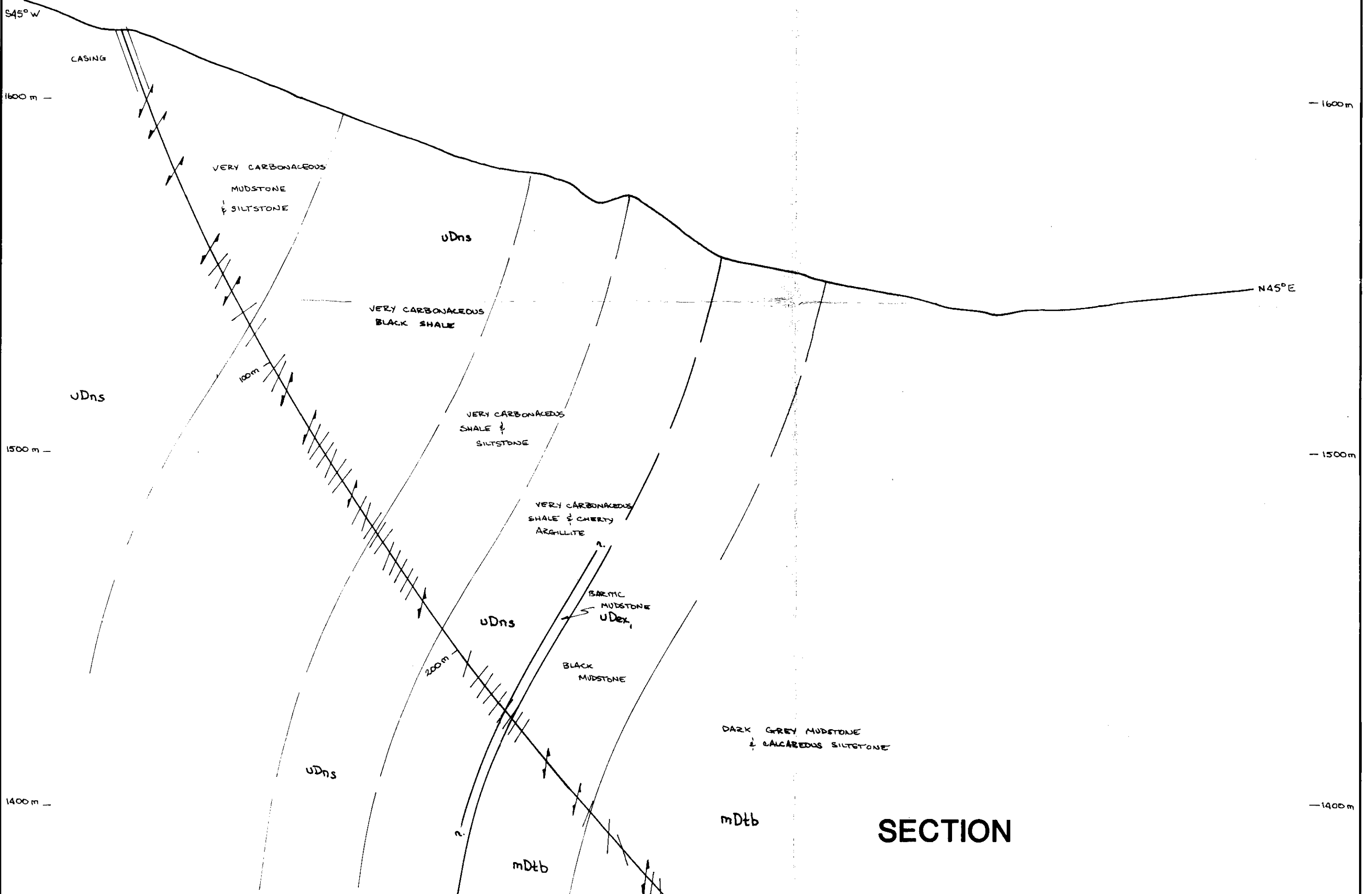
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PLAN



SECTION

TABLE OF FORMATIONS

DEVONIAN AND MISSISSIPPIAN (EARN GROUP)

UPPER DEVONIAN: Gunsteel Formation

[uDsb] siliceous, carbonaceous fine-grained black shale and cherty argillite

[uDex] exhalite horizon; cherty argillite, siliceous mudstone, bedded and nodular or blebby barite; pyrite

[uDns] non-siliceous, carbonaceous, gritty, grey weathering, dark grey shale with pyrite-silica and barite nodules; thin siltstone interbeds

[uDex] exhalite horizon; cherty argillite, siliceous mudstone, bedded and nodular or blebby barite; pyrite

[uDrb] ribbon-banded, black cherty argillite and chert with thin carbonaceous partings

[uDic] intraformational conglomerate, angular chert and cherty argillite clasts in a carbonaceous mudstone matrix

MIDDLE DEVONIAN: Akie Formation

[mDv] widely scattered volcanoclastic debris and tuffaceous horizons

[mDtb] dark grey weathering, black, carbonaceous siltstones, chert granule conglomerate, debris flows and silty mudstone

[mDex] exhalite horizon; cherty argillite, siliceous mudstone, bedded and nodular or blebby barite

[mDss] brown weathering, silty mudstone and siltstone, thin to medium bedded

LOWER TO MIDDLE DEVONIAN: Kwadacha Limestone

[ImDls] grey weathering, medium to thick bedded, fossiliferous limestone and limestone conglomerate

[ImDst] light grey to brown weathering silty limestone, limestone turbidites and thin graptolitic shale

MIDDLE ORDOVICIAN TO UPPER SILURIAN (ROAD RIVER GROUP)

[SsL] silty, platy, tan weathering, calcareous and dolomitic siltstone, bioturbated in sections

[Sct] grey weathering limestone turbidites

[Sls] grey weathering, medium bedded limestone

[Osh] dark to bluish grey weathering, black shale and mudstone; graptolitic; cherty near top in some areas

[Ov] orange weathering, lithic and lapilli tuff and microdiorite flows

CAMBRIAN AND LOWER ORDOVICIAN (KECHIKA GROUP)

[COcp] beige and cream weathering, phyllitic mudstone and calcareous siltstone

GEOLOGICAL BRANCH ASSESSMENT REPORT

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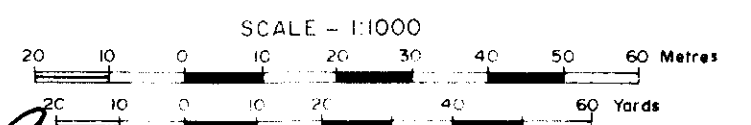
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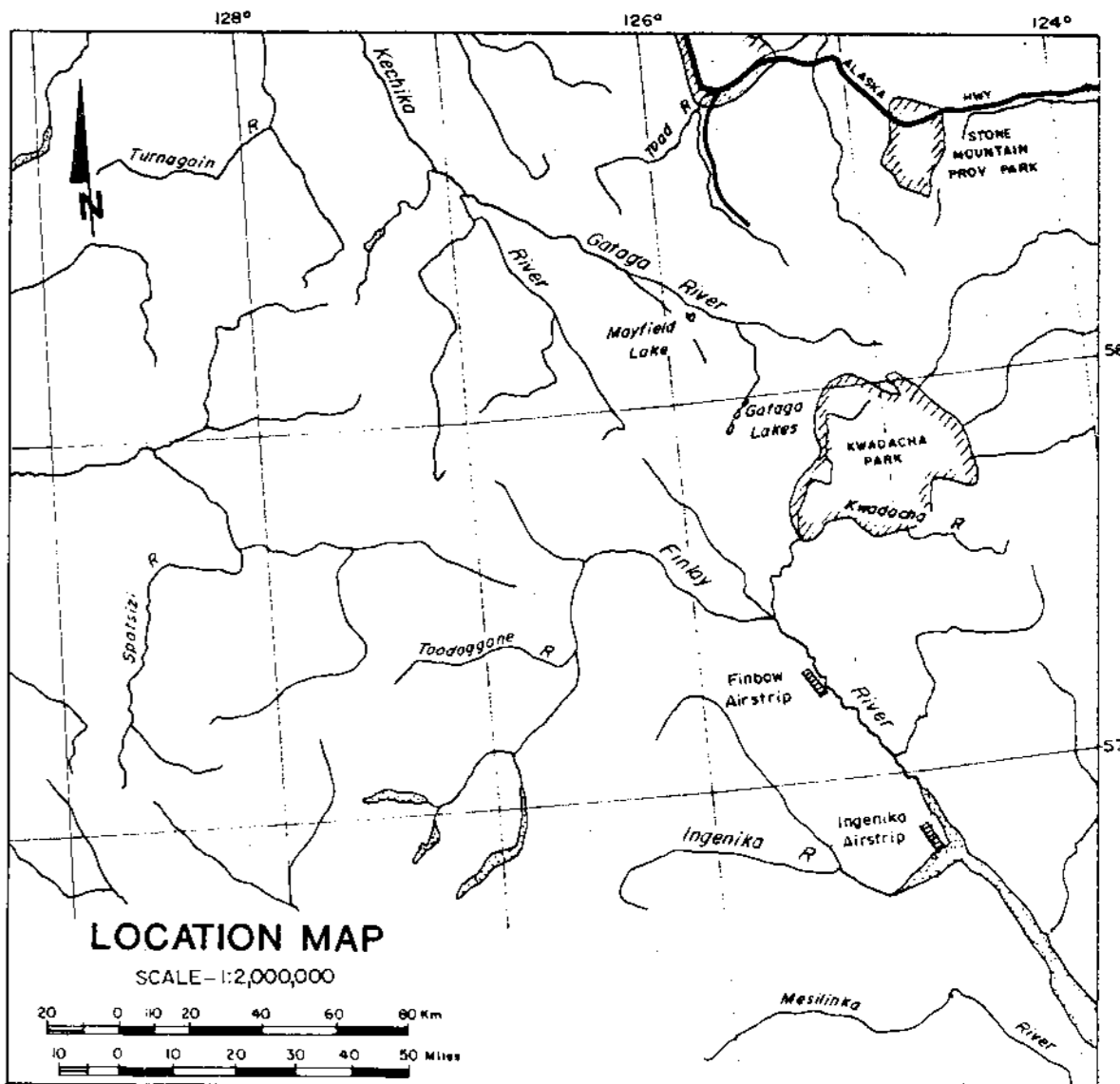
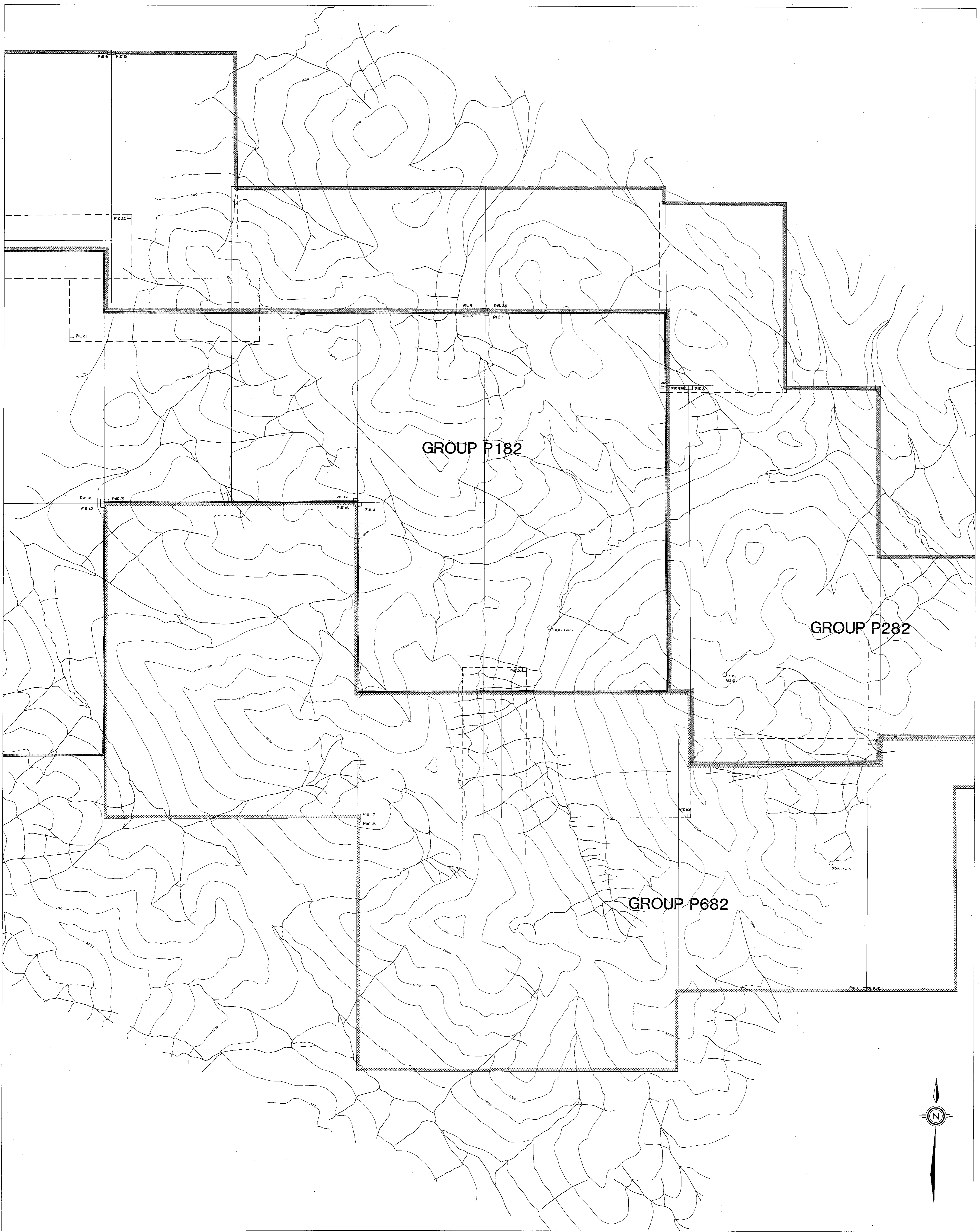
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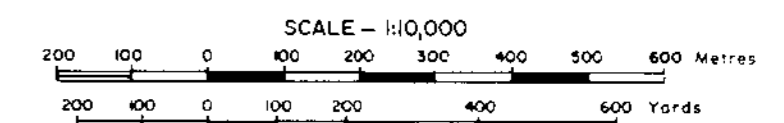


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Figure 2
ARCHER, CATRO & ASSOCIATES (1981) LIMITED
**CLAIM MAP and
LOCATIONS of DRILL HOLES**

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