drill hole: MGS-8 (ALSO CALLED MDDP-8) Grid Name: MESABI DEEP DRILLING PROJECT

angle & Direction: VERY QUICK LOG! Location: SEC 36, T. 56N., R. 24W. 475748E, 5237554N. (NAD 27 UTMs)

Logged by: M.J. SEVERSON

Date: 6-26-00

footage From	to	ft	UNIT	rock type and description	BDD TYPE	BDD THICKNESS	BDD ∠ (to C.A.)	COLOR	OXIDES	MAGNETISM	ALT	TEXTURES	comments
0	214			OVERBURDEN									
214	1541			VIRGINIA FM									
				214-1302 SKIPPED (THIN-BDD ARGILLITE + SILTSTONE ETC)									
				1302-1337 THIN-BDD GRAY ARGILLITE (MDSTN) + PALE GREEN	SILTSTONE								
				1337-1342 " " DK. GRAY TO BLACK MUDSTONE									
				1342-1420 " " BROWN CARBONATE IF w/ 20-30%									
				INTERBEDS OF DK GRAY TO BLACK MDSTN									
				AND VERY MINOR INTBDS OF CHERT (BEDS = <3mm + NODULES = <½" IN DIAMETER)									
				AND SLTST.									
				1420-1441 FAULT ZONE = BROKEN, VEINED + SLICKENSIDED	MUDSTONE								
				1441-1449 " " = MICRO-BRECCIATED MDSTN = MICRO MUDSTONE CHIPS IN A LIGHT MATRIX (CARBONATE? - NO HCl)									
				1449-1458 MDSTN ; BDD = 0-20° TO CORE AXIS									
				1458-1460 " ; " = 60° " " "									
				1460-1541 THIN-BDD BROWN CARB. IF w/ BLACK TO DARK GRAY MDSTN INTBDS,									
				MINOR GREEN SLTSTONE + MINOR CHERT	BEDS + NODULES								
			↓GRAD	@1468 THICKEST CHERT BED = 3"	<2mm		<5mm						
1541	1555		UPPER SLATY	UPPER SLATY OF BIWABIK IRON-FM = THIN-BDD, BROWN									
				CARBONATE IF w/ CHERT BEDS (<3" THICK) +									
				<10% MUDSTONE INTERBEDS									
				@1550-1555 OXIDIZED + LIMONITIC									
1555	1565		UPPER CHERTY	OX, THIN-BDD CHERT (ONLY 3' OF RECOVERY)	THIN								
1565	1583			" " " " - POOR RECOVERY = BROKEN-UP +	REDRILLED PIECES								
1583	1593			" " " TO REG-BDD GRAN CHERT	REG								
1593	1598			" " " SLATY IF (HEMATITIC CLAYEY ROCK)	THIN								
1598	1610			" REG-BDD GRANULAR CHERT	REG								
1610	1652			OX, THICK-BDD, POROUS GRANULAR CHERT w/ IRREG HEM. BEDS (MINOR)	THICK								
				@1611-1612½ HEM. CLAYEY THIN-BDD SLATY IF	(THIN)								
				@1621 3" " " " " " " "									
				@1644-1647 " " " " " " " (70%)									
1652	1672		LOWER SLATY	OX, THIN-BDD SLATY IF = BROWN FE-CARB + GOETH IF w/ MINOR	THIN								
				CHERT BANDS (<1½")									
				@1652-1653½ RED HEMATITIC CLAYEY SLATY IF									
				@1661-1670 WITH "ORGANIC" GRAY MDSTN INTERBEDS (INTERMEDIATE SLATE)									

drill hole: MGS-8 Grid Name: _____ Page 2 Of 2

angle & Direction: _____ Location: _____ Logged by: MJS

Date: 6-26-00

footage					BDD	BDD	BDD ∠	COLOR	OXIDES	MAGN-	ALT	TEXTURES	
From	to	ft	UNIT	rock type and description	TYPE	THICKNESS	(to C.A.)			ETISM			comments
1672	1674			~~THIN-BDD CHALCEDONIC CHERT (PIECES BROKEN-UP BY DRILLING)~~	THIN								
1674	1774		LC5	~~REG-BDD CHERT w/ VUGGY + BOTRIOIDAL BROWN GOETHITE~~	REG								
1774	1815		LC4	OX, WAVY-BDD GRANULAR CHERT w/ GOETH (MAGNETITE)	WAVY					(√)			
				BEDS. SOME LOCAL GREEN SILICATE-RICH BEDS									
				PRESERVED									
1850	1920			OX, WAVY-BDD? = BROKEN-UP PIECES OF CHERT + SMALL	WAVY?								
				GOETHITE PIECES. BDD TYPE HARD TO TELL									
				POOR RECOVERY!									
				@ 1835-1920 DECR. AMOUNT OF GOETHITE PIECES									
1920	1985		LC3	OX, POROUS CHERT w/ BRN GOETH AS WAVY-BEDS (AT	WAVY					(√)			
				1955' → DOWN, ESPECIALLY)									
				@ 1966-1968 WITH HEM. SLATY IF	(THIN)								
				SPLIT ↓ @ 1970 - EOH SPLIT CORE									
1985	2005		LC2	OX, REG-BDD (WAVY-BDD) GRANULAR CHERT	REG					(√)			
2005	2010		LC-1B	THIN-BDD, HEMATITIC SLATY IF	THIN								
2010	2013		LC-1A	OOLITIC JASPER	OOLITIC								
2013	2034		"	THIN-BDD HEMATITIC SLATY IF w/ THIN OOLITIC	THIN								
				JASPER BANDS + CLASTS									
				@ 2017-2023 65% OOLITIC JASPER									
				@ 2028-2034 WITH BANDS OF JASPER +									
				CHERTY INTRAFORMATIONAL CONGL.									
2034	2036½		"	ALGAL CHERT									
2036½	2044		POK	POKEGAMA QTZITE									
				EOH = 2044'									