



010

TOWNSHIP: Noseworthy REPORT No.: 18

WORK PERFORMED BY: Newmont Ltd.

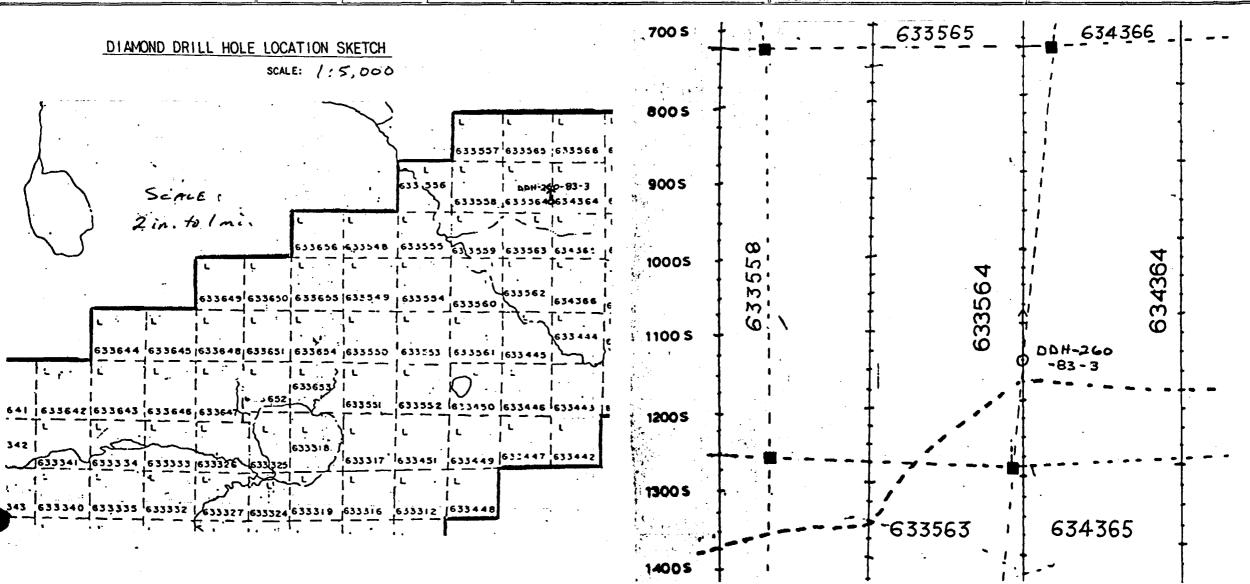
CLAIM No.	HoLE No.	FOOTAGE	DATE	Note
L 633564	260-83-3	850	Feb/83	(1)
L 633355	260-83-4	627	Mar/83	(1)
L 633367	260-83-5	517	Mar/83	(1)
L 624982	260-83-6	507	Mar/83	(1)
L 624982	260-83-7	537	Mar/83	(1)
		3038		

Notes: (1) #263-83

## DIAMOND DRILL HOLE RECORD

HOLE No. 260-83-3

LOCATION		DIP TEST		LEVEL	HORIZONTAL COMPONENT 625 feet	DATE STARTED Feb. 26, 1983
AREA or TWP. Noseworthy Twp. Ont.	FOOTAGE	RECORDING	CORRECTED		VERTICAL 573 feet	DATE FINISHED March 2, 1983
indeworthy 1wp. Onc.	- 0 450	500 51	50 42.25	ELEVATION	BEARING True North	LOGGED BY R.A. Archer
CLAIM No. 633564	850	43	34.75	LATITUDE 11+50S	LENGTH 850 feet	PURPOSE To test IP Anomaly
NTS 32E12 UTM				DEPARTURE 20+00E	CORE LOCATION Timmins	TOT. RECOVERY 99.5%



## DIAMOND DRILL HOLE LOG-

PROJECT \_\_\_Mikwam - 260

HOLE No. \_\_DDH-260-83-3 \_\_\_\_ Page \_1 \_\_of \_9 \_\_\_\_

F001	TAGE	ROCK TYPE AND DESCRIPTION	CORE	5		SAMPL	.E		}	Anal	lytica	1 Resu	ult:			
FROM	то	TOTAL TIPE AND DESCRIPTION	ANGLES	SULPH-		FROM	то	LENGTH	Au	As	Cu		Co <sub>2</sub>		sen	P
			-	<del>  </del>	<del></del>	-		+	122N	22111	Frm	EE.				<u> </u>
)	95	-overburden - casing	<del>                                     </del>	<del>                                     </del>				+			<del></del>	<del></del>		<del></del>		۲
					l		<del>                                     </del>	<b>†</b>	<del>                                     </del>	1	<del>  </del>					$\vdash$
95	101	-casing in bedrock														
		Basalt - General Description											<u> </u>	$ \top$		
			<del> </del>	<del></del>	ļ	<del>                                     </del>	<del> </del>	<del> </del>	<del> </del>	+	<u> </u>	<u>'</u>	·			<del> </del>
		-relatively unaltered for the most part. Crystals of	<del>                                     </del>	<del></del>	<del> </del>	-	<del> </del>	-	<del> </del>	<del>  </del>	<del></del>	<b></b>	<b></b>			-
		hornblende (up to 3mm long) are partially altered to		<del>-  </del>	<del> </del>	<del> </del>	<del></del>	+		<del>  </del>		<b>'</b>				<del> </del>
	<del>'</del>	chlorite and define a lineation/foliation that varies from 65° to 0° to C.A. The rock is fairly homogeneous	<del>                                     </del>	<del></del>		<del> </del>		-	<del> </del>	<del>  </del>	<u> </u>		·			-
	\		<del> </del>	<del></del>	<del> </del>	-	<del> </del>	+	<del> </del>	<del>                                     </del>	<del></del>	<del>'</del>	·——-			-
	<u> </u>	with 35% hornblende/chlorite, 60% fine grained quartz- feldspar - (carbonate) and about 5% sericite. The	<del> </del>	<del></del>	<b>—</b>		<del>                                     </del>	+	<del>                                     </del>	<del>  </del>	<b></b>	<del></del>				-
		most prominent structural feature is a system of thin	<del> </del>	<del>  </del>	<del> </del>		<del> </del>	+	<del> </del>	<del>                                     </del>	<del>  </del>	<b></b>				$\vdash$
	<u> </u>	(<3mm) calcite-hematite-filled fractures that have a	<del>                                     </del>	-	<del> </del>	<del>                                     </del>	<del> </del>	+	<del> </del>	<del>  </del>	<del></del>	<b>└──┤</b>	<b></b>	<del></del>		-
	<u> </u>		<del>                                     </del>	<del>                                     </del>	<del> </del>	<del> </del>	<del> </del>	+	+	1	<del>                                     </del>	<del></del>	<del></del>			+
	<u> </u>	parallel strike and perpendicular dip to the foliation, lineation of the rock. (ie about 25 to C.A. in	<b></b>	<del>                                     </del>	<del> </del>	<del> </del>	<del>                                     </del>	+	<del> </del>	+	<del>                                     </del>	<del></del>	<del> </del>	<del></del> +	+	+
	<b></b>	opposite direction). The basalt ranges from massive	<del>                                     </del>		<del> </del>	<del> </del>	<del> </del>	+	<del> </del>	+			<del>                                     </del>	-+		+
		to pillowed to coarse pillow breccia to flow top	<del>                                     </del>		<del>                                     </del>	<del> </del>		+	+-			$\vdash \vdash \vdash$	<del></del>	+		
		breccia (hyaloclastite). Individual units are as	<del>                                     </del>		<del>                                     </del>	!	<del>                                     </del>	+	1	1	<del>                                     </del>	<del>                                     </del>	+	+		+
		follows:	<del>                                     </del>		<del>                                     </del>		<del>                                     </del>	+	<del>                                     </del>	<del>                                     </del>		<del></del>	<del>                                     </del>	+		t
		TOTTOWS:	<del>                                     </del>	<del> </del> -	<del> </del>		<del></del>	+	<del>                                     </del>	<del>                                     </del>		<del>                                     </del>	<del>                                     </del>	-+		<b>T</b>
101	125 7	Massive to Pillowed Basalt	650		<del>                                     </del>	<del>                                     </del>		1	<del> </del>				<del>                                     </del>	+		T
	1220./	-mostly massive, homogeneous. Few small pillows (about	<del> </del>		14823	118.3	119.0	0.7	1	5	38	37	0.5	Ca	lc-a	11
	<del> </del>	3 in. thick) with thin selvages. Irregular quartz			1			1	T=-	1	<u> </u>	<u> </u>			bas	+
	<del> </del>	veining from 124.7'-125.7'. No mineralization			<b>T</b>	1	<del>                                     </del>	1	<b>T</b>							Ť
	<del></del>	TOTAL ACTOR TOTAL ACTOR TO MUNICIPALIZATION						1	1	1						Γ
125.7	129.5	Pillow Breccia	45													
		-grey silicified fragments in a green chloritic matrix			14801	124.7	131.0	6.3	8	5						
	T	Fragments are locally fractured and bleached. From														
		127.4-128.0' the matrix contains 3% disseminated pyrite		·										$\Box$		Ĺ
129.5	142.0	Massive Basalt														
		-Few small, irregular, non-mineralized quartz veins.														L
		Dip changes gradually to 15° to C.A. by 142'.														L
	<del></del>		1	1	T			1	1							1

# DIAMOND DRILL HOLE LOG

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HOLE No. DDH-260-83-3

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F00	TAGE		CORE	5		SAMPLE	E		1	Anai	lytical		ult:			
FROM	то	(alteration, structure, mineralization)	170	S'SULPH-   DES	NUMBER	EDOM	7.0	I EHAT	Au		Cu	Zn		Jens	en	
. NVM	.,,		AXIS		NUMBER	FROM	ТО	LENGTH	ppb	ppm		ppn	h	<del> </del>	on P	lot
			1						'							
142.0	145.4	TATION DECOCEO	150	1%			<u> </u>		1		'					
		-matrix contains 2% chalcopyrite from 142-143'	<u> </u>		14802	142	145.4	3.4'	15	5	350	41				
105	4	Manadan Banasa	100	L					1		<b>-</b>	'				
45.4	150.4		40	0%		-	1		'1	4	'	'				
		-coarse at base and fining upwards (down hole). Small	<u></u>	L			1		'	1	'	'				
	<u></u>	(3in) zone of hematization at 149.3' then two-inch vein	<u> </u>	L	<u></u>		1		'		'	'	1			
		of brecciated, vuggy quartz and pink calcite near conta	ct,				1		'		'	'		نـــا		
		at 150.2'.	<u></u>	L		-			<u>'</u>		\	'				
	<u></u>	<u> </u>	<u> </u>	1	L	<del></del>	L		<b>'</b>	<u></u>	<b>'</b> ——	'	<u></u>	L	<u></u>	
50.4	180.0		45°	<18	<u></u>	<del></del>	L		<u></u>	<u></u>	<b>'</b>	1	<u></u>	L	-	<b>L</b>
	L	-coarse grained, homogeneous matrix with silicified	<u>'</u>	L	L	<del></del>			<u>'</u>	4	'	<b>'</b>	<u></u>		<b></b>	
		fragments that appear porphyritic, having abundant	<u>'</u>	-	<b>L</b>	<del> </del>	L	<del></del>	<u>'</u>	<u></u>	<b>'</b> —	<u>'</u>	<u></u>	$\longrightarrow$	<del> </del>	-
		subhedral phenocrysts of white feldspar. Few small	<u>'</u>	-	<b></b>		L	-	<u></u>	<u></u>	<b>'</b> ——	<u>'</u>		L	-	
		non-mineralized quartz stringers. The rock is vesicular	<u>t</u>	ļ	<del></del>	<del></del>	L	-	<u></u>	<u></u>	<b>'</b>	<u> </u>	L	L	-	
		(weathered out cavities now) from 167-168.5'. Minor	<u></u>	-	<del> </del>	-	L	-	<u></u>	-	<b>'</b> —	<u></u>	L		-	-
		pyrite. Breccia fines upwards-fragments become smaller	<u></u>	1	<del></del>	<del></del>			<u></u>	4	<b>'</b>	<u></u>			-	<del></del>
		and less abundant. Foliation at 30° to C.A. at 175'		<u></u>	<b></b>	I		-	<u></u>	<u></u>	'	<u></u>	-	L	-	+
	<u></u>	Chloritic matrix is locally garnetiferous.	<u> </u>	+	-	+	<del></del>	-	L	<del></del>	<del>'</del>	<u></u>	-	<u></u>	<del></del>	-
00 0	272 -	Dillow Process	0.50	+	<del></del> ,	<del> </del>	<del></del>	+	<u></u>	$\longrightarrow$	<del>'</del>	<u></u>	-		-	+
80.0	2/2.5		25 <sup>0</sup>		basal co		<del></del>	<del>                                     </del>	L	<del></del>	<u></u>	4		<del></del>	<del> </del>	++
	<del></del>	-some fragments are more siliceous and massive while	<del></del>		varies		<del></del>	<del>                                     </del>	<del></del>	$\longrightarrow$	<u></u>	<b></b>	-	<del></del>	<del> </del>	++
	<del></del>	others are more porphyitic. At 187.0' the matrix	<b></b>	+	to 45° t	C.A.	<del></del>	+	<u></u>	<del></del>	<u></u>	<del></del>		<del></del>	+	++
——	<del></del>	becomes very coarse grained and highly chloritic.	<u></u>	+	<del></del>	+	<del></del>	+	<del></del>	<del></del>	<u></u>		-	<del></del>	+	++
	-	Foliation varies considerably. Quartz-calcite-feldspan	<u> </u>	+	<del></del>	+	<del> </del>	<del> </del>	<u></u>	<del></del>	<u></u>		-	<del></del>	+	++
<del></del>	<b></b>	segregations are common and are probably a result.	<u></u>	+	<del></del>	+	<del></del>	+	<del></del>	<del></del>	<u></u>	-	-	<del></del>	+	+
	<del></del>	of metamorphism. These locally also contain hematite.	<del></del>	+	<del></del>	+	<del></del>	+	<del></del>	+	<u> </u>	-	+	+	+	++
72 5	270 4	Physolite Dombo	<del></del>	+	+	+	<del></del> ,	+	<del></del>	+	<del></del>	+	<del></del>	+	<del> </del>	++
12.5	2/9.4	Rhyolite Porphry	<del></del>	+	14824	273.3	274.0	6 71	+-	4	14	110	0.7	mbo	leiit	tic+
<del></del> ,	<del></del>	-15% subhedral phenocrysts of white feldspar in a grey matrix of fine grained quartz, feldspar, biotite and	<del></del>	+	14024	213.3	214.0	<b>**</b> /	+	+ + +	1	1270	+ <del>**</del>		plite	
	-		<del></del>	+	<del> </del>	1	+	+-	<del></del>	+	<del></del>	+	1	+	+	<del> </del>
· · · · · · · · · · · · · · · · · · ·	<del> </del>	chlorite. Slightly magnetic	+	+	+	+	+	+-	+,	+	<del></del>	+	1	+	+	++
\max	100-		+	118	<del> </del>	+	+	+-	<del> </del> 1	+	<del></del> '	+	+	<del></del>	<del>                                      </del>	1
19.4	1295.5	Flow-Top Breccia	7	FT#	+	<del> </del>	+	+	<del> </del>	+	<del></del> '	+	1	<del>                                     </del>	+	++
		-small stretched fragments in a coarse, chloritic matrix	+	+	<del> </del>	+	+	+	<del></del>	+	<del></del>	+	+	<del>                                     </del>	<b>†</b>	<del> +</del>
		Minor pyrite. Locally slightly magnetic.	Ь		<u></u>		<u></u>	<u></u>	<u> </u>	<u> </u>		<u></u>	<u></u>	<u></u>		

DIAMOND DRILL HOLE LOG

PROJECT \_\_Mikwam-260

HOLE No. \_\_DDH-260-83-3

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F00	TAGE	ROCK TYPE AND DESCRIPTION	CORE	× 1		SAMPLE	E	1	(	Ana	lytica	11 Resu	ult:		_	
FROM	то	(alteration, structure, mineralization)	TO I	SSULPH-	NUMBER	EDOM	T	1500	Au		T					_
			AXIS		HUMBER	FROM	ТО	LENGTH	H	b ppm	11	T	,,,		,	-
<u> </u>											/	T1				•
295.5	301.0	Rhyolite					( )					1	<u> </u>			•
		-as above Highly fractured and broken up but core recover	у								11					•
		is still good.			11		1									*
							·									*
301.0	311.0	Flow-Top Breccia	25				·								1	1
<u> </u>		-as above, Not as broken up as porphyry	<u></u>				1									•
211 0	222 0	Rhyolite	-	-	<u> </u>		<u> </u>	-		<del></del>	-	<u></u>	<u></u>	-		,
<u> </u>	333.0	-very hard, siliceous, extremely broken up. Minor pyri	te -	+	14000	1226	307 5	+, -	<del></del>	+	<del> </del>	$\leftarrow$	<del></del>	+		•
<u> </u>	<del> </del>		T-	+	14803	326.0	327.0	++-0	1 3	5	+	<del>                                     </del>	<del></del>	1	<u> </u>	
l	+	usually in fractures.  Small, pyritic quartz vein at 326', perpendicular to	+	+	<del>                                     </del>	<del>                                     </del>	<del></del> ,	+	<del></del>	+	$\vdash \lnot$	$\leftarrow$	<del></del>	+		
<del> </del>	+		1-	+	+	<del></del>	<del></del>	+	<del></del>	+	+	+	<del></del>	+	<del></del>	•
<u> </u>	+	C.A. Bleached to a brownish-grey colour.	<del> </del>	+	+	<del></del>	<del></del>	+	<del></del>	<del></del>	+	<del></del>	<del></del> ,	+-	<del></del>	
333 0	3/1 0	Silicified, Carbonatized Basalt	250	2%	<del> </del>	+	<del></del>	+	+	+	+	+	+	+	<del></del>	
ا ددر	7 344.0	-may have been hyaloclastite but now it is bleached wit	+	125	14804	333.0	337.0	4.0	5	5	+	<del>                                     </del>	<del> </del>	+	<del>                                     </del>	•
<u> </u>	<del></del>	pervasive calcite-filled fractures. 2% disseminated	7	+	+	+	<del></del>	+	+	+-	+	+'	+	+	-	•
<u> </u>	1	pyrite	1	+	14805	337.0	341.0	4.0	4	8	+-	+,	<del> </del>	+-	+	-
<del></del> -	<del>                                     </del>	T	1	1-2%	<del> </del> '	'	<del></del>	+	+	+	+	+	+	+	<del></del>	-
341 0	346 5	Rhyolite	+-	+	<del></del>	1	<del></del>	+	+	+	+-	+	+	+	+	-
1 · · ·	<del>  339.3</del>	-highly bleached, fractured, Small, brecciated	+	+	14806	341.0	346.5	5 5	1 14	5	+	+	<del> </del>	+	-	-
<del></del> ,	<del> </del>	quartz-calcite vein at 343.5'.	+	+	14000	241.0	1 340.5	+	7	+	+	+	<del></del>	+-		_
<b> </b>	+	Few fractures filled by black chlorite and calcite.	1	+	<del>                                     </del>	<del></del>	<del></del>	+	+	+	+	+	+	+	+	_
	1	1-2% disseminated pyrite	1-	+	1	+	<del></del>	+	+	+	+	+	<del> </del>	+	+	-
	1	1	1	+	<del>                                     </del>	+	+	+,	+	<del> </del>	+	+	<del>                                     </del>	+	1	-
346 5	360 3	Fault Breccia	*20°	+,	+	1	+	+		<del>+</del> ,	+	1-,	1		<del>                                     </del>	-
	+	-fragments of porphyry up to 2 inches across in matrix	1	<b>&lt;18</b>	14807	346.5	353.6	6 7.1	2	3	<del>                                     </del>	1_,	1			_
	+	of serpentine and calcite. Volume of fragments > that	1	1	1		T	1	<u></u> 1	<u></u> )						-
	1	of matrix, ie. clast supported until 353.6' where the	T		14808	353.6	355.6	6 2.0	5	5						_
		matrix predominates. From 353.8' to 355.6' the previous	3													•
	<del>                                     </del>	matrix of serpentine and calcite is brecciated itself			14809	355.6	360.3	3 4.7	4	3						
		and lies in a soft pale green matrix of chlorite and			`											
		clay minerals. This indicates a second period of						<u></u>	-		<del></del>	<u> </u>	-	-		-
		movement along the fault. From 355.6' the fragments	1	-				-		<u></u>		-		-	<u></u>	_
		are larger again, possibly of hyaloclastite origin,	<u></u>	1				1		<u></u>	1	-		1		_
	T	and lie within a serpentine - calcite matrix	1	1 .	1	ti		1 -	1	1 ,	1 .	1	1	1 \	1	

# DIAMOND DRILL HOLE LOG

PROJECT \_\_Mikwam - 260

HOLE No. DDH-260-83-3

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	TAGE		CORE	5		SAMPL	E		1	Anal	ytica	i Resu				
FROM	то	ROCK TYPE AND DESCRIPTION	ANGLES	SSULPH-	4	F00		T	Au	As			co,		nsen	
	.,,		TO AXIS	. 523	NUMBER	FROM	ТО	LENGTH							tion	
							1		'		,					
60.3	381.0	Altered Basalt	30	<b>&lt;1%</b>	1				'							
		(Pbx for first 1.5' then f.t.bx) bleached, silicified wi	th		14825	372.3	373.0	0.7	9	1	13	88	0.1	Mg-	Thole	i
		several calcite-chlorite stringers. Locally epidotized.					1		·							T
		3" wide (true width) section of fault breccia at 20°			1		1		·						Τ	T
		to C.A. at 368.0'			1		T		<u> </u>						T	T
		Note: the lower contact with the previous fault breccia		T1	( <u> </u>		1									T
		(ie at 360.3') strikes almost perpendicular to the strik			1										T	1
		of the foliation of the basalt. Assuming on east-west		T			,		,						Ţ,	1
		strike for the latter, the fault contact is striking		1	T				,	1		<del>                                     </del>			<u> </u>	†
	T	roughly N20 <sup>O</sup> W with a steep SW dip.	1		1		,	1	<u></u>	1		<del></del>			<del>                                     </del>	†
		Another 1.5' section of breccia cuts the basalt from	1	<del>                                      </del>	<del>                                     </del>	1			<del></del> 1	1						$\dagger$
	1	369.7-371.2'.	T		T .				, I	1					<del>                                     </del>	†
		2% pyrite, lecally.	1	1	1				<u> </u>			1			Ţ,	†
		Core angles at 40° to C.A. at 379'.	40°	1	1	1	1.		<del></del> 1		. )				Τ	1
		Multiple quartz-carbonate veinlets at 380.5'.	T	Ţ	14810	380.0	381.0	1.0	14	3		T			Τ	†
	1			<del>                                     </del>	T ,				1						Τ.	T
381.0	472.2	Flow-top breccia (unaltered)	40°	<18 h							1					Ţ
		-mostly coarse to fine grained chloritic matrix with									1					Ţ
		small stretched fragments. Where biotite is present in		T	T,						<u> </u>	T				T
		the matrix the rock takes on a brownish colour. 1%	1	1	T			<u> </u>	1		<u> </u>	T				T
	<u> </u>	disseminated pyrite is found locally. Foliation is	T	7			1 .		1		1					Ţ
		usually about 40° to C.A. but is also found parallel to	1	T_,	<b>1</b>	1	1		<u> </u>						T .	1
	<del> </del>	it in places, indicating small scale folding. A small	1	T_,	<del>                                     </del>	1					T	<del>                                     </del>			T	T
	1	vuggy calcite vein at 424.5' contains 4" calcite crystal	\s	T_,	<del>                                     </del>	1						1			T	Ť
	+	and many 1/16" pyrite crystals. Locally, the siliceous		T	<del>                                     </del>			1	T .		<del></del> ,					T
	1	WARM SURGERY AT AND MYSAUG GEVERGEES AND		+	<del>1</del> ,		1				<del></del>	+				†
				1 '	1	1	1									+
		fragments become larger such that the rock could be termed a pillow breccia but for the most part they are		<del>                                     </del>	<u> </u>						$\overline{}$					1
		fragments become larger such that the rock could be termed a pillow breccia but for the most part they are	<del> </del>													$\dagger$
		fragments become larger such that the rock could be termed a pillow breccia but for the most part they are small and the matrix predominates.			14811	436.7	442.0	5.3	5	5					<u></u>	+
		fragments become larger such that the rock could be termed a pillow breccia but for the most part they are small and the matrix predominates.  Ouartz veining starts at 437'. These are roughly			14811	436.7	442.0	5.3	5	5					<u></u>	+++++++++++++++++++++++++++++++++++++++
		fragments become larger such that the rock could be termed a pillow breccia but for the most part they are small and the matrix predominates.  Ouartz veining starts at 437'. These are roughly conformable to the foliation and do not exceed 2" in				436.7									-	+ + + + + + + + + + + + + + + + + + + +
		fragments become larger such that the rock could be termed a pillow breccia but for the most part they are small and the matrix predominates.  Ouartz veining starts at 437'. These are roughly													<u> </u>	<del>                                      </del>
		fragments become larger such that the rock could be termed a pillow breccia but for the most part they are small and the matrix predominates.  Ouartz veining starts at 437'. These are roughly conformable to the foliation and do not exceed 2" in			14812		447.0	5.0	2							+ + + + + + + + + + + + + + + + + + + +

DIAMOND DRILL HOLE LOG

PROJECT Mikwam - 260

HOLE NoDDH-260-83→3 F	Page_5	_of <u>_9</u>
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F00	TAGE	ROCK TYPE AND DESCRIPTION	CORE	7		SAMPI	LE			Ana	lytica	l Res	ult:		
FROM	то	(alteration, structure, mineralization)	ANGLES TO	SULPH-	NUMBER	- FROM	то	LENGT	Au	As					
			AXIS		HOHBER	FROM	10	CERGIF	ppb	ppm					
											,				
		after 456'.			14814	452.0	456.0	4.0	15	25					
		Rock becomes increasingly Fe-rich and at 460.5' garnets													
		are seen within a dark green, coarse grained chloritic													
		matrix. These reach widths of $\frac{1}{2}$ " and some have retained													
		several crystal faces. From 462.8 to 463.8 the garnets													
		are largest and are found with 5% coarse disseminated													
		pyrite. Garnets are less common past this point in the												 	
		core.													
		Core angles are 45° at 470'	45°												
		Past 469' the rock becomes increasingly richer in													
		biotite and is finer grained. Contact with argillite													
		is somewhat gradational.													
72.2	486.2	Argillite	40°	2-39	14815	472.3	477.0	4.8	5	15					
		-moderately graphitic, finely laminated, locally brecciate	d		14816	477.0	482.0	5.0	4	3					
		with calcite-pyrite matrix. Quartz veining common			14817	482.0	486.2	4.2	3	3					
			Ī												
86.2	500.0	Altered, undifferentiated Basalt	40°	418											
		-carbonatized (ankeritic), massive flow with abundant			14818	486.2	491.0	4.8	2	40					
		quartz-carbonate stringers, 1% pyrrhotite locally.			14819	491.0	496.0	5.0	3	15					
		Alteration decreases down hole and rock regains the			14820	496.0	500.0	4.0	3	45					
		"striped" appearance of a pillow breccia - flow-top													
		breccia.									_				
500.0	525.0	Flow-Top Breccia-Pillow Breccia	40°												
		-repetitive units of pillow breccia and hyaloclasti te			14821	507.3	508.3	1.0	4	3					
		with the latter being more prevalent. Small quartz	1		T	1		1							
		(+ carbonate) veins occur periodically but are typicall	4												
		non-mineralized.													
525.0	529.0	Tectonic Breccia													
		-core is broken up and pieces contain chloritic slips.	T	1											
		Breccia textures are obvious in whole sections of core.	1	1				1							
		Core recovery is still reasonably good.					1.								
		LOCAL TECOVERY IS SELLET PASOHABILY GOOD.	T .	1.	1	1	1								

# DIAMOND DRILL HOLE LOG

PROJECT \_\_Mikwam - 260

\_ Page <u>6</u> of <u>9</u> HOLE No. DDH-260-83-3

F001	TAGE		CORE	2		SAMPLE	E		1	Anal	lytica	I Resu	ult:			
FROM	то	(alteration, structure, mineralization)		SULPH		FROM	то	LENGTH-		1				Щ	$\overline{}$	
	<del></del>		+	<del></del>	<del>                                     </del>	<del></del>		+	<del>'</del>	<del></del>	<b></b>	<del></del>	<b></b>	<del></del>		
20 0	569 0	Coarse-grained Flow Basalt	00-4	<del>(0)</del>	+	$\overline{}$		+	<del>'</del>	$\longrightarrow$	<u> </u>	<del></del>		<del></del>		<u> </u>
23.0	0.600	-Flow-banded matrix of coarse chlorite and fine grained	_I ~ E	+	<del></del>	<del></del>	L	+	<del>'</del>	-	<del>'</del>	<del></del>	-	+		<u> </u>
		quartz-feldspar-calcite. Mineral segregations are	<del></del>	$\leftarrow$	<del> </del>	<del></del>		+	<del>'</del>	<del></del>	<del></del>	Ь——	<del></del>	++		<u></u>
	<del></del>		<del>[                                    </del>	+	<del></del>	<del></del>		+		<del></del>	<del>'  </del>	<u></u>		+	-	<u> </u>
	<b></b>	common as are quartz-calcite veiniets. Foliation varies considerably. Small pillows are observed in places	<del> </del>	<del></del>	<del></del>	<del>                                     </del>		+	<del>'                                    </del>	<del></del>	<u> </u>		$\overline{}$	+		<u></u>
	<b></b>	but these are usually isolated and stretched so that	<del></del>	+-	<del> </del>	<del></del>		+	+	$\longrightarrow$	<del></del>		-	+	-	<u></u>
<del></del>	<del>'</del>		<del></del>	<del></del>	<del></del>	$\qquad \qquad $		+	<del>'</del>	$\longrightarrow$	<del></del>	<u></u>	-	<del></del>		<u></u>
	<del></del>	they are less than 2" thick.	+	<del></del>	<del>                                     </del>	<del></del>		+	<del></del>	<del></del>	<del>'</del>	<del></del>	<del></del>	++	-	
FCC -	ECO	Townships Date	440	1	<del></del>	<del> </del>		+	<del>'</del>	<del></del>	<del></del>	<del></del>	<del></del>	+		<u>_</u>
269.0	869.4	Demptoping to Sync	740	2%	<del></del> 1	<del></del>		+	<del>'</del>	$\longrightarrow$	<del></del>	<del></del>	<u></u>	+	<del></del>	_
	<del>'</del>	-porphyritic texture having a fine grained matrix	<b>├</b>	<del></del>	<del></del>	<del></del>	L	+	<del>'</del> +	-	<b>'</b>	<u></u>		+		L
<del></del>	<del></del> 1	(weathers dark brown) and 7% needles of hornblende.	<del></del>	<del></del>	<del></del>	L		+	<del>'</del>	-	<del></del>	<b>—</b>	L	<del></del>	<del></del>	L
	<del></del>	Chilled margin against basalt is about 4" thick.	<u></u>	+	-	<u></u>	<u></u>	+	<del>'+</del>	-	<u>'</u>	<u></u>	$\vdash$	++	-	L
	<u>'</u>	Contains 2-3% disseminated pyrite. Cuts core at 40°	<u></u>	<del></del>	<del></del>	<del></del>		+	<del>'+</del>	<del></del>	<u></u>	<u></u>	<del></del>	+	<del></del>	L
	<del>'</del>	to C.A. but at different strike than basalt. Appears	<b>I</b>	<del></del>	<del></del>			++	<b>'</b>	<del></del>	<u></u>	<u></u>		+	<del></del>	L
	<u></u>	to strike in a northeasterly direction with a moderate	<u></u>	<b>—</b>	<del></del>	L		+	<del>'</del>	-	<u></u>	L	<b>—</b>	+	-	L
	<u></u>	to steep dip to the southeast.	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	+	<b>'</b>	-	<del></del>	<u> </u>	-	++		-
569 4	581 0	Flow Basalt	450	+	<del> </del>	'	<del></del>	+	<del></del>	<del></del>	-	<del></del>	<del></del>	+	$\overline{}$	+
	122.0	-as above	+	+	<del>+</del> -	<del>                                     </del>	+	<del>  </del>		+	<del></del>	<del>                                     </del>	1	<del>                                     </del>		+
	<del></del>		+	+-,	<del>                                      </del>	+	+	+		+		<del>     </del>	1	<del>                                     </del>		+
581 0	601 5	Pillow Breccia	40	<del></del>	+	+	<del> </del>	+		+	+	<del></del>	1	1		+
	1202.3	-contorted, silicified pillow fragments in a highly	+	<del>                                     </del>	1	+ - 1	+	+		+	$\leftarrow$	+	1	1		T
<del></del>	<del></del>	chloritic matrix. A 4" veinlet of quartz-calcite-chlori	te	+	<del>+</del> ,	+	+	+		+	<del></del>	<del>                                     </del>	+	<del>                                     </del>		+
	<del></del>	cuts core at 583-584.5' at 5° to C.A. 1% pyrite in	+-,	<del>+-</del>	+	+	+	+	—	+	<del></del>	1	1	+		<del>+</del>
<del></del>	<del></del>	wallrock.	+	+	+	+	+	+-	<u></u>	+	<del></del>	+	<del></del>	+		+
	<del> </del>	Wallioch.	+	+	+	+	+	+	<del></del>	+	+	+	+	1-1		+
601 5	633 2	Flow-Top Breccia	1250	+	+	+	+	+	<u> </u>	+	<del>                                     </del>	+	1	1		+
	133.2	-small siliceous fragments in flow-banded Chloritic	1=-	+	<del>                                      </del>	<del>                                      </del>	+	1	<del></del>	+	<del></del>	<del>                                     </del>	1	1		+
	<del> </del>	matrix.	+	+	<del>+</del> '	<del>+</del> '	+		1	+	<del></del>	<del>     </del>	1	1		+
	<del></del>	maclin.	+-	+	<del>+</del> -	+	+	+	<del></del>	+	<del> </del>	<del>                                      </del>	<del>                                     </del>	1		+
633 3	635 6	Lamprophyre Dyke	30°	1	<del>                                      </del>	<del>+</del>	+	+	<del></del>	+	<del></del>	1.	+	1		+
223.2	333.0	-texture is same as above but this unit appears to	† <u> </u>	1	<del>                                     </del>	1	1		1	1	<del>                                     </del>	T .	<del>                                     </del>			T
	<del>                                     </del>	strike in a northwesterly direction (cuts core at	1	-	<del>                                     </del>	<del>                                      </del>	1	1	1	1	<u> </u>	T .	T_,			T
	+	30° to C.A.) with a fairly steep southwesterly dip.	+-	<del>                                     </del>	<del>                                     </del>	<del>                                     </del>	<del>                                      </del>	<del>                                      </del>	1		1	T .	1			T
	-	The rock is brecciated from 634.4' to 635.6' and	+	+	<del>                                      </del>	+	<del>                                     </del>	+	$\leftarrow$	+	<del>                                     </del>	<del> </del>	1	1-1	<del></del>	+

851' - End of Hole

# DIAMOND DRILL HOLE LOG

PROJECT \_\_Mikwam - 260

HOLE No. DDH-260-83-3

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F00	TAGE		CORE	*		SAMPL	.E			Ana	lytica	ıl Res	uit:		
FROM	то	(alteration, structure, mineralization)		SULPH-	NUMBER	FROM	то	LENGTH	Au ppb	As					_
			<del>                                     </del>						PPZ	PPIII	<del>                                     </del>	<del> </del>			-
		calcite has filled in between the fragments.	<b> </b>				<del></del>			<del> </del>	-	-			_
				<del>                                     </del>				1	<del> </del>	1	<del> </del>		<del>                                     </del>		
635.6	675.2	Flow-Top Breccia	35				<del> </del>	<del> </del>		<del>                                     </del>					
		-as above. Vuggy calcite vein at 644.8' l" quartz						<del> </del>	<b> </b>	<del> </del>	<del>                                     </del>				
		vein at 671'.						1							
										1	<u> </u>	T			_
675.2	678.3	Lamprophyre Dyke	350							1					
		-massive, aphanitic except for needles of hornblende						1			1	<del>                                     </del>			
		randomly oriented throughout. Appears to strike north-						1		1		<del>                                     </del>			
		west with a moderate southwesterly dip.						1		1	<del>                                     </del>				_
								T		1		1			
678.3	680.2	Flow-Top Breccia	30°												
								1							_
680.2	681.7	Lamprophyre Dyke	35°												
		-as above; both of these dykes are cut by thin calcite													
		stringers													
681.7	778.6	Flow Basalt	40												
		-coarse grained chlorite and fine grained quartz-feldspa	<u>t-</u>												
		calcite. Occasional pillow fragments and quartz-calcit	<u> </u>		· .						<u> </u>				
		veinlets. Minor pyrite. Brecciated quartz-calcite-	<u> </u>		14822	745.0	750.0	5.0	5	N.D.	<u>.</u>				
	ļ	tourmaline veins from 745'-750'. Smaller vein at	<u> </u>	<u> </u>	<b></b>	<u></u>	ļ			<b></b>	<b></b>	<u> </u>			
		745.5' is at 80° to C.A. but larger vein (747'-750')	<u> </u>		ļ				<u> </u>					_	
		trends almost parallel to C.A. No sulphides	<u> </u>							ļ	<u> </u>			_	
					<u> </u>	<u> </u>	<u>                                     </u>	1					<b> </b>  -		
778.6	786.2	Pillow Breccia	40°					<del></del>		<del> </del>	<u> </u>		<b> </b> - -		
		-fine grained, stretched pillow fragments in chloritic	<u> </u>	<del> </del>	<u> </u>						<u> </u>				
		matrix.	<u> </u>			ļ				<del></del>	<u> </u>				_
	<u> </u>		<u> </u>		<b> </b>			<del> </del>		-	<del> </del>	-			_
786.2	851.0	Flow-Top Breccia	35°	<del></del>					<u> </u>	-	<b></b>	ļ	<del>                                     </del>		
		-small, contorted, siliceous fragments in a coarse-	1	<del> </del>		ļ	ļ	<u> </u>	<u> </u>		<del> </del>	<del> </del>	1		
		grained chloritic matrix. Few small quartz veins	↓				<del> </del>	<u> </u>	<u> </u>	-		<del> </del>			_
		(non-mineralized) At 846' the foliation starts to	<del> </del>	<del> </del>				-	<b> </b>		<del> </del>				
ł		change and by 851' it is at 10° to C.A rapid change	I	1	1	1	1	Ì	1	I	1	1	1 1	ı	

DIAMOND DRILL HOLE LOG

PROJECT Mikwam - 260

HOLE No. DDN-260-83-3

\_\_ Page\_8\_\_of\_\_9\_

FOOT	AGE	ROCK TYPE AND DESCRIPTION	CORE	%		SAMPL	E		Ţ	Anal	lytical	Resu	IIt:		*	
FROM	то	ROCK TYPE AND DESCRIPTION (alteration, structure, mineralization)	ANGLES	SULPH-	NUMBER	FROM		LENGTH	Au			$\Box$				
-			AXIS	'			<u> </u>		ppb		1					
+				'							<u>'                                    </u>	$\Box$				
		Sludge Samples		1	14411	101	117	16 .	7			$\Box$		$\Box$		
4					14412	117	127	10'	7							
4					14413	127	137	10'	4		1	$\Box$				
+				<u> </u>	14414	137	147		11			$\Box$		<u> </u>		
				']	14415	147	157		15					T		
		·			14416	157	167	10'	10					'T		
					14417	167	177	10'	7							
					14418	177	187	10'	8							
	T				14419	187	197	10'	4							
					14420	197	207	<del></del>	14							
				1	14421	207	217	10'	5							
					14422	217	227	10'	14							
					14423	227	237									
					14424	237	247	10'								
1				1	14425	247	257	10'			+					<del>,</del>
					14426	317	327	10'	5		1	<del></del>				<del></del>
1 1					14427	327	337	10'	4		+					
				<u> </u>	14428	337	347	10'	8		1	<del></del>				
					14429	357	367	10'	5		+	$\dashv$				
					14430	367	377	10'	5		+					
					14431	377	387	10'	<del></del>							
					14432	387	397									
1 1					14433	397	407	10'								
1					14434	407	417	10'								
1	<del></del>				14435	417	427	10'			<del></del>					
1	<del></del> +				14436	427	477		<del>                                     </del>		1	$\overline{}$				
+-+					14437	477	497				1					
+			<del></del>		14438		517	20'			1					
+					14439	<del> </del>	537	<del>-  </del>	<del>-1</del>		1					
,	I I	•	<del></del>		14440	<u></u>	547	10'		1	+				<del> </del>	<del></del>
				$\longrightarrow$						+	+		<del></del>	<del></del>		
				( '	14441	547	1 557	1 10.	1 37 1			,	. ,	( 1	1	
					14441 14442		557 567	10'		<del>                                     </del>	<del></del>			$\vdash$		
					14442	557	567	10'	8							
				ş. •		557 567		10'	8 7							

# DIAMOND DRILL HOLE LOG

PROJECT Mikwam - 260

HOLE No. DDH-260-83-3

Page 9 of 9

FOOTAGE	ROCK TYPE AND DESCRIPTION	CORE	*		SAMPLI	E			Analytica	i Resu	ılt:			
FROM TO	ROCK TYPE AND DESCRIPTION (alteration, structure, mineralization)	CORE ANGLES TO AXIS	SULPH-	NUMBER	FROM	то	LENGTH	Au	T					_
			1											
	Sludge Samples cont'd			14446	597	607	10'	8						
				14447	607	617	10'	3						$\prod$
				14448	617	627	10'	2				•		
			1	14449	627	637	10'	+						
			·	14450	637	647-	10'	<del> </del>			$\Box$			
			<b></b>	14451	647	657	10'							
			·	14452	657	677	10'							
				14453	677	717	40'							4
				14454	717	737_	20'							$\perp$
				14455	737	747	10'							+
			·	14456	747	757	10'	1						1
			<u> </u>	14457	757	767	10'							4
			·	14458	767	777	10'	+						$\bot$
				14459	777	787	10'	<del></del>	·					1
				14460	787	797	10'			L				$\bot$
				14461	797	807	10'	10						
					¹ <del></del>		-			<b></b>				4
							-							$\bot$
					·									_
				<b></b>	' <del></del>									_
					·		-			<b> </b>				4
					1		-	<b> </b>						
					·		-						4-	+
					!		-	<b></b>						_
				<b></b>	<u>'</u>		+	-		1				+
					· <del></del>	<b></b>	-							+
			L		t		+	-		<b></b>				4
					1	<b></b>	+	-		<del>  </del>				+
			L		1	<b></b>	-	-		<del>                                     </del>				+
			L	<del></del>	(	<del></del>	-	-		1				+
						<b></b>	-	-		1	<b></b>		-	+
			. •					-			L			+
						1		-		-	<u> </u>			+
				1				-		-		\		-
			1	1	•			1 1			1 _1	\L		}

PROJECT Mikwam (260)

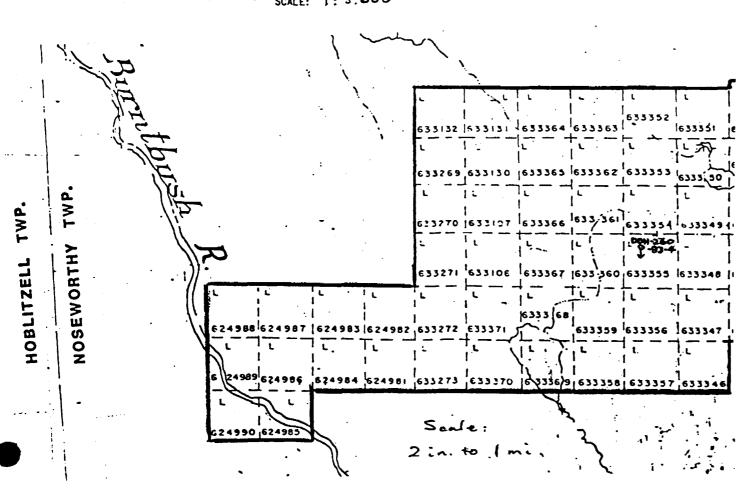
## DIAMOND DRILL HOLE RECORD

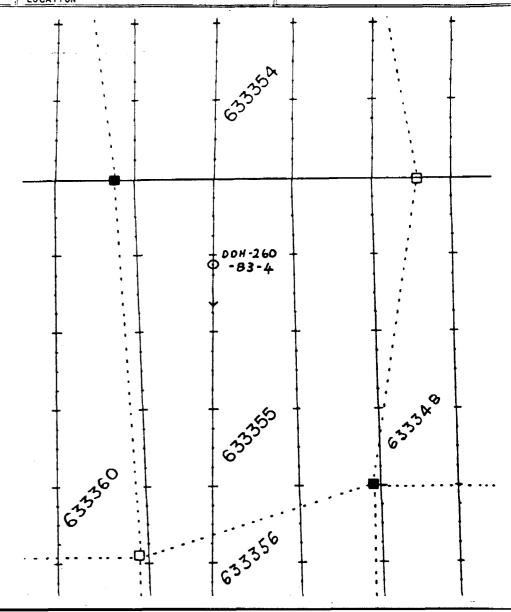
HOLE No. 260-83-4

LOCATION		DIP TEST		LEVEL	HORIZONTAL COMPONENT	DATE STARTED March 5, 1983
AREA or TWP. Noseworthy Twp.	FOOTAGE	RECORDING	GLE CORRECTED		VERTICAL COMPONENT	DATE FINISHED March 7, 1983
CLAIM No. 633355	300	50 o 45.75	37.5°	ELEVATION	BEARING Sout	h LOGGED BY R.A. Archer
633355	625	38.2°	30.5	LATITUDE 37+12.5S	LENGTH 627	feet PURPOSE Test EM & Mag
NTS 32/E12 UTM				DEPARTURE 30+00 W	CORE Timm	ins TOT. RECOVERY 100%

#### DIAMOND DRILL HOLE LOCATION SKETCH

SCALE: 1: 5.000





# DIAMOND DRILL HOLE LOG

PROJECT \_\_ Mikwam - 260

HOLE No. DDH-260-83-4

\_ Page\_1\_\_of\_8\_\_

F00	TAGE		CORE	%		SAMPL	<u>.E</u>			Anal	lytica	al Resi	ult:			
FROM	то	(alteration, structure, mineralization)		SULPH-	NUMBER	FROM		LEVA	Au	As	Cu	Zn				
	.,		ÄXIS		HJOOLK	FRUM	ТО	LENGTH	ppb	ppm		<del></del>				_
	90								L	-	<u> </u>					-
<u>'</u>	89	-casing in overburden		<del>                                     </del>				+	ļ	<del>  </del>			<b></b>		+	-
39	218	Dacitic Volcaniclastic Breccia	500	5%				+	<del> </del>	+		<del> </del>	<del>  </del>	_	+	-
		-elongated irregularly - shaped, siliceous fragments			14734	89.0	94.0	5.0	11	N.D.						
		(usually greyish colour) in a fine grained chloritic,													I	-
		often tuffaceous matrix. Thin units (up to 1-2 ft) of			14735	94.0	100.0	6.0	4	N.D.	l				$\perp$	_
		fine grained, well-bedded ash tuffs are locally inter-													$oldsymbol{oldsymbol{oldsymbol{oldsymbol{\Box}}}$	
		calated with the breccia. Fine sulphides, predominantly			<del>                                     </del>	100.0	105.0		<u> </u>	N.D.					$\int$	•
		pyrrhotite in matrix only. Where pyrite occurs, it is				105.0	110.0			N.D.					$\int$	
		usually enclosed by pyrrhotite . Up to 107' there is			<del>                                     </del>	110.0	112.0			5					$\bot$	•
		abundant quartz veining accompanied by local silicificat	ion		14739	138.3	143.0			40					$oldsymbol{ol}}}}}}}}}}}}}}}$	_
		and remobilization of chlorite, sericite and carbonate			14740	148.0	154.0	6.0	5	30					$\perp$	_
		into coarse 'clots'. Sulphides are also coarse within														_
		the veins.			14741	154.0	159.0	5.0	7	20						_
		Some fragments show remnant porphy ritic textures. Pyrit	e e													_
		becomes predominant sulphide at about 138'. Small			14742	159.0	165.0	6.0		5						_
		quartz vein at 174.5'.			14743	174.0	175.0	1.0	26	N.D.						_
		Milky quartz-carbonate vein at 183.5(4" true width but														_
		at 35° to CA)			14744	183.2	184.0	0.8	2	5						_
												ــــــــــــــــــــــــــــــــــــــ				_
218	231.6	Bleached Dacite Breccia	50 <sup>0</sup>	5%												_
		-bleaching is minor at first but becomes more intense														_
		down the hole. Rock becomes light grey to brown in			14745	222.6	227.0	4.4	3	5						
		colour and very little chloritic material is left.													$\perp$	_
		Probably rhyolitic in composition now.			14746	227.0	231.6	4.6	4	10		<u> </u>	igsquare			_
		Sulphides increase in abundance downhole from 1%						1				-	<b></b>		$\bot$	-
		disseminated pyrrhotite at 222' to 10% stringer						1					<u> </u>		1	_
		pyrite and pyrrhotite at 231'. Small quartz-						1								_
		carbonate vein at 230.5'						1				-				_
			-					-		-		-	$\vdash$		-	-
231.6	238.1		45	75%		<u></u>	<del> </del>	+	-	<del> </del>					-+	_
		-75% granular/crystalline to massive pyrite and		<b>9.</b> •	ļ		<del> </del>	+	<del> </del>	<del> </del>	<del> </del>	-			-	_
	1	pyrrhotite with small siliceous fragments in a finely	( .	1 3	1 14747	231.6	238.1	165	17	80	32	308	ι !	1		
	<del></del>	laminated, dull green to dark grey chloritic matrix.		<del>                                     </del>	1 23/3/	231.0	1-2-00-1	+0.	<del>                                     </del>	+	+	1300	<del> </del>		_	_

# DIAMOND DRILL HOLE LOG

PROJECT Mikwam - 260

HOLE No. DDH-260-83-4

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F00	TAGE	ROCK TYPE AND DESCRIPTION	CORE	2		SAMPL	<del></del>			Ana	ytica	I Res	ult:	····	 
FROM	то	(alteration, structure, mineralization)	TO	SULPH-	NUMBER	FROM	то	LENGTH	Au	As					
			AXIS		NUMBER	FRUM	10	LCRGII	ppb	ppm					
											,				
		Sulphides appear to be of a tuffaceous nature (not repla	ce-												
		ment) as pyrite is also found as whole and broken													
		nodules and as banded fragments. Pyrrhotite content													
		increases in a downhole direction													
38.1	249.0	Stringer Zone	45°	7%											
		-sulphides decrease rather abruptly to about 20% at			14748	238.1	243.0	4.9	4	5					
		238.1' then gradually to 2% by 247'. Matrix grades													
		from laminated tuff into more clastic siliceous breccia	ī.		14749	243.0	248.0	5.0'	3	5					
		again, still bleached at first but this dies off by abou	t												
		247' also. Sulphides are predominantly pyrrhotite.													
49.0	273.8	Rhyolitic Volcaniclastic Breccia	40°	2%											
		-very siliceous, clast supported with disseminated													
		pyrrhotite in matrix 2" quartz-carbonate vein at													
		263.5'			14750	263.0	264.0	1.0'	22	N.D					
-,															
73.8	281.2	Ash-lapilli Tuff	50°	1%											
		-fragments are mostly small, highly flattened and stretche	a												
		in a chloritic matrix giving the rock a laminated													
		appearance. Occasional larger siliceous fragments													
		show less distortion. Sulphides occur as disseminations													
		and stringers and are also stretched. Sharp contact													
		at 281.2'													
			Π					T							
81.2	283.3	Quartz-sulphide Rich tuff	50°	15%											
		-ash tuff, locally silicified, with one 3" and several			14751	281.2	283.3	2.1	• 10	18					
		smaller quartz veins and 15% sulphides. The latter are	I												
		locally massive but granular and consist of pyrite and	1												
		pyrrhotite in roughly equal proportions. Possibly													
		Minor sphalerite at edge of quartz vein at 288'.	T												
	<del>                                     </del>	The state of the s	T												
	<b>†</b>		1	1											
	<del>                                     </del>		$\top$			1	1	1							
			1	<del>                                     </del>	<del>                                     </del>	1	+	1	T	T	<b>†</b>				

# DIAMOND DRILL HOLE LOG

PROJECT <u>Mikwam - 260</u>

HOLE No. <u>DDH-260-83-4</u> Page <u>3 of 8</u>

F00	TAGE		CORE	7	<u> </u>	SAMPL	.E	1		Ana	lytica	I_Resu	ilt:		
FROM	TO	(alteration, structure, mineralization)	ANGLES:	SULPH-		FROM	то	LENGTH	H	As	+	Zn			_
			AXIS				-,-		ppb	ppm	ppm	ppm			_
183 3	200 7	Sulphidic Tuff	550	70%	L		-	<del></del>	-	-	<del></del>	<del></del>			_
	200.7	-pyrite with minor pyrrhotite in a chloritic and siliceou	1	,08	14752	283.2	288.7	5.5	111	160	20	360			
	<b></b>	matrix. Pyrite is typically of a granular/crystalline	7	<del>'</del>	14,32	203.2		+	14	100	20	368			
		variety but nodules do occur. Possibly at least two	-	<del>'</del>	<u> </u>		-	<del></del>	-	+	+	<del></del>	+		_
	<del>'                                    </del>	ages of pyrite as larger fragments and nodules are	+		<u> </u>	-	<del></del> ,	+	+	+	+				_
	<del>'</del>	ages of pyrite as larger fragments and nodules are duller and may be from a primary sedimentary deposition	<del>                                     </del>	·——	<u> </u>	-	-	-	+	+	+	-			
	<del></del>		<del></del>	<del>'</del>	<u> </u>	+	-	<del></del>	<del> </del>	+	<del>                                     </del>	<u> </u>			
	<del></del>	while finer grained pyrite is brighter and may be a	<del>                                     </del>		<del></del>	<del>                                     </del>	<del></del>		<del></del>	+	<del>                                     </del>	4			_
<del></del>	<b></b>	secondary phase recrystallized during and/or after	<del></del>	-	<u> </u>	-	-		-	+	<del></del>				_
<del></del>	<del></del>	brecciation and re-deposition.	<del></del>	<del>'</del>	<del></del>	<del> </del>	-	<del> </del> 1		+	1	<u></u>			_
188 7	203 E	Bleached zone	+	10%	<del> </del>	+		+	-	+	+	<del></del>	+		
	+	-light brown siliceous 'breccia' (fragments highly contor	<del> </del>		14753	288.7	293.5	4.8	4	N.D	1	<del></del>	<del>+</del>	-	
	<del></del>	very little matrix) with 10% stringer and disseminated	1	<u></u>	1	1		1	+	+		<del> </del>	· <del></del>		
	<u> </u>	sulphides, mostly pyrrhotite		<b></b>	1	<del>                                     </del>		+	<del>                                     </del>	1	1	<del></del>	<del></del>		
	<del></del>	surprinces, instry pyrrnotite	<del>                                      </del>				<del>                                     </del>	<del> </del>	<del>+</del>	+	+	1	+	-+	_
293.5	312.5	Rhyolitic Volcaniclastic Breccia	45 <sup>0</sup>	7%											_
		-clast supported, very little matrix as this is mostly		<u> </u>	14754	293.5	297.5			5					_
		'replaced'(?) by sulphides. Bleaching is minor at			14755	297.5	302.5	5.0	5	10			<u> </u>		
		first but becomes more intense from about 300'-313'			14756	302.5	307.5	5.0	3	3					_
		Few quartz veinlets (1 inch). 25% sulphides from		<u>'</u> ]											_
		305'-306' and 310'-311'.		'	14757	307.5	312.5	5.0	7	8					_
<del></del>			50°		-	-	-	-		-	-	<del>  </del>	<b>'</b>		
312.5	317.6	Transition zone	120	2%	14758	312.5	317.6	5.1	12	5	+	-	<b>'+</b>		_
	L	-transition from volcanic breccia-tuff to bedded	-	<b></b>	14/36	122.5	317.0	7.1	+-	+	+	$\overline{}$	<b>'</b> +		
	<u></u>	greywacke. Rock changes from light brown (bleached)	+	<b></b>	<del></del>	<del></del>	+		+	+	+	-	<del>+</del>	<del></del>	-
	L	and fragmental to dark grey, equigranular and laminated	-	<del></del>	<b></b>	+	<del> </del>	+		+	+	-	<b></b>		_
	<u></u>	to bedded. This zone has been injected with several	-	4	<del></del>	<del> </del>		+	+	+-	+	-	<del></del>		
<del></del>		irregular quartz veins up to about six inches wide.	-	4	<b></b>	-	+	-	+	+,	+	-	<del></del>		
	<b></b>	Sulphides, mostly pyrrhotite are disseminated in host	1-	$\sqsubseteq$		-	-	-	+	+	+	-	<del></del>		
<del></del>	-	rock and, to a lesser extent, in the veins	+	<del></del>	<del></del>	+	+	+	+	+	+	+	<b></b>		
317 6	337 2	Argillaceous Greywacke	45°	1-2%		+	+	+	+	+	+	<del>                                     </del>	++		_
227.0	1331.2	-well-bedded, locally laminated sediment with 3%	T-			317.6	324.0	6.4	3	5					_
	<del>                                     </del>	disseminated sulphides in the first 6 feet, then	<del>                                     </del>	1		T		T							_
	<del> </del>	l%. In this first section several quartz-carbonate	†	1	1				1		1		1		

DIAMOND DRILL HOLE LOG

PROJECT Mikwam-260

HOLE No. DDH-260-83-4

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FOOTA	ROCK TYPE AND DESCRIPTION	CORE	<b>%</b>		SAMPL	.E			Ana	lytic	al Res	ult:		
FROM	(alteration, structure, mineralization)	ANGLE	S'SULPH  I DES	NUMBER	FROM	7.0	CHOT	Au	As	Cu	Zn			
		AXIS		NUMBER	FROM	TO	LENGTH	ppb	ppm	ррп	ppm			
	veinlets (maximum width 1") occur parallel to and cro	oss-												
	cutting the bedding. Calcite is the predominant ca	rborate	I.											
	now and is pervasive throughout the rock.													
37.2 3	50.4 Bleached Rhyolite Breccia - Tuff	45 <sup>0</sup>	10%											
	-grey-green to light brown siliceous fragments (coarse	e		14760	337.2	342.0	4.8	4	N.D.					
	to fine) in a largely sulphidic matrix. Contact at			14761	342.0	347.0	5.0	4	N.D.					
	337.2' is quite sharp but more gradational at 350.4'			14762	347.0	350.4	3.4	3	N.D.		1			
		_												
350.4 3	55.5 Transition Zone	55	2%											
	-graduation from Lapilli to ash tuff to bedded greywa	cke		14763	350.4	351.4	1.0	4	N.D.					
	Sulphides decrease from 5% to 1%. 4" wide, mottled													
	quartz-carbonate-chlorite-sericite "vein" at 351'.													
55.5 3	84.9 Siliceous Greywacke	550	1%											
	-dark grey, fine grained, equigranular, well bedded w	ith												
	pervasive calcite and local disseminations and strin													
	of pyrrhotite. Few quartz veinlets with 5% pyrrhoti	te			_									
	from 380'-382.5'		5%	14764	380.0	382.5	2.5	3	N.D.					
384.9 4	02.0 Bleached Rhyolite Breccia		15%	14765	387.0	392.0	5.0	5	28					
	-Fairly sharp contact at 384.9'. Bleaching starts he	re		14766	392.0	397.0	5.0	10	20					
	also and sulphides gradually increase to 75-80% at			14767	397.0	402.0	5.0	4	60					
	401-402'.													
				T										
402.0 4	26.2 Sulphidic Lapilli Tuff	55	60%											
	-small siliceous fragments in a highly schistose			14768	402.0	404.9	2.9	' 5	5					
	sericitic, chloritic matrix. Sulphides, mostly pyri	te,												
	are locally massive and pyrite nodules are fairly			14769	404.9	408.0	3.1	10	105	42	326			
	common													
	Quartz vein: with 35% massive pyrite from 408'-409.3'													
	at 10° to C.A.			14770	408.0	409.3	3 1.	1 5	180	8	166			
			1										i T	

# DIAMOND DRILL HOLE LOG

PROJECT \_\_Mikwam-260

HOLE No. DDH-260-83-4

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F00	TAGE	ROCK TYPE AND DESCRIPTION	CORE	× 1		SAMPLE	E			_Analy	'tical	Result	•		
FROM	то	(alteration, structure, mineralization)	TO .	SSULPH-	NUMBER	FROM	TO .	LEHOT Z	Au	As C	<u>.u</u> .	Zn			
	1		AXIS		HOMBER	- KUM	то			<del> </del>		ppm		I	
														I	_
		Zones of massive sulphides alternate with zones of	11		14771	409.3	414.5	5.2 7	7	160 2	24 2	94			_
		few sulphides (3-5%). The greater the amount of	11		1		,	T		1				1	_
	'	total sulphides, the higher the ratio of pyrite to			14772	414.5	419.5	5.01	4	200 1	4 2	62			_
		pyrrhotite, indicating that the latter is likely an	Ţ <u></u>		<del> </del>	421.6	423.4	<del></del>		5					
	'	alteration product of primary volcano-sedimentary	I												
		pyrite. Quartz-sulphide zone at 422'.	11				1	1		1-					
	'		<u>,                                     </u>				1	+		1	<del></del>			1	_
426.2	527.9	Rhyolitic Volcaniclastic Breccia	550	5%	1	1	<del></del> 1	+		+					
		-locally bleached, fragments quite rounded. Clast	1	1	14774	426.2	432.0	5.8	3	5					_
		supported. 5% pyrrhotite and pyrite in matrix.	<del></del> 1	1	1	1	437.0		4	N.D.					_
		Few quartz veinlets. Pyrite is locally nodular. Larger	<del>(                                    </del>			437.0	442.0		4	15			_	1	
		fragments are often pale grey-brown and contain 5%	<del></del> 1	1	14777	442.0	447.0		4	10					-
	1	disseminated pyrrhotite. Wide range in size and amount	<del></del> 1	<del>                                     </del>	+	447.0	452.0			10			_	1	
		of fragments present - lmm to 10 cm wide and some	<del>'                                    </del>	<del>     </del>	<del></del>	<del>                                     </del>	457.0	<del></del>		13					_
		areas contain 95% fragments while others contain bedded	<del>                                     </del>	+		457.0	462.0			15				1	
		ash material and sediment. One of the latter zones,	<del></del>	+		462.0	467.0			25					
		at 487-489', contains abundant white disseminated	<del></del>	<del>                                     </del>	14782	<del> </del>	472.0	<del></del>		15				1	_
			500	1		472.0	477.0			3	<del></del>			1	_
1		Sulphides increase to 15% (locally 100%) by 497'	<del></del> ,	15%		477.0	482.0			3				1	
1		then decrease to 5% again. Six inch section of	1	<del>     </del>	<del> </del>	+		<del></del>		40					_
1	1	massive pyrite at 521'.	1	<del>                                      </del>			492.0			25				1	
1	1	1	<del>                                     </del>	<del>                                     </del>	14787	492.0	497.0	<del></del>		15	<del></del>			1	
1			<del>, ,</del>	1	14788	<del></del>	502.0	5.0	10	10					
1			<del>1 ,</del>	1	14789					N.D.				1	
527-9	532-8	Transition Sediment	500	15%	14790	507.0	<del></del>	<del></del>		5				1	_
T	<del></del>	-fine grained, bedded, argillaceous greywacke or ash	<del>                                     </del>	1	14791	512.0				3				1	
+	+	tuff. 15% disseminated and nodular pyrite. Calcite	<del>                                     </del>		14792	<del></del>	522.0			100				1	
+	+	is pervasive	<del></del> ,	1	14793	<del></del>	527.9			15					
+	+		<del></del> ,	+	14794		532.8				24	87		1	
+	+	<del>                                     </del>	<del> </del>	t - 1	1	1	+	+	<u> </u>	++		<del>-  </del>		1	
532.8	549 2	Graphitic Argillite	65	700	<del>                                     </del>	+	<del>                                     </del>	+	$\overline{}$	+		_			
1-32.0	13.2.2	-finely laminated to bedded; quartz-calcite segregations		100	14795	532.8	537.0	4.2	34	100				+	
+	<del></del>		+	<del>***</del>	1	537.0	1	<del></del>		15				1	
+	<del></del>	common, often contorted. Pyrite is mostly disseminated	<del> </del>	+	1 - 1 / 30	10.10	1 342.0	12-0	<del>-</del>	+	<del></del>			1	
L	L		L	+	<del></del>	<del></del>	<u> </u>	+		+				+	_

PROJECT \_\_Mikwam-260

DIAMOND DRILL HOLE LOG

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F00	TAGE	ROCK TYPE AND DESCRIPTION	CORE	3		SAMPL					lytic	ai Res	ult:			
FROM	то	(alteration, structure, mineralization)	TO	SULPH-	NUMBER	FROM	ТО	LENGTI	Au	As	+	Zn			sen	_
			AXIS				1	1	ppp	bbm	ppm	ppm		Cati	on P	1
					14797	542.0	547.0					ļ				_
		Poorly developed graded bedding indicates tops to the	<u> </u>		14798	547.0	549.2	2.2	7	50						
		south		<u> </u>			<u> </u>			<u> </u>		<u> </u>				_
							ļ		<b> </b>	<del> </del>	-					-
549.2	581.6	Argillite	55 <sup>0</sup>	1%			<u> </u>	ļ	ļ	ļ	<del> </del>	ļ				
		-laminated to well bedded with occasional cherty interbed	ls				ļ	-	ļ		ļ				Ц_	
		(non-mineralized). Carbonate is pervasive, first as							<u> </u>							
		granular ankerite ( lmm disseminated) to about 565' the	n as													
		very fine grained and stringer calcite; 12" quartz			14799	554.0	554.5	0.5	5	300						
		carbonate vein with 3% sulphides at 554.3'. about one														
		foot of alteration is evident prior to the sharp														
		contact with the porphyry. The altered argillite is														
		greenish - greyish brown in colour														_
581.6	627.0	Quartz- Feldspar Porphyry	45°	1%												
		-30% white feldspar and blue quartz phenocrysts (Up to			147800	586.4	587.0	0.6	5	18	72	120	3.2	Calc-	1ka	j
		1/8" across) in a fine to medium grained matrix of												andes	te	
		quartz, feldspar, chlorite, biotite, tuffaceous material														
		(ash ?) and occasionally, pyrrhotite. Matrix varies														
		from light grey to light brown in colour. Quartz														_
		veinlets are common but are non-mineralized														
																-
																_
		627.0' - End of hole														_
		Sludge Samples			14539	88	97	9'	4							
		1 1			14540	97	107	10'	5							
				Ī	14541	107	127	20'	4							
		1 11 11,~			14542	127	147	20'	5		T					
		0 11 11 12			14543	147	157	10'	7		T					•
	<b></b>				14544	157	167	10'	5							
				T.	14545	167	177	10'								_
	<del>                                     </del>		1	1	14546	177	187	10'	<del>                                     </del>	1						
	<del> </del>		<del>                                     </del>						1		_					
	1	l ·	1	1	14547	197	207	10'	15	ì	1	1	1	] 1		

# DIAMOND DRILL HOLE LOG

PROJECT \_\_Mikwam-260

HOLE No. DDH-260-83-4

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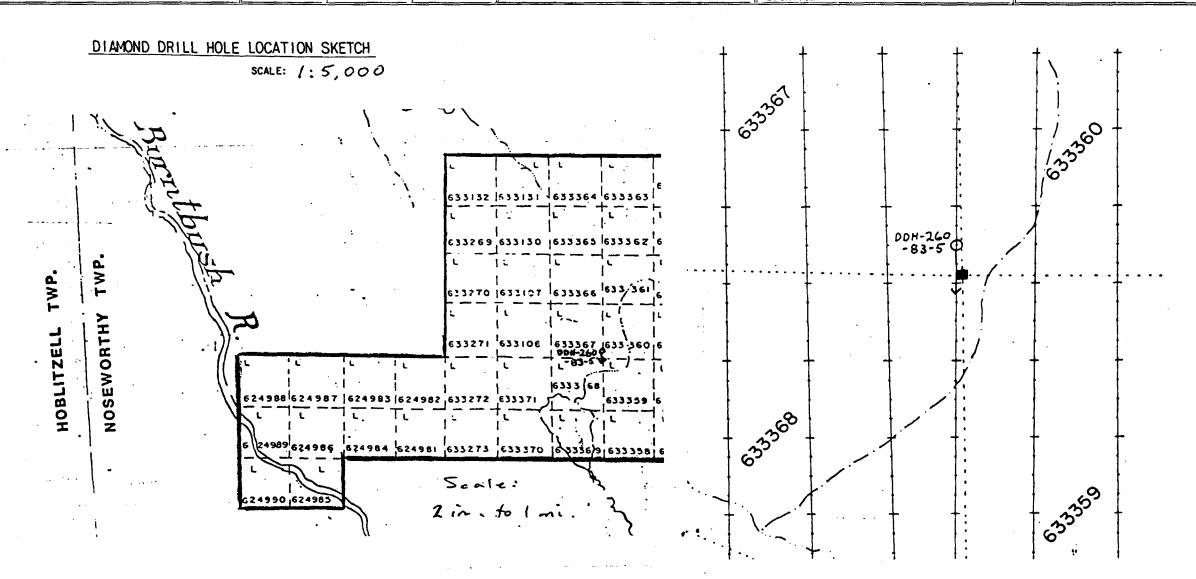
FOOT	AGE	ROCK TYPE AND DESCRIPTION	CORE	SIII PU		SAMPLI	<del></del>				lytical	Resu	ilt:		
FROM	то	ROCK TYPE AND DESCRIPTION (alteration, structure, mineralization)	ANGLES'S TO I	SULPH-	NUMBER	FROM	то	LENGTH	Au					+	
 			AXIS		\	1		LENGTH 1	ppb	1	'			4	
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PROLECT Mikwam (260)

## DIAMOND DRILL HOLE RECORD

HOLE No. 260-83-5

LOCATION		DIP TEST		LEVEL	HORIZONTAL COMPONENT	DATE STARTED March 9, 1983
AREA or TWP. Noseworthy Twp. Ont.	FOOTAGE	RECORDING	CORRECTED		VERTICAL COMPONENT	DATE FINISHED March 11, 1983
CLAIM No. 633367	250	56.50	47.75°	ELEVATION	BEARING South	LOGGED BY R.A. Archer
633367	510	52.30	43.500	LATITUDE 40+50S	LENGTH 517 Feet	PURPOSE Geology/Geophysics
NTS 32E/12 UTM				DEPARTURE 36+00W	CORE LOCATION Timmins	TOT. RECOVERY 100%



DIAMOND DRILL HOLE LOG

PROJECT Mikwam-260

HOLE No. \_DDH-260-83-4

Page 8 of 8

F00	TAGE	ROCK TYPE AND DESCRIPTION	CORE	<b>x</b>		SAMPI	.E			Ana	lytica	l Resi	ılt:		
FROM	то	ROCK TYPE AND DESCRIPTION (alteration, structure, mineralization)	CORE ANGLES TO AXIS	SULPH-	NUMBER	FROM	то	LENGTH	Au						
	<del></del>		+	<del> </del>			<del> </del>	-							+-
		Sludge Samples Cont'd	<del> </del>		14583	597	607	10'	3						+-
		prude pampres come d	<del> </del>		14584	607	617	10'	81					+	╀
			+	<del> </del>	14585	617	627	10'	36	<del> </del>					+
			+-	<del> </del>	14586	327	337	10'	11	<del>                                     </del>				+	+
			+	<del> </del>	14700	321	331	10						+	+
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NEMWONI	EXPLORATION	OF CANADA LTD	J.

# DIAMOND DRILL HOLE LOG

F00	TAGE		CORE		1	SAMPLE	Ε	1	1	Anal	lytical F	Result:		
FROM	то	(alteration, structure, mineralization)	ANGLES'S TO AXIS	SULPH-		FROM	то	IL ENGTH.	Au	As				
				<del></del>	+	+	+	+	+==-	+	7		<del></del>	+
0	237	overburden - casing	1			1	<del>                                     </del>	1	1	1	<del></del>	+		<b>—</b>
	1		1		1		1	1	<del>1  </del>	1				
237	251	-casing in bedrock	<del></del> 1				<u> </u>	1	1 ,	1				
			<u> </u>					1	1					
251	317.5	Argillite with greywacke interbeds	60 <sup>0</sup>	5%		1	<u> </u>	<u> </u>	1					
		-argillite is black, mostly graphitic, finely laminated	المست				1	1	1 1					1
	1	with 5% pyrite. Quartz and calcite occur throughout			1				1					
		as fine disseminations and as irregular stringers paral	el				1		<u> </u>					
	1	to bedding. These stringers contain the pyrite which							Τ_,					
	1	occurs as small nodules fine disseminations, and												
		semi-massive granular patches.	<u> </u>											
		Interbedded greywacke, is light grey in colour quartzos	<u>3</u>											
		(arenaceous greywacke) and granular (grains 41/16" in	<u> </u>				<u> </u>						1	<u></u>
		size). Wide range in thickness from 1/8" to about	'				lı				` <u> </u>			<u></u>
		6 inches. Contacts with the argillite are usually	450	at 3	bo'						\			<u></u>
		sharp and graded bedding is not obvious.	'					<b></b>	لــــا		'			
	<u> </u>	4" wide quartz-carbonate vein at 314.5'	<del>'</del> ا	<u> </u>	14698	314.0	315.0	1.0	1 7	50	\			1
	<u> </u>		1				<u> </u>	<u></u>			'			
317.5	324.8	8 Greywacke	¹	لــــا				-	L		1			
		-fine grained, finely bedded to laminated with thin argi	<u>a-</u>	2%				-	<b></b>		'———			1
	<u></u>	laceous material. Poorly developed graded bedding	<u> </u>				<u></u>	-	L		'		4-	
		indicates tops to the south (down the Hole). Stretched	1					-			1			<del></del>
		"fragments" of black graphitic material are common	<b>'</b>					-		L	'			
		and give the rock a tuffaceous appearance. Pyrite	<u></u>					-	<b> </b>		\		+	-
		is present as disseminations and subhedral cubes up	1		<u></u>		<u></u>	<del> </del>	<b></b>	-	'		+	
		to 1/8" across Pyrrhotite is present within a thick	<u></u>	<u></u>	<del></del>			-	-	-	'			+
		bed from 322.8'-324.0' and occurs as disseminated	<b></b>	<u></u>	L	L		-	<del></del>	-	11			-
		grains which are elongated perpendicular to bedding.	<u></u>		<b></b>	<del></del>			-	-	<b>'</b> ———			+
		Both pyrite and pyrrhotite grains are seen cross-cutting	<b>4</b> g	L		<del></del>		-	-	-	'			+
		fine laminations and are probably of post-sedimentary	<u></u>	L	<del></del>	<del>                                     </del>	L	<del> </del>	-	++	'			+
		origin.	<u></u>	L	<del></del>	<b>—</b>	<u></u>	+	<del></del>	++	<b>'</b> —		+	+
	ļ		L	. •	<del>                                     </del>	<del></del>		+	<del></del>	++	<del></del>			+
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# DIAMOND DRILL HOLE LOG

PROJECT \_260-Mikwam

HOLE No. DDH-260-83-5

Page 2 of 6

F00	TAGE		CORE			SAMPLE	Ε		(	Anal	lytical	I Rest	ult:			_
FROM	то	(alteration, structure, mineralization)	ANGLES	SSULPH-	4	Engi	1	\ Feeces	Au	As				T		Ţ
· AVFI	1		AXIS	. 553	NUMBER	FROM	то	H FRUITU.	ppb I				+			1
							1	T	<u> </u>	<del>                                      </del>			+			+
		A 4" quartz carbonate vein cuts this unit near the cont	act				T	1)	<u> </u>							T
		with argillite at 324.2'-324.5'			14699	324.0	325.0	1.d'	8	75						ţ
							<u> </u>									Ţ
324.8	364.5		Ţ		]		11									1
		-finely bedded greywacke interlayered with finely lamina	ted				1		1						1	7
	1	argillite. Sulphides tend to occur mostly within the	45		14700	334.5	335.0	0.51	5	5						1
		greywacke and in quartz-carbonate seems interrelated	1	T-,	1	7	1	1	<del> </del>	1	<del></del>		1	<del></del>		1
		with the argillite. Within the greywacke pyrrhotite	1	1 ,	14701	337.0	338.0	1.0	8	225	+		<del>-  </del>	<del></del>		+
		often occurs as pseudomorphs after cubic pyrite.	_	<del>                                     </del>	1,01	- 557.0	+ 333.0	+	<del></del>	+===	+		<del></del>	<del></del>		+
	1	Bedding within the argillite is locally quite	1	<del>                                      </del>	14702	346.0	347.8	3 1.8	10	40	+		<del></del>			1
	+	irregular due to the injection of quartz-carbonate	<del></del>	+	1		+	+	+	+	++		<del></del>	+		+
	+	veining and veinlets. Some greywacke beds are full	+	<del>                                     </del>	14703	356.5	357.1	0.6	11	60	+		<del></del>	<b></b>		1
	<del>                                     </del>	of small holes as if weathered and appear soft and	+	<del>                                     </del>	+	<del></del>	+,	+	<del> </del>	+	<del></del>		+	+		+
	+	porous. These probably have a higher carbonate content	+	<del> </del> ,	1	<del></del>	<del> </del> ,	+	+	+	+		1	<del></del>	1	1
	+	than other, more competent units.	+	<del> </del>	1	<del></del>	<del>+</del> ,	+	+,	+	+		+	+		+
	1	Few inches of breccia (slumping?) at 363.7' is followed	ta .	1 .	1	<del></del>	<del>+</del> ,	1	<del></del> 1	1	+ +		1	<del></del>		1
	1	by 9" of medium grained quartz-carbonate arenite or	+	<del>                                     </del>			<del></del> ,	+	<del>     </del>		+		1	+	·	1
	1	ash tuff.	<del>                                      </del>	<del>                                     </del>	<del>                                     </del>		<del>                                     </del>	1	<del>                                     </del>		1		1	·		1
		At the top of this bed are several stringers of	1	<del></del>			<del>(                                    </del>	1	<del>1</del>		1			+	<del></del> 1	1
	1	massive pyrrhotite.	1	<del>                                     </del>			<del>1</del> .	1	<del>1 ,</del>	1	+ +		1			1
	+	1	1	<del>                                     </del>			1	1	<del>                                     </del>		1		+	<del></del>		7
364	5 391.5	S Carbonate - rich Argillite - Greywacke	1	<del>                                     </del>			<del>1</del>	1	1		1	1		-	)	1
<u></u>	7-2-	-finely laminated argillaceous and carbonate - rich sand	₹y	1 ,			<del>                                     </del>	1	<del></del> 1	<del>                                      </del>			<del>   </del>			1
	$\overline{}$		450	<b>41%</b>	14704	376.5	377.5	1.01	5	50	1		T			1
	1	contain minor pyrrhotite. The carbonate is often quite		1 .			T,	11	T1		1					1
	+	coarse within the veins and is a light brown colour,	T.	<del>                                     </del>	14705	378.3	379.5	1.2	4	35	1				1	1
	+	probably ankerite or siderite. If typically occurs	1	<del>                                     </del>			<del>                                     </del>	1	<del></del> ,	1						1
	+	along edges of the veins and in fractures and was	1	<del>                                     </del>	14706	388,9	391.5	5 2.6	7,	50	1					1
	+	probably introduced after the quartz veins as a	+	<del>                                     </del>		1	<del>                                     </del>	1	Τ,	1	1	<u> </u>				1
<del></del> 1	+	probably introduced after the quartz veins as a pervasive alteration.	1	1 .		1	<del>                                     </del>	<del>     </del>	<del>1 ,</del>	1		<del></del> 1	1			7
<del></del> -	+	1	+	<del></del>	1	1	<del>                                     </del>	+-1	<del>† ,</del>	1	1	<u> </u>	1	-		7
	+		+		1	1	<del>                                     </del>	<del>     </del>	<del>                                     </del>	1		1		1	I	1
	+	<del>                                     </del>	1	-	1	+	<del>                                     </del>	<del>     </del>	<del>                                     </del>	+		<u> </u>				7
	+		1	1	1	<del> </del>	<del>                                     </del>	<del>                                      </del>	<del>                                     </del>	<del>                                      </del>		<del></del> 1				1
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# DIAMOND DRILL HOLE LOG

PROJECT 260-Mikwam

HOLE No. DDH-260-83-5 Page 3 of 6

F00	TAGE	ROCK TYPE AND DESCRIPTION	CORE	*		SAMPL	E			Ana	lytica	1 Res	ult:		٠	
FROM	то	(alteration, structure, mineralization)	TO	SULPH-		FROM	то	LENGTH	Au	As						
	<del></del>		AXIS						ppb	ppm						
391.5	404.2	Quartz-carbonate Rich Mudstone	0	<b>∠1</b> %	14707	391.5	396.3	1 0	8	200	,					
<u> </u>	7 404.4	-contact is gradational over about ten feet but mudstone		718	14/0/	391.3	390.3	4.0		200						
		first appears at 391.5'. This rock type is very fine	1	-	14708	397.0	401.3	1 2	7	30	_					•
			├	├	14/08	397.0	401.3	4.3		30						
		grained, grey to green to brown in colour and may be	<del> </del>	<u> </u>				-		1.0						•
		finely laminated or massive and bedded. The bedding	<del> </del>		14709	403.3	404.2	0.9	4	10						
		within this unit is highly contorted due to the	<u> </u>	ļ	ļ					ļ						-
		injection of quartz veins. Again, brown, iron-rich	<u> </u>	ļ			<del></del>			ļ						
		carbonate is pervasive throughout the host rock and														
		along edges and fractures of quartz veins. Quartz														
		veins average about $\frac{1}{2}$ " in width and each foot of core														
		containst two to three veins and or veinlets. Pyrite														
		and pyrrhotite are not common but a few stringers are														
		present in places. Coarse sericite and chlorite often														
		occur adjacent to quartz veins. Veins are for the mos	4													
		part. conformable to bedding but locally are seen to														
		cross-cut it and often contain inclusions of wall-		<u> </u>	<u> </u>											
		rock material.														
					<u> </u>											
404.2	444.	. Laminated Iron Formation	45	<b>&lt;18</b>	14710	404.2	405.7	1.5	5	5						
		-oxide facies iron formation with laminations of magnet	te													
		mudstone and minor chert. The chert layers are blue			14711	405.7	410.0	4.3	4	5						
		to pink in colour and well-bedded in contract with					· · · · · · · · · · · · · · · · · · ·									
		conformable quartz veins which are blue to milky-white			14712	410.0	414.7	4.	7' 22	13						
		(more commonly the latter) have irregular broundaries					·									
	_	and are usually accompanied by brown carbonate along			14713	414.7	417.0	2.3	11	10						
		the edges of the veins and in fractures. Due to the			1											
		nature of the occurrence of carbonate.			14714	417.0	421.2	4.2	7	10						•
	<del> </del>	-as fracture fillings, along contacts, and pervassive	<del>                                     </del>	1												٠
	<del> </del>	through the more porous beds it appears that carbonati	dat ic	h	14715	421.2	424.0	2.8	5	20			<del> </del>		-	٠
		has occurred as a late process and that it does not	1	-				<del>                                     </del>	├ <del></del>	20			<del> </del>			
		represent sedimentary carbonate. Sulphide minerals		<del>                                     </del>	<b></b>			<del>                                     </del>	<del> </del>	<del>                                     </del>			1			•
	<del> </del>	are not found within the iron formation itself but	+	+	<del>                                     </del>			<del> </del>	<del> </del>	<del> </del>	<del>                                     </del>		<del>                                     </del>	<del>                                     </del>		•
	<del> </del>	are not found within the from formation itself but	+	•	<del> </del>	-		<del> </del>	<del> </del>	+	<del> </del> -	<del> </del>	<u> </u>			•
	<b>ļ</b>		<del> </del>	+	<del> </del>	<del> </del>		<del> </del>	<del> </del>	<del> </del>	┼		<del> </del>			٠
				+	1	<del> </del>		<del> </del>	├	<del> </del>	<del> </del>		<del> </del>	├		-

DIAMOND DRILL HOLE LOG

PROJECT \_\_260-Mikwam

HOLE No. DDH-260-83-5

Page 4 of 6

F00.	TAGE		CORE	5		SAMPLI	<u>E</u>	)	1	Ana	lytica	I Res	ult:	 
FROM	то	(alteration, structure, mineralization)	ITO I	SULPH-	NUMBER	EDOLL		1	Au	As		1		
			AXIS		NUMBER	FROM	ТО	LENGTH	ppb	ppm				
											<u> </u>			
		do occur in small amounts along fracture planes and												
		associated with quartz veining. A silvery mineral in												
		quartz may be arsenopyrite but is probably sericite.							<u></u>					
		The greenish mudstone intruded by quartz veins has been			1									
		silicified and changed to a light greenish-brown colour	1						1			[		
		and is often difficult to distinguish from naturally			1		-		<u> </u>					_
		siliceous chert layers. Small scale faulting shows					T		<u> </u>		1	1		 
		displacement of layers in a sinistral sense. Some						1	<u></u>			1	1	 
		layers of mudrock are highly chloritic, dark green and					<del>                                     </del>	1		1		<del></del>	1	
		appear relatively unaltered. One such layer occurs at	1			1	<del></del>	1	<del></del>	1		<del>                                     </del>	+	 
		424' then is capped (assuming tops to the south) by				1	<del></del>	1	<del></del>	1		<del></del>	1	
1		a 6" layer of pinkish-brown chert which is in turn	1		14716	424.7	425.4	0.7	12	30	1	1	1	 
		overlain by a sandy unit, The latter appears to have						1	1			1		 
	'	a high carbonate content, presumably because of its	<u> </u>	1	14717	429.0	431.5	2.5'	5	75	T	<del>                                     </del>		
		higher porosity. Minor pyrite does occur within the						1		T-		<b>†</b>	1	
		cherty layers sandy layer continues to 428.6 then mud-		/	14718	432.8	433.6	0.8	4	45		<del></del>		_
		stone to 429.0 and more chert with magnetite. This	1						,			Γ ,		 -
		sequence is not consistent but all three types continue	Б		14719	436.1	440.1	4.0"	5	10		Ţ,		 
		to be interelated to the top to the top of the iron												
		formation (is last occurrence of magnetite) at 444.1			14720	440.1	444.1	4.0'	10	15				
														 _
444.1	447.0	Mudstone												
		-dull green, finely laminated with a few thin layers of	60°	<18	14721	445.2	447.0	1.8'	7	40				
		chert and minor magnetite (transition from LIF is some-		<u> </u>										
		what gradational). Similarly, the transition from												
		mudstone into argillite is gradational and the contact												
		has been determined somewhat arbitrarily.												
														_
				اسما										
1				-										_
	<del></del>			1	1				T	<del></del>	T			 

# DIAMOND DRILL HOLE LOG

F00	TAGE	ROCK TYPE AND DESCRIPTION	CORE	*		SAMPL	E			Ana	lytical	Resu	ılt:		
FROM	ТО	(alteration, structure, mineralization)	ANGLES TO AXIS	SULPH- I DES	NUMBER	FROM	то	LENGTH	Au ppb	As ppm					
447.0	481.0	Argillite					<u> </u>								
		-dark grey to black, finely laminated.	50°	(1%	14722	448.1	448.9	0.8	7	15					
		Brown carbonate occurs as thin seams parallel to lamin-			14723	450.3	451.2	0.9	4	70					
		ations but is most abundant next to quartz veins where			14724	453.4	454.2	0.8	5	70					*****
		it has turned the wall rock a light rusty brown colour.			14725	455.0	456.6	1.6	5	45					
		pyrite ; and occasionally pyrrhotite are minor and occur only in quartz veins, except in vein at 459.8' where													
		sulphides are coarse and constitute about 3-4% of vein.		3-48	14726	459.5	461.3	1.8	7	50					
		At 468' a thin calcite seam indicates the start of a					<del>                                     </del>	<del> </del>		-30					
		transition from Fe - to Ca-rich carbonate over the ten			ļ ————————————————————————————————————		<del>                                     </del>	+							
		feet of core.			· · · · · · · · · · · · · · · · · · ·	<del> </del>		+							
		The argillite changes from brown and black to grey and					<del> </del>								
		black and calcite stringers become more prevalent.					<u> </u>			<u> </u>		-			
		Quartz veiningstops at 466'.			<u> </u>	<b>†</b>		1	<del>                                     </del>						
		X			1			+	<del>                                     </del>	<u> </u>					
474.5	493.3	Ash Tuff	550	5%	14727	481.0	483.9	2.9	7	20		$\neg \uparrow$			
		-light grey-brown, locally very fine grained with		-		13333									
		argillaceous laminations.			14728	483.9	489.1	5.2	7	40					
	<u> </u>	Fragments are ( long, alongated and sub-rounded.													
		As a whole the unit is siliceous and sericitic and							<b>†</b>						
		contains 5%pyrite and pyrrhotite as disseminations													<u></u>
		and stringers parallel to bedding. Contacts are													
		transitional over 4-5 feet from and to argillites													
		above and below.													
<b> </b>															
493.3	517.0	Volcaniclastic Sediments	55	3%	14729	493.3	499.0	5.7	8	40					
		-fragments range from light grey siliceous material to													
		black graphite. They are typically alongated and			14730	499.0	504.0	5.0	5	20					
	† ·	usually less than 1 inch wide. Calcite is pervasive													
		as pods, seams and disseminations. Pyrrhotite is			14731	504.0	509.7	5.7	3	50					
		the most common sulphide and occurs as elongated blebs													
1	1	and small seams. No Porphyritic fragments were observed			14732	509.7	510.7	1.0	5	5					
<del> </del>	+	The state of the s	7	1		510.7	517.0			120	1			Г	

DIAMOND DRILL HOLE LOG

HOLE No. DDH-260-83-5 Page 6 of 6

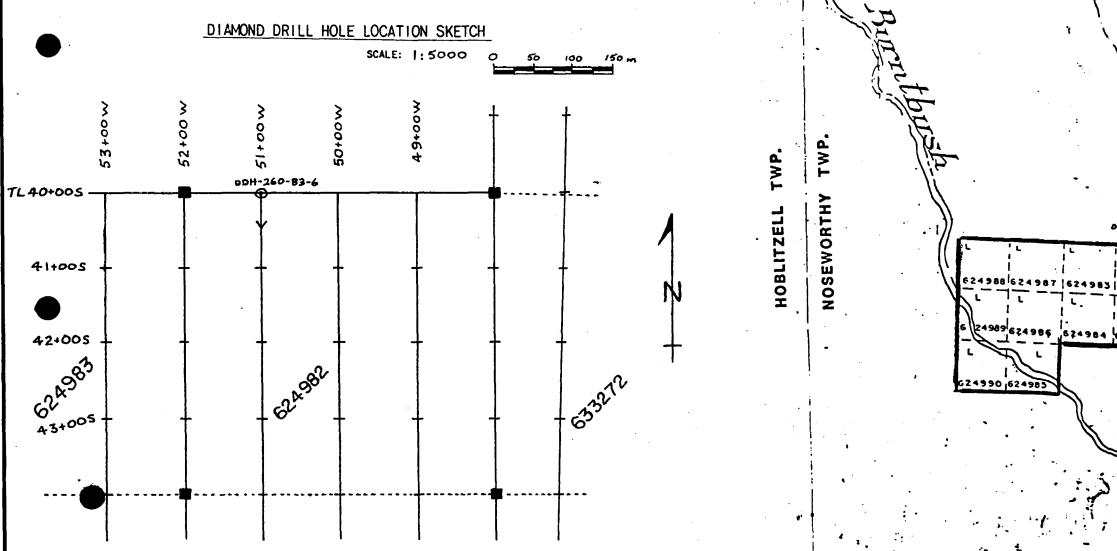
F00	TAGE	BUCK TADE VYIL DECODIBLION	CORE	*		SAMPL	Ε		1	Analytic	al Res	ait:		
FROM	то	ROCK TYPE AND DESCRIPTION (alteration, structure, mineralization)	ANGLES TO AXIS	SULPH- I DES	NUMBER	FROM	TO	LENGTH	Au					
			AXIS						ppb					
			<u> </u>					<u> </u>			<del> </del>			
		Quartz-carbonate veinlets cross-cut the bedding at 90°	—					<u> </u>			<del></del>			
ļ <u></u>		to C.A. A 10" quartz -carbonate vein occurs at 510'.	ļ					ļ					ļ	
<del>                                     </del>			-				<del></del>	-l	<u> </u>					<u> </u>
<b> </b>			<u> </u>						ļ					<u> </u>
		End of Hole - 517'	ļ								-			
<u> </u>		Elid OI NOIE - 317												
			<u> </u>					<u> </u>	ļ		<del></del>			_
<b> </b>		Sludge Samples	<u> </u>		14587	251	257	6'	8	ļ	<del></del>		<u> </u>	
			<del> </del>		14588	257	267	10'	8		1			
			ļ		14589	267	277	10'	7					
			<u> </u>		14590	277	287	10'	8			<u> </u>	<u> </u>	↓_
			ļ		14591	287	297	10'	10			<del> </del>	<u> </u>	
			<u> </u>		14592	297	307	10'	11		<del></del>			<u> </u>
					14593	307	317	10'	15				<u> </u>	↓_
		A HAD	<u> </u>		14594	317	327	10'	5		<del></del>			↓_
			<u> </u>		14595	327	337	10'	10		<u> </u>			_
			<u> </u>		14596	337	347	10'	7"					
		1/ PL			14597	347	357	10'	8					
			<u> </u>		14598	357	367	10'	5					
					14599	367	377	10'	4				<u> </u>	
		• (			14600	377	387	10'	3					
			<u> </u>		14601	387	397	10'	5					
			<u> </u>		14602	397	407	10'	4			<u> </u>		$oxedsymbol{oldsymbol{oxed}}$
					14603	407	417	10'	3					<u> </u>
					14604	417	427	10'	3					<u> </u>
					14605	427	437	10'	5					<u> </u>
					14606	437_	447	10'	7					
					14607	4477	457	10'	3					_
					14608	457	467	10'	4					
					14609	467	477	10'	4					
					14610	477	487	10'	7					
1					14611	487	497	10'	7					
1					14612	497	507	10'	5					_
+	1			T	14613	507	517	10'	5			1	I	

PROJECT Mikwam-262

## DIAMOND DRILL HOLE RECORD

HOLF No. 260=83-6

LOCATION		DIP TEST	LEVEL	HORIZONTAL COMPONENT 362 feet	DATE STARTED March 12, 1983
AREA or TWP. Noseworthy Twp, Ontario	FOOTAGE	ANGLE RECORDING CORRECTED		VERTICAL 348 feet	DATE FINISHED March 14, 1983
CLAIM No. 624982	<del>- 258</del>	50 50 52.75 43.75°	ELEVATION	BEARING South	LOGGED BY R.A. Archer
624982	500	46.85 38.25	LATITUDE 40+00S	LENGTH 507 feet	PURPOSE Geology/Geophysics
NTS 32E/12 UTM			DEPARTURE 51+00W	CORE Timmins	TOT. RECOVERY 100%



# DIAMOND DRILL HOLE LOG

PROJECT \_\_\_\_\_\_\_ 260 - Mikwam

HOLE No. \_\_\_\_\_\_ DDH-260-83-6 Page \_\_\_\_\_ of \_\_\_\_ 5

FOC	TAGE	ROCK TYPE AND DESCRIPTION	CORE	*		SAMPL	E			Ana	lytica	al Res	ult:		
FROM	ТО	(alteration, structure, mineralization)	ANGLES TO	SULPH-	4	Foot		. 5	Au	As					_
· ROPI			AXIS	. 523	NUMBER	FROM	TO	LENGTI	ppb	ppm					_
0	35	-overburden - clay, till and boulders									1				_
35	42	-casing in bedrock													_
							_								_
42	315	Dacitic volcaniclastic breccia	00-	3-5%											_
		-angular, irregularly-shaped fragments up to several	45°		14616	42.0	44.0	2.0'	8	N.D.					
		inches across within a matrix of finer fragments,			14617	44.0	48.0	4.0'	7	N.D.					•
		chlorite, sericite, quartz, carbonate and magnetite.			14618	48.5	54.0	5.5'	5	N.D.					
		The fragments are typically light grey in colour and			14619	54.0	59.0	5.0'	5	N.D.					•
		may be silicified and fine grained or carbonatized			14620	59.0	64.0	5.0'	4	N.D.					•
		and porphyritic. The latter contains remnant phenocrysts			14621	64.0	69.0	5.0'	4	N.D.					•
		of quartz and/or feldspar that have been mostly			14622	69.0	74.0	5.0'	10	N.D.					•
		replaced by calcite and ankerite in a fine grained			14623	74.0	79.0	5.0'	5	15					•
		matrix of quartz, carbonate, sericite, devitrified			14624	79.0	84.0	5.0	4	5					•
		volcanic glass and minor sulphides. The silicified			14625	84.0	89.0	5.0'	5	N.D.					•
		fragments are typically smaller, aphanitic and			14626	89.0	95.0	6.0'	4	N.D.					•
		non-mineralized.			14627	95.0	100.8	5.8	5	5					
		Magnetite in the matrix appears to have a direct			14628	100.8	102.6	1.8'	3	N.D.					•
		correlation with the chlorite content and more chloritic			14629	102.6	104.6	2.0'	5	5					
		patches contain up to 5% coarse magnetite crystals.			14630	104.6	110.0	5.4	5	5					
		Disseminated pyrite is the most predominant sulphide			14631	110.0	115.0	5.0'		5					
		mineral and minor pyrrhotite is present locally.			14632	115.0	120.0	5.0'	14	5					•
		Foliation varies considerably depending on the			14633	120.0	125.0	5.0'	5	N.D.					
		abundance and size of the fragments present.			14634	125.0	130.0	5.0'	7	N.D.					
		2" quartz vein at 43".8'			14635	130.0	135.0	5.0'	7	5					
		9" quartz vein at 102' and 6" vein at 103'. Both			14636	135.0	140.0	5.0'	4	10					•
		have coarse sericite-chlorite alteration in the wall			14637	140.0	145.0	5.0'	3	10					•
		rock and coarse ankerite within the vein.			14638	145.0	150.0	5.0	4	5					•
	1	Locally, bleaching turns the rock a greenish-brownish-			14639	150.0	155.0	5.0	4	5					
		grey but texture is unchanged			14640	155.0				5					
	1	Possible sphalerite at 119'			14641	160.0	165.0	5.0	7	5					
		1/2" calcite veinlet at 135'			14642	165.0	170.0	5.0	4	5					
		Foliation at 70° to C.A. at 175' but parallel to it at			14643	170.0	175.0	5.0	41	N.D					
		185'			14644	175.0	180.0	5.0	7	10					
	1	Starting at 187.4' chlorite and sericite became			14645	180.0				10					<u>.</u>
	1	increasingly altered to a cream colour - probably clay			14646		187.4			N.D					i

# DIAMOND DRILL HOLE LOG

260 - Mikwam

HOL

LE	No.	DDH-260-83-6	Page.	2	01	5
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F00T	AGE		CORE	% Sur Du		SAMPL					lytica	I Resi	ult:		
FROM	то	(alteration, structure, mineralization)	TO :	SULPH-	NUMBER	FROM	то	LENGTH	Au	As	Cu	Zn		 	
			AXIS						րիր	ppm	ppm	ppm			
		minerals, then at 192.6', these are selectively replaced	ļ		14647	187.4		5.2'		10				 	
		by massive pyrite. Pyrrhotite is also present but in		40%	14648	192.6	197.7	5.1'	19	80	34	664			
		minor amounts. Siliceous fragments are not replaced													
		but are further contorted by the introduction of the													
		sulphides. 193'-194' contains 85% pyrite. At 197.7' the			14649	197.7	203.1	5.4'	4	N.D.					
		sulphide content drops off to 3% and the pyrrhotite:			14650	203.1	205.5	2.4'	10	5					
		pyrite ratio increases. Past 197.7', there is still													
		some alteration of the chlorite, however, sericitization													
		and silicification are more prevalent here. Bleaching							1						
		to a light brown colour occurs from 203.1' to 210.0'.			14651	205.5	210.0	4.5'	5	N.D.					
		Sulphides are finely disseminated to 205.5' where they		5%											
		increase to 5% and occur as patches and irregular													
		stringers. Small, irregular quartz veinlets and pods													
		start occurring in this "stringer zone". Alteration			14652	210.0	215.0	5.0'	3	N.D.					$\Box$
		dies off by 210' and sulphides grade back into 4%		4%											
		disseminations with occasional stringers. Quartz			14653	215.0	220.0	5.0'	12	N.D.					
		veinlets are still present but are less common.			14654	220.0	225.0	5.0'	5	N.D.					
		Foliation is locally crenulated and rock is often			14655	225.0	230.0	5.0'	7	N.D.					
		bleached near fractures. 2% coarse magnetite occurs			14656	230.0	235.0	5.0'	5	N.D.					
		from 221.0'-221.7'. After 237', quartz veins and			14657	237.0	242.0	5.0'	78	5					
		veinlets are abundant again. These may be conformable			14658		250.3		_						$\Box$
		to or cross-cutting the foliation and show associated													
		carbonate, sericite and sulphides. 253.8' to 257' is			14659	253.8	257.0	3.2'	16	N.D.					
		quite highly bleached but contains no quartz veins and													
		only minor sulphides: 2" wide quartz-carbonate veins at			14660	257.0	258.7	1.7'	14	N.D.					$\neg$
		257.5', 267.6', 273.3' and 273.5'. Smaller veinlets		3%	14661		265.0			N.D.					
		are common throughout this zone. Sericite is becoming			14662		271.0			N.D.					
		more prevalent than chlorite and the rock is becoming			14663		277.5								
		less fragmental and more flow-banded with some fine-			14664		283.0								
		grained zones which are trending towards interflow			14665	<del></del>	287.6		<del>,                                    </del>						
		sediments. Quartz veinlet at 287.0' contains coarse							Γ						
		tourmaline. Starting at 290.5' quartz veins show associat	ed		14666	290.3	293.8	3.5'	19	N.D.					
-		coarse chlorite sericite and carbonate. These veins		0. 0					Γ						
		are irregular in shape and are roughly conformable				1		1	T						
		with the foliation although the latter is usually	1		14667	297.4	302.0	4.6'	3	N.D.					
		the totaleton atthough the latter is asually	1	1	1-10/	<del>                                     </del>	† · · · · ·	1	1		1	1			

# DIAMOND DRILL HOLE LOG

PROJECT \_\_ 260-Mikwam

HOLE No. DDH-260-83-6

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F00T	AGE	ROCK TYPE AND DESCRIPTION	CORE	<b>x</b>		SAMPL	E			Ana	lytica	I Res	uit:	 	
FROM	то	(alteration, structure, mineralization)	TO	SULPH-	NUMBER	FROM	TO	LENGTH	Au	As	Cu	Zn			
			AXIS .		NUMBER	FRUM	ТО	n rre-in	ppb	ppm	ppm	ppm			
		quite contorted near the veins. Veinlets often show smal	1												
		scaleboudinage structures. Pyrite and pyrrhotite are													
		disseminated throughout the wallrock and are locally		3%											
		concentrated along vein edges but are rarely seen within													
		the veins.													
		Two parallel, 3" quartz veins 308'-309'.			14668	305.5	309.0	3.5'	4	N.D.					
		Quartz vein with tourmaline from 313.2'-314.8' is parallel			14669	309.0	313.0	4.0'		N.D.					
		to foliation (about 20° to C.A.)	20°	3%	14670	313.0	315.0	2.0'	12	N.D.					
15.d	326.5	Flow-banded Dacite													
		stringer quartz and sulphide (2%) in crenulated,			14671	315.0	319.5	4.5'	8	N.D.					
		flow-banded dacite. Some stretched fragments are still			14672	322.3	324.5	2.2'	7	N.D.	<del></del>				
		visible and the rock appears to be locally tuffaceous						1							
		but a fine grained, schistose banding prevails				<u> </u>									
					1	T									
4.5	377.0	Pyritized Dacite Fragmental	20°	60%											
		-siliceous fragments range in size from 1/16" to about			14673	327.0	331.0	4.0'	22	15					
		1.5 feet. Chloritic matrix is mostly replaced			14674		322.0				114	56			
		by massive pyrite and pyrrhotite. In less mineralized			14675	·	336.4		-	_	78	84			1
		areas, sulphides occur as stringers between rock fragments			14676		346.0		_	50_	72	139			
		Pyrrhotite may be later phase as it cuts & surrounds													
		pyrite. 346'-351.7 is tuffaceous, sericitic with		3%											
		with 3% disseminated sulphides. 351.7'-355 is bleached			14677	352.7	355.0	2.3	5	N.D.					
		and brecciated with stringer quartz and 4% pyrite, and	1.												1
		pyrrhotite. Fold in foliation at 352' changes core angles		4%	14678	355.0	361.1	6.1	8	5					
		from 20° to C.A. to 35° to C.A. in opposite direction													
		within one foot of core afterwhich foliation is highly													
		contorted and irregular. 361.1' to 362.7' contains 50%			14679	361.1	362.7	1.6	25	5	142	110			
		pyrrhotite and some pyrite surrounding contorted fragments	1.									]			
		Rock appears porphyritic or tuffaceous in places due to	y .		14680	362.7	367.0	4.3	7	N.D.					
		coarse carbonate grains disseminated throughout the	T												
		matrix. Quartz-carbonate veinlets are common and 3%	1		14681	367.0	370.1	3.1	14	5					
$\overline{}$		sulphides are disseminated throughout. Irregular quartz	1	1		<del> </del>									
			<del>                                     </del>	1		<del>                                     </del>		1			1				
			+	1	<del>                                     </del>	1	<del>                                     </del>		1	-	1				-
1	,	1		1	1	1	1	1	1	1	1	1	t L _	 	

DIAMOND DRILL HOLE LOG

PROJECT \_\_\_\_260-Mikwam

HOIF No DDH-260-83-6

Page 4\_\_\_ of \_\_ 5\_

F00	TAGE		CORE	3		SAMPL	E	)		Ana	lytical	I_Rest	ılt:	 _
FROM	то	(alteration, structure, mineralization)	TO !	SULPH-	NUMBER	FROM	70	LENGTH	Au	As	Cu	Zn		
			AXIS		HUMBER	FRUM	то	LENGTH	ppb	ppm	ppm I	mqg		_
							-							
		vein at 370.5' contains coarse sulphides and tourmaline			14682	370.1	371.1	1.0'	10	N.D.			· -	
					14683		374.5	<del></del>		N.D.				_
						1	T							
377.0	453.5	Transition Zone	25 <sup>0</sup>	3%			T							
		-core is becoming increasingly ser icitic and finer grained	+		14684	377.0	382.0	5.0'	21	5			<del></del>	
		foliation grades from flow-banded to finely laminated.	Ţ,	- 1	14685	<del></del>	+	5.01		N.D.			<del></del>	
		Quartz veins and veinlets are common and pyrrhotite and			14686		<del></del>		<del> </del>	N.D.				
		pyrite are present as 3% disseminations and, locally,			14687	392.0	<del> </del>	<del></del>	2	N.D.	1			_
		5-10% stringers. Carbonate occurs with quartz or by itsel	f		14688		<del></del>	5.0'	7	N.D.	1			_
	<u> </u>	as veinlets and as open-space fillings in host rock. Rock	+	T .	14689			5.0'	7	N.D.	1			
		is locally fractured and bleached. Quartz-rich zone from	+	<del>                                     </del>	14690		412.0	5.01	4	N.D.	1			
		409' to 410' then highly fractured and bleached to 414'.	T ,		14691			5.0'		N.D.				_
		Another quartz-carbonate rich zone from 428'-429' then			14692	425.0	427.0	2.0'	10	N.D.				_
		quartz veinlets are less common, 1" quartz vein at			14693	428.0	429.0			N.D.	<del> </del>			_
		437.8 contains 50% massive pyrrhotite. Rocks			14694	437.5	438.0	0.5'		N.D.	+	<u> </u>		_
		become increasingly granular, almost massive to 453.5'										` <u> </u>		_
		where they become laminated and siliceous.											1	_
												`	\	_
453.5	462	Transition sediments	40°	1%								'	<u> </u>	
		-laminated, siliceous sediments interbedded with more											'T	_
		massive granular wackes. Both types are virtually										\	<u>'</u>	
		nonmineralized but contain occasional thin quartz										<u> </u>	<u>'</u>	_
		veinlets										<u>'</u>	' <u> </u>	
												<u></u> ı	'	_
462	477.5	Siliceous greywacke	20°	1%									<u> </u>	_
		-dark grey, fine grained, bedded to massive wackeconsisting	<u></u>					1	<u></u>				'	_
		essentially of quartz and sericitic micas. Appears						1				<u></u> '	'	_
		almost cherty in places. Start to get some interbedded											1	
		argillite at 475'.								1		<u>ا</u>	1	
								1		-			1	 _
477.5	488.6	Argillite	15°	5%				-		-			<u>'</u>	 _
		-finely laminated, locally graphitic contains up to 10%		-			<del></del>	-	<b></b>	+	-		<u></u>	 _
		stringerspyrite locally. Mineralized dextral fault			14695	479.0	484.0	5.0	14	N.D	126	304	<u></u>	 
	,		ł		(			L	1		[ ]	1 4		

# DIAMOND DRILL HOLE LOG

PROJECT 260-Mikwam

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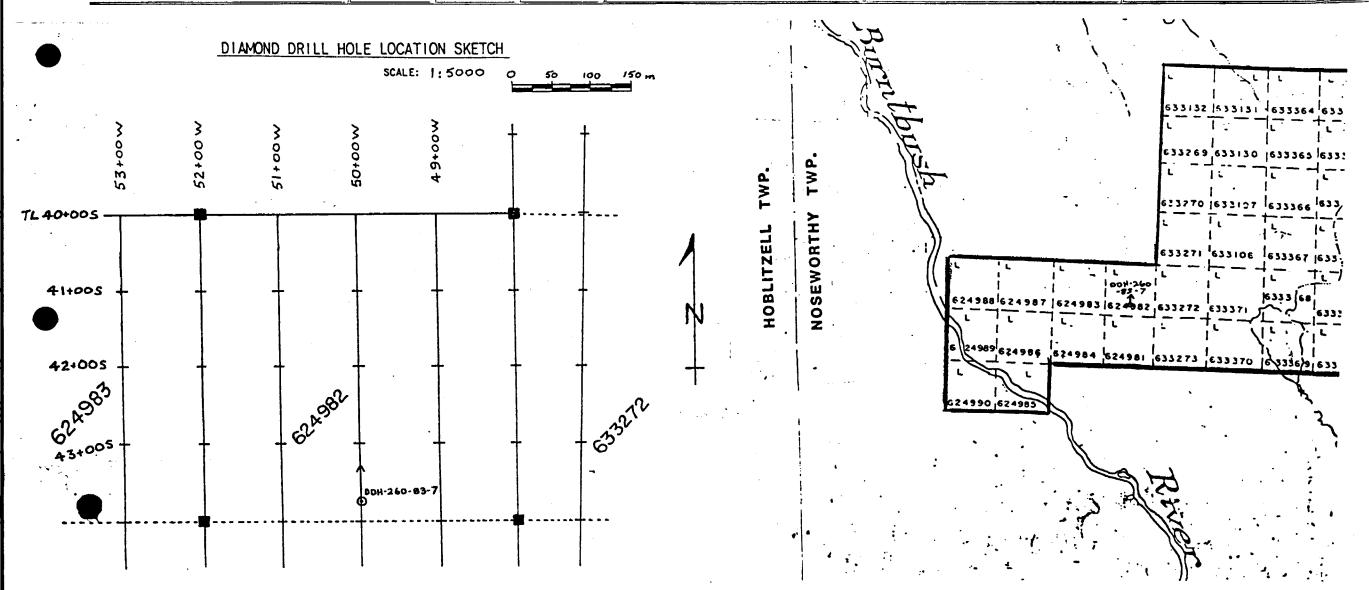
F00	TAGE	ROCK TYPE AND DESCRIPTION	CORE	7	1	SAMPL	LE		1	Ana.	alytical	l Resu	lt:	
FROM	то	NOUN TIPE AND DESCRIPTION	ANGLES'S	SULPH-	NUMBER	FROM	то	LENGTH	Au	As				<del>—</del>
			+	-	<del></del>	+	+	+	ppb	ppm	+			-
		offsets 3" quartz vein at 482'. Quartz-rich zone from	00	10	14696	105 0	488.6	+	<u></u>	5	+	<b></b>		+
		485'-487' but core angles are almost parallel with C.A.	+	15	174030	403.0	d.60t-	13.0	1	+	+	<b></b>		-
		here (drilling down-dip). Host rock in this zone is highly	7		<del>                                     </del>	1	1	+	<del></del>	+,	1	<b></b>		+
		_altered but contains only 1% sulphides			<del> </del>	<del>                                     </del>			+)	<del>                                      </del>	1			_
						T .		1	1	1	1			
488.6	507	Transition zone	25	1%					1	1		<del></del>		_
		-transition back into volcanics or may be a chloritized			14697	496.5	499.0	2.5	' 19	10				
		greywacke. Core is dark green, granular with well-defined	đ							T				
		but regular foliation/bedding. Quartz-carbonate							1					
c		stringers and veins are common but mineralization is							11					
		poor.		'										
					-									
		End of Holo - For's	-	<u>'</u>	<del></del>			-	<u></u>			` <del></del>		-
		End of Hole - 507'	-		-			-	L		-	<b>'</b>		-
		ļ	-	<u></u>	<del></del>		+	+	<u></u>	<u>  ·                                     </u>	-	' <u> </u>		-
			-	<u></u>	+	-	+	-	<b>—</b>	-	-	<b>'</b>		
		Note: No sludge samples taken	-	<u></u>	<del> </del>	'	+	+	<del></del>	<del></del>	+	<b>'</b>		-
	<u>'</u>	<del>                                     </del>	+	<u> </u>	+	<del></del>	+	+	$\leftarrow$	<del></del>	++	<b>'</b>		-
		<del>                                     </del>	1	<u> </u>	+	-	+	+	<del></del>	+	+	<b></b>		
	<u>'                                    </u>		1.	<u> </u>	<del>                                     </del>	+	+	+-	+	+	+	<del></del>		+
		1 //	1	<del></del> }	+	+	+	+	<del></del>	+	1	<del></del>		1
	<u> </u>	1 // hu	1	<u> </u>	<del> </del> ,	<del></del>		+-	<del>                                     </del>	<del>                                     </del>	+	<del>-  </del>	-	1
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PROJECT MIKWAM (260)

## DIAMOND DRILL HOLE RECORD

HOLE No. 260-83-7

LOCATION		DIP TEST		LEVEL		HORIZONTAL COMPONENT	375 ft	DATE STARTED March 15, 1983
AREA or TWP. Noseworthy Twp.	FOOTAGE	RECORDING	CORRECTED			VERTICAL COMPONENT	370 ft.	DATE FINISHED March 17, 1983
CLAIM No.	250'	50.00	50.00° 42.75°	ELEVATION		BEARING	N astro.	LOGGED BY R.A. Archer
624982	530'	51.00	42.250	LATITUDE	43+75s	LENGTH	537 feet	PURPOSEGeological/Geophysical
NTS $_{ m 32E/12}$ UTM				DEPARTURE	L50+ 00W	CORE	TIMMINS	TOT. RECOVERY 100%



DIAMOND DRILL HOLE LOG

PROJECT MIKWAM - 260

HOLE No. DDH-260-83-7

Page 1 of 9

F00	TAGE		CORE	3		SAMPL	.E			Ana	lytica	I Res	ult:		
FROM	то	(alteration, structure, mineralization)	ANGLES	SULPH-		FROM			Au	As					
			AXIS	. 525	NUMBER	FROM	ТО	LENGTH	ppb	ppm					
	41	-overburden - clay, till and boulders													
1	49	-casing in bedrock													
9	67.5	Dacitic lapilli tuff	400	<u> &lt;18</u>											 
		-light grey, siliceous fragments in a sericitic, well-													
		foliated matrix. Fragments range in size from < lmm to													
		5 cm in width and are typically stretched parallel to													
		the foliation. Ankerite is pervasive throughout													 
		the matrix and with quartz in small veinlets and gashes			<u> </u>										
		Ankerite-quartz intergrowths form clots in the matrix													
		around which the micaceous material (predominantly				<u> </u>									
		sericite with some chlorite) "flows". Foliation is				<u></u>									
		wavy and core angles often change by several tens				<u> </u>									
		of degrees in 10 or 20cm. Overall, core angles are													
		of degrees in 10 or 20cm. Overall, core angles are predominantly about 40° to core axis. Sulphides are													
		minor and where present, occur as disseminations and	<u></u>												
		'clots' within the matrix. Larger clots tend to	<u> </u>			·									
		follow the foliation. Pyrrhotite is more common than													
		pyrite.								,					
7.5	72.3	Flow-banded dacite		2%	14369	67.5	72.3	4.8'	10	N.D	<u> </u>			ļ	
		-fragments less common now. Matrix is well foliated &	<u> </u>												
		made up of alternating bands of green chlorite and dark						<u> </u>							
		grey sericite. Quartz-ankerite veinlets are abundant	<u> </u>												
		and are semi-conformable to the foliation. They are	<u> </u>						<u> </u>						-
		often irregular in shape and vary in width from 2mm to								<u> </u>	<u> </u>			ļ	 
		several cm. Within the matrix ankerite is associated							<u> </u>	ļ					
		more with the chloritic bands than with the sericite.	<u> </u>								L			<u> </u>	
		Core angles are variable. Pyrite is more common than	<u> </u>		<u> </u>				<u> </u>						
		pyrrhotite now.							<u> </u>					L	
					1	<u> </u>									 <b> </b>
72.3	75.5	Dacite			14370	72.3	75.5	3.21	5	N.D			ļ		
		-still foliated but appears more competent - fine grained	350												

# DIAMOND DRILL HOLE LOG

PROJECT \_MIKWAM - 260

HOLE No. DDH-260-83-7

Page 2 of 9

FOOTAGE			CORE	1 %		SAMPL	}	<b>!</b>	Ana	lytica	1 Resu	ult:		_		
FROM	то	(alteration, structure, mineralization)		SULPH-	NUMBER	EDAN	7.0	15::5-	Au	As						
	1 .0		AXIS		NUMBER	FROM	ТО	PLENGTH	ppb	ppm						_
	<u> </u>															
	'	With regular foliation at 35 to CA							1							-
75.5	154.8	Lapilli tuff														•
		-light grey siliceous fragments in a matrix of green		3%	14371	75.5	80.5	5.01	3	N.D.						
	\	chlorite, dark grey sericite and fine grained quartz			14372	80.5	85.5			N.D.						•
		and ankerite. Quartz-ankerite veinlets make up 5%;			14373	85.5	90.5			N.D.						
		very fine, disseminated pyrite and pyrrhotite is present	<u>{</u>		14374	90.5	95.5			N.D.						_
		throughout the matrix and along borders of veinlets.			14375	95.5				N.D.						_
		Foliation is very irregular. Rusty brown staining at 79'			14376	99.0	105.0			5_						_
		and 85.5' is due to the oxidation of ankerite as con-			14377					N.D.						-
		firmed by a positive KCN test. Pyrite and pyrrhotite			14378		115.0	<del></del>		N.D.						•
		often occur together, probably having been formed by	1.	1	14379	115.0	120.0	5.01	3 .	. 5						•
		exsolution, eq. at 89.2'. 13" wide quartz vein at 98.5'			14380	120.0	125.0	5.0'	3	5						•
		with 1% sheared pyrite in fractures. Small irregular			14381	125.00	130.00	5.0'	4	5						•
		quartz vein with 2% pyrite at 122.5'. From 125'-140'			14382		135.00			5						_
		fragments gradually get smaller until they are about			1		140.00			5						•
		1/8" in width. Ankerite is still pervasive but comprise		1 1	14384	140.00	145.0	5.4'	7	5						_
		only about 5% of matrix. Pyrite is still present as 2%	45°	22		4										_
		disseminations. Quartz veinlets in this section contain	s													_
\		20-50% coarse ankerite.														_
		Tuff coarses slightly at 145.4' and contains abundant			14385	145.4	151.5	6.1	5	10						_
		ankerite, sericite and 5% fine grained pyrite with		5%												_
		pyrrhotite following the foliation. At 151.5' the			14386	151.5	154.8	3.3	7	5						_
		chlorite content increases and the matrix is more														_
		greenish in colour than previously. Sulphide content		10%												_
		in this section increases to 10% and ankerite is													<u></u>	_
		pervasive throughout the matrix														_
																_
154.8	157.6	Rhyodacite						-							<u></u>	_
		-dense, poorly foliated, fine grained rock with 3%		2%	14387	154.8	157.6	2.8	12	5						_
		magnetite crystals. Normally a dark greenish grey but														_
		bleaching to a pale brownish grey has occurred		9. 0							-			<u></u>		_
		adjacent to fractures that are roughly conformable								-				L	<u></u>	_
		to the foliation. Rock is highly carbonatized and both	1				1	1	_		1	l	1	1	}	

DIAMOND DRILL HOLE LOG

PROJECT \_\_MIKWAM - 260

HOLE No. DDH-260-83-7

Page <u>3</u> of <u>9</u>

F00	TAGE		CORE	<b>%</b>		SAMPL	E		Anal	ytica	l Res	ult:		
FROM	то	(alteration, structure, mineralization)	ANGLES	SULPH-					 Au	As	Cu	Zn	T	
I KOM	10		AXIS	. 523	NUMBER	FROM	ТО	LENGTH	 ppb			ppm		
	!	calcite and ankerite are present in abundance. Very												
		fine disseminated pyrite is present locally												
157.6	186.0	Dacite												 
		-flow-banded, highly carbonatized (calcite and ankerite).	40°	3%	14388	157.6	162.0	4.4'	7	10				
		Carbonate occurs as pods and stringers within the matrix			14389	162.0	167.0	5.0'	3	5				
		and with quartz in veinlets. Matrix is predominantly			14390	167.0	172.0	5.0'	27	5				
		sericite with fine grained quartz-carbonate and some			14391	172.0	177.0	5.0'	5	10				
		chlorite. Very fine pyrite is disseminated throughout			14392	177.0	182.0	5.0'	10	5				
		and is most abundant next to quartz carbonate veinlets	l		14393	182.0	186.0	4.0'	5	5				
		2% disseminated magnetite crystals are present locally												
		l" quartz-carbonate vein at 168.9'												
		½" quartz-carbonate vein at 170.5'												
		'guartz-carbonate vein at 176.5'												
186.0	187.7	Rhyodacite												
· ·		-dense, poorly foliated, green-grey with 1% magnetite	400	1%	14394	186.0	187.7	1.7'	4	3	95	150		
		crystals, 1% fine pyrite				- <b>A</b>							.	 
187.7	190.6	Altered dacite with quartz												
		-25% irregular quartz-carbonate veins/sweats with		3%	14395	187.7	190.4	2.7'	3	4	86	110		
		coarse sericitic alteration in adjacent wall rock.												
		Latter is flow banded dacite as above with 'pods' of												
		of carbonate and 3% disseminated pyrite. Quartz itself												
		is typically barren of sulphides except for a single												
		grain, 1 mm across, of chalcopyrite in a small quartz												
		veinlet at 190.3'.												
190.4	207.0	Dacite												
		-flow-banded, sericitic and highly carbonatized with 4%	40°	4%	14396	190.4	194.4	4.0'	8	5_	76			
		fine, disseminated pyrite; 2% chalcopyrite in quartz												 
		veinlet at 196.7'. Bleaching occurs next to fractures			14397	194.4	197.5	3.1'	 8	5	86			
		at 197.8' and 201.0'. At 202' the sulphide content									<u> </u>			
		increases to 5% until 207'.			14398		202.0		10_	8	74		 	 
			1	5%	14399	202.0	207.0	5-01	29	10		[ ]		

### DIAMOND DRILL HOLE LOG

PROJECT \_\_MIKWAM - 260

HOLF No DDH-260-83-7

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100	TAGE	ROCK TYPE AND DESCRIPTION	CORE	5		SAMPL					lytical	Res	ult:		
FROM	то	(alteration, structure, mineralization)	TO	SULPH-	NUMBER	FROM	то	LENGTH	Au	As					
			AXIS			. NOP	10	Lugin	ppb	ppm					
									\		· .				
207.0	289.1			اا					!						
		-very little chlorite now, rock in composed of sericite	400	<18	14400	207.0	212.0	5.0'	14	10					
		and fine quartz-carbonate. Pods of carbonate are common	<b>L</b>		14401		217.0	<del></del>				1			
		Bleaching at 209' and 210'. Quartz-carbonate veinlets			14402		222.0					`			
		are small (less than 1" wide) but fairly common.			14403	222.0	226.6	4.6'	25	10					
		Sulphides are minor and occur as fine disseminations	<u></u>		14404	226.6		2.8'	27	15		1			
		adjacent to quartz veinlets. Veinlets at 214.7' and			14405	229.4	231.0	1.6'	5	40					
		219.5' are 90° to C.A. Start to get some bleaching at			14406		236.0			15					
		226.6' and rock is highly bleached from 229.4' - 231.0'		<del> </del>	14407		240.8								! 
		Rock is parti ally fractured and bleached from 242'-			14408	240.8	246.4	5.6'	10	20					
		245'. At 246.4' to 248.5' rock contains 8% pyrrhotite		8%	14409	<del></del>	248.5	2.1'	11	N.D.					
		with pyrite. Highly sericitic (coarse with contorted			14410			2.6'							\
		foliation) with irregular quartz-carbonate veins from			14462	<del></del>		4.9'	1	20		·			
		251.1' to 258.0'. A fracture trending subparallel to	نـــا	2%	14463			2.1'		20		ــــــــــــــــــــــــــــــــــــــ			
		C.A. from 253.8'-255.3' is mineralized with 20% pyrite,			14464		<del></del>	3.7'	<del>}</del>			<u> </u>			
		druzy calcite, green chlorite and a few grains of	ــــا		14465			4.5'		_		ــــــــــــــــــــــــــــــــــــــ			
		arsenopyrite.		-	14466	· · · · · · · · · · · · · · · · · · ·		4.8'	┿┷	10		١	<u> </u>		
	<u> </u>				14467	271.1	274.3	3.2'	88	10		·			
	'	At 271.1' the rock becomes light grey,				<u></u>				-		·	<b> </b>		
1	<u>'</u>	bleached until 272.6', then a zone of quartz-carbonate	<u> </u>									!			
	<u>'</u>	to 273.0', then coarse sericite with irregular quartz								-		·	<u> </u>		<u> </u>
	<u>'</u> i	veinlets to 274.3. Bleached zone and quartz vein are	L-	L			<u></u>			-		<u> </u>			<u></u>
	<u> </u>	non-mineralized but sericitized zone contains 1% pyrite-			<u></u>					-		<u> </u>			
	\	pyrrhotite. Coarse green chlorite is also found				1				1					
		adjacent to quartz veinlets in the sericitized zone.						-					$\sqcup$		
	1	From 274.3' to 285.4' rock contains only 1% sulphides			14468	274.3	274.8	5.5'	5	N.D.	-				<u> </u>
		locally, shows varying degrees of foliation (ie.some				<u></u>		-	<u></u>						
		are as more granular while others are schistose) and is			14469	279.8	285.4	5.6'	3	10					ļ
		locally fractured and slightly bleached. At 285.4' rock			14455	1005	300	h == 1		1	-	L		<b></b>	<u> </u>
		becomes more schistose with a wavy foliation; thin;			14470	285.4	289.1	B.7'	4	5	-	L			<u> </u>
		irregular quartz veinlets are common; sulphide content			-						-		-		<u> </u>
L		is 2% pyrite/pyrrhotite	<u></u>					-		-	-			<u> </u>	<u> </u>
						1		-		-	-		1	<u> </u>	<b>_</b>
1	1	Į	}	1	1	1	1	1 4	l	1	1 .	1	1	1	1

# DIAMOND DRILL HOLE LOG

PROJECT MIKWAM - 260

HOLE No. DDH-260-83-7

Page <u>5</u> of <u>9</u>

F00	TAGE		CORE	3		SAMPL	`.E			Ana	lytical	I Resu	ult:			_
FROM	то	(alteration, structure, mineralization)	10	SULPH-		EDOM	7.0	LENGTH	Au	As	Zn		1			Ţ
			AXIS		MOMBER	FROM	ТО	LENGTH	ppb	ppm	ppm					
1	<u> </u>		-	L	-				<u> </u>			<u> </u>		$\bot$		
289.1	294.0	Quartz-ankerite vein	-				1		<u> </u>			لـــــــــــــــــــــــــــــــــــــ		$\overline{\Box}$		Ĺ
	<u> </u>	-coarse milky quartz with 15% patches of coarse ankerite		5%	14471	289.1	294.0	4.9'	12	N.D.	141	<u> </u>		T		
	1	5% pyrrhotite and pyrite (~3:1 ratio) and minor brown										<u> </u>				ĺ
	<u>'</u>	sphalerite at 293.8. Coarse dark grey sericite is		نــــا					\			<u> </u>				
		present throughout the vein and the adjacent wall rock.														Ĺ
		Contacts irregular.	<u></u>													
294 0	296 5	Quartz-ankerite veins in wall rock		-	<del>                                     </del>	-		+	<u></u>	+	$\;\;\longmapsto\;\;$	<del>'</del>	<u></u>			-
	1-22-2	-quartz-ankerite - sulphide - sericite yeins and yeinlet	<del></del> ,	4%	14422	204 0	200 5	2 5.1	15	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	+	<del></del>	+	·		+
	<del></del>	in a highly contorted, brown and grey altered wallrock		4.8	14472	294.0	296.5	+4.5'H	172	N.D.	+	<del>'</del>	<del></del>	·——		H
	<del></del> '	Sectionaverages 4% sulphides (predominantly pyrrhotite)		+	<del> </del>	<del> </del>	+	+	<del></del> ,	+	++	<del>'  </del>		1		+
	<del> </del>	best and the surprises (predominantly pyrmotite)	<del> </del>	<del> </del>	<del> </del>	+	<del> </del>	+	<del></del>	+	+	<u>'</u>	+	·——		+
296.5	314.8	Rhyodacite - altered		<u></u>			<del></del>	+	+	_	+		+	<del>'+</del>	_	+
	·	-highly sericitized to 297.0' (light brownish colour)	400	20%	14473	296.5	301.0	4.5'	64	N.D.		<u> </u>				T
	<u> </u>	then becomes highly schistose with quartz-carbonate		T	14474	<del> </del>		5.1'		N.D.		<del></del> 1	1			T
	<u> </u>	matrix and 20% stringer sulphide parallel to foliation							1 ,			<u> </u>	1			T
	1	and usually associated with irregular quartz veinlets			14475	306.1	310.5	4.4'	18	NOD.		)				Ţ
	<u> </u>	or sweats (these are also parallel to foliation and			I				T,				1			T
	T	usually less than '," wide). This zone may represent			1:4476	310.5	314.8	4.31	18	N.D.		<del>,                                    </del>				T
	T	orginal bedded sulphides and chert that has been					1	1	<del>                                     </del>			<del>, , ,</del>				T
		recrystallized and re mobilized due to metamorphism.							<del></del> ,			<del></del> )				T
}		Foliation is crenulated to 307' then becomes more							<u></u> ,							Ţ
		regular. Brownish colour varies in intensity but continu	nes				1									Ţ
		to 314.8' - appears to be mostly silica and sericite,														Ĺ
		little carbonate here.							<u> </u>							
					L											
314.8	331.6	Rhyodacite														
		-well-foliated with quartz-carbonate veinlets and 3%		3%	14477	314.8	319.9	5.11		N.D.						L
		sulphides until 317' then rock becomes more granular,			14478	319.9	325.9	5.0'	2	5				<u>'</u>		L
		poorly foliated and non-mineralized until 319.9'. From														
		here the host rock remains the same but it is riddled		<del></del>	14479		330.4				_			<u>'</u>		L
		with quartz "sweats" (1/8" to 4" across) with associate	<b>a</b>		14480	330.4	331.6	1.2'	19	N.D.						L
		coarse sericite, chlorite, carbonate and 3% purrbetite						<u></u>		1					1	L
1		and pyrite. Quartz vein (4") at 331' contains 5% massi-	<b>L</b>											\		L
	<del>                                     </del>	Massi	1					,	1	,		1		· T	i	1

# DIAMOND DRILL HOLE LOG

PROJECT MIKWAM - 260

HOLE No. DDH-260-83-7

Page <u>6</u> of <u>9</u>

FOOT	TAGE	NOCH TIPE AND DESCRIPTION	CORE	1 5	1	SAMPLE	E	)	1	Anal	lytical	I Resu	ult:		_
FROM	то	(alteration, structure, mineralization)	TO I	SSULPH-		FROM	TO	ENAT	Au	As	Zn				_
			AXIS		HOMBER	FRUM	ТО	LENGTH-	ppb	ppm	ppm				_
		<u> </u>	<u> </u>						1						-
		pyrite and pyrrhotite with associatedcoarse sericite	<u> </u>				<u> </u>				1		1		_
		and chlorite.	<u>'</u>	1	1			<del></del>	1		'				_
331 (	362 5	Interflow sediments	<u></u>	<del></del>		-		++	·	<del></del>	4		1		_
9.10	302.5	Interflow sediments -appear similar to rhyodacites in colour and composition	1001	1.00	14402	1 221	224 5	12 51	<u></u>	<del></del>			'———		_
		and are probably derived from them, however these rocks		1-28	14481	331.6	334.2	2.6	(R		4		<b></b>		
		are granular, siliceous and poorly foliated, Sericite,	<del></del>	+	14482	339.8	343.0	3.2	14	20					_
		chlorite and carbonate are still present but are fine	1		1	1	1	1	<del></del> 1	1	<del></del>		+		
		grained within the matrix.1-2% sulphides (mostly pyrite)	7	+	1 ,		<del>                                     </del>	1	<del></del> 1	1	+		+		
	$\overline{}$	are present as very fine disseminations spread evenly	<del></del> }	+	<del></del>	1	<del>                                     </del>	+-	<del></del>	+	+	$\overline{}$	+		_
<del></del>		throughout the matrix and as occasional fine stringers	<del></del>	+	+	+	+	+	<del></del> )	+	+		<del></del>		
<del></del>	$\overline{}$	parallel to the foliation. Quartz-carbonate veinlets	<del></del> 1	+	<del>                                     </del>	<del>                                     </del>	+	1	<del></del> ,	1	+		+		
		(up to 1.5 wide still occur but are non-mineralized	<del></del> 1	<u>†</u> ,	1	1	1	1	<u> </u>	1	+		<del></del>		
		Six-inch, irregular quartz vein at 352.5' contains			14483	352.0	355.6	3.6'	4	N.D.					
		fragments of wall-rock -coarse sericite, chlorite and	1						1						
		biotite as well as some ankerite and minor sulphides.							1						
		From this vein to 355.5' the rocks contain increasing	<u></u> ,	<u> </u>	1				<u> </u>						
		amounts of white calcite giving the core a speckled		<u></u> ,											
		appearance and increasing amounts of pyrite (disseminat													_
		and stringers types) up to 8% from 354.5' to 355.6'	1	8%					<u> </u>			`			_
		From 355.6' to 362.5' the rocks are moderately schistos	<u>e</u>		14484	355.6	359.4	3.81	7	N.D.			1		
$\prod$	1	and locally, quite chloritic.3% finely disseminated	<u></u>						<u> </u>			<u> </u>	<u> </u>		_
		pyrrhotite from 357.5' to 359.4'. ½" quartz-carbonate	<u> </u>		L				<u> </u>			<u> </u>	1		_
		vein at 358'.										<u> </u>			_
		1	<u></u>	<b>└</b>	L	<del></del>		+		-	<u></u>	·	4		_
362.5	366.4	Ash tuff	<u></u>	<del></del>	<u> </u>	<del></del>	L	+	<u></u>	-	<u></u>	<del>'</del>	<u></u>		_
	<del>'</del>	-well-foliated, highly carbonatized (ankerite), medium	<u></u>	1-2%	14485	362.5	366.4	3.9	13	N.D.	154	<b>'</b> —	4		<u>.</u>
	<u>'</u>	grained tuff.1-2% pyrrhotite disseminated throughout	<u></u>	-		-		-		-	<u></u>	<del>'</del>	<u></u>		
	<u> </u>	as well as in few thin (1/16") stringers with reddish	<u></u>	<b></b>	L	-		-		-		<b>'</b> +	<u></u>		_
	` <u> </u>	brown sphalerite at 365'	<u></u>	<b>├</b>	<u></u>	-	<u> </u>	-		-	<u></u>	<b>'</b> —	4		_
	' <del></del>	<u> </u>	<u> </u>	+	<del></del>	-	<del></del>	+	<u></u>	<del> </del>	<del></del>	<del></del>	<b></b>		_
	<del></del>	<u> </u>	<del></del>	100	<del></del>	<del> </del>	<del></del>	+	<del> </del>	+	<del>                                     </del>	<u>'</u>	+		
	·		<u></u>	+	<del></del>	<del></del>	<del></del>	+	<u></u>	<del></del>	$\longrightarrow$	<del>'</del>	<del></del>		_
Г		Į.	4 ,	1 5	1	1 4		( )	4 5	1 1	r 1		. 1	i	

# DIAMOND DRILL HOLE LOG

PROJECT MIKWAM

HOLE No. DDH-260-83-7 Page 7 of 9

F00	TAGE	ROCK TYPE AND DESCRIPTION	CORE	*		SAMPL	LE			Ana	lytica	al Resu	ılt:		
FROM	то	(alteration, structure, mineralization)	ANGLES'	SULPH-		FROM	то	LENGTH	Au		Zn				$\Box$
			AXIS				<del></del>		ppb	ppm	ppm				_
366.4	399.7	Rhyodacite	$\vdash$				<del> </del>	+	-	+		++	-+		
		-well-foliated but in a more regular fashion than the	35°	1-2%	14486	367.0	368.0	1.0'	4	N.D.		1			
		previous flow banding ie. more like bedding or lamination	ıs		14487		373.5			N.D.		<del>                                     </del>			
		now. Locally granular or argillaceous, may be transition	1		14488		381.0			N.D.					
		into sediments.thin quartz veinlets parallel to foliation	h												
		have bluish tint and may be recrystallized chert. Quart:			14489	381.0	387.0	6.0'	19	5					
		veins at 367.5', 371.3' and 372' cross-cut foliation						T					1		
		slightly (about 70-80° to CA) and show associated			14490	387.0	390.0	3.0'	8	N.D.					
		sericite-chlorite-carbonate-sulphide mineralization.			14491	<del></del>	395.0		+	5			1		
		Sulphides are predominantly pyrrhotite with some pyrite													
		and occur as disseminations and fine stringers. Becomes			14492	396.7	399.7	3.0'	12	N.D.					
		increasingly siliceous towards 400'													
		7													
399.7	408.6	Cherty mudstone												T	
		-finely laminated, light grey, composed of very fine	35 <sup>0</sup>	2%	14493	399.7	404.0	4.3'	7	N.D.					
		grained quartz, sericite and locally, green chlorite.													
		Adjacent to quartz veins sericit@ andchlorite are			14494	404.0	408.4	4.4'	7	N.D.					$\Box$
		recrystallized into coarse clots, with 2% pyrrhotite													<u>.                                    </u>
		and pyrite and minor biotite								1	<u></u>				
	1				ļ				<u> </u>						
408.6	413.2	Interflow sediments			<u></u>	<u></u>				-	<u></u>				
		-granular, bedded, volcanic-derived grey wacke. Few quar							<u></u>		<u></u>	1			$\dashv$
		veinlets, minor sulphides	40 <sup>0</sup>	<u>&lt;18</u>					<u></u>			1			_
					<u></u>		ļ	1		1	<u></u>	1			
413.2	419.6	Mudstone	<u> </u>	<u> </u>	1 11 2 2	1	\	1	1	-	<u></u>	1			
	<u></u>	-finely laminated, chlorite and sericite - rich, highly	<u></u>	K 18	14495	413.2	419.6	6.4	15_	N.D.	-	1			
		contorted due to "intrusion" of quartz veins. The			<del> </del>	<del></del>			<del> </del>	+	<u> </u>	+			
	<b></b>	latter are sub-parallel to the laminations, are light gre	фУ	ļ	<del> </del>	+	<del></del>	+	<del> </del>		<del></del>	+	<b>\</b>		
	ļ	to milky-white in colour and have coarse sericite-		<u> </u>	<del> </del>		<del> </del>		<del> </del>	+	-	+	<b></b>		
		chlorite-biotite clots within the vein and along	-		<del> </del>	1	<del> </del>	-	-	-		+	<b></b>		
		borders. May be minor tourmaline. Pyrite is minor.	1		<del> </del>	-	-	-	-		-	+	<b></b>		
		Rock is light green to light brown (possibly due to	<del> </del>		<del> </del>	<del></del>	-	+	<del> </del>	+	-	+	<b></b>		
	<u></u>	'partial kaolinization of sericite) · Coarse ankerite	<del></del>		<del> </del>		+	+		+		+	<u> </u>		$\overline{}$
1	1	is also present in the veins	1	1	1	1	1	1	!		1	1 1	1		

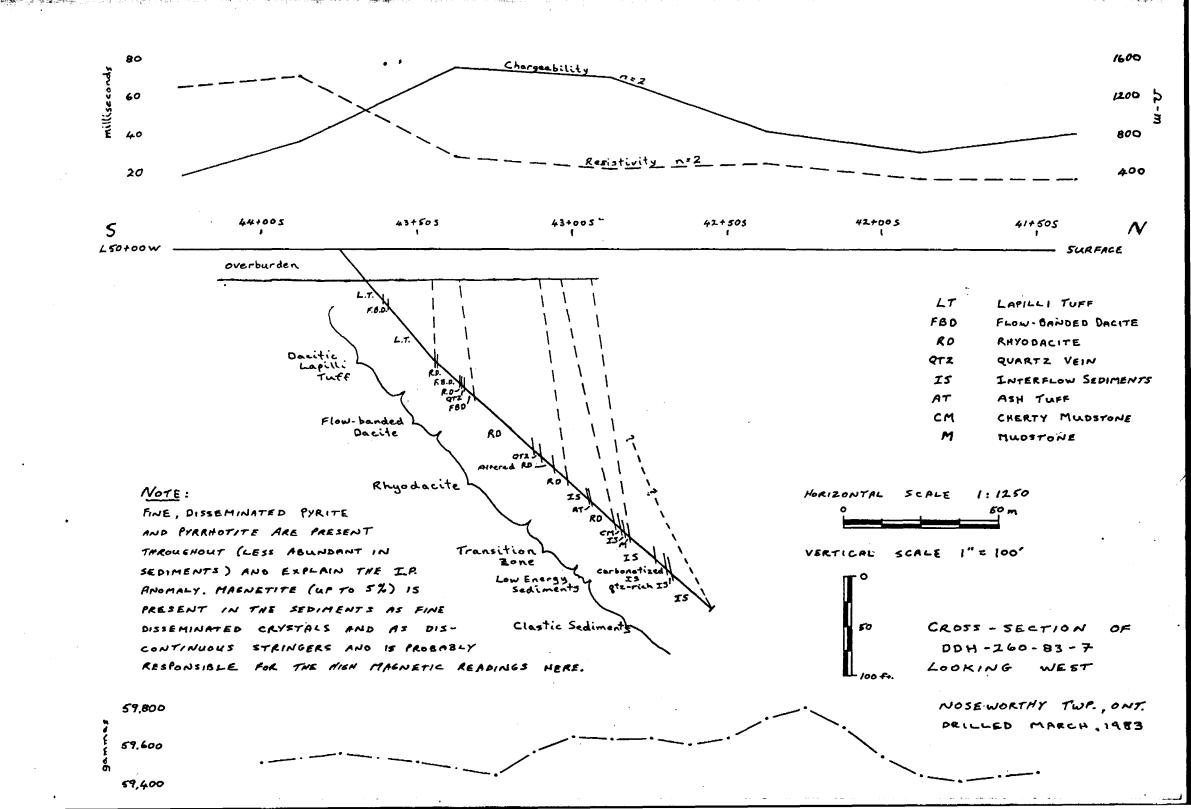
### DIAMOND DRILL HOLE LOG

PROJECT Mikwam - 260

HOLE No. DDH-260-83-7

Page\_8\_of\_\_\_9

F00	TAGE	ROCK TYPE AND DESCRIPTION	CORE	%	L	SAMPI	.E			Analy	tical	Result:		 
FROM	то	(alteration, structure, mineralization)	TO	SULPH-	NUMBER	FROM	то	LENGTH	Au	+				
			AXIS						ppb	ppm			_	 _
			<u> </u>		<del> </del>		ļ						<del></del>	 _
119.6	454.0	Interflow sediments	1400		<b></b>		ļ	ļ		<del>                                     </del>				 _
		-transitional over a few feet from mud stone into	400	<b>&lt;</b> 18	14496	419.6	424.4	4.8'	3	10				 L
		a granular, more massive grey wacke-type sediment. Quar	z											 L
		-ankerite veining is common, however, sulphide mineral-			14497		429.2			N.D.				 L
		ization is minor. Rock is locally cherty, very fine	<u></u>		14498	436.0	437.0	1.0'	5	N.D.				
		grained and contains abundant calcite in fractures, in			14499	442.0	443.0	1.0'	10	N.D.				
		the matrix and with quartz (+ ankerite) in veinlets.												
		Tourmaline is present in two small quartz veins at 436.	'		14500	450.0	451.0	1.0'	4	N.D.				
		and 442.5' (minor pyrite also). One inch wide quartz												
		vein at 450.6' has 4% associated pyrite in adjacent wal	1											
		rock. Start to get 3% magnetite crystals at 449.2'												
														Γ
454.0	469.1	Highly carbonatized sediment												Γ
		-finely laminated but medium grained and 25% ankerite	45°	<b>&lt;1</b> %										Γ
		crystals (average 1 mm in size) give the rock a tuff-												
		aceous appearance. Matrix is made up of chlorite, ser-												
		icite and magnetite which give the rock a well-defined												Γ
		foliation. Calcite alteration begins at 466' and												Γ
		ankerite decreases some what and becomes finer grained.												
														Γ
469.1	474.1	Quartz rich sediment												Ι
		-zone of patchy quartz with		2%	14614	469.1	474.5	5.4	5	N.D.				I
		coarse chlorite, sericite and 3% pyrite in the wallrock												
		The wall rock itself also appears somewhat silicified.												
		Discontinuous stringers of magnetite are also found												L
		throughout this zone (about 5%) and give the rock a												
		strong magnetic signature												
														Ĺ
474.1	537.0	Interflow sediments												
		-still strong carbonatization (calcite and arkerite). 3%	35°	1%										
		disseminated magnetite crystals are present to 480'.												Γ
		Pyrite occurs locally, parallel to foliation/bedding			1	T -								Ι
	<del> </del>	and may be recrystallized bedded pyrite. Rock appears					1							
	<del>                                     </del>	Augustian Deduct Pylice. Nick Appears	1		<del>                                     </del>	<del>                                     </del>	1			1				T
			<del>                                     </del>	1	1	1	<del>                                     </del>		1	1 1				T



DIAMOND DRILL HOLE LOG

PROJECT MIKWAM - 260

HOLE No. DDH-260-83-7

Page 9 of 9

1 F00	TAGE	ROCK TYPE AND DESCRIPTION	CORE	<b>x</b>		SAMP	LE		!	Ana	lytical	l Rest	ult:		
FROM	то	(alteration, structure, mineralization)	ANGLES	SULPH-	NUMBER	FROM	то	LENGTH	Au	As					$\overline{\bot}$
			<del>                                     </del>						ppb	ppm	,		-		-
		tuffaceous, locally, where carbonate (calcite and						<del>                                     </del>		<del>                                     </del>					-
		ankerite) becomes coarse grained. Quartz carbonate								<u> </u>					
		veinlets are thin but occur fairly often and at 20-250								<del> </del>					
		to C.A. Set of fine fractures, parallel to these vein-													
		lets occurs from 504' to 505.5'. At 509' the													
		foliation shallows drastically and is highly contorted													
		to 513' then again from 515' to 516'. Irregular		-											
		quartz vein/sweat at 514.5'-515.5' contains the usual													
		coarse chlorite and sericite as well as 2% magnetite			14615	514.5	515.5	1.0'	7	N.D.					
		crystals and 2% pyrrhotite and pyrite. Host rock is													
		non-mineralized. Foliation shallows down hole such													
		that it is $20^{\circ}$ to C.A. at 537'.	200												
•															
		End of hole - 537'													
		// // // //													
			<u> </u>												
		16.													
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Ainistry of Natural Resoughes Report of Work



to be recorded (see table below). cel work use form no. 1362 "Report igical, Geophysical, Geophemical and

900

pector's Licence No.

A-37767

Newmont Exploration of Canada Ltd.

33 Yonge St., Suite 370, TORONTO, Onterio. M5E 1T2

Summary of Work Performance and Distribution of Credits

Total Work Days Cr. claimed	× · N	fining Claim	Work	Mi	ning Claim	Work	M	lining Claim	Work
3/60	Prefix	Number	Days Or.	Profix	Number	Deys Cr.	Profix	Number	Days O
for Performance of the following work, (Check one only)	L.	624981	20	L.	624989	20	L.	633270	20
Menual Work		624982	20		624990	20		633271	20
Sheft Sinking Drifting or	sur singi si sang	624983	20		633106	20		633272	20
other Leteral Work.  Compressed Air, other		624984	20		633107	20	:	633273	20
Power driven or mechanical equip.		624985	20		633130	20		633312	20
Power Stripping		624986	20		633131	20		633313	20
Diamond or other Core drilling		624987	20		633132	20		633330	20
Land Survey	r .* saAnda	624988	20		633269	20		633331	20

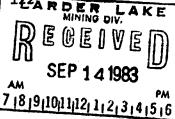
Hole No.	Claim No.	Depth	No.of Samples	Date Drilled	No. of Days	
260-83-3	L.633564	850°	36	Feb. 26-March 3,	1983 886	
260-83-4	L.633355	627'	25	March 5-7, 1983	652	
<b>260-</b> 83-5	L.633367	517'	· 20	March 9-11, 1983	TARIO GEOL <b>697</b> AL SURVEY	
260-83-6	L.624982	507'	. 20	March 12-14, 1983	Hubenhols27 Trice	
260-83-7	L.624982	537 <b>'</b>	21	March 15-17, 1983	SEP 3 051983	
		3038	12ARD	ER LAKE	RECENT ED	
Drilling o	contracted to:	•		INING DIV.		

Dominik Drilling Inc.

P.O. Box 247

VAL D'OR, Quebec

**J9P 4P3** 



RECORDESEP

Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying

R.A. Archer, P.O. Box 1430, TIMMINS, Ontario.

P4N 7N2

Date Certified ,1983 Certified by (Signature)

Table of Information/Attachments Required by the Mining Recorder

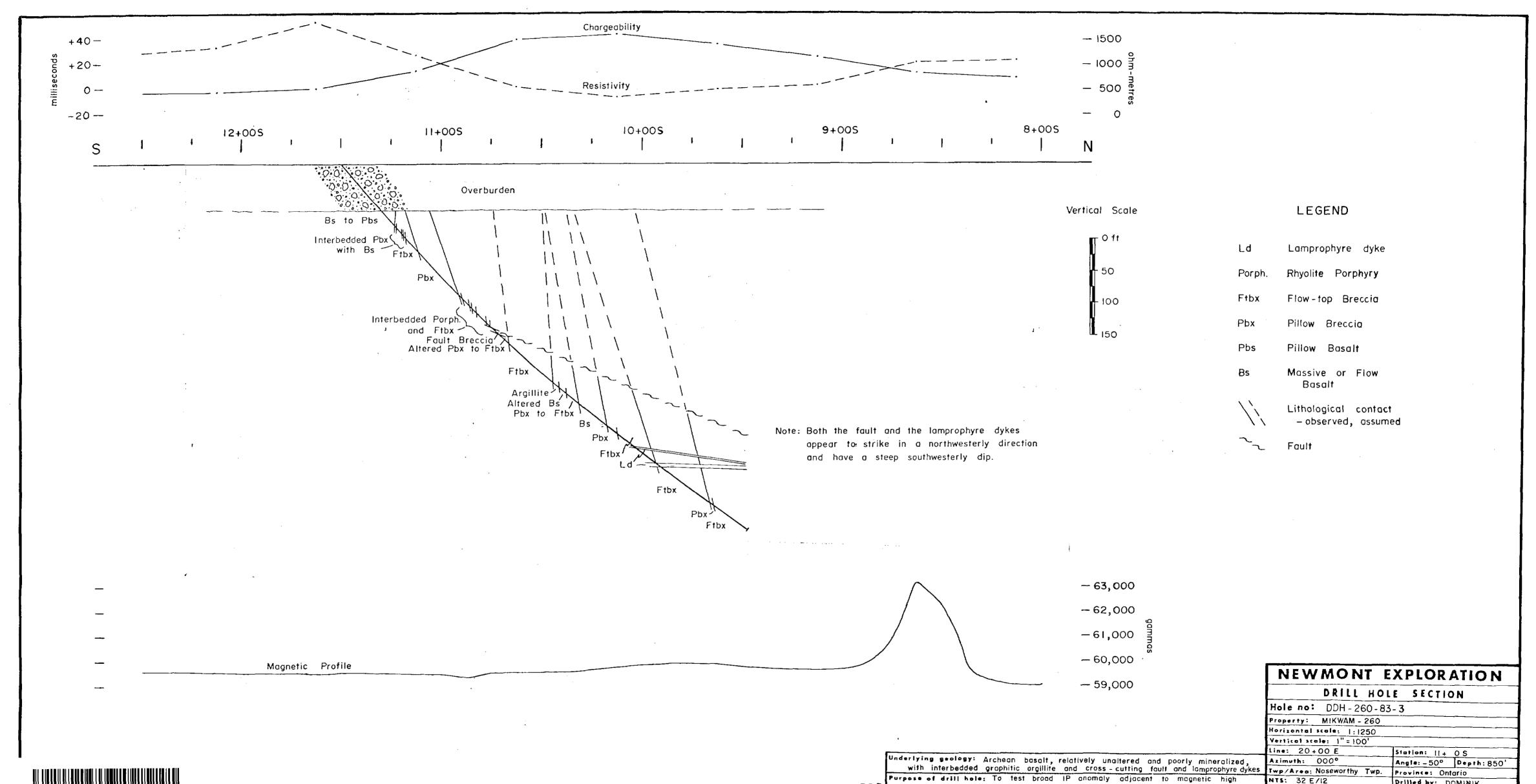
Type of Work	Specific information per type	Other information (Common to 2 or more types)	Attachments
Menuel Work	,		
Shaft Sinking, Drifting or other Lateral Work	NII	Names and addresses of men who performed manual work / operated equipment, together with dates and hours of employment.	Work Sketch: these are required to show
Compressed air, other power driven or mechanical equip.	Type of equipment	With dates and flours of employment.	the location and extent of work in relation to the
Fower Stripping	Type of equipment and amount expended, Note: Proof of actual cost must be submitted within 30 days of recording.	Names and addresses of owner or operator together with dates when drilling/stripping	neerest claim post.

Mining.	Claims	Traversed	II ist in	numerical	sequence
	Ciaiiiia	I I D V C I S C CI		HUHICHCAL	seducite

Prefix	dining Claim  Number	Expend. Days Cr.		Prefix	fining Claim Number	Expend. Days Cr.
L.	633332	20		L.	633356	40
	633334	20			633357	40
	633335	20		į.	633358	40
	633336	20			633359	40
	633337	20			633360	40
	633338	40			633361	40
	633339	40			633362	40
	633340	40			633363	40
İ	633341	40		! ! !	633364	40
	633342	40	l i		633365	40
	633343	40			633366	40
	633344	40		}	633367	40
	633345	40			633368	40
	633346	40			633369	40
	633347	40			633370	20
ļ	633348	40			633371	20
	633349	40			633439	20
•	633350	40			633440	20
	633351	40			633441	20
	633352	40			633442	20
	633353	40			633443	. 20
	633354	40			633444	20
•	633355	40			633445	20

Mining Claims Traversed (List in numerical sequence)

Mining Claim		Expend.		lining Claim	Expend.
Prefix	Number	Days Cr.	Prefix	Number	Days Cr.
L.	633446	20	L.	633565	20
	633447	20		633566	20
!	633448	20		633641	60
	633449	⋅ 20		633642	60
	633450	20		633643	20
	633451	20		633644	20
	633548	20		633645	20
	633549	20		633646	20
	633550	20		633647	20
	633551	20		633648	20
	633552	40		633649	20
	633553	20		633650	20
	633554	40		633651	20
	633555	20	,	633652	20
	633556	20	•	633653	20
	633557	20		633654	20
	633558	20		633655	20
. :	633559	20	,	633656	20
	633560 ,	20	•	634364	20
	633561	40		634365	20
ż	633562	20		634366	40
	633563	20		634367	40
	633564	20		634368	20

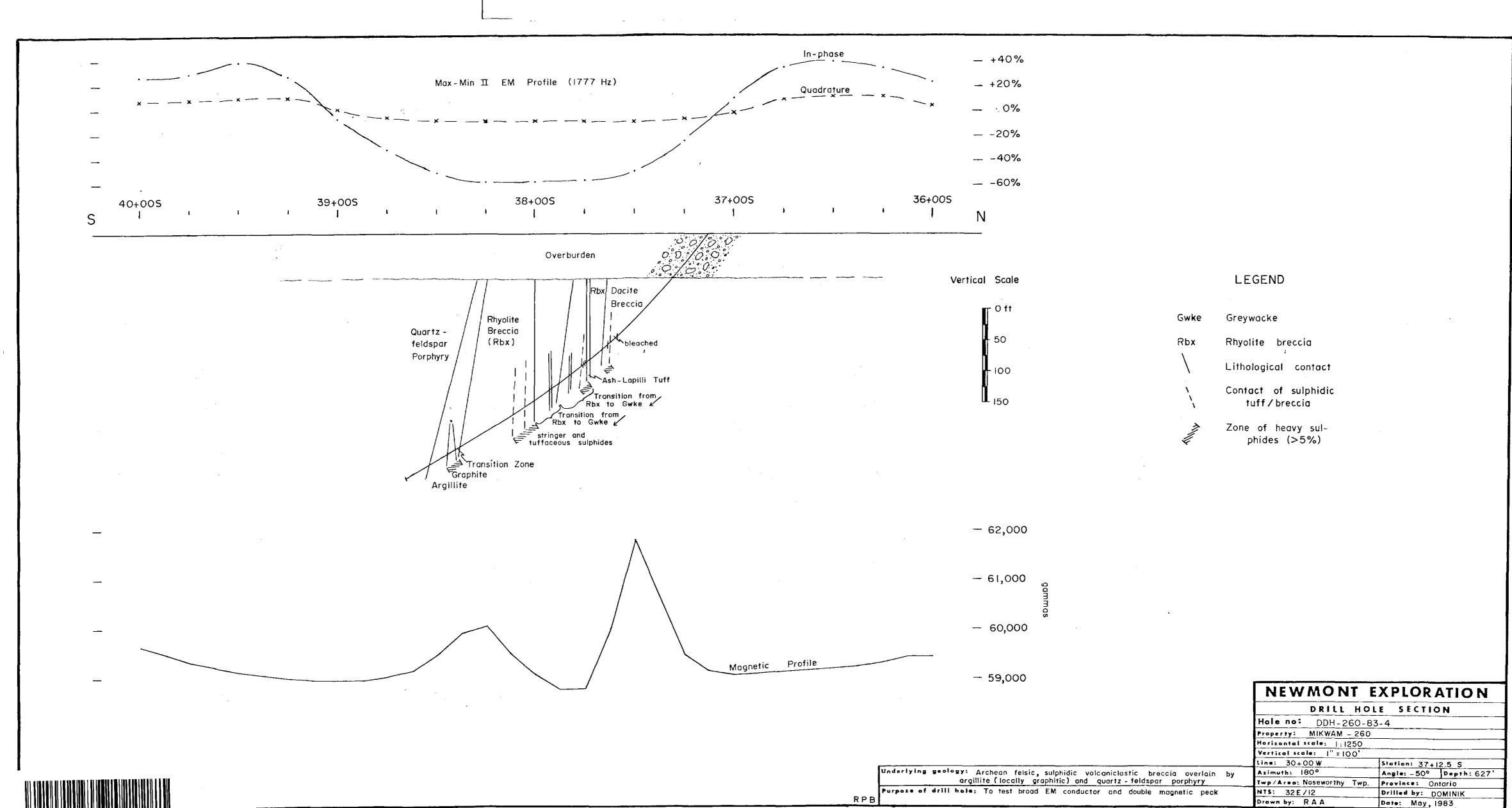


NTS: 32 E/12

Drawn by: RAA

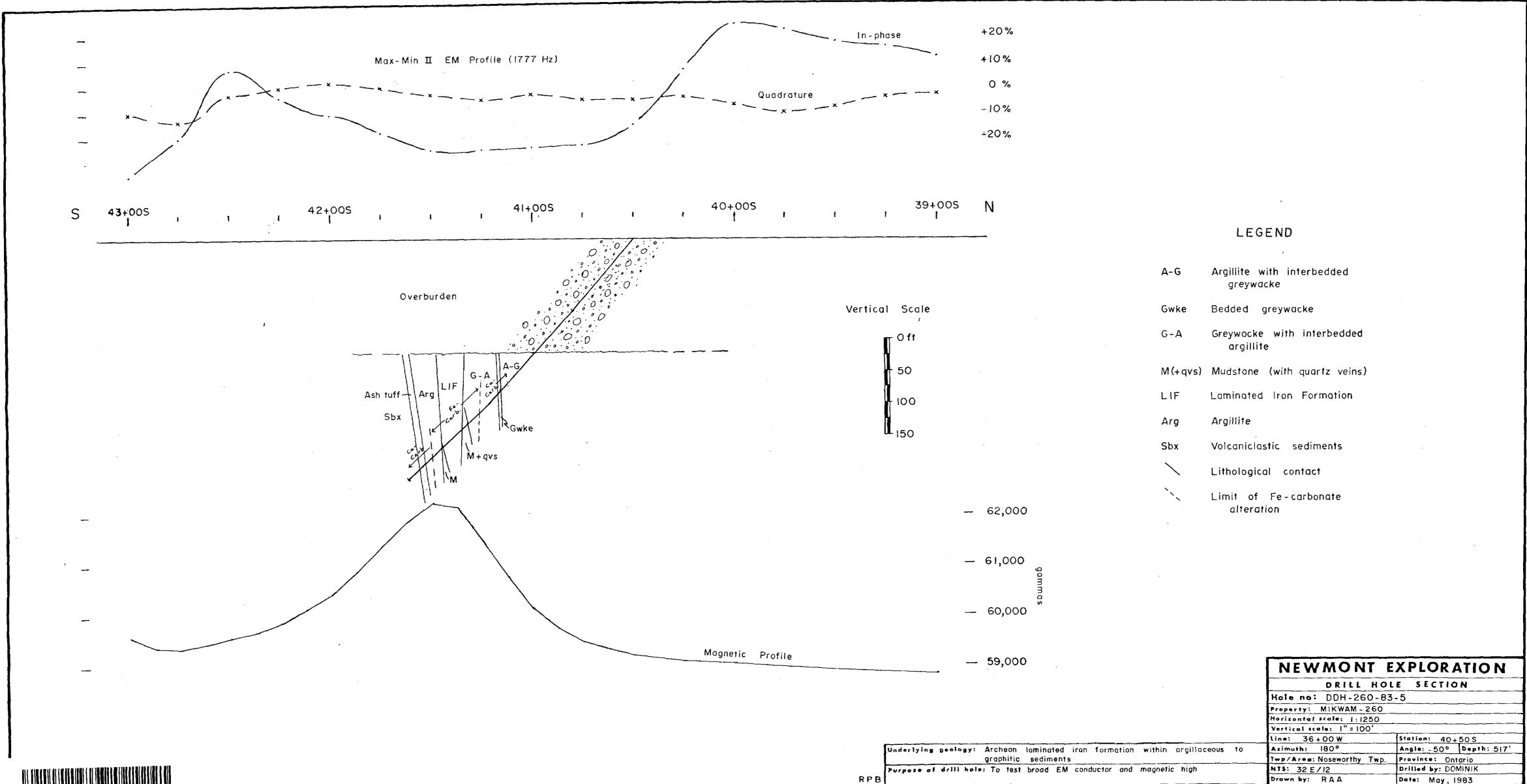
Drilled by: DOMINIK

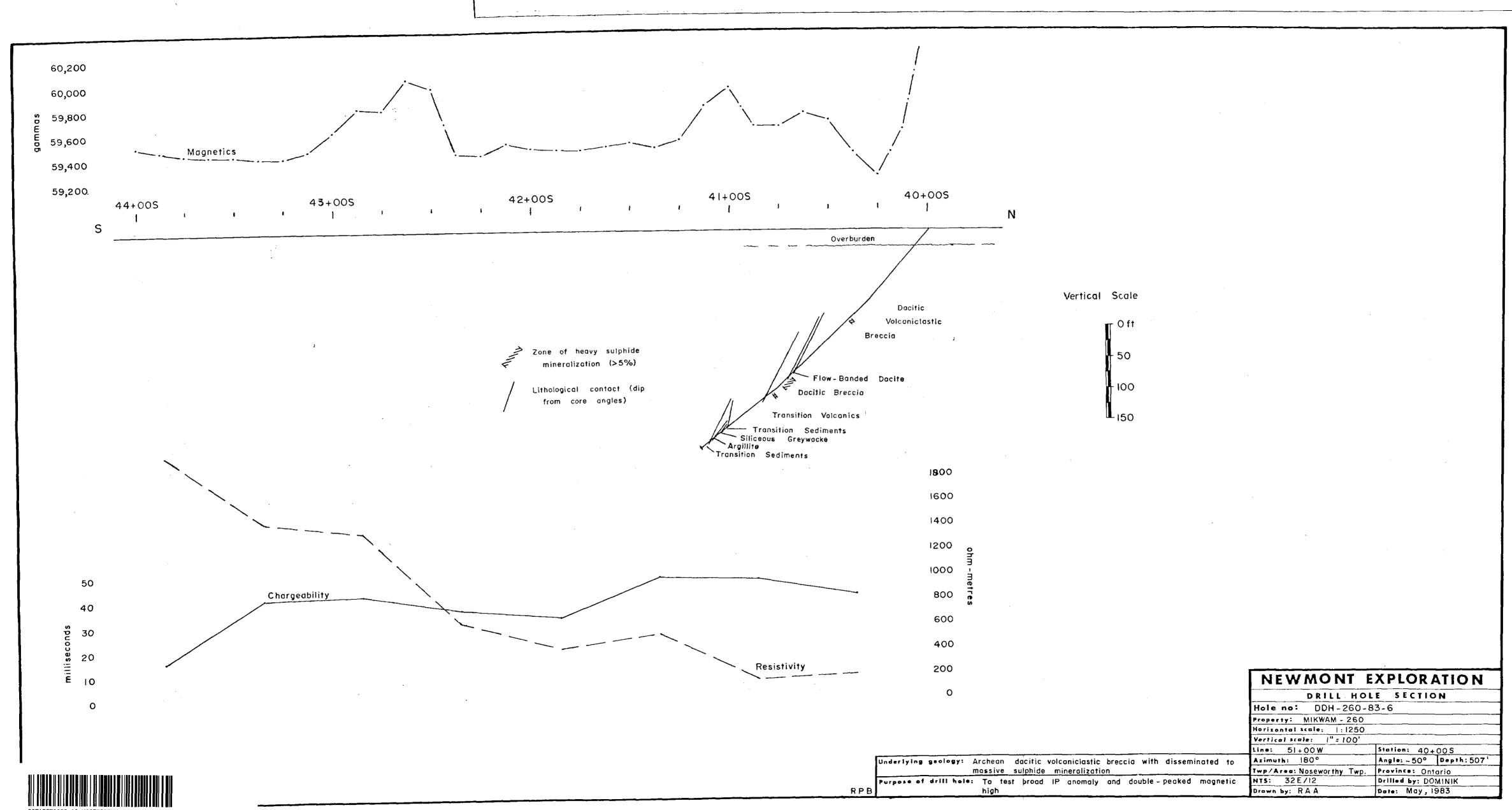
Date: May, 1983



TWO HOLE PUNCH FOR DRILL LUG FORMAT

TRUM TO THIS FIRE





VO HOLE PUNCH FOR DRILL LOG FORMAT

TRIM TO THIS LINE

AND