N1

NEWMONT EXPLORATION OF CANADA LIMITED

090987

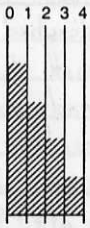
DRILL LOG

PROJECT: MINDY	GROUND ELEV.: 1665.5 m
HOLE NO.: 81-1	BEARING: 320° AZ
LOCATION: 6+13 N, 140 W	DIP: -60°
	TOTAL LENGTH: 150.3 m (493')
LOGGED BY: Douglas Oneschuk	HORIZONTAL PROJECT: 74.75 m
DATE: AUG. 1 1981	VERTICAL PROJECT: 125.0 m
CONTRACTOR: BBS Diamond Drilling	
CORE SIZE: BQ	
DATE STARTED: Aug. 1 (Day)	
DATE COMPLETED: Aug. 4 (Day)	
DIP TESTS: 250 ft ; -60.5°	

ALTERATION SCALE

absent
slight
moderate
intense

TOTAL SULPHIDE SCALE



traces only
< 1%
1% – 3%
3% – 10%
> 10%

COMMENTS

"Alteration" section of log paper is used as a mineral abundace indicator. The minerals being observed are recorded in each column. A scale of ~~zero~~ zero to four has been used, zero indicating mineral is not present, or is present in only minute amounts. Faulting is graded on a scale of one to four, one being a small shear & four being a major fault.

LEGEND

Scale 1:200

Biotite Hornfels
Calc-flinta
Skarn
Chert
Chert-Biotite Hornfels
Qtz vien
Bleached Zone
Fault

PAGE 1 OF 4 | PROJECT: MINDY | HOLE NO. 81-1

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION Bio A	Diop. B	Trem. C	Si D	E	FRACTURE INTENSITY per m	% VEIN QTZ.
				Casing							
3.05	82 85			3.05 → Bio Hrnfls 3.05 to 6.10 very brtn. weakly foliated, massive, mod limonitic interspersed @ sml grns & lenzes of qtz(?)	1	0	0	1		90	
5.0	100			6.1 → 9.4 solid grnd. No limonite, foliation							
	100			mod → good @ 30° to C.A. Jointing @	2	0	0	2		10	
	79			30° & 102° (30° predom) Amnt & size of							
10.0	100			qtz(?) lenzes increases ⊥ to foliation Bleached							
	100			zone @ 6.4 → 6.6, after which med to	0	0	0	1		7	
	100		F1	lrg gar (gross?; Red) (6.6 → 7.2). Qtz viens							
	100		(limonitic)	@ 7.2 (.07 m wide) & 7.6 (.12 m wide). Mod	2	0	0	1		20	
15.0				brtn fom 7.2 → 8.7 @ mod lim. staining.							
	100			Bleached zone @ 8.7 → 8.9 m							
	100			9.4 → 11.6. Qtz(?) grains more numerous.	1	0	0	2		10	
	100		F3	Original rk prob grit. foliation poor,							
	98		F2	@ 20°. Grains are qtz-fldspr	2	0	0	1		15	
20.0	100			11.6 → 21.8 fol poor → good, @ 10°. Grains							
	100			more lenzoid, size varries mg → fg							
	100		F3	Bleached zone @ 14.36, width .08							
	100			Small limonitic qtz viens @ 14.7 & 15.7	0			4		6	
				Grnd mod to well brtn @ limonite along							
				fractures fom 13 m. Ap vien contains	0			4		0	
25.0	100			minor calcite. From 17 m Joints may be filled							
				@ qtz & S.I content increases Qtz vien, 17.7	2	0	0	1		4	
				to 17.9; limonitic faults show rk pwdr,	0	0		4		0	
	100			increased bio & rk chips. Aplitic vien @ 19m	2	0	0	2		5	
				Bleached Zone:							
30.0				21.8 → 25.3 poor foliation @ 90°, S.I cont	0	0	1	4		1	
	100			increased. Minor calcite grains. Slight purpleish	1			2		2	
				hue (flouritic?) Qtz-feld grains euedent (mg.) More massive. Small Qtz stringers @ 95°							
	100			may be filled @ sulphides	1			2		2	
35.0				25.3 → 30.1 Bio Hrnfls (as above 11.6 →)							
			F2	Poor fol, increasing away frm ap.							
	100			Convoluted @ 27.2 & @ 150° @ 28.6	2			1		3	
				Zones of best fol most s.l. Bleached zone							
				at 27.7 → 28.1, same discription as above	10			4		0	
40.0				Similarly 29.22 → 30.1 except shows							
	100			coarser feld. grains & better foliation. P. ll,	3			2		2	
				30.1 → 38.0 Hrnfls has good fol @ 140°, is more s.l,							
	100			grains & lenzes lrger (max 2×1 cm). Small Bleach	3			2		2	
45.0				zone as described above @ 31.5 → 31.8, &							
				33.4 → 33.5 ⊥ containing massive Py @ minor							

chalco. alpacted @ 38.9 - 39.3 also.

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Bio.)	B (Ido crase)	C (Trem Actino)	D (Si)	E (Garnet)	FRACTURE INTENSITY	% VEIN QTZ.
			F1	45 → 65 Very sil Bio Hrn as before. fol well defined but random from 70° to 110°. Flourite along joint @ 47.9 - 50.1 Joints @ 10° & 170° Calcite along jnts showing limonitic stains. Zones of Drk grey, granular min. becoming more numerous & dense (ie area of 56.7) Occational area of poor foliation	3	0	0	3		4	
	100				3	0	0	3		3	
50.0	100				3	1	1	3		5	
	100										
	97				2	0	0	2		2	
55.0	100				2	0	0	2		3	
				57.8 → 58.2 Small qtz vienlet containing idocrase							
	100				2	0	0	3		4	
60.0											
	100			63.7 → 63.8 Bleached zone (w) massive Red garnet (andradite). Also @ 64.45 - 65.55	1	0	0	2		8	
			Calc-Flinta	(65 → 65.6) light green to cream, massive (w) convoluted & 60° foliation. Mainly chlorite,							
	100				1	0	0	3		2	
65.0				antherite(?) & Si. (Trem - actinolite)?	0	0	1	3	0	0	
			SKARN	(65.6 → 84.25) Massive, light pale grn, no foliation, contains zones of garnet (andradite) (ie 65.7 m) & idocrase (ie 67m)	0	0	1	3	3	3	
	100			Small calcite xstals sometimes ass (w)	0	0	2	3	1	4	
70.0				idocrase xstals. Andradite massive, granular fg. Idocrase granular to prysmatic xstals, radiate to fibourous, deep translucent green (xstals) to pale grn (fibourous & granular)	0	0	0	3	2	5	
	100				0	0	1	3	1	6	
				fg. Calcite xstals also in main mass & in t	0	0	3	3	1	5	
75.0				76m: Biotite & translucent grn Biotite (blades) minute vienlets cutting skrn @ 35° & 125° (125° most prominent). Patches of Tremolite -	0	0	2	3	0	7	
	100				0	0	2	3	0	5	
				actinolite (?) & vonsonite (?) patches .1cm wide ie	0	0	2	3	0	6	
				(70m). 70-65; sulphide min picks up. Skrn becomes slightly drker grn. Andradite	0	0	2	3	0	4	
80.0	100			rich zone 71.2 → 72.4. Tremolite (?)	0	0	3	3	0	2	
				rich zone 73.9 → 75.2. White, fibourous, radiating xstals. Andradite rich zone	0	0	1	3	3	3	
	100			83 to 84.25. Becomes more calcareous @ 82 m							
85.0				Bio Hrn. (84.25 → 106.3) Massive. Poor fol. @ 50° to 60°. Very siliceous, fol well defined.	1	0	0	3	0	2	
	100				1	0	0	3	0	2	
90.0											

% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION Bio A	B	Trem act. C	Si D	Gar E	FRACTURE INTENSITY	% VEIN QTZ.
100			Bio Hrnfls (cont) Bleached chlorite - Qtz zones @ 94.8 → 94.9 & 95.6 → 95.6 showing massive blebs of Po & trace chalco, & trem-act. Si content drops slightly & Bio content rises, ass @ drop in size &	1	0	0	3	0	2	
100				1	0	0	3	0	3	
100			amount of Qtz-feld. lenses, becoming fairly homogeneous at 96 m, @ only a few lenses up till 102 → 103.5; where round grains appear instead of lenses. Occasional thin (ie 1mm) Qtz veins containing massive chalco, Po	2	0	0	2	0	1	
100				2	0	0	2	0	1	
100			and Trem-act occurs @ 120° (ie 100.2m), Si content goes up @ 105 as Hrnfls grades into the chert lenses become larger, and go to lrge (3-5cm) breccia-pebble fragments, becoming less lenzoid as	2	0	0	2	0	2	
100			chert becomes more prominent. Anhedral(?) & chlorite?	1	0	0	2	0	1	
100			also fairly prominent in transition.	0	0	0	3	0	2	
100			CHERT (106.4 → 117.0) (106.4 → 108.1) limonitic staining in numerous small fractures @ black-grey	0	0	0	4	0	2	
100			substance. Vienlet fractures @ Po @ 10° (108.1 → 111.5);	0	0	0	4	0	4	
100			Massive chert @ small vienlets of pure chert cutting a more milky white chert aprox ⊥ to C.A. Veinlets v.							
100			dense (10/cm) Few major fractures @ 10° lined @ muscovite (111.5 → 117.0) as above, but chert veining is	0	0	0	4	0	3	
100			predom ⊥ to C.A. "micro-fracture" intensity increases & fractures are filled with creamy white (anhedral?) Major fractures							
100			still contain Musc. Chert vienlets become more random @ 114 Chert becomes intensly fractured @ Bio-Hrnfls contact,						6	
100			but still massive							
100			Bio Hrnfls (117.0 → 144.9) (117.0 → 121.6) Siliceous @ mod to poor fol. @ 70°. Andradite? up	1	0	0	3	2(?)	5	
100			to 1.0 (Red, fg xstaline, massive) Slightly calcareous. Chert lenses interspersed throughout, [2cm x (?) max]. Drk	1	0	0	3	2(?)	4	
100			grey, granular min (Diop.?) abundant (121.6 → 125.6) V. sil. possibly Hrnflsic Cht; lrg lenses (3cm max)	1	0	0	4	2(?)	5	
100			cut by Biotitic banding aprox ⊥ to C.A. Drk grey	1	0	0	4	2(?)	5	
100			grains found in these bands. At 123.6 fracturing & Hrnfl intensifies, lenses become thiner (1cm max);	2	0	0	2	2(?)	3	
100			more brecciated. Still slightly calcarious. Andradite? still							
100			evident, ass @ Hrnfelsic bands. Main Joints @ 15°	1	0	0	4	2(?)	4	
100			(125.6 → 126.8) Bio Hrnfls, as (117.0 → 121.6) except	1	0	0	4	2(?)	5	
100			fewer & smaller chert lenses. 2 3cm wide Pegmatite veins @ 25.9 & 26.1 containing qtz, muscov, Po & Tr chalcopy							
100			(126.8 → 134.9) Hrnfelsic Chert as described above. lenses max size 40 cm, generally about	1	0	0	4	2(?)	4	
100			7mm foliations @ 70° Jointing & vienlets @ 10° to							
100			30°. Pure chert veinlets cut milky chert in most fragments (similar to chert horizon above). minor calcite in some joints.							

PAGE 4 OF 4 | PROJECT: MINDY | HOLE NO. 81-1

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION Bio A	ALTERATION B	ALTERATION Trem actin. C	ALTERATION Si D	ALTERATION Gar. E	FRACTURE INTENSITY	% VEIN QTZ.
	100			Bio Hrnfls (con't) 134.9 – 144.9 similar to Bio Hrnfls @ 117.0, more massive, v. few qtz lenses fewer drk grey (diop?) grains. Gets progressively more sil, lenses become larger, Andradite? content increases starting @ 139.5. Andradite may be massive	2		0	2	1	4	
	100				1		0	2	3	3	
140				(ie 140.5 → 141.0) or granular (ie 144.5 → 144.9) (both f.g.) fol become more defined. Minor calcareous, increasing slightly Minor trem-actin @ 43.5							
	100				1		0	3	2	3	
	100			Chert (144.9 → E.O.H.) (still	1		0	3	2	3	
145				contains minor Hrnfelsic bands.) Massive, containing numerous fractures @ 50° filled @ Hrnfelsic material occasional major joints @ 10° containing trem-act. (minor flourite @ 146.8). All chert is milky white	0		0	4	0	4	
					0		0	4	0	3	
150											
				E.O.H. 150.3 m							
155											
160											
165											
170											
175											
180											