



TOWNSHIP: Shaw

REPORT No.: 28

WORK PERFORMED BY: Hollinger Argus Ltd.

CLAIM No.	HOLE No.	FOOTAGE	DATE	NOTE
P 539616	SH 3-1-81	727.0	Jan/81	(1)
	SH 3-2-81	<sup>528.0</sup> 1255	Feb/81	(1)

Notes: (1) #30-81

SH3-1-81

(i)

Core Size:

BQ

Location: XL 4E at 125 m N

PROPERTY:

SHAW #3 GROUP - Brown McDade Option

Azimuth: 250°

Township:

Shaw Township

Commenced: January 27, 1981

HOLE No.

Surface

Location of Collar from #1 Post of P.539616

Finished: February 1, 1981

Elevation:

West 995' South 275'

Contractor: Bradley Bros.

Dip:	Collar @ -45°; @ 200'-54.5°;	
4	@ 400'-51.5°; @ 600'-60°	

ТО	DESCRIPTION	From	To	Width							Description of Sample
	SUMMARY LOG										
70'	Casing. (Casing pulled).							! 			
252.7	Andesitic to Dacitic Volcanics with interbeds										
	of iron formation.										
	Dacite to dacite tuff: 123-148.2,								٠.		
	173.2-252.7.										
	Iron formation/Exhalite: 92.7-98.7,										
	150-155.8, 164.1-173.2.										
391.8	Andesitic Volcanics - calcitic, with iron										·
	formation from 252.7-253.5. Fragmental										
	volcanics below 374'.										
485.4	Andesitic to Dacitic Volcanics with interbeds										
	of oxide and sulphide iron formation.										
	Dacite tuff: 434.2-461.9.		·								
	Iron Formation: 391.8-393.3, 401.1-419.4										
	brecciated, 425.6-434.2, 461.9-463.8,										
	464.8-485.4.										
555.9	Carbonated dacite, dacite tuff.							ļ			
				1							
					1						
						i					
727	END OF HOLE		-		1						
i				i			1				
	70' 252.7  391.8  485.4  555.9	SUMMARY LOG  70' Casing. (Casing pulled).  252.7 Andesitic to Dacitic Volcanics with interbeds of iron formation.  Dacite to dacite tuff: 123-148.2,  173.2-252.7.  Iron formation/Exhalite: 92.7-98.7,  150-155.8, 164.1-173.2.  391.8 Andesitic Volcanics - calcitic, with iron formation from 252.7-253.5. Fragmental volcanics below 374'.  485.4 Andesitic to Dacitic Volcanics with interbeds of oxide and sulphide iron formation.  Dacite tuff: 434.2-461.9.  Iron Formation: 391.8-393.3, 401.1-419.4  brecciated, 425.6-434.2, 461.9-463.8,  464.8-485.4.  555.9 Carbonated dacite, dacite tuff.  727 Andesitic Volcanics.	SUMMARY LOG  70' Casing. (Casing pulled).  252.7 Andesitic to Dacitic Volcanics with interbeds of iron formation.  Dacite to dacite tuff: 123-148.2,  173.2-252.7.  Iron formation/Exhalite: 92.7-98.7,  150-155.8, 164.1-173.2.  391.8 Andesitic Volcanics - calcitic, with iron formation from 252.7-253.5. Fragmental volcanics below 374'.  485.4 Andesitic to Dacitic Volcanics with interbeds of oxide and sulphide iron formation.  Dacite tuff: 434.2-461.9.  Iron Formation: 391.8-393.3, 401.1-419.4 brecciated, 425.6-434.2, 461.9-463.8,  464.8-485.4.  555.9 Carbonated dacite, dacite tuff.	SUMMARY LOG  70' Casing. (Casing pulled).  252.7 Andesitic to Dacitic Volcanics with interbeds     of iron formation.     Dacite to dacite tuff: 123-148.2,         173.2-252.7.      Iron formation/Exhalite: 92.7-98.7,         150-155.8, 164.1-173.2.  391.8 Andesitic Volcanics - calcitic, with iron     formation from 252.7-253.5. Fragmental     volcanics below 374'.  485.4 Andesitic to Dacitic Volcanics with interbeds     of oxide and sulphide iron formation.     Dacite tuff: 434.2-461.9.     Iron Formation: 391.8-393.3, 401.1-419.4     brecciated, 425.6-434.2, 461.9-463.8,     464.8-485.4.  555.9 Carbonated dacite, dacite tuff.	SUMMARY LOG  70' Casing. (Casing pulled).  252.7 Andesitic to Dacitic Volcanics with interbeds  of iron formation.  Dacite to dacite tuff: 123-148.2,  173.2-252.7.  Iron formation/Exhalite: 92.7-98.7,  150-155.8, 164.1-173.2.  391.8 Andesitic Volcanics - calcitic, with iron  formation from 252.7-253.5. Fragmental  volcanics below 374'.  485.4 Andesitic to Dacitic Volcanics with interbeds  of oxide and sulphide iron formation.  Dacite tuff: 434.2-461.9.  Iron Formation: 391.8-393.3, 401.1-419.4  brecciated, 425.6-434.2, 461.9-463.8,  464.8-485.4.  555.9 Carbonated dacite, dacite tuff.	SUMMARY LOG  70' Casing. (Casing pulled).  252.7 Andesitic to Dacitic Volcanics with interbeds  of iron formation.  Dacite to dacite tuff: 123-148.2,  173.2-252.7.  Iron formation/Exhalite: 92.7-98.7,  150-155.8, 164.1-173.2.  391.8 Andesitic Volcanics - calcitic, with iron  formation from 252.7-253.5. Fragmental  volcanics below 374'.  485.4 Andesitic to Dacitic Volcanics with interbeds  of oxide and sulphide iron formation.  Dacite tuff: 434.2-461.9.  Iron Formation: 391.8-393.3, 401.1-419.4  brecciated, 425.6-434.2, 461.9-463.8,  464.8-485.4.  555.9 Carbonated dacite, dacite tuff.	SUMMARY LOG  70' Casing. (Casing pulled).  252.7 Andesitic to Dacitic Volcanics with interbeds  of iron formation.  Dacite to dacite tuff: 123-148.2,  173.2-252.7.  Iron formation/Exhalite: 92.7-98.7,  150-155.8, 164.1-173.2.  391.8 Andesitic Volcanics - calcitic, with iron  formation from 252.7-253.5. Fragmental  volcanics below 374'.  485.4 Andesitic to Dacitic Volcanics with interbeds  of oxide and sulphide iron formation.  Dacite tuff: 434.2-461.9.  Iron Formation: 391.8-393.3, 401.1-419.4  brecciated, 425.6-434.2, 461.9-463.8,  464.8-485.4.  555.9 Carbonated dacite, dacite tuff.	SUMMARY LOG  70' Casing. (Casing pulled).  252.7 Andesitic to Dacitic Volcanics with interbeds of iron formation. Dacite to dacite tuff: 123-148.2, 173.2-252.7. Iron formation/Exhalite: 92.7-98.7, 150-155.8, 164.1-173.2.  391.8 Andesitic Volcanics - calcitic, with iron formation from 252.7-253.5. Fragmental volcanics below 374'.  485.4 Andesitic to Dacitic Volcanics with interbeds of oxide and sulphide iron formation. Dacite tuff: 434.2-461.9. Iron Formation: 391.8-393.3, 401.1-419.4 brecciated, 425.6-434.2, 461.9-463.8, 464.8-485.4.  555.9 Carbonated dacite, dacite tuff.	SUMMARY LOG  70' Casing. (Casing pulled).  252.7 Andesitic to Dacitic Volcanics with interbeds of iron formation. Dacite to dacite tuff: 123-148.2, 173.2-252.7. Iron formation/Exhalite: 92.7-98.7, 150-155.8, 164.1-173.2.  391.8 Andesitic Volcanics - calcitic, with iron formation from 252.7-253.5. Fragmental volcanics below 374'.  485.4 Andesitic to Dacitic Volcanics with interbeds of oxide and sulphide iron formation. Dacite tuff: 434.2-461.9. Iron Formation: 391.8-393.3, 401.1-419.4 brecciated, 425.6-434.2, 461.9-463.8, 464.8-485.4.  555.9 Carbonated dacite, dacite tuff.	SUMMARY LOG   Total Casing Casing pulled   Summary Log   Summary Log	SUMMARY LOG   Total Casing pulled   SUMMARY LOG   SUMARY LOG   SUMMARY LOG   SUMARY LOG   S

Core Size:

BQ

Location: XL 4E at 125 m N

PROPERTY:

SHAW #3 GROUP - Brown McDade Option

Azimuth:

250°

Township:

Shaw Township

Commenced: January 27, 1981

Elevation: Surface

Location of Collar from #1 Post of P.539616

Finished: February 1, 1981

HOLE No.

Dip: Collar @ -45°; @ 200'-54.5°; @ 400'-51.5°; @ 600'-60°

West 995' South 275'

Contractor: Bradley Bros.

From	То	DESCRIPTION	From	То	Width					Description of Sample
0	70'	Casing. (Casing pulled).								
		The casing was driven to 78'.								
						-				
70	252.7	Volcanics - a sequence of andesitic to								
		dacitic rocks, with scattered units of iron							•	
		formation.					•			
		In this upper sequence of volcanics,								
		the rocks are moderately to well altered,								
		poorly veined and sparsely mineralized.								·
		Alteration in the volcanics consists of								
		ankerite and chlorite ± sericite.								
-		The andesitic portions vary from medium								
		to dark green and grey green in colour, while	3							·
		the dacitic rocks are medium to light grey :								
		green and putty coloured. To some extent								
<del></del>		the dacitic sections may represent more								
<del></del>		bleached and carbonated units of andesite								
<del></del>		since contacts between andesite and dacite								
<del>(,, , , , , , , , , , , , , , , , , , ,</del>		are either gradational or very irregular.								
		The iron formation member of the						-		
		volcanic sequence is characterized by narrow								
		bands of magnetite, and bright red jasper ±								
<u> </u>		cherty and ankeritic bands with/without	1		į					

Township Shaw Township

From To DESCRIPTION From To Width Description of Sample magnetite. Volcanic material is often intercalated with the iron formation. The breakdown of units within the sequence includes: 70-92.7 - Andesite - moderately fractured with chlorite and stringers of 80  $A_2 - 20$ % strs. quartz-ankerite up to 79.3. From 79.3-80.8 the core is bleached to yellowish grey green 92.5 2.5 90 A2 - 5% strs. and putty coloured - potential dacite(?). 92.5 95 2.5 E - 15% " - 20% mgt. tr.py From 80.8-92.7, the andesite is poorly frac-97 E - minor " - 10% mgt, minor py tured, veined and is speckled with ankerite E - 20% " - 7% mgt, tr.py 2 and tiny dark blebs of chlorite. C1A2 - 5% " 102 92.7-98.7 - Iron formation - for the A2 - 5% " 102 105 A2 - 10% " most part brick red to plum coloured, with 105 110 buff to earthy coloured carbonate sections from 94.2-95.7 and 96.0-97.7. The upper part of the iron formation, from 92.7-94.2, contains narrow bands and lenses of magnetite with scattered irregular patches of either carbonate or carbonated volcanics. The carbonate portions are pale grey to grey green in colour on fresh surfaces, but are putty to brownish and earthy in appearance on core surfaces - presumably an

,rom	To	DESCRIPTION	From	To	Width					Description of Sample
		effect of the ankerite present. These patches								
		are fine grained, sugary textured and contain				1			1	
	•	numerous tiny crystals/blebs of exsolved(?)								
-		magnetite.								
		The upper contact is strongly rusted					j			
		with ankerite at 85°. The core is moderately					:			. •
		veined with narrow, irregular stringers of						İ		
		ankerite-quartz.								
		From 94.2-95.7, the rock is a very fine						_		
		grained, sugary textured carbonate or car-								
		bonated volcanic with narrow bands/vein(?)							1.	
		of chert, and scattered blebs of exsolved								
_		magnetite. There is also a minor amount of								
		pyrite associated with some cherty bands and								
		chloritic fractures.			•					
		From 95.7-96.0, there is a narrow, ir-								
		regularly banded horizon of magnetite-								
		jasper at 850 to the core axis.					1			
		Below 96.0, there are no bands of								
		magnetite in the iron formation, although the	2							
		carbonate and jasper portions do contain a					1	İ		
		moderate amount of exsolved magnetite.								
		From 96.0-96.7. the core is well fractured and rusted with ankerite and is weakly								

,rom	To	DESCRIPTION	From	To	Width						Description of Sample
		reddish stained. This section is followed									
		by a unit of carbonate with irregular bands/				i 1					
	İ	patches of greyish to milky chert, from									
		96.7-97.7.									
•		The lower contact of the iron formation,									
		from 97.7-98.7, is a mixture of brick red to									
		plum coloured jasper with minor greyish		<del></del>							
		chert and patches of greyish carbonate.									
		Overall, the iron formation is moderately									
· · · · · · · · · · · · · · · · · · ·		magnetic with exception to the banded magnetite									
		sections from 92.7-94.2, and 95.7-96.0 which				-					
		are strongly magnetic.							•		
		The lower contact of the iron formation							·		
		is broken, bleached and rusted nearly normal							·	1	
		to the core.									
		98.7-150.0 - Volcanics - both dark									
		coloured andesitic volcanics and lighter									
		coloured, bleached sections of potential									
		dacite.									
		The first part of the zone, up to							<del></del>		
		approximately 123, consists of units of dark									
		chloritic andesite with scattered units of	1				1		<u> </u> -		1
-		yellowish grey green to putty coloured							<del>i</del>		
		dacite. Contacts between andesite and dacite	3		į						

Hole No. SH3-1-81

PROPERTY\_ Shaw #3 Group - Brown McDade Option

com	To	DESCRIPTION	From	To	width						Description of Sample
		are gradational and/or irregular.						Ì	1	1	·
		Below 123, the rocks are generally					İ	İ			;
		lighter in colour and marginal in composition	120	123	3			ļ			A <sub>2</sub> - 5% strs.
		to dacite, although there are lighter	123	125	2			Ì			A <sub>2</sub> /C <sub>1</sub> - 5% strs.
		coloured, bleached sections in this zone as									
		well. The change to lighter coloured rocks									• •
	1	after 123 is gradational. Similarly, below									
		148.2, the rocks grade darker in colour									
		again, and are andesitic in composition.									
		Lighter coloured bleached sections									
		within the volcanic sequence are found at:									
		98.7-99.1; 100.7-101.9; 103.9-104.1; 109.5-									
		110.0; 114.7-117.6; 131.8-132.5; 144.1-144.5;							•		
,		and 146-148.2.					*				
		All of the volcanics in the sequence are			•						
		amygdaloidal with scattered amygdules up to									
		7 mm in size filled with either quartz or									
		ankerite.									
		In the section 123-146, aside from being									
		lighter coloured, the rocks are coarsely			-						
		speckled with metacrysts of ankerite up to									
		3 mm in size. The ankerite occurs in sub-									
		ovoid blebs which are completely enveloped by									
		chlorite. Elsewhere in the sequence, the					T				

rom	To	DESCRIPTION	From	To	Width						Description of Sample
·		core is locally speckled with fine metacrysts							i		· · · · · · · · · · · · · · · · · · ·
		of ankerite.									
		Within the andesite at 108.2-108.7, and									
		119-119.2, there is a minor amount of brick		····							
	! !	red to purplish iron formation occurring with					:				
		quartz-ankerite stringer material. The lower									
		occurrence is strongly magnetic.		·						<u></u>	
		The base of the volcanic sequence, from				<u>-</u>					
		146-150, is finely tuffaceous in appearance.									
		150-155.8 - Interlayered iron formation									
		and andesitic volcanics. The iron formation									
		sections are typically banded with thin									
		lamellae of magnetite, chert, jasper and						-   ·			
		carbonate ± chlorite.									
		The andesitic portions at 150.7-152.3,			•						
		152.8-153.5, and 155.2-155.8, are thinly									
		bedded units of tuff, with very fine grained									
		layers, more coarsely granular/finely frag-									- Marie
		mental layers, and horizons of greyish to									
•		milky chert. Coarse to fine gradations within	1								
		the andesite suggest that tops are up the hole									
		Banding in both the iron formation and					1		<del>-  </del>		
		the andesite averages 65-700 to the core axis				<del></del>					
		The iron formation at 150-150.7 and				<del></del>		<del>!</del>			

rom	TO	DESCRIPTION	From	То	Widt	1					Description of Sample
		153.5-155.2 is strongly magnetic, with the							i		
		section 152.3-152.8 being moderately magnetic									
		- the andesite is non-magnetic. Trace amounts		<u> </u>		1	<del>;</del>	-			
		of pyrite are found within the andesitic tuffs			<del>-  </del>	!				<del>                                     </del>	
		155.8-164.1 - Andesite - medium to dark									
		green and chloritic with a local tuffaceous		-			İ				:
		appearance - particularly near the base of			-				<del>- </del>		
		the section.		<del></del>							
		The upper contact of the andesite is	150	151	1						E+A <sub>2</sub> - minor strs 30% mgt.
		well veined with stringers of quartz-ankerite	151	153	2						A <sub>2</sub> +E - 15% strs 3% py
		from 155.8-157.1, followed a fractured, rusty	153	155	2		<del> </del>				E+A <sub>2</sub> - 15% " - 20% mgt tr.p
		section from 157.1-157.4.	155	157	2						A <sub>2</sub> +E - 50% " - 5% mgt py
<del>, , , ,</del> ,		Elsewhere the andesite to andesite tuff,	157	160	3				<del>                                     </del>		A <sub>2</sub> - 10% " - minor py
		is poorly veined, sparsely mineralized and :	160	164	4						A <sub>2</sub> - minor " - tr.py
		is well altered with chlorite, ankerite.	164	167	• 3						E - 10% " - 30% mgt.
		164.1-173.2 - Iron formation - a well	167	170	3						E - 5% " - 40% mgt.
		banded unit of magnetite and brick red jasper	170 ·	173	3						E - 5% " - 40% mgt.
		with scattered horizons of carbonate rich	173	175	2						A <sub>2</sub> - minor " - tr.py
		rocks.									2
		The banding varies from 50-650 to the									
		core axis with contacts of the zone at 650/50	o.		<u> </u>				<u> </u>		
		The iron formation is strongly magnetic,			<del></del>			<del></del>	!		
		averaging 30-40% iron.									
		173.2-252.7 - Volcanics - in this instance					<del> </del>		-		

From	To	DESCRIPTION	From	To	Width	L						Description of Sample
		more dacitic rocks with darker, chloritized						i				
		portions that appear to be marginal in com-						<del></del>		-	_	
		position to andesite. The core varies from					!					
		medium to light grey green in colour with	200	204	4							C <sub>1</sub> t - minor strs.
		darker green, chloritized, and yellowish	204	205	1		<del>- </del>					E+C1 - 10% strs 30% mgt. tr.p
		grey green bleached sections.										- State of the sta
•		The volcanics are tuffaceous in appearance				<del> </del>						
		with numerous angular to elliptical chloritic						<del></del>				
		blebs - some of which are definite fragments.			1							
		Fragment size is in the range of 3-10 mm.						1				
		The volcanics are also amygdaloidal with										
		scattered quartz and/or ankerite amygdules						-		<del>-                                     </del>	<del>- †</del>	
		up to 8 mm in size.							•			
		The dacite is moderately altered with									• • • • • • • • • • • • • • • • • • •	
		ankerite, chlorite and sericite, is poorly						<del></del>				
		veined and sparsely mineralized. Near the			+	<u> </u>			<del>- </del>			
<b></b>		base of the volcanic sequence, after 238,										
		there is a coarse development of ankerite										
		metacrysts which produces a somewhat por-				<del> </del>						
		phyritic appearance to the core.			+							
		Along the lower contact of the zone, the		-	<del></del>				<del></del>	-		
		volcanics grade calcitic - at the expense of				-			<del></del>			
		ankerite.							<b></b>			
		At 176.5 (2 cm), and 204.2-204.9, there		1			<del>- </del>					

rom	To	DESCRIPTION	From	To	Width					Descripti	on of Sample
		are two irregular patches of iron formation									
		within the dacitic tuff - the lower unit is									
		strongly magnetic.									
		The lower contact of the dacite is									
•		bleached and partly broken at 600 to the core							•		
		axis.									•
252.7	391.8	Andesitic volcanics - a sequence of fine	250	252.5	2.5					C <sub>1</sub> t - 7% strs.	
		grained much more uniform volcanics, the	252.5	253.5	1					E - 10% strs	20% mgt, minor
		upper contact of which is along a narrow unit	253.5	255	1.5			·		A <sub>2</sub> - minor strs	•
		of iron formation from 252.7-253.5.									
		The andesite varies from dark green to									
		dark grey green in colour, is weakly altered,						•			
		very poorly veined and sparsely mineralized:	295	300	5					A <sub>2</sub> amg minor	strs.
		Alteration in the andesite consists of			•						
		chlorite and calcite - ankerite is very minor									3
		to non-existent.									
		The andesite is also amygdaloidal -						!			
		with scattered calcite filled amygdules up									
		to 1 cm in size.									
-	I	The iron formation along the upper	-								
		contact is similarly altered with calcite.									
		It is a brick red to plum coloured unit with				İ					
		ill defined beds of magnetite and jasper at				i	<u> </u>		İ		

Shaw Township Township

com	To	DESCRIPTION	From	To	Width					Description of Sample
		65-75° to the core axis. The iron formation								
		is moderately veined with stringers of								•
		calcite and sparsely mineralized with pyrite.							-	
		. The lower contact of the iron formation	330	335	5		 			A <sub>2</sub> - 10% strs.
		is irregular, averaging 750 to the core axis.	330			-				1
		At the base of the andesitic volcanics,								
		particularly after 374, the rocks become		-			4		+	
		blotchy in appearance and a few scattered	370	375	5					A <sub>2</sub> - 15% strs.
		fragments are noted leading up to a unit of .	0.0	0.0				, , , , , , , , , , , , , , , , , , ,		
		iron formation at 391.8.								
		Fragments are up to 3 cm in size and								1
		include dark green chloritic, greyish		-						
		andesitic to dacitic, and cherty types. A								
		couple of the cherty fragments were well :								
		mineralized with pyrite.			•					
		At the base of the andesite the rocks								1
		are weakly ankeritic, chloritic, calcitic,			-					
_		poorly veined, and sparsely mineralized. The								1
		calcitic amygdules, although ill defined in								
		this basal sequence, are still present.					<del></del>			
		The lower contact is sharp at 70° to								
		the core axis.							-	
							 		<del> </del>	

From	To	DESCRIPTION	7			•				· · · · · · · · · · · · · · · · · · ·	· ·
			From	To	Width	 Ì					Description of Sample
391.8	485.4										•
<del></del>		volcanics and iron formation - the term									
	İ	iron formation being loosely applied to both				1			·		
		banded magnetite-chert units and carbonate-									
		chert-sulphide units.					i				
		The rocks in this sequence are extremely									
		variable in the amounts of alteration, veining,							<del></del>		
		mineralization and brecciation.							<del></del>		
		The breakdown of units within the						·-·			
		sequence includes:									
		391.8-393.3 - Iron formation - a poorly									
		bedded unit of carbonate, chert and magnetite	,			-			•		
		the lower portion of which, from 392.6-393.3,		· · · · · · · · · · · · · · · · · · ·				•			
		is fractured and brecciated with chlorite and									***************************************
		stringers of quartz ankerite. In the upper			•						
		part of the unit the banding is weakly							<u> </u>		
		developed at 70° to the core axis.									
<del></del>		Bands in the sequence are grey to buff									
		carbonate with or without disseminated				<u> </u>			<del></del>		
<del></del>		magnetite, and grey, to blue grey chert.		<u></u>							
<del>,                                    </del>		A minor amount of pyrite is present								!	
		near the upper contact, with approximately 5%						1		!	
		pyrite, pyrrhotite in the brecciated unit				<del></del>		i		<u> </u>	
		which is more weakly magnetic.			<del>-</del>	<del></del>			!		

From	To	DESCRIPTION	From	To	Widt	1					Descript	ion of Sample
		The carbonate in the iron formation is										•
		ankerite.										
	İ	393.3-401.1 - Andesite - a dark green,										
		fine grained, chloritic unit that is strongly				İ						
•		calcitic and ankeritic. The andesite is										
		uniform in appearance, poorly veined, sparsely										
***************************************		mineralized and amygdaloidal.		<u> </u>			<del> </del>					
		Amygdules in the andesite are filled										
		with calcite. Contacts of the unit are at .						<del>†                                     </del>				
		75°/70°.										<del></del>
		401.1-419.4 - Brecciated iron formation								1.		
		- a fragmented sequence of carbonate and	390	391	1				_		A <sub>2</sub> - minor st	rs tr.py
		chert units with a fairly high percentage of	391	393	2				•		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	s 12% mgt,5% py
		sulphides and accessory chlorite alteration.	393	395	2						A <sub>2</sub> - minor st	
	Ì	The first part of the sequence from	395	400	• 5						A <sub>2</sub> - "	11
		401.1-403.2 is dark and cherty with scattered	400	401	1						A <sub>2</sub> - "	77
		patches of ankeritic carbonate. The core is	401·	403	2						····	- 5% py tr.po mgt.
		sparsely mineralized with disseminated pyrite,	403	405	2			İ			E - 15% "	
		and is weakly magnetic. The cherty breccia	405	407	2						E - minor str	s 7% po py tr.Zni
		is locally well fractured with fine stringers	407	410	3						E - " "	- 10% po py
<del></del>		of quartz-ankerite ± calcite.										
		At 403.2, gradation into a more carbonate										
		rich section containing greyish to buff										
		coloured ankerite with discontinuous bands		<del> </del>		<del>-  </del>						

From	To	DESCRIPTION	From	To	Width			1	Description of Sample
		and patches of chert. The core is moderately				1			
		mineralized with pyrrhotite, pyrite and							
		minor magnetite.							
		. At 405.5, contact at 76° into a strongly							
		chloritized breccia. Fragments in the breccia	1						
		are up to 5 cm in size and consist of grey		<u> </u>					•
		to buff coloured carbonate and/or chert set		<u> </u>					
		in a dark, chloritic, ankeritic matrix. The	410	412	2				E - 15% po tr.py for As
		fragments of iron formation and the matrix	412	415	3				E - 15% po pv
		are fairly well mineralized with pyrrhotite	415	417	2				E - 10% po py
		and pyrite ± splashes of sphalerite and	417	420	3				E - 15% po py
		chalcopyrite.	420	425	5				A <sub>2</sub> - 3% py
		The core appears to be moderate to	425	427	2				E - 7% po py
		strongly magnetic from the presence of	427	430	3				E - 10% po py
		pyrrhotite - no magnetite was noted.							
	İ	The base of this iron formation, from							
		412.9-419.4, is more weakly brecciated with							
		somewhat discontinuous bands of ankeritic							
		carbonate and chert. Banding varies from 00							
		to 40° to 70° to the core axis. The core is	<u> </u>						
		well mineralized with pyrrhotite and pyrite.							
		419.4-425.6 - Andesite(?) - a dark							
		coloured, medium grained, granular textured							
		unit which is strongly altered with chlorite							
		and calcite.			<del> </del>	 · · · · · · · · · · · · · · · · · · ·	<del>`</del> <del>`</del> _	***************************************	

From	To	DESCRIPTION	From	To	Width				Description of Sample
		The base of the andesite, from 424.1-							
		425.6, grades lighter in colour to pale grey							
		with an increased carbonate content. In							
		this basal section there are fairly numerous				į		į	
•		subrectangular blebs of chlorite - apparently						1	
		retrograde after mica.							. •
-		The core is moderately mineralized with							
·		disseminated cubes of pyrite. Contacts of							
		the andesite are abruptly gradational at .							
		approximately 70° to the core axis.							
		:425.6-434.2 - Iron formation - a					1		
		sequence of poorly layered ankeritic carbon-							
		ate and chert/silica which is well mineralized							
		with pyrrhotite and pyrite.							
	<del>                                     </del>	The majority of this section is greyish			•	***************************************			
	1	to milky chert with irregular bands and							
· · · · · · · · · · · · · · · · · · ·	1	patches of grey to buff carbonate. Banding,							
	-	although poorly defined, varies from along							
		the core, to 70° - the average banding is							
		at 65-70°.							
<del></del>		The predominate sulphide is pyrrhotite,					1		
<del></del>		although at the base of the zone from 432.8-							
		434.2 most of the mineralization is pyrite							
		with minor pyrrhotite and traces of magnetite	≥ .						

	<del></del>						<u>-                                    </u>	T		
LOW	TO	DESCRIPTION	From	To	Width					Description of Sample
		The base of the zone also contains a few								
		chlorite rich bands.				1				
		The lower contact of the iron formation								
		is.broken at 70°.								
		434.2-461.9 - Carbonate to Carbonated	430	432.5	2.5					E - 15% po tr.py
		Volcanics - a sequence of very light coloured	432.5	434	1.5					E - 20% py po
		rocks which appear to be almost wholly	434	437	3					C <sub>1</sub> - 7% strs minor py tr.mg
		carbonate ± chlorite and sericite alteration.	437	440	3					C <sub>l</sub> - 5% strs.
		The rocks are fine grained and granular	440	444.5	4.5					C <sub>1</sub> - minor strs.
		textured with numerous fine blebs of chlorite	4							
		sericite, and ankerite in a sugary textured,	444.5	447	2.5					E - minor strs 20% mgt 5% p
		ankeritic matrix. Locally, small quartz and	447	450	3					C <sub>1</sub> - minor strs.
		ankerite amygdules are noted, and some of								
		the alteration blebs appear to be altered :								
_		fragments, such that the rock may be a dacitic			•					
		tuff.								
		The core varies from buff to yellowish								
		buff and pale grey green in colour with								
		scattered darker grey green to grey olive,							1	
		more chloritic portions.	ļ							
		At the upper contact from 434.2-434.9,								
		and at 444.6-446.5, the core is weakly banded								
<u></u>		at 65-80°, with accessory chlorite and								
	1	magnetite. The lower unit (i.e. 444.6-446.5)				į			i i	i a a a a a a a a a a a a a a a a a a a

			•			-	•			·
,rom	To	DESCRIPTION	From	To	Widt)					Description of Sample
		is well banded at the base and is strongly							······································	
		magnetic. Contacts of the lower unit are at:							1	
		82°/60°.								
		The lower contact of the sequence is	450	455	5					C <sub>1</sub> - no strs.
		sharp at 72°.	455	460	5					C <sub>1</sub> - no strs.
		461.9-463.8 - Iron formation - interbedde	d							
		units of greyish to milky silica, greyish to	460	462	2					C <sub>1</sub> - no strs tr.py
		buff ankerite, and chlorite rich carbonate.	462	465	3					E+A <sub>2</sub> - 15% py
		The banding varies from 75-80° to the core	465	468	3		1			E+C <sub>1</sub> - 15% strs 15% py
		axis. The rock is well mineralized with	468	470	2					E - 20% strs 30% mgt, mino
		coarse disseminated cubes and aggregates of								
		pyrite, plus local magnetite.								
		463.8-464.8 - Carbonate to carbonated						•		
		andesite - a narrow unit of dark green,								
		medium grained, granular carbonate and			•					
	İ	chlorite. The andesite(?) is sparsely								
		mineralized with pyrite.								
	1	Contacts of the unit are at: 420/760.								
		464.8-485.4 - Iron formation - both								
		sulphide and oxide associations, with inter-								
		calated volcanic material.								
		The upper part of this sequence, from								
		464.8-467.1, consists of interlayered units								
		of chert carbonate, and chlorite rich								

.rom	To	DESCRIPTION	From	To	Width			1		Description of Sample
		carbonate/carbonated volcanics. The core is					į			
		well mineralized with pyrite and is locally								
		magnetic. Bands average about 1 cm in width								
		and are at 70-80° to the core axis.								
•		From 467.1-468.5, the rock is a grey								
		carbonate to carbonated volcanic with streaks		-						
		and lenses of magnetite, and minor pyrite.								
		There are a couple of amygdules in this unit						1		
		which are filled with quartz, and rimmed with					i			
		magnetite. One pyrite aggregate at the base					İ			
		of the zone is similarly rimmed with magnetite								
		From 468.5-471.5, the iron formation								
		contains 30-50% magnetite, with a thinly								
		banded magnetite-chert-jasper-carbonate .								
	1	sequence from 469.2-471.1.			1					
		At the margins of the closely banded								
		sequence, there is approximately 15-20%								
	1	magnetite between bands of greyish to milky				Ì				
		chert, and grey to buff carbonate.								
		The banding is at 65-70°. There is a								
· · · · · ·		minor amount of disseminated pyrite.								•
		Below the magnetite sequence, from 471.1	+							
		471.5, there is another unit of grey green to								
	1	grey buff carbonate/carbonated volcanics with		<del>                                     </del>		<del></del>				

LOW,	To	DESCRIPTION	From	To	Wid	<u>-</u> h					Description of Samp	le
		streaks and lenses of magnetite, and minor										
	•	disseminated pyrite.									,	
	İ	From 471.5-480.3, the iron formation	470	471	1			1			E - minor strs 50% mgt.	
		consists of numerous bands of chert, carbon-	471	473	2			!			E - 10% strs 10% mgt, 15	t pv p
•		ate, and chlorite rich carbonate at 70-850	473	475	2						E - minor " - 12% py tr.po	
		to the core axis.	475	477	2			:	İ		E - " " - 12% pv minor	
		The rock is well mineralized with pyrite,	477	478.5	1.	5		!	1		E - 50% strs - 15% by bo t	
		and contains a minor amount of disseminated	478.5	480	1.	5					E - minor " - 20% py tr.po	
		magnetite locally. From 477.1-478.3, there	480	483	3						C <sub>1</sub> t - minor strs 7% py	
		is some irregular veining in the iron formation	483	485	2						E - minor strs 25% py	
		although there is no accessory mineralization	485	490	5			<del> </del>			C <sub>1</sub> - " - minor py	
		From 480.3-483.1, there is a narrow										
		putty coloured unit of carbonated dacite										
		tuff(?). The rock is very fine grained and										
		ash-like, with a weak lineation (banding?)			-			İ				
		at 70-80° to the core axis.										
		At 481.5 (2 cm), and 482.1-482.4, there										
		are a few cherty and chlorite rich bands										
		within the dacite at 70-80° with accessory										
······		pyrite - otherwise, the dacite tuff is very										
		sparsely mineralized.						<del> </del>				
		The base of the iron formation sequence,				<del>                                     </del>		-				
		from 483.1-485.4, contains numerous bands of							i			
		chert, carbonate and chlorite rich carbonate,					İ			i		

mor?	To	DESCRIPTION	From	To	Width					Description of Sample
		at 75-80° to the core axis. The iron								_
		formation is well mineralized with pyrite				İ				
	İ	and is locally weakly magnetic.					:			
		. The lower contact of the sequence is		-		<u> </u>				
•		along a band of pyrite at 800 to the core	540	545	5					C1t - minor strs.
		axis.								
	!						İ			_
185.4	555.9	Contact into a sequence of carbonated								
		dacite to dacite tuff. The rocks are very								
		fine grained to massive with scattered								
		granular and finely fragmental horizons. One	2	İ		i				
		section, from 541.9-543.4, contains fairly								:
		well defined dark, chloritic fragments up to						•		
		8 mm in size.								
		The dacite varies from medium grey to			•					
		grey green in colour and is moderately								
		altered, very poorly veined and sparsely								
		mineralized. Alteration in the dacite is a								<u>                                     </u>
		mixture of calcite and chlorite with lesser								
		ankerite.								
		At the upper and lower contacts of the				<del>i</del>	i		1	
		dacite (within 5' of the contacts), there are	2				ļ			
		a few grey, more siliceous units, with								
		accessory pyrite, at 75-800 to the core axis.				i				

rom	TO	DESCRIPTION	From	To	Width		Description of Sample
		The lower contact of the dacite sequence					
		is at 750 to the core axis, along one of the					
		narrow more siliceous units, with accessory					i
		pyrite (from 555.6-555.9).					
			590	595	5		A <sub>2</sub> - 15% strs tr.py
55.9	727	Andesitic Volcanics - a sequence of much					
		more uniform, 'fresher' volcanics.					
		The andesite varies from medium to dark	650	655	5		A <sub>2</sub> - 10% strs tr.py
		green in colour, is fine grained, moderately.					
		altered, moderately veined and sparsely					
		mineralized.					
··············		Alteration in the andesite consists of					
		calcite and chlorite with subordinate	720	725	5		A <sub>2</sub> - 20% strs.
		ankerite, sericite and epidote. The core is	725	727	2		A <sub>2</sub> - 10% strs tr.py
		cut by fairly numerous calcitic fractures			•		
		and wider stringers to 3 cm of quartz-calcite					
		Most of the accessory sericite and epidote					
		alteration is found marginal to the wider					
		stringers of quartz-calcite.					Dre R. Cleran
		The andesite is sparsely mineralized					/6
		with scattered cubes and aggregates of pyrite					
	727	END OF HOLE					

HOLE No. SH3-2-81

(i)

Core Size : BQ

PROPERTY: SHAW #3 GROUP - Brown McDade Option

Azimuth: Grid South (180°) Township: Shaw Township

Commenced:

February 2, 1981

Elevation: Surface

Location of Collar from #1 Post of P.539616

Finished:

February 6, 1981

Dip: Collar @ -46°; @ 200'-54.5°; @ 400'-55.5°

Location: XL 6E @ 0+50 m N

West 780' South 500'

Bradley Bros. Contractor:

'rom	To	DESCRIPTION	From	To	Width		!		Description of Sample
<u> </u>		SUMMARY LOG							
0	14'	Casing. (Casing left in hole).							
		Andesitic to Dacitic Volcanics with interbeds				_	 		
		of iron formation.					 <u> </u>	_	
		Dacitic to dacite tuff: 86.4-119.4,						_	
	-	139.3-173, 181.4-232.7.							
		Iron Formation/Exhalite: 15-16.2, 39.3-							·
		40.7, 76.6-77.3, 119.4-139.3, 173-181.4,							
	1.	and 232.7-247.3.							
247.3	316.4	Andesitic Volcanics - calcitic below 283,							
	t	fragmental after 305.		1					
316.4	332.0	Brecciated Iron formation.							
332.0	444.8	Andesitic Volcanics with units of iron							
		formation.							
		Iron formation/Exhalite: 347.8-351.6,							
· · · · · ·		377.3-383.1.							
		332-377.3 - calcitic volcanics.							
	-	377.3-444.8 - ankeritic volcanics.							
444 8	528	Dacitic Volcanics with iron formation							
<u> </u>	, <u>J2</u> 0	444.8-461.6.					_		
	528	END OF HOLE		j					

Location: XL 6E @ 0+50 m N

PROPERTY:

SHAW #3 GROUP - Brown McDade Option

Azimuth:

Core Size :

Grid South (180°) Township:

Shaw Township

Elevation: Surface

Location of Collar from #1 Post of P.539616

Dip: Collar @ -46°; @ 200'-54.5°; @ 400'-55.5°

BQ

West 780'

South 500'

SH3-2-81 HOLE No.

Commenced:

Finished:

February 2, 1981

February 6, 1981

Bradley Bros. Contractor:

rom	То	DESCRIPTION	From	To	Width					Description of Sample
0_	14'	Casing. (Casing left in hole).								
							· .			
14	247.3	Volcanics - a sequence of andesitic to			ļ					
		dacitic volcanics with intercalated units of				<u> </u>				
		iron formation. The rock sequence is nearly							••	
		identical to that found in DDH SH3-1-81,								
		with the exception that individual rock units						1		
<u></u>		are much more easily distinguished, and are								
		not as strongly altered as the previous								
		drill hole.								
		Due to the marked variations within the								
		sequence, the breakdown of units includes:								
		14-150 - Andesite - a unit of fine								
<u></u>		grained, dark green chloritic volcanics	15	16	1					E - 5% strs 30% mgt. tr.p
		which are moderately altered with ankerite,	16	20	4					A <sub>2</sub> - 5% strs.
<del> </del>		chlorite, moderately veined with fine diffuse								
	-	stringers of quartz-ankerite, and urmineral-								
		ized. The andesite is finely speckled with								
		ankerite.				·				
	1	15.0-16.2 - Iron formation - a narrow	<del> </del>							
		irregularly banded unit of magnetite, chert,								
		jasper and ankerite. The rock is very fine grained with banding varying from 10-300								

rom	To	DESCRIPTION	From	To	Width							Description of Sample
		to the core axis.						1	:			
		The upper contact of the iron formation										
		is irregular and nearly along the core, the										
		lower contact is broken.							•			
	·	16.2-39.3 - Volcanics - initially										<del></del>
		dark green chloritic andesite which is					······································					
		bleached from 23.4-24.3, and grades lighter										
		in colour below 34.8.									1	
		The andesitic portions are dark green, .					<del></del>	!				
		fine grained, chloritic and ankeritic. The										
		rock is generally speckled with metacrysts(?)						į		i		
		of ankerite, and contains scattered quartz										
		and ankerite filled amygdules up to 5 mm in										
		size. The andesite is moderately fractured:								1		
		with fine stringers of ankerite ± quartz and			•							
<del></del>		chlorite.						<u> </u>				
		The section 23.4-24.3 is bleached and										
		partly silicified to a dull grey and orange										
		grey colour. The effect may be, in part, due										
		to the presence of magnetite, since the							-	Ť		
		bleached section is weakly magnetic. All the	=			l						
		features of the andesite including amygdules						!		i		<del></del>
		and ankerite metacrysts are preserved in this	3									
		section.			1	<del> </del>	<del></del>	<del>.;</del>	1		<del>-    </del>	

rom	To	DESCRIPTION	From	To	Width						Description of Sample
	<u> </u>	Below 34.8, the core grades much lighter					į		1	:	
		in colour, such that most of the volcanics								<del></del>	
	İ	appear marginal in composition to dacite.									:
		The rocks are strongly carbonated, moderately									1
•		chloritic, and finely fractured with quartz-	!								<u> </u>
		ankerite. Both metacrysts of ankerite and							i		
		scattered amygdules are present.	!	<u> </u>			;		<del></del>		
		As in the previous drill hole (SH3-1-81)	,				<del></del> -	!	_	1	
	1	this gradation to lighter coloured dacitic .			-		<u> </u>	_			
		rocks may be a function of alteration and									
		bleaching rather than a change in rock type.									
		The base of the section is medium grey green									
		to yellowish grey green in colour.						<del> </del>			
		39.3-40.7 - Iron formation - a narrow						-			
·		unit of closely bedded magnetite, silica, and		<del></del>	-			_			1
	T	ankerite up to 40-0, followed by a broken									
		section of fragmented/brecciated iron formation		<del></del>			<u> </u>		1		
		to 40.7.					- 1				
		The lower unit contains bright orange									
		red fragmented bands of jasper and magnetite,				<del>-</del>		_			
		with some silica at the base.					.			i i	
		The banding in the upper part of the						!			
		unit varies from 55-65° to the core axis with		<del></del>				i	-		
		a potential cross bed(?) suggesting that tops					<del></del>				

rom	To	DESCRIPTION	From	To	Widt	1	+		Description of Sample
		are up the hole. There is minor amount of		<del></del>	<del> </del>			:	
		pyrite present marginal to some of the							<del></del>
		magnetite bands.							
	1	. The upper contact of the zone is at $70^{\circ}$ ,		<del> </del>					
•		the lower contact is broken and irregular							
		averaging 50°.							*
	1	40.7-76.6 - Andesite - the upper part			1		!		
		of which, from 40.7-42.8, is variably	39	41	2		:		E - no strs 30% mgt. tr.py
		bleached and altered, and is marginal in .	41	45	<del>-;</del>				$C_1A_2 - 5$ % strs.
		composition to dacite.	45	50	-	<del></del>			A <sub>2</sub> - 5% strs.
		The andesite is similar to the previous	50	55	5		<del></del>		A <sub>2</sub> - 15% "
		units, in that the rocks are fine grained,	55	60	5				A <sub>2</sub> - 20% "
		dark green, chloritic, ankeritic, amygdaloidal	60	63	3				A <sub>2</sub> - 50% "
		and speckled with ankerite. This section of	63	65	2				A <sub>2</sub> - minor strs.
		andesite, however, is locally well veined	65	70	5				A <sub>2</sub> - 10% strs.
		with wider (to 10 cm) stringers of quartz-	70	75	5				A <sub>2</sub> - 5% "
		ankerite which contain scattered sightings	75·	76.5	1.	5			A <sub>2</sub> - 5% "
		of black tourmaline(?).	76.5	77.5	1				E - 10% " - 40% mgt.
		Marginal to the wider stringers, the	77.5	80	2.	5			A <sub>2</sub> - minor strs.
		andesite is usually bleached lighter in							
	1	colour and is partially rusted with ankerite.							
		The upper contact zone, which is marginal							
	1	in composition to dacite, is yellowish grey							1
		green to orange yellow in colour and is			<del>                                     </del>	<del>-    </del>			

,rom	To	DESCRIPTION	From	To	Width		* * * * * * * * * * * * * * * * * * *				Description of Sample
		partly rusted with ankerite. As seen in the							<u> </u>		
		zone immediately above the iron formation,									
	İ	all of the features of the andesite are							į	:	
	!	preserved, such that the dacite is most	i							1 :	
•		likely a bleached andesite.					:				
		The base of the andesite sequence is				į					÷
	•	marginally lighter in colour approaching				1					
		another unit of iron formation.									
		76.6-77.3 - Iron formation - a fine									
		grained, poorly banded unit of magnetite,									
		jasper and chert with lesser carbonate and									
		traces of pyrite. Banding in the iron for-									
		mation is at $70^{\circ}$ , with contacts at: $80^{\circ}/75^{\circ}$ .									
<del></del>		77.3-119.4 - Volcanics - a sequence o	f								
		andesite and lighter coloured dacitic rocks			-						
		similar to the unit 98.7-150 in DDH SH3-1-81									
		Initially, the rock is a dark chloritic									
		amygdaloidal et al andesite as previous,									
		which grades lighter in colour and becomes									
		more dacitic below 86.4. The unit, from									
		86.4-110.6, is a medium to pale green and									
		grey green dacite which is rather coarsely								i	
		speckled with metacrysts of ankerite.							1		
		Ankerite metacrysts are enveloped by chlorite	7	-		i					

rom	To	DESCRIPTION	From	To	Width	1		1	Description of Sample
		a feature idential to the section 123-146 in	1				1		
		DDH SH3-1-81.						i ,	
	i	Below the dacitic section, the base of	i						i
	1	the volcanic sequence is a medium grey to							
		grey green dacite which is bleached to a pale							
		buff, grey green at the lower contact, from	95	100	5				C <sub>1</sub> A <sub>2</sub> - minor strs.
		119.1-119.4.		100					CITY MULTOL DULG.
-		Throughout the overall zone, the vol-					į	!	İ
		canics are fine grained, moderately altered ·							
		with ankerite, chlorite, poorly veined,					!		
		sparsely mineralized and amygdaloidal. There							
		is a minor amount of ankerite rust along a							
		few open fractures in the sequence.							
		119.4-139.3 - Iron formation with							
		several sections of intercalated volcanics -			•				
		the percentage of volcanic material in this							
		part of the sequence being much greater than							
		that in DDH SH3-1-81.							
-		The upper contact of the sequence is							
		along fine grained, weakly banded, granular,							
	1	andesite tuff - the bands of magnetite first							
		appearing below 120.3. From 120.3-121.3, the						Ì	
		iron formation is closely banded with magnetite	-						
		chert, carbonate and carbonated dacite(?).		<del>                                     </del>	T	i			

rom	T0	DESCRIPTION	From	To	Widt	ו				•	Description of Sample
		The core is sparsely mineralized with pyrite									
		marginal to some of the cherty bands.								 	
ì		The upper contact of the zone is at 75°	,								1
		with banding at 70-750 to the core axis.		····							
		Below the magnetite sequence, there is						!			1
1		a narrow unit of pale green to grey green									<u> </u>
		dacite tuff from 121.3-122.2, followed by a	120	122	2		1				E+C1 - 5% strs - 15% mgt, minor p
		rusty ankeritic section from 122.3-123.	122	125	3						E+C <sub>1</sub> - 7% " - 8% mgt, minor py
		Parts of the ankeritic zone are weakly banded.	125	127	2						E - 50% " - 5% mgt, 3% py
		at 750 - none of this section is magnetic.	127	129	2						C <sub>1</sub> - minor strs.
		From 123-125.6, the iron formation is	129	130	1						E - minor strs - 5% mgt, tr.py
		well banded with units of chert, magnetite,	130	135	5				·		C1 - 5% strs.
		carbonate, carbonated dacite and chlorite	135	137	2						E+C1 - 15% strs 7% mgt, minor
		rich carbonate/carbonated andesite.	137	140	3						E - 15% strs 20% mgt, 5% py
Ì		The upper contact of this zone is									
		strongly rusted with ankerite, plus there is				-		i			
		some rusty ankeritic fracturing at 125. The									
		core is poorly veined with stringers of			1						
		quartz and quartz-ankerite, and is sparsely									
		mineralized with pyrite. The base of the			-		-				
		unit, particularly from 125-125.4, has a						<del>-  </del>			
		strong chlorite component.									
1		From 125.6-126.9, the iron formation is						-			
		strongly veined/brecciated with chert/silica	•				<del>-                                    </del>	<del>-  </del>			

MOI.	TO	DESCRIPTION	From	To	Width						Description of Sample
	!	Bands of carbonate, chlorite et al are					İ				
		fractured and discontinuous. The core is									
	İ	weakly magnetic, and sparsely mineralized wit	h								
	†	pyrite.	1						i		
	!	Below the veining/brecciation, the rock									
		is a medium to pale grey green, carbonated									
	1	dacite tuff with scattered fragments up to				<del></del>			<u> </u>		
		1 cm in size. The base of the dacite is cut		<del> </del>							<del> </del>
		by a rusty, open ankeritic fracture from .									
		127.8-128.8.								1	
		At 128.1-128.3, there is a narrow,						<del></del>	!		
		silicified, brecciated unit in the dacite							<del>-  </del>		
<del></del>		sequence at 75°.									
		From 128.8-130.2, return to iron formation	1	!					<del>-                                    </del>		and the second of the second o
		- in this case, poorly banded at $65-70^{\circ}$ , with	1						ĺ		
	7	a strong chert component and minor carbonate,	!				<del>-  </del>				
		carbonated chloritized volcanics.					1				
		From 130.2-135.9, there is a wider unit									
		of medium to pale green dacite tuff. Fragment	s ·								
		range up to 2 cm in size although the majority					•	!			
		of this unit contains only scattered frag-					1				·
		ments from 2-5 mm. The dacite has erratic									
•		cherty, and more altered sections. The core									
	1	is poorly veined and sparsely mineralized.	<del></del>				1	-		-	

rom	To	DESCRIPTION	From	To	Width			Description of Sample
	i I	Contacts of the unit are at: 550/600.						
		The lower part of the iron formation -						
		volcanic sequence, from 135.9-139.3, is a						i
		rather poorly banded zone of magnetite, chert,						
		carbonate and jasper with accessory chlorite/	i					
	-	carbonated andesite tuff at the upper contact						
	•	from 135.9-136.4.	:					
		Below 136.4, the iron formation contains						
		approximately 20% magnetite with scattered .		1				
		coarse aggregates of pyrite. The majority		:				
<u> </u>		of the brick to orange red jasper component	i					
		in the sequence is found near the lower						
•		contact from 138.9-139.3.						
		The lower contact of the iron formation						
		is broken at 80°.						
		139.3-173 - Carbonated dacite tuff -		-			<u> </u>	
		a sequence of medium grey to grey green						
	<del>-                                    </del>	dacitic volcanics with scattered fragments						
-		up to 5 mm in size.						
-		The core is moderately altered with					İ	
		ankerite and chlorite - the chlorite content						:
		appearing to increase towards the base of the	9					
		unit. The dacite is moderate to poorly		İ				
	1	veined/fractured and sparsely mineralized.	<del></del>				<del></del>	i

From	To	DESCRIPTION	From	TO	Widtl			; ; ;		1	Description of Sample
		From 166.1-168.0, the volcanics grade									
		more coarsely grained with ankerite and									
	<u> </u>	chlorite - a few chloritic fragments are			<u> </u>						
		still visible, however. Also, from 168.7-									
	i !	169.3, there is a narrow unit of fine grained	,			T					
	1	brick red to plum coloured iron formation	155	160	5						C1t - minor strs., broken core.
		with rather diffuse contacts at: 750/550.							İ		
		Part of the dacitic sequence is blocky	168	170	2						C <sub>1</sub> +E - 10% strs - 10% mgt, 3% py
		in nature with broken core from 156.8-159									
		and a trace of gouge at 158.9.	173	175	2						E - 30% strs 20% mgt, 7% py
		The lower contact of the dacite tuff is	175	177	2						E - 30% " - 25% mgt, minor p
		sharp and chloritized at 60°.	177	180	3		ŧ				E - 50% " - 20% mgt, tr.py
		173-181.4 - Iron formation - a well	180	182	2				•		E - 10% " - 20% mgt, minor p
		veined and contorted sequence of brick red	182	185	3						C <sub>1</sub> - 15% " - minor mgt.
		to plum coloured iron formation with erratic								!	
		units of magnetite, jasper, chert, and								<u> </u>	
	<u> </u>	carbonate. The core is moderate to strongly									
		magnetic, and is weakly mineralized with									
		pyrite.									
		The lower contact of the iron formation									
		is sharp, although broken at 70°.									
		181.4-232.7 - Carbonated dacite tuff,			İ		İ	<del></del>			
		with scattered fragments/patches of dark,									
		brick red iron formation from 183.4-184.6.					1				

Low	To	DESCRIPTION	From	To	Width			1	Description of Sample
		The dacite is fine grained with occasional							· · · · · · · · · · · · · · · · · · ·
	İ	small fragments up to 5 mm in size. The							
	İ	core varies from medium to pale grey green,			!	1		:	
	1	grey and yellowish grey green in colour and							· · · · · · · · · · · · · · · · · · ·
•		is moderately altered with ankerite, chlorite,	,						
		sericite, moderately veined, fractured, and	202	205	3				C, - 10% strs minor tour.?
		sparsely mineralized.	202	203	1 3				100 3113. MINOT COM:
		Sections of lighter coloured bleached							
		dacite are often found to contain fine,							
		scattered, hard, black, acicular crystals of				!			
		either tourmaline or amphibole.	225	230	5	<u> </u>		•	C <sub>1</sub> - minor strs w.tour.
		In general the dacite is blocky in	230	233	3		•	·	C <sub>1</sub> - minor " - w.tour.
	Ì	nature, particularly in the section 196-220.	233	235	2				E - 15% strs 35% mgt, minor p
		The lower contact of the dacite is	235	237	2	1			E - 30% " - 20% mgt, tr.py
		broken, irregular and partly chloritized	237	240	. 3				E - 20% " - 55% mgt, tr.py
		from 231.3-232.7	240	243	3				E - 10% " - 30% mgt, tr.py
		232.7-247.3 - Iron formation - a brick	243.	246	3				Lost Core
		red to orange red, black and plum coloured	246	248	2				E+C1 - 20% strs 7% mgt.
		unit which has a very high magnetite com-							
		ponent.			<del>- </del>	į			
-		In the previous drill hole (SH3-1-81)							
		this unit was placed at the top of the				!			
		ensuing andesitic volcanics due to its calcite				<u>-</u>			!
		component - what carbonate is present in this			i				<u> </u>

rom	TO	DESCRIPTION	From	To	Width						Description of Sample
		zone, however, is ankerite.									·
		Banding in the iron formation is con-					į				
	1	torted and poorly defined with variations						i			
		from 0-70° to the core axis - the most		<del></del> -			i	į	i	1	
		consistent bedding being at 500.					Į.				
		The iron formation contains magnetite,	; ; ;								:
	1	jasper, chert and carbonate units, with a						1		İ	
		narrow fine chloritic section from 235.9-						•			
		236.2, and a coarse, granular chlorite .						i			
		ankerite unit at 246.3-247. The core is		<u> </u>							
	İ	moderately veined with stringers of quartz					+		i .		
		and quartz-ankerite, and is aparsely									
		mineralized with pyrite.									
		Although banding is contorted, only one									
		strongly brecciated section was noted at									
<del>.</del>		236.2-236.7. From 243-246, lost core.						_			
		The lower contact of the iron formation							:		
		is sharp, bleached, rusty and ankeritic at									
		78° to the core axis.									i
247.3	316.4	Andesitic Volcanics - the upper contact							į	1	
		of which, to 251.5, is bleached, much lighter	q						i		
		in colour and contains sections that are of				İ					
	İ	a dacitic composition.							· · · · · · · · · · · · · · · · · · ·		

com	To	DESCRIPTION	From	To	Widt	1	•				Description of Sample
		Unlike the previous drill hole, the						<del></del>	1		-
		andesite, and the overlying iron formation		<del></del>	;						
		are not calcitic, and bleached sections of								:	
	1	dacite(?) are present. For the most part,			<del></del>						
•		the upper half of this sequence, to 283, is								i	1
		similar to the andesite at the top of the					!				
		hole - i.e. the rocks are fine grained,								_	
		chloritic, ankeritic, locally bleached,								:	
		speckled with ankerite, poorly veined,	263.5	266.5	3						A <sub>2</sub> - 20% strs. (pk).
		sparsely mineralized and contain scattered									
		quartz and quartz-ankerite filled amygdules.				1	<u> </u>	1			
		Below 283, the rocks become more uniform									
		in appearance with both calcite and ankerite						•			
		being present. The andesite in this section									
		is fine grained, dark green, and chloritic			•		İ	<del></del>		!	
		with scattered calcite and quartz-calcite								-	1
		amygdules to 1 cm in size. The core is also	•								i
		locally speckled with both calcite and			1				_	,	
		ankerite.							!	!	
		Around 305, the andesite contains									1
		scattered carbonate, volcanic and cherty								+	
		fragments up to 5 cm in size - fragments			<del>-                                    </del>					-	
		becoming more frequent and better defined								<u> </u>	:
		towards the base of the unit at 316.4.	<del>                                     </del>					_		1	

rom	TO	DESCRIPTION	From	To	wid	th				1	Description of Sample
-		This basal sequence is moderately									
İ		altered with calcite, ankerite and chlorite					·				
		and is weakly lineated at 70-80° to the					:				
	1	core axis.	305	310	5			<del>-</del>	}		A2 - 5% strs tr. py po
•	t t	The fragmental andesite is also mineral-		315	5				;		A <sub>2</sub> - minor strs minor py po
		ized with splashes of pyrite and pyrrhotite -	:	317	2		:				A <sub>2</sub> - 5% strs minor py.po
		some of the fragments similarly being	317	320	3						bx - 10% " - 10% mgt, 5% po py
		mineralized.	320	322	2						bx - 5% " - 5% mgt, 7% po py
		The lower contact of the andesite frag-	322	325	3		5 2 8 8				bx - minor strs 15% mgt, 7% po
		mental is at 65°.	325	327	2						
			327	330	3		1				bx - " " - 15% mat, 10% por bx - " " - 10% " 10% "
316.4	332.0	Brecciated iron formation - a strongly	330	i							
		chloritized, brecciated unit with contorted	332		2		-				bx - " " - 20% " 7% py p
		bands and fragments of iron formation in a	332	333	1 3						A <sub>2</sub> - 5% strs.
		chlorite-ankerite rich matrix.			-						
	<del> </del>	The iron formation consists of chert,			_						
		carbonate, and carbonated volcanic bands/									
	<del> </del>	fragments with up to 30% exsolved(?) magnetite.		-							
· · · · · · · · · · · · · · · · · · ·		The core is moderately mineralized with			_					!	
	-	streaks, lenses and scattered aggregates of		<u> </u>	_						
·		pyrrhotite and pyrite.	-			i					
<u> </u>		Unlike the adjacent volcanics, all of	-			1.			!		
	<del> </del>	the carbonate in the breccia appears to be				!			1		
	<del> </del>	ankerite. The lower contact of the sequence		1						<u> </u>	

LOW	To	DESCRIPTION	From	To	Width						Description of Sample
		is sharp, and in part bleached at 72° to							; ;		·
		the core axis.									
										i	
32.0	444.8	· Andesitic Volcanics - a sequence of									
•		fairly uniform lava with scattered units of	1						1		
		iron formation.									·.·
	!	The andesite varies from medium to dark							<del></del>	<del>-</del> ii	
·		green and grey green in colour and is									
		moderately altered, poorly veined and sparsely	_				1				***
		mineralized. Near contacts with iron formation	1								
		the andesite often grades lighter in colour		<del>70</del>			!	<u> </u>	<del>-</del>		
		with increased carbonate alteration - either		- i							<del></del>
		calcite or ankerite.									
		At the upper contact of the andesite,									
		from 332-334.5, and 337.5-338.7, the core is			•			<del></del>			**************************************
		much lighter grey in colour and is marginal	•								
		in appearance to dacite. These two sections								<del>  </del>	
<del></del>		are strongly altered with calcite # ankerite									
		and are coarsely speckled with blebs of									
<del></del>		chlorite and carbonate. Similarly, in the						!			
	!	section 372-377.3, the andesite is lighter					: !	· · · · · · · · · · · · · · · · · · ·	!		
		grey in colour and strongly calcitic just				1	<u> </u>	<del>-  </del>			
		previous to a unit of iron formation.									
<del></del>	i	From 341.7-341.9, there is a narrow	!			:	<del></del>		<del></del>	! !	

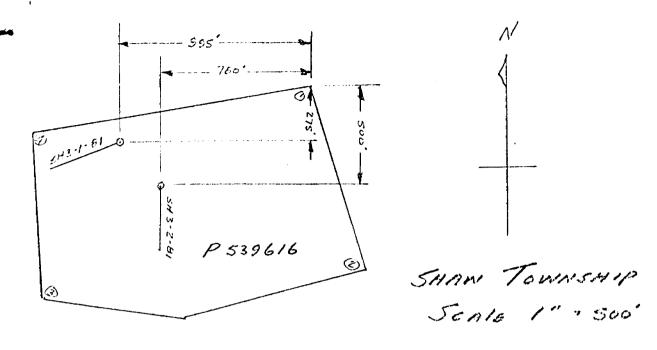
, rom	To	DESCRIPTION	From	To	Widt	h	t 1			i i		Description of Sample
		cherty band within the andesite that is								<del></del>		
	1	weakly magnetic - potential iron formation(?).										
		Contacts of the unit are at: $50^{\circ}/40^{\circ}$ .	347	350	3							E - minor strs - 15% mgt, tr.py
	ļ	The first recognizable sequence of iron	350	352	2							E - minor strs 10% mgt.
•		formation is encountered from 347.8-351.6.										
		The rock varies from plum to greyish purple									į	· ·
	<u> </u>	in colour, and is weakly banded with units of						-				
		chert, carbonate, magnetite and carbonated	·								i	
		volcanics. Most of the carbonate in the	-	-	_						· · · · · · · · · · · · · · · · · · ·	
		sequence is ankerite, although some calcite		<u> </u>							<del>-                                    </del>	
		is present.								i	<del>-  </del>	
		The core is banded at 65-70°, with									İ	
		contacts of the zone being at: 67°/40°.	375 ·	377	2				<del>-   .</del>	<del>-  </del>		A <sub>2</sub> - 5% strs.
		From 377.3-383.1, there is a second	377	379	2							E - 10% strs minor mgt, 5% pop
	1	unit of iron formation which is fairly well	379	381	. 2							E - 15% " - 5% mgt, 7% po py
		banded at 65-70° to the core axis, with	381	383	2			-			<del>-</del>	E - 20% " - 40% mgt, minor py
		contacts at: 620/730.	383 .	385	2	·					_	$A_2$ - no strs.
		The upper part of this zone of iron							<del>-  </del>			
		formation, from 377.3-381.7, contains units					i			<del></del>		
		of chert, carbonate, carbonated volcanics	420	425	5					1		A <sub>2</sub> - 7% strs.
		and magnetite with scattered amounts of	120	123	<del></del>					<del>-                                    </del>	!	A3 - 7° Sus.
		pyrrhotite and pyrite. The base of the zone			<del>- </del>						!	
		is strongly magnetic with interbanded magnetite	,									
		chert and carbonate from 381.7-382.3, and		:	<del>-  </del>		<del></del>		1		<del>-  </del>	

rom	To	DESCRIPTION	From	To	Width							Description of Sample
		jasper, magnetite from 382.3-383.1.								İ		
		This unit of iron formation appears to							!			
		mark a change in the chemical and physical										
		characteristics of the andesite, in that the				İ						
		upper sequence of rocks is fine grained,								1		
		chloritic, amygdaloidal, and calcitic with										:
	<u> </u>	subordinate ankerite, while below the iron		· · · · · · · · · · · · · · · · · · ·				!				
		formation the andesite is fine grained,										
		chloritic, coarsely speckled with carbonate,.		· · · · · · · · · · · · · · · · · · ·				: :				***
		and is ankeritic with subordinate calcite.					-	<u>.                                    </u>				
		The carbonate component within the iron						<del> </del>				
		formation is a mixture of both ankerite and						-	1			
		calcite.							·			
		The lower contact of the andesite sequence	e	- ·								
	Ì	is along a unit of iron formation - the			•					1	:	
		andesite having graded lighter in colour		<del></del>								
		with an increased ankerite content after 440.										
		The lower contact is sharp at 80°.	·					1				
				•								
44.8	528	Dacitic Volcanics with a unit of iron						!				
		formation along the upper contact from 444.8-	_		1				İ		1	
	<u> </u>	461.6.						!				
	1	The iron formation is included with the						•				
		dacitic sequence since most of the inter-					l	<del>                                     </del>	<del></del>	i	i	

rom	To	DESCRIPTION	From	To	Widtl	1			Description of Sample
		calated volcanic material, particularly					!		
		below 457, is dacitic in composition.							
	1	The dacitic rocks, below 461.6 are fine						[	
		grained, and vary in colour from medium to							
•		dark grey and grey green. The core is							
	Ì	moderately altered with ankerite and chlorite,					i		
		is moderately veined, fractured, and sparsely							
		mineralized.	445	447	2			<del></del>	E - minor strs - 40% mgt, minor
		The iron formation is a well banded	447	449	2				E - 5% strs 15% mgt, 5% py
	1	sequence of rocks containing both oxides and	449	451	2				E - 20% " - 20% mgt, minor py
		sulphides. Banding is fairly consistent	451	453	2		<del></del>		E - minor " - minor mgt, 15% py
	i	throughout, at 75-85° to the core axis.							 tr.p
		The upper unit, from 444.8-446.2, con-	453	455	2				E - minor strs 20% po py
		sists of alternating units of jasper and	455	457	2				E - " " - 20% py, tr.po
		magnetite with minor chert and carbonate.	457	460	. 3				C <sub>1</sub> +E - minor strs 7% py
		This section grades downward into a zone of	460	462	2				E - minor strs 25% py
		banded magnetite, chert, and carbonate, with	462 .	465	3				C <sub>1</sub> - 5% strs.
		minor jasper, and carbonated volcanics.	<del> </del>						
		From 447-450.7, the iron formation					<del></del>		
		sequence is a banded mixture of chert, carbonate		<u> </u>					
	1	carbonated volcanics and magnetite, with a		1			1	<del></del>	
		moderate amount of pyrite being present.						1	
	1	Individual bands of magnetite are much			!				<u> </u>
	<del>-</del>	narrower than previous, and the intercalated	1		-				

rom	To	DESCRIPTION	From	To	Width	1	1			Description of Sample
		volcanic material includes both chlorite					i			
		rich (andesitic?) and chlorite lean (dacitic?)					i			
	İ	rocks.						!		1
		From 450.7-457, very little magnetite is		<del></del>			<del>-                                    </del>	İ		
		present in a sequence of chert, carbonate					!			
•		and carbonated volcanics, which are moderately	1							
	!	to well mineralized with pyrite and pyrrhotite.								
		Some of the pyrite occurs in bands, while the								
	İ	pyrrhotite generally appears to be secondary.								
		Below 457, there is a narrow section					1			
		(to 459.9), of carbonated and cherty dacitic					<del></del>			,
		rocks (tuffs?), with scattered bands of chert					!			
		and pyrite. The dacite varies from medium to								
		dark grey and pale brownish grey in colour,								
		is fine grained, ankeritic, locally thinly			•					
		banded, unveined and sparsely mineralized.								
		None of the rocks in this section were found			İ	<del></del>				
		to be magnetic.				<del>i</del>				
	i	The base of the iron formation sequence,								
· · · · · · · · · · · · · · · · · · ·		from 459.9-461.6, consists of narrow beds of					<del></del>			
		chert, pyrite and pyritic, carbonated vol-				:				
		canics. Most of the volcanic units are dark		1						
		and chlorite rich. Cleavages along some slip	/				<del>-  </del>			
		bedding planes in the chloritic sections, are		<del> </del>		i			1 1	
		crumpled and/or kinked.	.1	1					<u> </u>	

.om	To	DESCRIPTION	From	To	Width	‡ ! !				Description of Sample
		The lower contact of the iron formation								
		is sharp, at 83°.							<del>-  </del>	
		Below the iron formation, the dacite	475	480	5	į				C1 - 15% strs.
		exhibits similar crumpled and/or kinked								
		cleavage patterns, usually adjacent to	510	515	5					C1 - 10% strs minor py, fract.
		accessory veining.		323						C) 10° Sers. mirror by, 11acc.
		Locally, the rocks are chloritized and								
		appear to be marginal in composition to	525	528	3					C <sub>1</sub> - no strs.
		andesite - particularly below 504, where	323	320					1	CI - NO SCIS.
		there is increased fracturing with chlorite.						i		
		Near the end of the hole, after 519,							<del> </del>	
		there is a weak calcite component in the						•	i i	
		dacite, and the rocks are amygdaloidal with						·		
		scattered calcite filled amygdules to 8 mm.								Dave R. Clexander
		The base of the dacite sequence is			-				!	- Sur R. Surpunavi
		moderately veined with stringers of quartz-								
		ankerite, and quartz-ankerite-calcite. The	·							
		core is also locally speckled with ankerite								
		and sparsely mineralized with pyrite t rare								
		splashes of chalcopyrite.							-	
-	İ									1
										1
	528'	END OF HOLE							-	
							<del>  -</del>		!	



SH3-1-81

START JAN 27/81

START FEB 2/81

FINISH FEB 1/81

LENGTH 727

DIP -45°

DIP -46°

AZ 250°

DIR OF CORE 1.44" BO DIA OF CORE 1.44" BO

CONTRACTOR BRADLEY BROS TIMMINS ONT

HOLLINGER ARGUS LIMITED TIMMINS, ONTARIO

## HOLLINGER ARGUS LTD.

Whitney Twp. M.319

