DIAMOND DRILLING

010

TOWNSHIP: Hess

REPORT NO.: 19

WORK PERFORMED BY: Cominco Ltd.

CLAIM NO.	HOLE NO.	FOOTAGE	DATE	NOTE
S 471072	He 3-3-77	327.0	Aug/77	(1)
	Total: 1OH	327.0'		

NOTES: (1) #85-81

FORM 522

DIAMOND DRILL REPORT

690' East

NORTH 1+10N
EAST 1+50E
ELEV. Surface
AZIM. 151°
DIP Collar @ 60° - no other tests

COMMENCED August 7, 1977
FINISHED August 11, 1977
PURPOSE OF HOLE Test Pb Zn Showing at depth under DDH #1

PROPERTY MIRON OPTION - HESS #3 GROUP
S-471072 Ex Core
Hess Township
Drilled by: Wm. Manderstrom

FROM	TO	DESCRIPTION	CORE SAMPLES FROM	TO	RECOV.	WIDTH	ASSAY	DESCRIPTION OF SAMPLE
0		Casing.						NWS/77
3	182.5	Espanola formation - a mixture of limey siltstone and carbonate sand or re-crystallized (?) carbonate mud.						Note: Only the first 120' have been filed for Assessment purposes.
		The siltstones are fine grained and thinly bedded, varying in colour from dark lime green, to grey green, grey brown and putty shades. Both the siltstones and carbonate sections react strongly with HCl.						
		The carbonate phases---whether they be carbonate sands or recrystallized carbonate muds--are somewhat granular in texture producing a salt and pepper appearance to the core. These units vary from light to dark grey, green grey and brown grey in colour. Bedding within these units is very poorly developed to nonexistent. Mineral-ogically, the carbonate sections are almost wholly composed of carbonate - in some coarser grained horizons minute 'eyes' of quartz(?) and carbonate (average 1 mm) are visible. Occasionally, an odd lenticular fragment of siltstone may be found in these carbonate sands.						

DIAMOND DRILL REPORT

NORTH
EAST
ELEV.
AZIM.
DIP

PROPERTY MIRON OPTION - HESS #3 GROUP

Hess Township

COMMENCED
FINISHED
PURPOSE OF HOLE

FROM	TO	DESCRIPTION	CORE SAMPLES FROM	TO	RECOV.	WIDTH	ASSAY	DESCRIPTION OF SAMPLE
		Metamorphism does not appear to be much (if any) of a contributing factor to the granular nature of these carbonate sands. Thus, it appears to follow, that some variation in the type or direction of source material is needed to achieve an assemblage of interbedded carbonate sand and fine silt units. Sulphides in this zone are very minor in amount, usually finely disseminated but occasionally smeared along bedding planes. Pyrite is the almost exclusive sulphide mineral. Fracturing in the silty-sand sequence consists of scattered fine stringers of calcite normally at a shallow angle to the core. Banding in the silt-carbonate sand sequence is quite variable along the core as: @ 13' - 37°; @ 18' - 40°; @ 22' - 35°; @ 28' - 45°; @ 38' - 45°; @ 58' - 40°; @ 60' - 35°; @ 65' - 35°; @ 72' - 25°; @ 89' - 25°; @ 96' - 35°; @ 122' - 42°; @ 136' - 50°; @ 164' - 60°; and the lower						

FORM 522

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PURPOSE OF
HOLE

FROM	TO	DESCRIPTION	CORE SAMPLES FROM	TO	RECOV.	WIDTH	ASSAY	DESCRIPTION OF SAMPLE
		contact @ 182.5 - 60°.						
		Top determinations from the banding						
		are somewhat tentative since grain						
		gradations, cross beds, etc, are not well						
		developed. Although the evidence is weak,						
		tops appear to be up the hole to a point						
		around 125' - after that point where the						
		bedding angles steepen, tops are suggested						
		to be down the hole.						
		The base of this sequence, beginning						
		at 178.2, grades a dark lime green in						
		colour before entering a fragmental zone						
		from 180-182.5. The fragmental zone						
		((breccia? or erosional unconformity(?)))						
		consists of erratic whitish to pale green,						
		subangular fragments of limestone in a						
		fine, variably chloritic limey siltstone						
		matrix.						
		Sections of lost core: 50-52; 73.3-						
		75.5; 87.2-87.8; and 119-121.2.						
182.5	317.7	Contact at 60° to Espanola limestone -						
		the creamy to greyish white and white						
		limestone seen in both DDH's 1 and 2.						

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FORM 522

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PROPERTY MIRON OPTION - HESS #3 GROUP

Hess Township

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FROM	TO	DESCRIPTION	CORE SAMPLES FROM	TO	RECOV.	WIDTH	ASSAY	DESCRIPTION OF SAMPLE
		Near the upper contact the limestone is pale greenish to greyish in colour for about 3.5' (to 186). After 186, the limestone is lighter and more porcelainous in appearance. The limestone is fairly well fractured with fine seams of brownish to yellowish sericite and dark green chlorite. Similar alteration minerals occur along some of the bedding planes within the limestone. Fine stringers of calcite are present, but are not abundant near the top of the limestone. Carbonate (calcite) does become significant, however, approaching a fault zone that runs along the core from 297.5 to 309. The fault zone is marked by 2 to 5 mm of mud-gouge locally cemented with calcite. Surrounding the fault zone the limestone is strongly fractured, brecciated and injected with masses of calcite. Previous to the fault zone (beginning at 286.5), there is a sharp increase in fracturing with associated chlorite						

FORM 522

DIAMOND DRILL REPORT

NORTH
EAST
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PROPERTY MIRON OPTION - HESS #3 GROUP
Hess Township

HOLE NO. [redacted] HS-3-77
COMMENCED
FINISHED
PURPOSE OF
HOLE

FROM	TO	DESCRIPTION	CORE SAMPLES FROM	TO	RECOV.	WIDTH	ASSAY	DESCRIPTION OF SAMPLE
		sericite alteration. In approaching the						
		gouge zone the fracturing increases and						
		localized breccia horizons are common.						
		The bedding in this area becomes extremely	215	218		3		LSt - neg. sulph.
		contorted and often trends subparallel to	218	221		3		" - very minor Pb py cp
		the core axis. The first wide stringer of	221	222.5		1.5		" - 7% Pb cp py
		carbonate is noted just previous to the	222.5	225		2.5		" - 3-5% Pb py cp
		fault gouge.						
		After 309 (end of gouge), the lime-						
		stone is cut by wide stringers of carbonate						
		with the remaining limestone being weakly						
		brecciated and showing highly contorted						
		bedding.						
		Previous to the area disturbed by						
		faulting the bedding in the limestone is						
		fairly regular. A gradual steepening of						
		the angle to the core axis is quite evident,						
		however, as: @ 185' - beds @ 60°; @ 212' -						
		65°; @ 218' - 70°; @ 245' - 70°; @ 269' -						
		75° and by 280-285' - 85°.						
		In comparison with the two previous						
		holes, there is an increase in the sulphide						
		content here. Pyrite, chalcopyrite,						
		galena, sphalerite and pyrrhotite(?) can						

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DIAMOND DRILL RECORD

PROPERTY MIRON OPTION - HESS #3 GROUP

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Hess Township

FROM	TO	DESCRIPTION	CORE SAMPLES FROM	TO	RECOV.	WIDTH	ASSAY	DESCRIPTION OF SAMPLE
		be found erratically along the core. The						
		heaviest concentrations of sulphides tend	265	270		5		LSt - tr py cp
		to occur in vuggy patches or along intense	270	271		1		" 10% Pb Zn py cp
		fracturing with accessory sericite-chlorite	271	275		4		" tr Pb Zn py
		as at: 194.4 - fracturing w. py; 200.6 -						
		vuggy w. py; 220 - vuggy w. py; 221.8-222.4						
		intense fracturing with carbonate PbS,py,cp	285	290		5		LSt - minor py cp
		224.2 - fracturing py,Pb; 270.6-271 - vuggy	290	292		2		" minor py cp
		w. CO_3,Pb,Zn,py; 289.8-290.1 fracturing w.	292	293		1		" 7% py cp
		py.cp,po; 292-292.5 fracturing heavy	293	295		2		" tr py cp
		sericite,py,cp; and @ 313.5 few blebs cp						
		in a CO_3 str. Other scattered occurrences						
		of sulphides may be found but the above	300	305		5		Fault zone - minor py
		sections are examples of the greatest						
		concentrations.						
		Through the area of faulting and mud	310	315		5		LSt - 80% $CaCO_3$ - minor py cp
		gouge, the only sulphide noted was pyrite						
		in isolated blebs. These pyritic blebs						
		normally occur marginal and subparallel to						
		the mud gouge. The fault would certainly						
		not appear to be a source for the lead-zinc						
		-chalcopyrite mineralization scattered						
		elsewhere in the limestone.						
		Lost core in limestone at: 304.5-306.5.						

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PROPERTY MIRON OPTION - HESS #3 GROUP

Hess Township

FROM	TO	DESCRIPTION	CORE SAMPLES FROM	TO	RECOV.	WIDTH	ASSAY	DESCRIPTION OF SAMPLE
		The lower contact of the limestone is along a carbonate stringer from 317.2-317.7. Lower contact of the stringer is at 75°.						
317.7	321.8	Contact to a unit of breccia, fragmental, conglomerate(?) as seen in DDH HE3-1-77. Up to 319.8 the rock is a fine sand to silt, banded at 75° and variably carbonatized. After 319.8 this unit is generally fragmental with a bit of fine grained granite(?) from 321.1-321.7 (contacts broken). The evidence does not appear to be conclusive to suggest whether or not the adjacent granite is older or younger than the preceding sedimentary suite. Fragments in this section vary from angular to subrounded - the granite fragments being of both types. Some of the angular fragment types include - yellowish brown sericitic types; black, fine grained types; brownish limey types (derivation??); and the odd calcite fragment.						

FORM 522

DIAMOND DRILL REPORT

HOLE No. HR-3-77 8.

NORTH
EAST
ELEV.
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Hess Township

FROM	TO	DESCRIPTION	CORE SAMPLES FROM	TO	RECOV.	WIDTH	ASSAY	DESCRIPTION OF SAMPLE
		Fragments range from 1 mm to 2 cm in size.						
		The fine grained granitic section						
		suggests intrusion but there is no evidence						
		of chilling on the adjacent sediment-breccia.						
		On the other hand the bedding and the						
		lineation of the angular fragments are						
		conformable with the overlying limestone.						
		In re-examining DDH #1 the contact						
		unit shows definite conformable sedimentary						
		banding. Further, in hole #1, the contact						
		zone is carbonatized while the granite is						
		not, and the granite is not finer grained						
		at the contact.						
		In this hole the contact zone is						
		variably carbonatized, and the adjacent						
		granite is carbonatized only in regular						
		open fracture patterns. The granite here						
		does show a weak sense of being finer						
		grained near the contact, however.						
		Unfortunately, there are no inclusions of						
		foreign material within the granite to						
		yield a more conclusive interpretation.						

FORM 522

DIAMOND DRILL REPORT

HOLE NO. HE3-3-77

NORTH
EAST
ELEV.
AZIM.
DIP

COMMENCED
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PURPOSE OF HOLE

PROPERTY MIRON OPTION - HESS #3 GROUP

Hess Township

FROM	TO	DESCRIPTION	CORE SAMPLES					DESCRIPTION OF SAMPLE
			FROM	TO	RECOV.	WIDTH	ASSAY	
321.8	327	Broken, irregular contact to granite.						
		The granite is medium to coarse grained						
		and greyish with approximately 55% pale						
		greenish to pinkish and white feldspar,						
		35-40% clear to greyish quartz and 5-10%						
		hornblende-biotite.						
			325	327		2		Granite - for U_3O_8 bckg.
	327	END OF HOLE						

Dan R. Alexander
HOLLINGER MINES LIMITED
TIMMINS, ONTARIO

Form 70-2

HOLLINGER MINES LIMITED

Geochemical Lab. Report

From Hollinger ..... Date September 12, 1977.

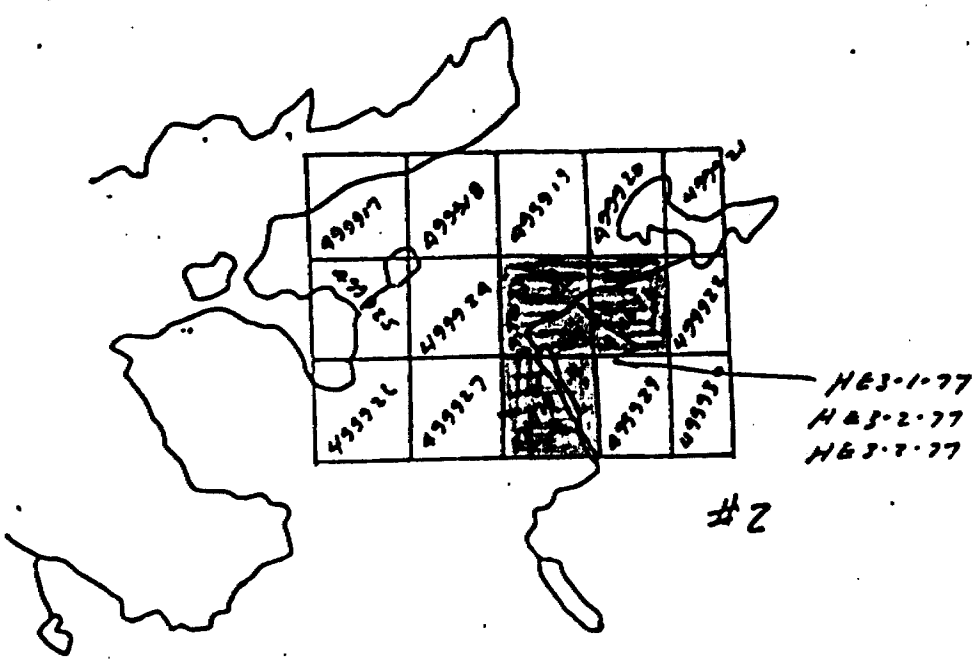
..... Extraction.....

Analyst..... Fraction used - 100 Mesh
- 80 Mesh

Geochem results for Hess #3 Group

Sample No.	Hg - ppb	Cu - ppm	Zn - ppm	Ni - ppm	Ag - ppm	Pb - ppm	Au
HE3-2-77							
40-45		70	143		4	1090	Tr.
45-46.5		20	319		2	1565	Tr.
40-45 (Ag repeat in oz. = 0.15)							
HE3-3-77							
215-218		20	66		< 1	265	Nil
218-221		33	116		< 1	475	"
221-222.5		213	235		13	26500	Tr.
222.5-225		100	2025		< 1	705	Nil
265-270		37	209		3	595	Tr.
270-271		135	11050		4	6550	Tr.
271-275		54	325		< 1	1050	Nil
285-290		248	265		< 1	295	"
290-292		1490	191		< 1	130	"
292-293		4225	257		3	210	Tr.
293-295		285	212		< 1	95	Tr.
300-305		55	165		N.D.	120	Nil
310-315		527	1050		1	305	Tr.
325-327	0.001% U_3O_8						
221-222.5	(Ag repeat in oz. = 0.52)						
270-271	(Ag repeat in oz. = 0.13)						

Page.....

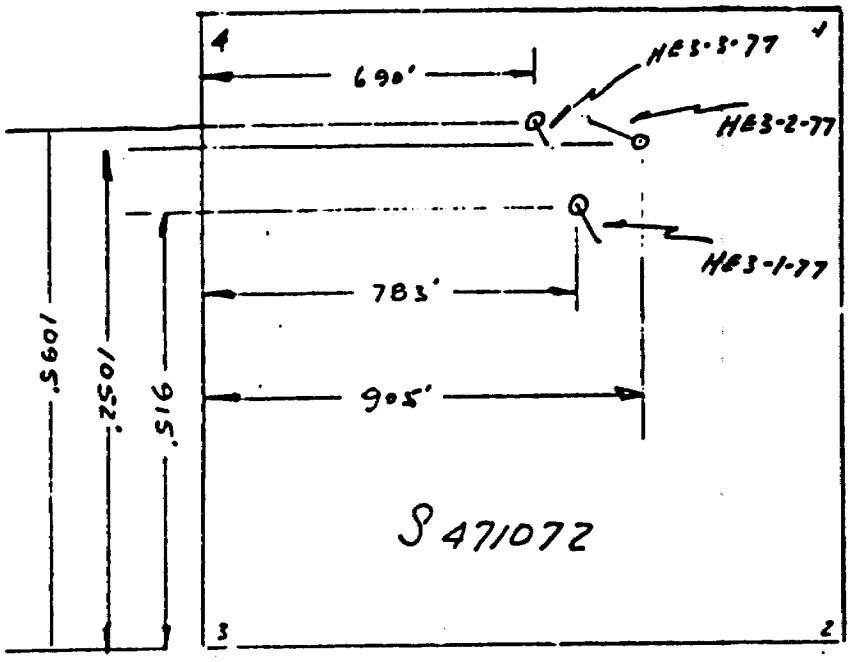


Hess Tinp.

8 7 6 5

PLAN OF DDH HE3-1-77
HE3-2-77
HE3-3-77

HEIS TWP
Scale 1" = 400'



	HE3-1-77	HE3-2-77	HE3-3-77
STARTED	July 30/77	Aug 3/77	Aug 7/77
FINISHED	Aug 2/77	Aug 6/77	Aug 11/77
DIP of CORE	EX .81"	.81"	.81"
LENGTH	120'	180'	327 (~~120~~ remains)
DIP	-45°	-45°	-60°
AZ	151°	294°	151°

CONTRACTOR W A MANDERSTROM
Box 429 TEMAGAMI

Dec 10/81
~~Nov 4/77~~

MUNSTER TWP.

MONCRIEFF TWP. M.869