

810742

SHEBA COPPER MINES LTD
HIGHLAND VALLEY PROPERTY, B.C.
REPORT OF EXPLORATION WORK
1967 - 1968

PART VI DRILLING

92-J-13

INDEX

PART VI DRILLING

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Diamond Drill Logs

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PART VI - DRILLING

DIAMOND DRILLING

A total of 6,569 feet of diamond drilling was done in 15 holes to test geochemical and geophysical anomalies and to investigate mineralization found in outcrops or exposed in trenches. B Q wireline equipment was used throughout. The core diameter was approximately $1\frac{1}{2}$ inches. Core recovery was satisfactory. The core is stored on the property -- the core from the early drilling at the Peel cabin and from the later drilling at the core shack near the south east end of Gnawed Lake. Logs and drill-sections are enclosed with this part of the final report.

Assay results were very low except for three or four ten-foot sections in holes near Gnawed Mountain which assayed 0.5% or better copper equivalent (copper plus molybdenum). The narrow width and sporadic distribution lends no encouragement for further work.

PERCUSSION DRILLING

A total of 5,250 feet of small-hole (2-inch) percussion drilling was done in 21 holes using an Atlas Copco overburden drill. Small hole percussion drilling using a 2-inch bit should not be confused with large-hole percussion drilling using a down-the-hole machine and 6 or 7-inch bit. The cost of large hole drilling is substantially higher than small-hole but the large-hole sample is more reliable for valuation purposes than the small-hole sample.

With the Atlas Copco equipment a 2 3/4-inch O. D. casing with a 3 5/8-inch O. D. ring bit is drilled into bedrock. The casing is cleaned out with a 2-inch O. D. 4-wing tungsten carbide bit on jointed rods (10-foot lengths). From the bottom of the casing, drilling proceeds with the 2-inch bit without casing. Cuttings are air-flushed above the water table and water-flushed below.

At the start of the program, dry cuttings were collected in special pans supplied by the contractor. The pans were inconvenient and there was often some loss of cuttings. Later in the program, a cyclone was fabricated to collect the cuttings. In spite of rather crude design, the cyclone proved to be very satisfactory from both the point of view of convenience and cuttings recovery. Dry cuttings were passed through a compound riffle splitter and reduced to about 4 lb. each, bagged, and sent for assay.

During wet drilling, the cuttings were passed through an electric-driven Vezin-type splitter. During most of the drilling a 1/8 split was taken, but for some of the later holes a splitter that cut 1/12 was used. Separan solution (a flocculant) was added to the sample and thoroughly stirred. The solid material was allowed to settle and most of the water decanted. The wet samples were then dried over a propane hot plate and/or under an infra-red heater, bagged and sent for assay.

The cost of percussion drilling is much less than for diamond drilling. Direct drilling costs including water supply were about \$2.60 per foot compared with almost \$8.00 for diamond drilling. The speed of drilling is about four times that of diamond drilling. Sample handling and assaying costs are comparable.

Percussion drilling, on the other hand has certain limitations.

- 1) Only gross changes in lithology can be detected and only rarely can other geologic features be identified.
- 2) Details of the occurrence of mineralization cannot be obtained (e.g. fracture filling cannot be distinguished from dissemination).
- 3) Unless somewhat elaborate or expensive techniques are used, there is a real possibility of obtaining erroneous high values in molybdenum. Copper is less of a problem.
- 4) About 300 feet seems to be the practical limit of depth of hole.

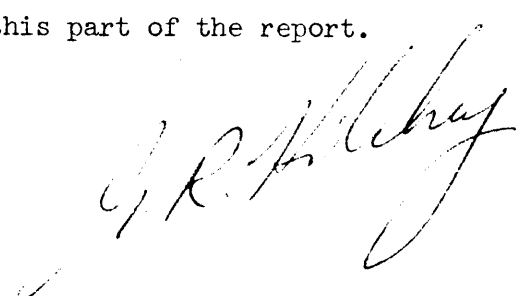
A/

The best use for small-hole percussion drilling is to obtain a quick, relatively inexpensive, approximate assay value of a body of rock. It is very unlikely that an orebody would not be recognized with percussion drilling but the assays should not be used for valuation without independent checks.

Percussion drilling was used on the property as a supplement to diamond drilling to test anomalies and known mineralization for approximate value. It was considered to be very useful for this purpose.

In the five percussion holes in the northern part of the project area, assay results were all very low. Southeast of Gnawed Lake, however, three or four isolated 10-foot sections of drill-cuttings assayed 0.5% or better copper equivalent (copper plus molybdenum).

In Hole No. 16, a narrow rich vein of molybdenum was intersected. Assay values for some tens of feet beyond this vein were very encouraging but the pattern of results suggested that there was some salting of the samples by sidewall wash from the rich vein. This was checked by Hole No. 19. The hole was grouted with AM-9 chemical grout after passing through the vein and again 20 feet beyond. The assay results of Hole No. 19 were low except across the vein and the suspicion of accidental salting was confirmed. Hole No. 20, 100 feet to the south of No. 19, returned a narrow section of better assays on strike with the better values in Hole No. 16 and 19. The balance of the holes returned only very low copper and molybdenum assays. Drill sections showing the results of the percussion drilling are included with this part of the report.

A handwritten signature in cursive script, appearing to read "G. R. McHenry", is located in the bottom right corner of the page. The signature is written in dark ink and is somewhat slanted.

SUMITOMO METAL MINING CO. OF CANADA LTD.

PROPERTY Sheba Copper Mines Ltd.

HOLE No. 1

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 1 Sheet No. 1 of 7
 Section 32 + 187' N
 Date Begun Aug 17, 1967
 Date Finished Aug. 29, 1967

Lat. 32 + 187' N
 Dep. 9 + 87' W
 Bearing East -45°
 Elev. Collar

Total Depth 732'
 Logged By M. O.
 Claim J #32
 Core Size B.Q.W.L.

DEPTH	DESCRIPTION	SAMPLE No.	FOOTAGE	WIDTH OF SAMPLE	Cu. %				
0 - 40'	No core, overburden	909-1014	40'-50'		0.025				
40' - 52'	B.Q.D. normal, medium grain alt - chl, ep, K-spar, spotty and Film (fracture) No mineralization								
52' - 53'	Mal. and Bo. along Fracture, very poor recovery \pm 50%								
53' - 56'	B.Q.D. normal, medium grain 56' Cp (& Bo) * Chl Film along Fracture								
56' - 58.5'	alt. - Chl Ep K-spar 58.5 Aplite veinlet 2", (V.F. grained Ep + Chl Qtz vein)	894-1016	50'-60'		0.095				
58.5' - 63'	B.Q.D., alt Chl. Ep K-spar Potash Feldsparization rather strong.								
63' - 88'	B.Q.D. same as above, mineralization Mal & Bo & Cp (rare) mostly Malachite, mainly along Fracture density of Fracture 1" - 5"	895-1018	60'-70'		0.20				
	63' - 74' - relatively remarkable, every one foot Bo + Qtz Chl ep. vein	1020	70'-80'		tr.		B		
		1022	80'-90'		tr.		B		
88' - 94'	B.Q.D. alt chl Ep K-spar, Faint mineralization (mal stain)	914-1024	90'-100'		0.09				
		915-1026	100'-103.5'		0.10				
94' - 140'	B.Q.D. alt-chl, Ep, K-spar 103' - 106' orange K-spar rich (dark) 114' - 122' orange K-spar rich (clear)	1028	110'-120'		tr.		B		

SUMITOMO METAL MINING CO. OF CANADA LTD.

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HOLE No. 1

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 1 Sheet No. 2 of 7
 Section
 Date Begun
 Date Finished

Lat.
 Dep.
 Bearing
 Elev. Collar

Total Depth
 Logged By
 Claim
 Core Size

DEPTH	DESCRIPTION	SAMPLE No.	FOOTAGE	WIDTH OF SAMPLE	Cu %				
	115'-117' Hm/Fracture development								
	103.5'-104' Fracture zone								
	106.5'-108' Fault? core recovery <30%								
	124'-126' } Fracture zone-Hm & Mal stain								
	136'-138' }	1029	120'-130'		tr.	B			
	very weak mineralization - mainly Mal Film	1030	130'-140'		tr.	B			
	101.5' & 1" Mal & Bo vein, Qtz + chl + Ep + Sericite								
140' - 174'	B.Q.D. - alt chl, Ep, K-spar	1031	140'-150'		tr.	B			
	generally K-spariz. is intensive	1032	¹⁵⁰ 105 '-160'		tr.	B			
	Ep veinlet remarkable, Hem, chl.	1033	160'-170'		tr.	B			
	168'-172' Fractureing with Hem.								
	Faint Mal along Fracture 140'-165'								
174' - 200'	B.Q.D. compact, alt-chl, Ep, K-spar compact	1034	170'-180'		tr.	B			
	Partly chl, Ep, veinlet	1035	180'-190'		tr.	B			
	193' - 194' } Mal. stain along fracture	1036	190'-200'		tr.	B			
	198' }								
200' - 217'	B.Q.D.	1037	200'-210'		tr.	B			
	200'-202' Bo. & Mal. along fracture, very weak								
	203'-204'								
	205'-208' - dark brown badly weathered dio								
	Hm. + clay along fracture								

B - Assayed by Bethlehem

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HOLE No. 1

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 1 Sheet No. 3 of 7
 Section
 Date Begun
 Date Finished

Lat.
 Dep.
 Bearing
 Elev. Collar
 Total Depth
 Logged By
 Claim
 Core Size

DEPTH	DESCRIPTION	SAMPLE No.	FOOTAGE	WIDTH OF SAMPLE	Cu %				
	207'-208'								
	210'-212' Crushed								
	Alteration generally chl; Ep, K-spar	1038	210'-220'		tr.	B			
217' - 239'	B.Q.D. - partly porphyritic, alt same as above	1039	220'-230'		tr.	B			
	228.5 - along fracture, chrysocolla & Kaoline(?) Film	1040	230'-240'		tr.	B			
	217'-223' - K-spar rich, dark orange								
239' - 258'	B.Q.D., partly prophyritic								
	239'-241' }								
	249' } Mal (& partly Bo.) along fracture								
	254'-256' }	1041	240'-250'		tr.	B			
	259' }	1042	250'-260'		tr.	B			
	240'-241' }								
	251'-252' } crushed zone, Hem. & Mal. (Fault?)								
258' - 300'	B.Q.D. partly porphyritic, generally compact								
	alt. - chl., Ep, K-spar	1043	260'-270'		tr.	B			
	259'-260' }	1044	270'-280'		tr.	B			
	274' - 275' } Mal. veinlet & stain (along fracture)	1045	280'-290'		tr.	B			
	generally in this zone, Ep. & Qtz. stringer	1046	290'-300'		tr.	B			
	(without mineralization) remarkable								
	274'-276' crushed zone								
	277'-279'								

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PROPERTY Sheba Copper Mines Ltd.

HOLE No. 1

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 1 Sheet No. 4 of 7
 Section.....
 Date Begun.....
 Date Finished.....

Lat.....
 Dep.....
 Bearing.....
 Elev. Collar.....

Total Depth.....
 Logged By.....
 Claim.....
 Core Size.....

DEPTH	DESCRIPTION	SAMPLE No.	FOOTAGE	WIDTH OF SAMPLE	Cu%				
300' - 324'	B.Q.D. (same as before)	1047	300'-310'		tr.	B			
	No mineralization	1048	310'-320'		tr.	B			
	Ep, chl veinlet Ep & Qtz vein remarkable								
324' - 346'	compact B.Q.D.	1049	320'-330'		tr.	B			
	327'-329' } chl. Fractures develop	1050	330'-340'		tr.	B			
	343'-345' } no mineralization								
	333'-338' - porphyritic								
346' - 387'	B.Q.D. - no mineralization	177	340'-350'		tr.	B			
	Alt. - chl, Ep, K-spar	178	350'-360'		tr.	B			
	352'-353' } - crushed zone	179	360'-370'		tr.	B			
	363'-364' }	180	370'-380'		tr.	B			
	generally chl. Ep. veins abundant	181	380'-390'		tr.	B			
	346'-350' }								
	362' } porphyritic								
	370'-371' }								
	380'-383' }								
	383'-387' many Ep. veins								
387' - 409'	B.Q.D., porphyritic, large Hb. crystal	182	390'-400'		tr.	B			
	393'-395' K-spar, Ep. rich	183	400'-410'		tr.	B			
	chl. Ep. veinlet								

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HOLE No. 1

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 1 Sheet No. 5 of 7
 Section.....
 Date Begun.....
 Date Finished.....

Lot.....
 Dep.....
 Bearing.....
 Elev. Collar.....

Total Depth.....
 Logged By.....
 Claim.....
 Core Size.....

DEPTH	DESCRIPTION	SAMPLE No.	FOOTAGE	WIDTH OF SAMPLE	Cu%				
409' - 441'	B.Q.D. Alt.- chl. Ep. K-spar	184	410'-420'		tr.	B			
	412'-430' porphyritic	185	420'-430'		tr.	B			
	423'-441' aplite 1/2"	186	430'-440'		tr.	B			
	440'-441' K-spar rich, chl. Ep. veinlet								
	429' Fault (?)								
441' - 460'	B.Q.D., alt.-chl. Ep. K-spar, no Cu. mineralization	187	440'-450'		tr.	B			
	445-448 porphyritic	188	450'-460'		tr.	B			
	456'-458' K-spar rich, center is Ep. Qtz. vein								
	445'-448' } crushed zone								
	451' }								
460' - 481'	B.Q.D.	189	460'-470'		tr.	B			
	474' malachite stain	190	470'-480'		tr.	B			
	Alt. chl. Ep. K-spar Ep. remarkable								
481' - 504'	B.Q.D. 501'-504' porphyritic	886 -191	480'-490'		0.075				
	Alt. chl. Ep. K-spar	889 - 192	490'-500'		0.09				
	chl. veinlet remarkable, fracturing more intense								
	486'-503' mineralization, chl, Bo, Mal, veinlet								
	mafics altered along fractures								
	497'-498.5' 1.5' mineralization remarkable (Bo.)								

SUMITOMO METAL MINING CO. OF CANADA LTD.

PROPERTY Sheba Copper Mines Ltd.

HOLE No. 1

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 1 Sheet No. 6 of 7
 Section
 Date Begun
 Date Finished

Lat.
 Dep.
 Bearing
 Elev. Collar

Total Depth
 Logged By
 Claim
 Core Size

DEPTH	DESCRIPTION	SAMPLE No.	FOOTAGE	WIDTH OF SAMPLE	Cu%				
504' - 527'	B.Q.D. 518'-527' porphyritic	910-193	500'-510'		0.015				
	No mineralization	194	510'-520'		Tr.	B			
	alt - chl. Ep. K-spar	195	520'-530'		tr.	B			
	505'-507' } crushed								
	510'-512' }								
527' - 547'	B.Q.D. - all porphyritic	877-196	530'-540'		0.09				
	538'-560' - mineralization, chl, Mal & Bo net	197	540'-550'		tr.	B			
	Alt - chl, K-spar remarkable								
547' - 569'	B.Q.D. all porphyritic	198	550'-560'		tr.	B			
	557'-558' } chl, mal & Bo veinlet	199	560'-570'		tr.	B			
	561'-562' }								
	alt, chl, Ep, K-spar, after 560' K-spar rather strong								
569' - 598'	B.Q.D. all porphyritic	200	570'-580'		tr.	B			
	570'-570.5' } green copper stain with clay	1015	580'-590'		tr.	B			
	593'-594' } mineral along fracture, poor	1017	590'-600'		tr.	B			
	569'-590' K-spar remarkable								
	587'-591' clay & crushed rock, fault								
598' - 616'	B.Q.D., generally porphyritic	1019	600'-610'		tr.	B			
	608'-615' chrysocolla along fracture, partly Bo	890-1021	610'-620'		0.20				
	alt, chl, Ep, K-spar								
	606' Ep. vein 3", chl, Ep veinlet								

SUMITOMO METAL MINING CO. OF CANADA LTD.

PROPERTY Sheba Copper Mines Ltd.

HOLE No. 1

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 1 Sheet No. 7 of 7
 Section
 Date Begun
 Date Finished

Lat.
 Dep.
 Bearing
 Elev. Collar

Total Depth
 Logged By
 Claim
 Core Size

DEPTH	DESCRIPTION	SAMPLE No.	FOOTAGE	WIDTH OF SAMPLE	Cu%				
616' - 630'	B.Q.D. generally porphyritic Alt.-mod. K-spar. chl. Ep-chl. veinlet some malachite, Few Bo. stringers & diss.	1023	620'-630'		tr.	B			
630' - 648'	B.Q.D. generally porphyritic mod-chl. K-spar, some Ep. chl. veinlets very little malachite stain no visible primary sulphides	1025 526	630'-640' 640'-650'		Tr. tr.	B B			
648' - 656'	B.Q.D. - mod. chl. weak K-spar-gen. proph. rich in chl-Ep veinlets	527	650'-660'		tr.	B			
656' - 686'	B.Q.D. - generally porphyritic mod. chl. K-spar, some chl-Ep V.L.	528 529	660'-670' 670'-680'		tr. tr.	B B			
686' - 697'	B.Q.D. - generally porphyritic mod. strong chl. K-spar some chl-Ep V.L. some malachite stain little Bo. string & diss.	530 876-531	680'-690' 690'-700'		tr. 0.075	B			
697' - 733'	B.Q.D. - generally porphyritic mod. chl. weak K-spar rich in chl-Ep V.L. very little Bo. diss. (Fracture Filling?) with malachite	532 533 534 535	700'-710' 710'-720' 720'-730' 730'-733'		tr. tr. 0.12 tr.	B B B B			
	End of Hole								

SUMITOMO METAL MINING CO. OF CANADA LTD.

PROPERTY Sheba Copper Mines Ltd.

HOLE No. 2

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 2 Sheet No. 1 of 2
 Section 36 + 45 N
 Date Begun Aug 31, '67
 Date Finished Sept 7, '67

Lat. 36 + 53 N
 Dep. 9 + 75' W
 Bearing East -45°
 Elev. Collar

Total Depth 182' 8"
 Logged By M. C.
 Claim J # 32
 Core Size BQWL

DEPTH	DESCRIPTION	SAMPLE No.	FOOTAGE	WIDTH OF SAMPLE	Cu%				
0' - 103'	Overburden to approx. 60'	1001	61'-70'		tr.	B			
	60'-130' omitted	1002	70'-80'		tr.	B			
103' - 123'	B.Q.D. - pinkish	1003	80'-90'		0.06	B			
	mineralized whole core, mainly Bo. mal. Cp (112)	1004	90'-100'		0.05	B			
	Bo. Cp dissemination	1005	100'-110'		tr.	B			
	Mal. Film dissemination along fracture	1006	110'-120'		tr.	B			
	Alt: Chl & mag. of all mafics, K-spar (Feldspars)								
	Ep. veinlet - partly sericite along fracture								
	Fractures develop, generally high angle 50° - 70°								
123' - 132'	B.Q.D. - same as above	1007	120'-130'		tr.	B			
	127'-132' - Fractured crushed zone Hem.	1008	130'-140'		tr.	B			
132' - 134'	B.Q.D. (K-Feld. poor) mafics all chloritized								
134' - 146'	B.Q.D. (pinkish) same as above								
	103'-123' - crushed core	1009	140'-150'		tr.	B			
146' - 172'	B.Q.D. (Pinkish) mineralized whole core, poor	1010	150'-160'		tr.	B			
	159.6' Bo vein, thin	1011	160'-170'		tr.	B			
	Alt. chl. & Mg. K-spar, Ep.								
	generally crushed, fractures develop 148'-157'								
	163'-168' fault, sheared rock, clay								

SUMITOMO METAL MINING CO. OF CANADA LTD.

PROPERTY Sheba Copper Mines Ltd.

HOLE No. SDD #2A

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 2A Sheet No. 1 of 8
 Section 36 + 45'N
 Date Begun Sept 11/67
 Date Finished Sept 26/67

Lat. 36 + 53'N
 Dep. 9 + 75'W
 Bearing East -43°
 Elev. Collar

Total Depth 790' 8"
 Logged By M. O.
 Claim J# 32
 Core Size BQWL

DEPTH	DESCRIPTION	SAMPLE No.	FOOTAGE	WIDTH OF SAMPLE					
0' - 61'	Overburden								
61' - 84'	B.Q.D. somewhat porphyritic strong-mod. chl. K-spar some sericite, argill, ep. little mal. in fractures								
84' - 105'	B.Q.D. somewhat porphyritic mod. chl. K-spar, some ser. arg. little mal. in fractures, little Bo. dissem.								
105' - 127'	B.Q.D. somewhat porphyritic mod. strong chl. K-spar some Ep. little malach in fracture, very rarely Bo. Diss.								
127' - 134'	Porphyry (porphyritic Beth.) very rusty, Hem. rich very few mafics - all chl. 127'-127½ core ground								
134' - 147'	B.Q.D. somewhat porphyritic strong mod. chl. k-spar, some chl. Hem. Ep. V.L.'s very little malachite in fractures at 143' clay-small fault? core angle 40°								
147' - 151'	B.Q.D. mod. chl. weak-mod. K-spar at 151' Qtz. V.L. (barren) core angle 60°								

SUMITOMO METAL MINING CO. OF CANADA LTD.

PROPERTY Sheba Copper Mines Ltd.

HOLE No. 2A

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 2A Sheet No. 2 of 8
 Section.....
 Date Begun.....
 Date Finished.....

Lat.....
 Dep.....
 Bearing.....
 Elev. Collar.....

Total Depth.....
 Logged By.....
 Claim.....
 Core Size.....

DEPTH	DESCRIPTION	SAMPLE No.	FOOTAGE	WIDTH OF SAMPLE	Cu%				
151' - 154'	B.Q.D., qtz. veinlet (barren)								
	badly crushed, strong argill., Hem. rich, very rusty.								
154' - 180'	B.Q.D. mod. chl. K-spar								
	very rarely malach in fracture								
	164' - 167' core badly crushed str. arg.								
	171' - 173'								
180' - 188'	B.Q.D. mod. chl. K-spar								
	some ep. chl. veinlets								
188' - 200'	B.Q.D. mod. chl. mod. weak k-spar								
	some ep-chl V.L.								
200' - 225'	B.Q.D. mod. chl. K-spar, some Ep. chl. V.L.	536	200'-210'		tr	B			
	locally malach. stain in fracture	537	210'-220'		tr	B			
	very rarely Bo. diss in H ₆	538	220'-230'		tr	B			
225' - 286'	B.Q.D. somewhat porphyritic	539	230'-240'		tr	B			
	weak-mod. chl. weak K-spar, some ep.	540	240'-250'		tr	B			
	some biotite prominent	541	250'-260'		tr	B			
286' - 294'	B.Q.D. mod. chl. K-spar, some Ep.	542	260'-270'		tr	B			
	Ep. k-spar. Qtz. V.L. At 286' str. chl. k-spar	543	270'-280'		tr	B			
	290'-292' str. chl. little Bo. Diss. in H ₆ with mal. stain	544	280'-290'		tr	B			
294' - 315'	B.Q.D. weak K-spar, chl.	545	290'-300'		tr	B			
	at 311' porphyry dike less than 1" wide	546	300'-310'		tr.	B			

SUMITOMO METAL MINING CO. OF CANADA LTD.

PROPERTY Sheba Copper Mines Ltd.

HOLE No. SDD # 2A

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 2A Sheet No. 3 of 8
 Section.....
 Date Begun.....
 Date Finished.....

Lat.....
 Dep.....
 Bearing.....
 Elev. Collar.....

Total Depth.....
 Logged By.....
 Claim.....
 Core Size.....

DEPTH	DESCRIPTION	SAMPLE No.	FOOTAGE	WIDTH OF SAMPLE	Cu %				
315' - 366'	B.Q.D. - somewhat porphyritic	911-547	310'-320'		0.02				
	Weak-mod. Chl. weak K-spar, argill	916-548	320'-330'		0.02				
	some Ep. VL & Hem. Chl. VL.	881-549	330'-340'		0.16				
	some malachite, little Bo. diss. in H ₆ and stringers	923-550	340'-350'		0.01				
366' - 377'	B.Q.D. Weak-mod. Chl. K-spar	883-551	350'-360'		0.10				
	some Ep. K-spar, Qtz. V.L.	552	360'-370'		tr	B			
377' - 422'	B.Q.D. str.- mod. chl. K-spar Ep. argill	553	370'-380'		tr	B			
	some malach, stains, little Bo. diss. in H ₆	554	380'-390'		tr	B			
422' - 442'	B.Q.D. very strong K-spar mod. chl.	555	390'-400'		tr	B			
	much mal. stain, some chl. V.L.	556	400'-410'		tr	B			
	some Bo. string & diss. in H ₆	922-557	410'-420'		0.02				
442' - 449'	B.Q.D. (?) core badly crushed & ground	920-558	420'-430'		0.30				
	Very strong K-spar, some malachite stain	878-559	430'-440'		0.42				
449' - 458'	B.Q.D. somewhat porphyritic	887-560	440'-450'		0.04				
	mod. Chl. K-spar, some mal. stain, little Bo. diss.	918-561	450'-460'		0.15				
	and stringers	924-562	460'-470'		0.07				
458' - 469'	B.Q.D.								
	mod. chl. mod. weak K-spar								
	some malachite stain								
	Few Bo. stringers rarely Bo. diss.								

SUMITOMO METAL MINING CO. OF CANADA LTD.

PROPERTY Sheba Copper Mines Ltd.

HOLE No. SDD # 2A

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 2A Sheet No. 4 of 8
 Section.....
 Date Begun.....
 Date Finished.....

Lat.....
 Dep.....
 Bearing.....
 Elev. Collar.....

Total Depth.....
 Logged By.....
 Claim.....
 Core Size.....

DEPTH	DESCRIPTION	SAMPLE No.	FOOTAGE	WIDTH OF SAMPLE	Cu%	Mo%			
469' - 485'	B.Q.D., mod. Chl. str-mod. K-spar a lot of malach stain, Few Bo. Stringers very rarely diss. Bo.	884-563	470'-480'		0.12				
485' - 499'	B.Q.D. porphyritic strong K-spar, str-mod. chl. little malach no visible primary sulphides	913-564 565	480'-490' 490'-500'		0.02 tr.		B		
499' - 512'	B.Q.D. porphyritic Mal. & Bo. diss. mainly fracture filling generally poor 501'-503' remarkable K-spar, chalky Feld. Alt. - K-spar remarkable, Ep. Chl veinlet, mafic alt with magnetite	891-566	500'-510'		0.09				
512' - 535'	Same as above No Cu. mineralization except 514' (diss. Bo. & Mal.) Alt. K-spar, Chl-veinlet fractures develop generally crushed to small pieces	1651 1652 1653	510 - 520 520 - 530 530 - 540		0.02 <0.01 <0.01				
535' - 556.4'	Same as above 545', 556.3' malachite stain Alt. K-spar, chalky Feldspar, chl. distinctive	1654 1655	540 - 550 550 - 560		0.01 0.01				

SUMITOMO METAL MINING CO. OF CANADA LTD.

PROPERTY Sheba Copper Mines Ltd.

HOLE No. SDD # 2A

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 2A Sheet No. 5 of 8
 Section.....
 Date Begun.....
 Date Finished.....

Lat.....
 Dep.....
 Bearing.....
 Elev. Collar.....

Total Depth.....
 Logged By.....
 Claim.....
 Core Size.....

DEPTH	DESCRIPTION	SAMPLE No.	FOOTAGE	WIDTH OF SAMPLE	Cu %				
556.4'-573.4'	same as above, no mineralization	1656	560-570		< 0.01				
573.4'-575.0'	Guichon quartz diorite-medium grain No mineralization, Chl. K-spar distinctive 573.4', very contact, a slip plane Marginal facies on Beth. Side (chilled margin Mafic conc.) is not to be found (ground?)								
575'-575.4'	Beth. Q.D. porphyritic - no mineralization K-spar, chalky Feldspar, very contact in K-spar concentration.								
575.4'-576.6	Guichon Q.D. - chloritized, no mineralization								
576.6'-579	Beth. Q.D. Porphyritic no mineralization, heterogeneous, K-spar remarkable last 1 foot aplitic, partly big qtz. seggregation	1657	570-580		< 0.01				
579'-588'	Guichon Q.D. no mineralization, chloritized, K-spar slay along or near fracture, generally uniform texture.	1658	580-590		< 0.01				
588'-590'	Beth. Q.D. porphyritic no mineralization K-spar, chl. Ep.								
590'-597'	Guichon Q.D. no mineralization some Fresh biotite remains	1659	590-600		< 0.01				

SUMITOMO METAL MINING CO. OF CANADA LTD.

PROPERTY Sheba Copper Mines Ltd.

HOLE No. SDD # 2A

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 2A Sheet No. 6 of 8
 Section.....
 Date Begun.....
 Date Finished.....

Lat.....
 Dep.....
 Bearing.....
 Elev. Collar.....

Total Depth.....
 Logged By.....
 Claim.....
 Core Size.....

DEPTH	DESCRIPTION	SAMPLE No.	FOOTAGE	WIDTH OF SAMPLE	Cu%				
597'-597.4'	Beth. Q.D., porphyritic								
	no mineralization, upper side very contact								
	chilled margin & Hb concentration								
597.4'-603'	Guichon - no mineralization K-spar along fracture, chl veinlet, partly well chl, partly fresh biotite								
603'-604.5'	Beth Q.D. porphyritic, pale brown no mineralization, chl, Ep, K-spar								
604.5'-606.7'	Guichon Q.D. chl, K-spar								
606.7'-608'	Beth Q.D. porphyritic, pale brown no mineralization, chl, Ep, K-spar								
608'-610.5'	Guichon Q.D.	1660	600'-610'		< 0.01				
610.5'-610.7'	Beth Q.D. same as former								
610.7'-622'	Guichon Q.D. no mineralization chl, K-spar, Ep, partly Fresh Bio.	1661	610'-620'		< 0.01				
622'-636'	Beth. Q. D. porphyritic no mineralization, poikilitic texture, with large Hb crystals concentrated along marginal face	1662	620'-630'		< 0.01				
	K-spar remarkable chl.	1663	630'-640'		0.01				

SUMITOMO METAL MINING CO. OF CANADA LTD.

PROPERTY Sheba Copper Mines Ltd.

HOLE No. SDD #2A

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 2A Sheet No. 7 of 8
 Section
 Date Begun
 Date Finished

Lat.
 Dep.
 Bearing
 Elev. Collar

Total Depth
 Logged By
 Claim
 Core Size

DEPTH	DESCRIPTION	SAMPLE No.	FOOTAGE	WIDTH OF SAMPLE	Cu%				
636'-(689')	Guichon Q.D., medium grain, no mineralization	1664	640'-650'		<0.01				
	K-spar, mainly along fracture, mafics chloritized	1665	650'-660'		0.01				
	partly fresh Biotite	1666	660'-670'		<0.01				
	663'- a small dike (1") of Beth qtz. porphyry	1667	670'-680'		<0.01				
	675'-689' crushed zone, Fractures and Faults	1668	680'-690'		<0.01				
(689')-728'	Guichon Q.D. - same as above	1669	690'-700'		0.01				
	696-697 - crushed zone	1670	700'-710'		<0.01				
	726' - mal. stain	1671	710'-720'		<0.01				
728'-729'	Beth. Q.D. porphyritic, no mineralization	1672	720'-730'		<0.01				
	Hb concentrates								
729'-758'	Guichon qtz. dio.	1673	730'-740'		<0.01				
	729'-736' coarse grained, looks like beth.	1674	740'-750'		<0.01				
	737'-745' K-spar rich, dark orange, fractures develop	1675	750'-760'		<0.01				
	740'-744' Fault (?)								
	No mineralization								
758'-761'	Guichon-medium grain								
	Weak - Mod K-spar, Weak chl, gradual change								
761'-765'	Guichon Q.D. - coarse grain, mod K-spar	1676	760'-770'		<0.01				
765'-779'	Guichon Q.D.-fine grained, Homo-Tex	1677	770'-780'		0.02				
	weak K-spar, Mod. chl.								

SUMITOMO METAL MINING CO. OF CANADA LTD.

PROPERTY Sheba Copper Mines Ltd.

HOLE No. SDD #3

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 3 Sheet No. 1 of 3
 Section 00 + 90' N
 Date Begun Sept 20, 1967
 Date Finished Sept 28, 1967

Lat. 00 + 90' N
 Dep. 16 + 10' E
 Bearing West -53°
 Elev. Collar

Total Depth 613' 6"
 Logged By H. O.
 Claim J #35 FR
 Core Size BQWL

DEPTH	DESCRIPTION	SAMPLE No.	FOOTAGE	WIDTH OF SAMPLE					
0 - 26'	O/B								
26'- 60'	Beth Q.D. (Biot. <Hb) mod. chl, k-spar Argill. 49.8-50.2 - crushed 50.2'-53.0' - no core								
60'- 86'	B.Q.D. mod. chl, argill, weak K-spar								
86'-107.5'	B.Q.D. mod. chl, weak k-spar, argil locally Ep VL, thin aplite dike								
107.5'-133'	B.Q.D. mod-str. K-spar, chl, rich in Ep, mod. Argill								
133'-144'	B.Q.D. mod. K-spar, chl, argill, Ep.								
144'-152'	B.Q.D. fresh-weak k-spar, chl.								
152'-164'	B.Q.D. weak-mod. chl, Ep, K-spar.								
164'-171'	B.Q.D. fracturing with chl, Ep, films weak K-spar								
171'-187'	B.Q.D. fractures with chl, ep, weak K-spar locally crushing								
187'-205'	B.Q.D. fresh-weak chl, k-spar, weak-mod. Argill.								
205'-210'	B.Q.D. crushed, strong Argill, some Ep.								
210'-222'	B.Q.D. weak-mod. chl, K-spar, ep. in fract locally crushed								

SUMITOMO METAL MINING CO. OF CANADA LTD.

PROPERTY Sheba Copper Mines Ltd.

HOLE No. SDD #3

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 3 Sheet No. 2 of 3
 Section
 Date Begun
 Date Finished

Lat.
 Dep.
 Bearing
 Elev. Collar

Total Depth
 Logged By
 Claim
 Core Size

DEPTH	DESCRIPTION	SAMPLE No.	FOOTAGE	WIDTH OF SAMPLE	Cu%				
222'-235'	B.Q.D. fresh-weak chl, K-spar								
235'-248'	B.Q.D. weak-mod. chl, locally strong K-spar								
248'-251'	B.Q.D. porphyry-K-spar rich								
	at 250' dense mafic minerals								
251'-253'	Beth-coarse mafics, strong K-spar								
253'-280'	B.Q.D. porphyritic, weak-mod. chl, K-spar, Ep. VL, parallel to core								
280'-321'	B.Q.D. porphyritic-weak-mod. chl, K-spar, some Ep. Rare specks of Bo in Hb	604 921-605	280'-290' 290'-300'		tr. <0.01	B			
	305', 310' - core ground, str. K-spar	606	300'-310'		Tr.	B			
321'-333'	B.Q.D. weak-mod. chl, no K-spar some Ep., ep, VL, rich, rare barren qtz VL.	607 608	310'-320' 320'-330'		Tr. Tr.	B B			
333'-370'	B.Q.D. Weak chl, weak K-spar	609	330'-340'		Tr.	B			
370'-383'	B.Q.D. mod chl, very weak K-spar, no mal. little Bo. diss.	610 611	340'-350' 350'-360'		Tr. Tr.	B B			
		612	360'-370'		Tr.	B			
383'-390'	B.Q.D. mod, chl, weak K-spar (some K-spar VL)	613	370'-380'		0.14	B			
390'-400'	B.Q.D. weak chl, very weak K-spar	614	380'-390'		Tr.	B			
400'-415'	B.Q.D. weak chl., K-spar, few ep. VL.	615	390'-400'		Tr.	B			

SUMITOMO METAL MINING CO. OF CANADA LTD.

PROPERTY Sheba Copper Mines Ltd.

HOLE No. SDD #3

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 3 Sheet No. 3 of 3
 Section.....
 Date Begun.....
 Date Finished.....

Lat.....
 Dep.....
 Bearing.....
 Elev. Collar.....

Total Depth.....
 Logged By.....
 Claim.....
 Core Size.....

DEPTH	DESCRIPTION	SAMPLE No.	FOOTAGE	WIDTH OF SAMPLE					
15'-424'	B.Q.D. very porphyritic weak-mod chl, str K-spar, some chl-Ep VL								
	420'-420.5' core ground Ep-chl rich								
424'-460'	B.Q.D. with some reddish porphyry dikes (K-spar) (less than 1" to 3" wide)								
	weak chl, K-spar, some chl-Ep VL.								
460'-522'	B.Q.D. somewhat porphyritic Weak-mod chl, K-spar (partly strong)								
	chl -Ep VL rich								
522'-531'	B.Q.D. porphyritic, mod chl, weak-mod K-spar Ep-net work or VL								
31'-585'	B.Q.D. somewhat porphyritic mod chl, K-spar, some chl-ep VL.								
	559- reddish aplitic dike 2" wide								
585'-604'	B.Q.D. porphyritic (change gradual) mod-locally strong K-spar, mod chl, rich in Ep-chl, VL.								
605'-613.6'	B.Q.D. porphyritic-weak-mod chl, K-spar rarely barren qtz VL								
	End of Hole								

SUMITOMO METAL MINING CO. OF CANADA LTD.

PROPERTY Sheba Copper Mines Ltd.

HOLE No. SDD #4

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 4 Sheet No. 1 of 2
 Section 24 + 80'N
 Date Begun Sept 30, /67
 Date Finished Oct 5, /67

Lat. 24 + 80'N
 Dep. 5 + 50'W
 Bearing West -45°
 Elev. Collar

Total Depth 578'9"
 Logged By H. O.
 Claim JAY #17
 Core Size BQWL

Cu %

DEPTH	DESCRIPTION	SAMPLE No.	FOOTAGE	WETNESS OF SAMPLE		Sample No.	Footage	Cu%	
0'-19'	O/B	567	19'-30'	tr.	B	588	230'-240'	Tr.	B
19'-33'	Guichon Q.D. chl or Ep VL in fract.	568	30'-40'	tr.	B	589	240'-250'	Tr.	B
33'-43'	Fault (?) no core	569	40'-50'	tr.	B	590	250'-260'	Tr.	B
43'-92'	Guichon Q. D. mod chl K-spar	570	50'-60'	tr.	B	591	260'-270'	Tr.	B
	65'-69' core ground	885-571	60'-70'	0.01		592	270'-280'	Tr.	B
92'-121'	B.Q.D. porphyritic, str K-spar rich in chl VL.	572	70'-80'	tr.	B	593	280'-290'	Tr.	B
	Partly malach stain in fract.	573	80'-90'	tr.	B	925-594	290'-300'	0.025	
121'-132'	Beth. Q.D. (more or less porphyritic)	879-574	90'-100'	0.015					
	mod K-spar mod-weak chl.	575	100'-110'	tr.	B				
132'-187'	B.Q.D. str K-spar, mod chl, partly	576	110'-120'	tr.	B				
	mal. in fractures, Bo-very little in fract	577	120'-130'	tr.	B				
	151'-155' core ground	578	130'-140'	tr.	B				
187'-208'	B.Q.D. Biot rich mod K-spar chl.	919-579	140'-150'	0.09					
208'-286'	B.Q.D. biot rich, weak K-spar, chl, some ep VL	888-580	150'-160'	0.075					
	258' malach stain in fract.	892-581	160'-170'	0.09					
286'-300'	B.Q.D. Biot-rich. Mod K.F. chl (locally Str. K-spar)	882-582	170'-180'	0.065					
	Ep VL rich	880-583	180'-190'	0.035					
	291' - malach in fract.	584	190'-200'	tr.	B				
300'-340'	B.Q.D. - mod-str K-spar, mod. chl, rich in Ep	585	200'-210'	tr.	B				
	307' malach stain in fract.	586	210'-220'	tr.	B				
		587	220'-230'	Tr.	B				

SUMITOMO METAL MINING CO. OF CANADA LTD.

PROPERTY Sheba Copper Mines Ltd.

HOLE No. SDD #4

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 4 Sheet No. 2 of 2
 Section.....
 Date Begun.....
 Date Finished.....

Lat.....
 Dep.....
 Bearing.....
 Elev. Collar.....

Total Depth.....
 Logged By.....
 Claim.....
 Core Size.....

DEPTH	DESCRIPTION	SAMPLE No.	FOOTAGE	WIDTH OF SAMPLE				
340'-350'	B.Q.D. Weak chl, K-spar	595	340'-350'	Tr.	B			
	343'-344' str K-spar along Fract (20° to core). malach in fract - some sericite							
350'-370'	B.Q.D. Weak-mod K-spar, weak Chl.							
370'-390'	B.Q.D. mod chl, K-spar, some mal. stain	596	370'-380'	Tr.	B			
390'-420'	B.Q.D. mod-weak chl, K-spar, Ep veinlets	597	380'-390'	Tr.	B			
420'-436'	B.Q.D. mod chl, K-spar	598	420'-430'	Tr.	B			
	426' malach. (Bo?) in fract with some sericite	599	430'-440'	Tr.	B			
436'-450'	B.Q.D. Weak-mod chl - K-spar	600	440'-450'	Tr.	B			
450'-494'	B.Q.D. Weak-mod chl, K-Spar							
494'-496'	B.Q.D. str. K-spar, Ep							
496'-520'	B.Q.D. Mod chl, weak K-spar							
	516'-517' Ep V 3" wide @ 30° to core							
520'-535'	B.Q.D. Mod str. K-spar, chl, Ep VL.	601	520'-530'	Tr.	B			
	532'-534' Mal in fract. diss Bo.	602	530'-540'	Tr.	B			
535'-550'	B.Q.D. Mod. K-spar, chl, Ep VL	917-603	540'-550'	0.065				
550'-578.9'	B.Q.D. Mod chl, weak K-spar, some Ep VL.							
	End of Hole.							

SUMITOMO METAL MINING CO. OF CANADA LTD.

PROPERTY Sheba Copper Mines Ltd.

HOLE No. SDD #5

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 5 Sheet No. 1 of 3
 Section 56 + 95' S
 Date Begun Oct. 10/67
 Date Finished Oct. 12/67

Lat. 56 + 95'S
 Dep. 39 + 45'W
 Bearing East -45°
 Elev. Collar

Total Depth 296.6
 Logged By H.O.
 Claim Cu #2
 Core Size BQWL

DEPTH	DESCRIPTION	SAMPLE No.	FOOTAGE	WIDTH OF SAMPLE	Cu%	Mo %			
0 - 9'	O/B								
9'- 12'	B.Q.D., med-gr, str chl, Feld → brownish, Cp. diss in Chl-Hb, (wk min)								
12'- 19'	B.Q.D.	616	0 - 15'		0.055	0.001			
	13'-Cp-Bo fine diss in mafics	617	15 - 20'		0.17	0.007			
	15'-Bo diss & (Cp) str chl, Ep, 15.5' <40° Bo string								
	15'-19' fract. well developed, lim. rich in Fract.								
19'- 24'	B.Q.D.- 19.5' <50°-Cp, Hem, Bo, Qtz VL								
	19'-20.6' Cp diss weak, 20.6', <40° , Bo diss along Fract								
	20.9' Bo string & diss.								
	21.5' Cp in Fract.								
	21.5'-24' Cp & Py Impreg-weak	618	20' - 30'		0.24	0.005			
24'- 62.2'	Porphyry (P-3)-quartz phenocrysts up to 1/4"								
	24'-1" wide chilled margin, 24.5', <30° cp string	619	30' - 40'		0.30	0.011			
	24'-32'-pale brown Feldspars partially bleached	620	40' - 50'		0.21	0.004			
	weak argill, 28.5', <25° Bo-qtz VL.; 30.7', <45° Cp, Mo, QV	621	50' - 60'		0.07	<0.001			
	32'-35' - alteration is stronger, Feldspars partly bleached								
	32.9' <40° Mo-qtz Vein								
	35'-62.2'-Chl partly pale brown (argill?)								
	36.6', <50° Cp, QV; 37.6', <30° Cp QV; 41.0' <25°, <10°, Cp-Bo QV								
	47.5' <15°, Cp in Fract; 54.5', <45° Bo. chl. QV; 63.0', <20° Cp. Film in Fract.								

SUMITOMO METAL MINING CO. OF CANADA LTD.

PROPERTY Sheba Copper Mines Ltd.

HOLE No. SDD #5

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 5 Sheet No. 2 of 3
 Section.....
 Date Begun.....
 Date Finished.....

Lat.....
 Dep.....
 Bearing.....
 Elev. Collar.....

Total Depth.....
 Logged By.....
 Claim.....
 Core Size.....

DEPTH	DESCRIPTION	SAMPLE No.	FOOTAGE	WIDTH OF SAMPLE	Cu%	Mo%			
	Cp-Py-Bo, Mo, qtz stringer. Cp-Py & Bo diss								
	Partially Fine Mo stringers in fract. very little malachite								
62.2'-89'	Beth Q.D.- porphyritic-Cp-Bo-Mo diss	622	60'-70'		0.07	0.002			
	str-chl, partly Ep VL Hem qtz VL, 74.5'; <50° Mo QV	623	70'-80'		0.65	0.113			
	pale brown Feld (84'-88'); 77.0' <35° Bo, Q VL	624	80'-90'		0.08	0.022			
	75'-79' Bo diss, Cp-Bo-Mo qtz string, intrusive								
	88'-91' Hem qtz Mo in fract; 87.0' <55°, Mo along fract.								
89'-104.7'	B.Q.D. qtz pheno cryst remarkable; 97.0', <400 Mo Q VL	625	90'-100'		0.04	0.011			
	Mafics scarce 95'-101' chl-mod, pale brown Feld.	626	100'-110'		Tr.	Tr.	B		
	intensive fract of Hem. Hem, Mo diss very rarely Cp.	627	110'-120'		Tr.	0.005	B		
104.7'-132'	B.Q.D. coarse grain, chl partly orange Feld.	628	120'-130'		Tr.	0.041	B		
	Mo. diss. along Fract.	629	130'-140'		0.13	0.115	B		
132'-135'	B.Q.D. Mo, -(Cp)-Qtz stringer parallel to core								
135'-157'	B.Q.D. med-coarse grained chl in tensive	630	140'-150'		Tr.	Tr.	B		
	Feldspars brown. Hem fract well developed	631	150'-160'		Tr.	Tr.	B		
	No mineralization								
157'-175'	B.Q.D. - str chl, brown Feld, low in Hem.	632	160'-170'		Tr.	Tr.	B		
	No mineralization	633	170'-180'		.14	0.009	B		
175'-182'	B.Q.D. Argill (ser) silic. strong								
	176.3'-177.3' Qtz V. (barren)								

SUMITOMO METAL MINING CO. OF CANADA LTD.

PROPERTY Sheba Copper Mines Ltd.

HOLE No. SDD #5

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 5 Sheet No. 3 of 3
 Section.....
 Date Begun.....
 Date Finished.....

Lat.....
 Dep.....
 Bearing.....
 Elev. Collar.....

Total Depth.....
 Logged By.....
 Claim.....
 Core Size.....

DEPTH	DESCRIPTION	SAMPLE No.	FOOTAGE	WIDTH OF SAMPLE	Cu %	Mo %			
182'-225'	B.Q.D. med. gr. Hb >> Biot	634	180'-190'		0.12	0.041	B		
	chl, Ep-chl VL, partly fresh biotite	635	190'-200'		tr.	tr.	B		
	some Hem.	636	200'-210'		tr.	tr.	B		
	186'-197' - Mo qtz V	637	210'-220'		0.18	0.015	B		
	195' - Cp qtz string								
	211'-212' Cp-Py diss.								
	214'-215' Cp diss weak								
	223.5' Bo fine diss.								
225'-231'	B.Q.D. med. gr. chl, orange Feld	638	220'-230'		0.18	tr.	B		
	226' - no diss. in mafics								
231'-262'	B.Q.D. - med. gr. chl mod.	639	230'-240'		0.10	tr.	B		
	236'-237.5' Hem qtz in fract partly orange Feld	640	240'-250'		0.14	tr.	B		
	238.6'-239.1' Bo string, Bo Cp diss	641	250'-260'		tr.	tr.	B		
	255.8'-257.7' weak Cp diss (orange Feld rich)								
262'-296.6'	B.Q.D. - med. gr. - Med-wk chl, partly orange feld	642	260'-270'		tr.	tr.	B		
	295' - Mo diss.	643	270'-280'		tr.	tr.	B		
		644	280'-290'		tr.	tr.	B		
	End of hole	645	290'-296.5'		tr.	tr.	B		

SUMITOMO METAL MINING CO. OF CANADA LTD.

PROPERTY Sheba Copper Mines Ltd.

HOLE No. SDD #6

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 6 Sheet No. 1 of 2
 Section 60 + 96'S
 Date Begun Oct. 13'67
 Date Finished Oct. 17'67

Lat. 60 + 96'S
 Dep. 28 + 38'W
 Bearing East - 45°
 Elev. Collar

Total Depth 300'
 Logged By H.O.
 Claim CU # 4
 Core Size BQWL

DEPTH	DESCRIPTION	SAMPLE No.	FOOTAGE	WIDTH OF SAMPLE	Cu %	Mo %			
0'-7.7'	O/B								
7.7'-39.0'	B.Q.D. felsic, Homogeneous appearance mafic → chl, ep, no mineralization.								
39. '-44.'	B.Q.D. porous mafics → chl, ep. no mineralization								
44.'-62.'	B.Q.D. Felsic, Homogeneous appearance, Hem. mafic → chl, ep, no mineralization.								
62'-70'	B.Q.D. - porous, mafics partly Hem mafic → chl, ep; no mineralization.								
70'-81'	B.Q.D., med grained, Hb > Biot, partly porous mafics richer than above, no mineralization								
81'-126'	B.Q.D. same as above chl, Ser, Ep, locally Hem and brown Feld.								
81'-83'	Bo, Mo diss	896	80'-90'		0.10	Tr.	B		
100'-101'	Bo, Diss frags developed <20°	897	90'-100'		Tr.	0.005	B		
104.5'	Mo-Qtz in fract, orange Feldspar rich along Fract. < 25° - 30°	898	100'-110'		0.11	0.022	B		
107'	Mo-Qtz along Fract <25°								
108'	Mo-Qtz along fract <25°								
112.2'	Mo, Cp Diss, very weak	899	110'-120'		0.17	0.034	B		
113'	Bo in fract. (very weak)								
114'-115'	Bo-Mo diss and in fract								

SUMITOMO METAL MINING CO. OF CANADA LTD.

PROPERTY Sheba Copper Mines Ltd.

HOLE No. SDD #6

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 6 Sheet No. 2 of 2
 Section.....
 Date Begun.....
 Date Finished.....

Lat.....
 Dep.....
 Bearing.....
 Elev. Collar.....

Total Depth.....
 Logged By.....
 Claim.....
 Core Size.....

DEPTH	DESCRIPTION	SAMPLE No.	FOOTAGE	WIDTH OF SAMPLE	Cu%	Mo%			
	118.5' Cp-Bo-Mo in fract & diss.								
	125.5'-126' Bo-Cp-Mo in fract & diss	900	120'-130'		0.09	0.013	B		
126'-144'	B.Q.D. - mod crushed, strong Chl, no mineralization								
144'-192'	B.Q.D. mod-weak chloritized, partly Fresh biotite								
	175'-177' crushed zone								
192'-194'	B.Q.D. all except qtz. is chloritized	646	190'-200'		0.08	0.101	B		
	193' - Mo clay (black)? in fracture < 30°	647	200'-210'		0.13	0.005	B		
194'-205'	B.Q.D. - core recovery 50%	648	210'-220'		0.08	0.006	B		
	Fault zone, alteration same as above. Crushed	649	220'-230'		Tr.	Tr.	B		
205'-258'	B.Q.D. Mod-weak chl, partly pale brown Feld.	650	230'-240'		0.05	0.008	B		
	230' Mo along Fract.	651	240'-250'		0.06	Tr.	B		
258'-259'	B.Q.D. Mod-weak chl. partly brown Feld.	652	250'-260'		Tr.	0.012	B		
	Bo diss along Fract.	653	260'-270'		Tr.	0.012	B		
259'-268'	B.Q.D. Mod-weak chl, partly brown Feld								
	261' - Mo in Fract.								
268'-276'	B.Q.D. Mod-weak chl, Dark orange Feld								
	no mineralization								
276'-300'	B.Q.D.								
	276'-278' chl mod								
	285' - Ep-qtz stringer < 20°								
	End of Hole								

SUMITOMO METAL MINING CO. OF CANADA LTD.

PROPERTY Sheba Copper Mines Ltd.

HOLE No. SDD #7

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 7 Sheet No. 1 of 4
 Section 72 S
 Date Begun Nov. 16/67
 Date Finished Nov. 21/67

Lat. 72 S
 Dep. 4 W
 Bearing West -45°
 Elev. Collar

Total Depth 520'
 Logged By H.O.
 Claim DO #4 FR
 Core Size BQWL

DEPTH	DESCRIPTION	SAMPLE No.	FOOTAGE	WIDTH OF SAMPLE					
2'-16'	O/B								
16'-38'	B.Q.D. mod chl								
	22' Fract < 15° K-spar along fract.								
	22'-27' argill & wk K-spar								
	22'-38' Rusty Fracts @ < 15° - 20°								
38'-60'	B.Q.D. mod. chl.								
	38'-39' porphyritic								
	39'-41' rusty loose, int-argill								
	55' - gradually porphyritic; argillaceous								
60'-67'	B.Q.D. porphyritic, int. chl, mod-wk K-spar & argill								
	60'-61.5' brown alt.								
	61.5'-67' mod. argill, whitish color, partly crushed core								
67'-88.5'	B.Q.D. somewhat porphyritic int-mod chl.								
	locally irregular or core < 90° K-spar bands								
88.5'-104.5'	B.Q.D. porphyritic, int argill & chl.								
	94'-97.5' chl-ep-qtz VLs core < 70-75°								
	97.5-98' crushed zone								
	98'-102' qtz. VLs (barren) core < ± 10°								
	102' → argill. gradually weakens								
	101'-104.5' brown alteration								

SUMITOMO METAL MINING CO. OF CANADA LTD.

PROPERTY Sheba Copper Mines Ltd.

HOLE No. SDD #7

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 7 Sheet No. 2 of 4
 Section.....
 Date Begun.....
 Date Finished.....

Lat.....
 Dep.....
 Bearing.....
 Elev. Collar.....

Total Depth.....
 Logged By.....
 Claim.....
 Core Size.....

DEPTH	DESCRIPTION	SAMPLE No.	FOOTAGE	WIDTH OF SAMPLE					
104.5'-111'	B.Q.D.-somewhat porphyritic, int-mod chl, wk k-spar								
111'-136'	B.Q.D.-wk-mod chl, Locally K-spar along fract $<^{\pm} 20^{\circ}$								
	130' - chl VL @ $<90^{\circ}$, Fine Bo. diss. in Hb, intersect by chl VL								
	132'-134' silicified mafics rare, Ep-chl, brown alt porphyritic appearance								
	133° $< 20^{\circ}$ Hem-cal. VL								
136'-151.5'	B.Q.D. somewhat porphyritic wk chl								
	149' - core $<35^{\circ}$ chl VL Very fine Bo-Mo on Hb intersect by fractures.								
151.5'-174'	B.Q.D. wk chl, wk K-spar, somewhat porphyritic								
	153' - chl VL, Mt in Fracts. core $<30^{\circ}, 25^{\circ}, 60^{\circ}$, etc.								
	154.5' - chl K-spar along fract core $<25^{\circ}$ (Bo?)								
174' - 199'	B.Q.D. wk-mod chl, wk K-spar								
	some chl VLs core $<30^{\circ} - 50^{\circ}$								
	192' - aplite dike 2" thick core $<80^{\circ}$								
	198'-199' brownish alter								
199'-199.5'	Apparent basic dike, irreg hem. net.								
199.5'-240'	B.Q.D. wk-mod chl wk K-spar								
	199.5'-200' int. chl								
	211' K-spar along fract ($< 45^{\circ}$) with fine diss of Bo.								

SUMITOMO METAL MINING CO. OF CANADA LTD.

PROPERTY Sheba Copper Mines Ltd.

HOLE No. SDD #7

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 7 Sheet No. 3 of 4
 Section
 Date Begun
 Date Finished

Lat.
 Dep.
 Bearing
 Elev. Collar

Total Depth
 Logged By
 Claim
 Core Size

DEPTH	DESCRIPTION	SAMPLE No.	FOOTAGE	WIDTH OF SAMPLE					
	218'- chl VL ($<45^{\circ}$) Bo in fract.								
	238.5'- Mo VL (very fine) core $<25^{\circ}$								
	238'-239' mod-int. chl, mod-wk K-spar								
240'-257'	B.Q.D. wk. chl. & Locally K-spar (weak)								
	255.5' - chl fract. $<30^{\circ}$ with Bo diss in fract.								
257'-260'	B.Q.D. wk chl - Fresh, locally chl-ep VL								
260'-269'	B.Q.D. somewhat porphyritic, wk-mod chl								
	locally with K-spar veinlet								
269'-312.5'	B.Q.D. vy-wk chl - Fresh vy wk-K-spar								
	locally K-spar veinlet								
	276'- Cp in fract.								
	289'-291' - mod-wk chl, some chl Hem VL ($<^{\pm} 30^{\circ}$)								
312.5'-316'	B.Q.D. mod-int. altered (K-spar, chl)								
	312.5'-314' int K-spar Cp in Fract.								
	314'-316' Mod chl wk K-spar								
316'-326'	B.Q.D. Few mafics, bleached, argill, mod chl								
	some calc VL with K-spar (core $<30^{\circ}$ - 40°)								
326'-360'	B.Q.D. mod-wk chl, locally wk K-spar & argill								
	some chl-ep VL (core $<30^{\circ}$ - 50°)								
360'-368'	B.Q.D. intensively alt (chl, ep, argill) along fract.								
	367'-372.3 core ground								

SUMITOMO METAL MINING CO. OF CANADA LTD.

PROPERTY Sheba Copper Mines Ltd.

HOLE No. SDD #7

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 7 Sheet No. 4 of 4
 Section.....
 Date Begun.....
 Date Finished.....

Lat.....
 Dep.....
 Bearing.....
 Elev. Collar.....

Total Depth.....
 Logged By.....
 Claim.....
 Core Size.....

DEPTH	DESCRIPTION	SAMPLE No.	FOOTAGE	WIDTH OF SAMPLE					
0' - 372.3'	B.Q.D. ground core, highly altered core recovery ≈ 23%								
372.3' - 464.2'	Grey ground mass, Fine-med. gr. rock, massive appearance (Homo geneous) Hb, Biot, Qtz, Feldspar rock, very fine opaque (pyrite) imp. 372.3'-375' Fine facies, greenish-dark grey quartz inclusion in Feld, Locally coarse gr. Feld. 455'-462' - Fine facies dark greenish gray 462'-464.2' - clay-dark grey								
464.2' - 466'	B.Q.D. Highly altered, core ground								
466' - 478'	B.Q.D. Highly altered (chl, ep) argill along fract.								
478' - 502'	B.Q.D. mod-int chl weak ep. & K-spar								
502' - 503'	B.Q.D. crushed clay								
503' - 520'	B.Q.D. mod chl. weak ep & K-spar with some ep-chl VL (core $\le 30^{\circ}$ - <math>50^{\circ}< math>)<="" td=""> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </math>50^{\circ}<>								
	End of Hole								

SUMITOMO METAL MINING CO. OF CANADA LTD.

PROPERTY Sheba Copper Mines Ltd.

HOLE No. 9

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 9 Sheet No. 1 of 2
 Section 00 + 33'N
 Date Begun Nov. 23, '67
 Date Finished Nov. 26, '67

Lat. 00 + 33'N
 Dep. 13 + 14'E
 Bearing N 90E -45°
 Elev. Collar

Total Depth 200'
 Logged By H.O.
 Claim JAY #16
 Core Size BQWL

DEPTH	DESCRIPTION	SAMPLE No.	FOOTAGE	WIDTH OF SAMPLE	Cu%	Mo			
0 - 18'	Overburden (Casing)								
18'-47'	B.Q.D. Fresh (badly weathered in places)								
	20-24 core ground-recovery less than 20%								
	26-29 core ground-recovery less than 50%								
	32.5-34 core ground								
	35-39 core ground								
	42-44 core ground recovery less than 50%								
47'-66'	B.Q.D. generally fresh, Epidote in places								
	47-48 core ground								
	52-58 core ground-recovery less than 50%								
	60.5 - 61 core ground-recovery very poor-some clay								
	63-66 core partly ground								
66'-73'	B.Q.D. generally fresh-core partly ground								
73'-86'	B.Q.D. - mod. ep. chl. wk. K-spar,	1684	70 - 80		0.02				
	76.5'-77.5' core ground-some malachite in fract.	1685	80 - 90		0.02				
	79'-82' Hem. rich in fract.	1686	90 -100		0.05				
86'-97'	B.Q.D. - generally fresh - partly chl. ep. 4 vl.								
	89'-89.5' intense K-spar, ep, silic, porphyritic appearance								
	94' bornite diss. in Hb.								

SUMITOMO METAL MINING CO. OF CANADA LTD.

PROPERTY Sheba Copper Mines Ltd.

HOLE No. 10

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 10 Sheet No. 1 of 2
 Section 4S
 Date Begun Nov 28, 1967
 Date Finished Dec 2, 1967

Lat. 46 4 S.
 Dep. 16 E
 Bearing West -450
 Elev. Collar - -

Total Depth 318'
 Logged By G.Y. Hirata
 Claim J #35 FR
 Core Size B.Q.W.L.

DEPTH	DESCRIPTION	SAMPLE No.	FOOTAGE	WIDTH OF SAMPLE					
0 - 13'	Over burden								
13'-141'	P ₃ - porphyry								
	Pheno ^c yst: rounded qtz + feldspar + hb (poikilitic hb. in place)								
	med - alt; feldspar → argill. mafic → chl.								
	25.5'-28.6' badly broken rec. 30%								
	28.6'-33.9' " " 65%								
	54.2'-56' hm along fractures								
	69'-141' hb → chlz + epidote								
	103'-105' epidote along fractures								
	112'-118' v.w. Bo, diss in mafics								
	116'-118' bleached P ₃ (pale coloured)								
	141' chilled margin of P ₃								
141 - - 318'	B.Q.D. med. coarse grained								
	Mod- alt, chlz + potassic								
	141'-143' bleached B.Q.D.								
	141'-143' small amt. of Bo in fract.								
	143' B.Q.D. mod. alt (chlz)								
	178'-186' v.w. Bo diss in mafic								

SUMITOMO METAL MINING CO. OF CANADA LTD.

PROPERTY Sheba Copper Mines Ltd.,

HOLE No. 10

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 10 Sheet No. 2 of 2
 Section.....
 Date Begun.....
 Date Finished Dec 1, 1967

Lat.....
 Dep.....
 Bearing.....
 Elev. Collar.....

Total Depth.....
 Logged By.....
 Claim.....
 Core Size.....

DEPTH	DESCRIPTION	SAMPLE No.	FOOTAGE	WIDTH OF SAMPLE					
	176'-220' intense K-spar, chlz.								
	193'-194' V.W. Bo-diss. in mafics								
	203' " " "								
	220'-285' mod. alt. (K-spar + chlz)								
	227.5'-228' sheared zone (hem + chl.) 45°								
	236.5'-240' fault with clay								
	248'-249' silicified B.Q.D. (with sericite + epidote)								
	249'-271' V.W. Bo-diss. in mafics								
	282' " "								
	285'-318' weakly alt (chlz)								
	316' P ₃ dyke? fine grained feldspar phino w = 1"								
318'	End of hole								

SUMITOMO METAL MINING CO. OF CANADA LTD.

PROPERTY Sheba Copper Mines Ltd.

HOLE No. SDD #12

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 12 Sheet No. 1 of 3
 Section at 135° - 315° Az
 Date Begun Dec 4, '67
 Date Finished Dec 8, '67

Lat. 12 + 50'N
 Dep. 42 E
 Bearing 135°Az -45°
 Elev. Collar

Total Depth 357'
 Logged By H. O.
 Claim Sheba #25
 Core Size BQWL

DEPTH	DESCRIPTION	SAMPLE No.	FOOTAGE	WIDTH OF SAMPLE					
0' - 4.5'	O/B casing								
4.5' - 32.0'	G.Q.D. fresh								
	20.5' - 23.5' core ground recovery less 30%								
	23.5' - 27 " " " 50%								
	Malchite in fract.								
32.0' - 47.0'	G.Q.D. weak K-sp.								
47.0' - 67.0'	G.Q.D. fresh								
67.0' - 77.0'	G.Q.D. chlz, argill								
	69.0' chalcopryrite diss.								
77.0' - 88.0'	G.Q.D. weak k-sp. locally argill								
88.0' - 97.0'	G.Q.D. intense K-sp Moderate argill								
97.0' - 110.0'	G.Q.D. strong chlz argill								
	98.0' - 100.0' crushed zone								
	101.0' - 103.0' "								
	106.0' - 110.0' "								
110.0' - 128.0'	G.Q.D. weak - moderate chlz. k-spar								
128.0' - 147.0'	G.Q.D. intense chlz. k-spar								
147.0' - 158.0'	G.Q.D. moderate K-spar, chlz.								
158.0' - 169'	G.Q.D. intense chlz. K-spar								
	161' - 162' Bo quartz vein with clay								
	167' - 169' crushed zone								

SUMITOMO METAL MINING CO. OF CANADA LTD.

PROPERTY Sheba Copper Mines Limited

HOLE No. SDD #12

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 12 Sheet No. 2 of 3
 Section.....
 Date Begun.....
 Date Finished.....

Lat.....
 Dep.....
 Bearing.....
 Elev. Collar.....

Total Depth.....
 Logged By.....
 Claim.....
 Core Size.....

DEPTH	DESCRIPTION	SAMPLE No.	FOOTAGE	WIDTH OF SAMPLE					
169'-179'	intense Argill, and chlz. weak K-sp. G.Q.D.								
179'-197'	G.Q.D. weak alter								
197'-208'	G.Q.D. intense chlz. K-sp. argill								
	200'-201' core-ground								
	202.5'-203' " } core crushed								
	204.0'-205' " }								
208'-219'	Guichon Q.D. mod. chlz. K-spar								
219'-229.5'	Guichon Q.D. intense, K-spar, mod. chlz. argill. ep. VL in places.								
229.5'-244'	Guichon Q.D. coarse-medium grain								
	mod-wk. K-spar, chlz. mod argill								
244'-257.5'	Guichon Q. D. coarse-medium grain								
	intense chlz. k-spar, argill.								
	244'-245' core crushed								
	250'-251.5' "								
257.5'-261'	Guichon Q.D. mod-wk. Alt.								
	core recovery 7" for 3.5' = doubtful.								
261'-265.5'	Guichon Q.D. intense chlz.-K-spar.								
265.5'-293'	Guichon Q.D. mod-wk. chlz. k-spar, argill.								

SUMITOMO METAL MINING CO. OF CANADA LTD.

PROPERTY Sheba Copper Mines Limited

HOLE No. SDD #12

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 12 Sheet No. 3 of 3
 Section.....
 Date Begun.....
 Date Finished.....

Lat.....
 Dep.....
 Bearing.....
 Elev. Collar.....

Total Depth.....
 Logged By.....
 Claim.....
 Core Size.....

DEPTH	DESCRIPTION	SAMPLE No.	FOOTAGE	WIDTH OF SAMPLE						
293'-329'	Guichon Q. D. coarser grain chlz-K-spar Wk ~ Mod.									
	328' Bo. Diss.									
329'-352'	G.Q.D. coarser grain intense chlz. argill k-sp.									
352'-357'	G.Q.D. coarser grain. Moderate chlz. K-sp. 354' - 355' intense chlz. Argill K-sp. core-crushed.									
	END OF HOLE									

SUMITOMO METAL MINING CO. OF CANADA LTD.

PROPERTY Sheba Copper Mines Ltd.

HOLE No. 13

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 13 Sheet No. 1 of 7
 Section 52 + 153'S
 Date Begun Dec. 6, '67
 Date Finished Dec. 10, '67

Lat. 52 + 153'S
 Dep. 39 + 56'W
 Bearing East 45°
 Elev. Collar

Total Depth 420'
 Logged By Y.H.
 Claim CU #2
 Core Size BQWL

DEPTH	DESCRIPTION	SAMPLE No.	FOOTAGE	WIDTH OF SAMPLE	Cu	Mo			
0' - 31.0'	Casing								
31.0'-37.0'	B.Q.D. mod-alt (chlz) 35.6' Cp along fract.	1697	31'-40'		0.12	0.010			
37.0'-50.0'	B.Q.D. w. alt (hb. → chlz, bt are not alt) 39.5' Cp - along fract 43.5' Moly diss. 47.5'-50.0' Moly, Cp diss and in fract.	1698	40'-50'		0.075	0.015			
50.0'-53.0'	B.Q.D. mod-extr alt (chlz, argill) 50.0'-54.5' Moly diss. in fract. 53.0' qtz vein 1"								
53.0'-85.0	B.Q.D. mod-alt (chlz) 54.5'-58.0' moly diss py along fract. 58.0'-68.0' moly diss, in fract. 69.0'-70.0' Bo + Cp diss 75'-76.0' Bo + Cp diss. in fract. 77'-85.0' py + cp diss. in fract. 80.0' Moly in fract. (with K-fd)	1699 1700 1701 1702 1703	50'-60' 60'-70' 70'-80' 80'-90' 90'-100'		0.05 0.11 0.035 0.025 0.11	0.025 0.032 0.009 0.009 0.009			
85.0'-89.0'	B.Q.D. w. alt (hb → chlz, bt are no alt.)								
89.0'-96'	B.Q.D. mod alt (chlz. K-fd) 89'-96' Cp-diss. (strongly mineralized)								
96.0'-97.0'	Bda-Porphyry								

SUMITOMO METAL MINING CO. OF CANADA LTD.

PROPERTY Sheba Copper Mines Ltd.

HOLE No. 13

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 13 Sheet No. 2 of 7
 Section.....
 Date Begun.....
 Date Finished.....

Lat.....
 Dep.....
 Bearing.....
 Elev. Collar.....

Total Depth.....
 Logged By.....
 Claim.....
 Core Size.....

DEPTH	DESCRIPTION	SAMPLE No.	FOOTAGE	WIDTH OF SAMPLE	Cu	Mo			
97' 97'-97.5'	B.Q.D. mod-extr. alt (K-fd, chlz) cp-diss								
97.5'-124.5'	Bda porphyry	1704	100'-110'		0.17	0.005			
	97.5'-112' diss finegrained Cp + Py	1705	110'-120'		0.07	0.007			
	103' Bo + Cp in fract.	1706	120'-130'		0.075	0.027			
	112'-120' no mineralization								
	124'-124.5' chilled margin								
124.5'-143'	B.Q.D. mod-alt (chlz + K-fd)	1707	130'-140'		0.03	0.013			
	124.5'-125' Cp-diss.								
	125' moly in fract.								
	127' Mo + Cp + Bo in fract.								
	128.5'-129.7' Cp in fract.								
	131' Cp in fract.								
	132' Mo diss.								
	133'-134' Cp + Bo in fract.								
	142'-147' Mo + Cp in fract.								
	147' qtz vein (3") moly + Cp								
	148' Bo-diss.								
143'-166'	B.Q.D. ext. alt (K-fd + chlz + argill)	1708	140-150		0.19	0.14			
	150' qtz. vein with Hm & Mo	1709	150-160		0.02	0.076			
	152' Mo in fract.	1710	160-170		0.02	0.005			
	153'=154' Mo diss.								

SUMITOMO METAL MINING CO. OF CANADA LTD.

PROPERTY Sheba Copper Mines Ltd.

HOLE No. 13

BWP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 13 Sheet No. 3 of 7
 Section _____
 Date Begun _____
 Date Finished _____

Lat. _____
 Dep. _____
 Bearing _____
 Elev. Collar _____

Total Depth _____
 Logged By _____
 Claim _____
 Core Size _____

DEPTH	DESCRIPTION	SAMPLE No.	FOOTAGE	WIDTH OF SAMPLE	Cu	Mo			
	154'-156' fine Py + Cp. diss. & in irr. fract.								
	158' Mo. + Py. in fract.								
	159' - 160' fault crushed zone core finely ground.								
	165.5' Hm. in fract.								
166'-175'	B.Q.D. Mod. Alt. (chlz)								
	170' Cp. in fract.								
	173' Bo in fract and diss. both side of fract.	1711	170'-180'		0.03	0.011			
175'-184'	B.Q.D. K-spar, Ep, V ₂ .	1712	180'-190'		0.04	0.008			
	175'-177' Hm in fract. (intense~Mod. argill)								
	181' Moly diss.								
	183' Cp in fract.								
	184' Bo + Cp in fract.								
	184.5' qtz. vein (epidote + hem)								
184'-195'	B.Q.D. mod. alt. (chlz)								
	187' py in fract.								

SUMITOMO METAL MINING CO. OF CANADA LTD.

PROPERTY Sheba Copper Mines Ltd.

HOLE No. 13

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 13 Sheet No. 4 of 7
 Section.....
 Date Begun.....
 Date Finished.....

Lat.....
 Dep.....
 Bearing.....
 Elev. Collar.....

Total Depth.....
 Logged By.....
 Claim.....
 Core Size.....

DEPTH	DESCRIPTION	SAMPLE No.	FOOTAGE	WIDTH OF SAMPLE	Cu	Mo			
196'-199'	B.Q.D. intense, K-spar. Ep.								
	196' Q.V. with Mo?								
	197' Mo. in fract.	1713	190'-200'		<0.01	0.010			
199'-206'	B.Q.D. Mod. chlz.	1714	200-210'		0.14	0.26			
	201' Hm. Py. in fract	1715	210'-220'		0.08	0.014			
206'-210'	B.Q.D. K-fd. chlz.								
	206'~206.3' Q. V. with Mo + (Cp + Bo)								
	208.5'~210' Q.V. with Mo + Cp.								
210'-219'	B.Q.D. K-fd. chlz.								
	210'-213' Cp + Bo in fract.								
	215'-220' Cp + Bo in fract.								
219'-230'	B.Q.D. Mod. alt. chlz.	1716	220'-230'		0.02	0.006			
	226'-228' Ep-diss.	1717	230'-240'		0.05	0.002			
230'-234'	B.Q.D. W. alt. chlz. bt is still remain	1718	240'-250'		0.03	0.002			
	231'-232' Cp. diss.								
	234' Cp. Moly in fract.								
234'-235'	B.Q.D. Mod. alt. argill. chlz.								
	238' Cp. in fract.								
235'-247'	B.Q.D. W. alt (chlz)								
247'-252'	B.Q.D. Mod. alt. argill. chlz.								
	248' c.c. in fract.								

SUMITOMO METAL MINING CO. OF CANADA LTD.

PROPERTY Sheba Copper Mines Ltd.

HOLE No. 13

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 13 Sheet No. 5 of 7
 Section.....
 Date Begun.....
 Date Finished.....

Lat.....
 Dep.....
 Bearing.....
 Elev. Collar.....

Total Depth.....
 Logged By.....
 Claim.....
 Core Size.....

DEPTH	DESCRIPTION	SAMPLE No.	FOOTAGE	WIDTH OF SAMPLE	Cu	Mo			
	247.5' c. c. in fract.								
	250.5'-251' qtz vein with c.c. (calcite, epidote)								
	251.5' c.c. in fract.								
252'-264'	B.Q.D. w. alt (hb → chlz)	1719	250'-260'		0.06	0.017			
	262' py. diss.	1720	260'-270'		0.02	0.004			
264'-295'	B.Q.D. mod. alt. chlz.	1721	270'-280'		0.03	0.007			
	266' hem. qtz. vein Cp in fract. some c.c.?	1722	280'-290'		0.01	0.004			
	266'-267' ep-in fract. ep.-diss.	1723	290'-300'		0.03	0.017			
	270'-272' py in fract. py-diss.								
	273' cp. c.c. in fract.								
	277' cp. in fract								
	278' Cp + Moly in fract.								
	278.5'-279' aplite dyke								
	287' qtz. vein Bo + c.c.								
295'-302'	B.Q.D. K-fd. chlz. (mod-extr alt)								
	295' Cp in fract.								
	296' Cp moly-diss.								
	296.5' qtz. vein hem + moly (?) (2")								
	297'-298' Hem in fract.								
	300' qtz. vein c.c.								
	302' qtz. vein c.c. + moly + hem. 4"								

SUMITOMO METAL MINING CO. OF CANADA LTD.

PROPERTY Sheba Copper Mines Ltd.

HOLE No. 13

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 13 Sheet No. 6 of 7
 Section.....
 Date Begun.....
 Date Finished.....

Lat.....
 Dep.....
 Bearing.....
 Elev. Collor.....

Total Depth.....
 Logged By.....
 Claim.....
 Core Size.....

DEPTH	DESCRIPTION	SAMPLE No.	FOOTAGE	WIDTH OF SAMPLE	Cu	Mo			
302'-314'	B.Q.D. chlz + argill (mod)								
	306' qtz. vein Cp in fract.								
314'-331'	B.Q.D. w alt (chlz)								
	323' qtz vein moly	1724	300'-310'		0.03	0.038			
	320' 322' Cp diss in fract. (very few)	1725	310'-320'		<0.01	0.003			
331'-346'	B.Q.D. porphyritic appearance	1732	320'-330'		0.065	0.019			
	moderate chlz. intense K-sp. in places	1733	330'-340'		<0.01	0.024			
	332' Mo - qtz vein 2" w core <45°	1734	340'-350'		<0.01	0.005			
	342' Hematite calcite qtz vein	1735	350'-360'		<0.01	0.004			
346'-353'	B.Q.D. intense argill	1736	360'-370'		0.04	0.003			
	347' Mo-veinlet core <45°	1737	370'-380'		<0.01	0.001			
353'-365'	B.Q.D. moderate-weak ep								
	355.5' Mo diss								
	360.0' Cp diss								
	362' Cp diss								
	363'~364.5' Cp diss								
365'-376'	B.Q.D. mod. chlz. heavy hem								
	366' cp-stringer core <50°								
	366.5' hem-qtz vein 2" w core <75°								
	367' 367.5' Cp-diss (weak)								
	370.5' hem. qtz. Veinlet core <45°								

SUMITOMO METAL MINING CO. OF CANADA LTD.

PROPERTY Sheba Copper Mines Ltd.

HOLE No. 13

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 13 Sheet No. 7 of 7
 Section.....
 Date Begun.....
 Date Finished.....

Lat.....
 Dep.....
 Bearing.....
 Elev. Collar.....

Total Depth.....
 Logged By.....
 Claim.....
 Core Size.....

DEPTH	DESCRIPTION	SAMPLE No.	FOOTAGE	WIDTH OF SAMPLE	Cu	Mo			
376'-383'	B.Q.D. intense chlz. K-sp.								
	381.2' Mo-qtz vein 1/2" w core < 45°								
383'-401'	B.Q.D. argill. chlz								
	384.5'~385.0' Mo-qtz vein								
	391' Mo. diss.	1738	380'-390'		0.03	0.015			
	392.5' Mo-stringer, Mo-Cp. stringer	1747	390'-400'		0.01	0.009			
	394'-396' stronger argill	1748	400'-410'		0.06	0.010			
401'-420'	B.Q.D. moderate chlz. intense argill in places	1749	410'-420'		0.20	0.018			
	404.5' Mo-Bo stringer core < 20°								
	405.0' Bo-Mo stringer core < 25°								
	408' Mo-hem. -qtz vein								
	409' Mo-diss.								
	410.5~411' Mo-Bo-qtz vein								
	411'~411.5' Cp-Bo diss								
	416' Mo-diss								
	419' Mo-diss Mo-qtz. veinlet								
420'	End of Hole								

SUMITOMO METAL MINING CO. OF CANADA LTD.

PROPERTY Sheba Copper Mines Ltd.

HOLE No. 14

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 14 Sheet No. 1 of 11
 Section 48 + 62'S
 Date Begun Dec 9, '67
 Date Finished Dec 14, '67

Lat. 48 + 62'S
 Dep. 40 + 27'W
 Bearing East 45°
 Elev. Collar

Total Depth 502"
 Logged By H. O.
 Claim Cu #2
 Core Size B.Q.W.I.

DEPTH	DESCRIPTION	SAMPLE No.	FOOTAGE	WIDTH OF SAMPLE	Cu	Mo			
0' - 12'	O/B								
12'-15'	Badly weathered zone								
	14'-14.5' ground quartz with mo and mal Bo VL								
15'-32'	B.Q.D. weath along fract								
	locally intense K-spar	1726	12'-20'		0.045	0.019			
	mod chlz and some ep VL	1727	20'-30'		0.05	0.032			
	18' Mo diss	1728	30'-40'		0.045	0.045			
	27.5' Mo VL (core < 45°)	1729	40'-50'		0.11	0.013			
	28' Cp diss								
	30.5' Cp diss								
	32' Ep. chl. VL (core < 45°)								
32'-48'	B.Q.D. intense ALT (k-spar, chlz. ep-VL locally silic.)								
	32'-33' Bo. + Cp. diss.								
	32.5' Cp + mo. Stringer (core < 10°)								
	33'-33.5' Mo + (Cp. + Bo) QV								
	33.5'-34' Hem. in irr. fract. very few Mo. diss.								
	34'-34.5' Cp. + Py. + Mo. diss.								
	39'-40' Bo. + Mo. QV								
	41'-45' Bo. + Cp. + Mo. diss. or in fract.								
	43'-43.5' (Cp) + Bo. + Mo. QV								
	43.5'-45.5' Cp + Mo + (Bo) diss or string.								

SUMITOMO METAL MINING CO. OF CANADA LTD.

PROPERTY Sheba Copper Mines Ltd.

HOLE No.

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 14 Sheet No. 2 of 11
 Section.....
 Date Begun.....
 Date Finished.....

Lat.....
 Dep.....
 Bearing.....
 Elev. Collar.....

Total Depth.....
 Logged By.....
 Claim.....
 Core Size.....

DEPTH	DESCRIPTION	SAMPLE No.	FOOTAGE	WIDTH OF SAMPLE	Cu	Mo			
	45.5'-46.5' Weak Mo+Cp diss. or string								
	46.5'-Mo. + Bo + Cp QV 1" W.								
	47.5' Mo diss & Bo + Mo Quartz Stringer								
48'-63'	B.Q.D. mod-WK chlz & K-spar								
	49' Cp + Mo Quartz VL ($\frac{1}{2}$ "(-)W)								
	49.5' \pm Cp + (Py) diss.								
	50'-52' Cp-chl VL Cp diss.								
	52'-54' Cp (rarely Bo) diss and string								
	55'-57' Cp diss.								
	56.5' Cp-quartz VL (core $\angle 80^\circ$)								
	59'-60' Mo. diss (very few)								
	59.5' Bo. stringer (core $\angle 90^\circ$)	1730	50' - 60'		0.16	0.008			
63'-71'	B.Q.D. intense alt. (K-spar silic.)	1731	60' - 70'		0.11	0.011			
	porphyritic appearance								
	64' Cp. + (PY) diss.								
	65'-67' core ⁹ ground, shattered Mo-Cp QV included								
	Cp stringer								
	67' Mo. diss								
	67'-67.5' Cp stringers (core $\angle 25^\circ$)								
	69.5' Cp. stringer								
	70.5'-71.0' few Mo. diss.								

SUMITOMO METAL MINING CO. OF CANADA LTD.

PROPERTY Sheba Copper Mines Ltd.

HOLE No. 14

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 14 Sheet No. 4 of 11
 Section.....
 Date Begun.....
 Date Finished.....

Lat.....
 Dep.....
 Bearing.....
 Elev. Collar.....

Total Depth.....
 Logged By.....
 Claim.....
 Core Size.....

DEPTH	DESCRIPTION	SAMPLE No.	FOOTAGE	WIDTH OF SAMPLE	Cu	Mo			
	133' Cp in fract								
	135' Cp in fract								
	135'-139' Cp + Py in fract or diss								
	140' Cp in fract								
	141' Py in fract								
	143'-146' Cp + Mo diss & in fract (very few)								
	147' Py in fract.	1745	130'-140'		0.03	0.003			
	148'-149' Mo + Cp diss	1746	140'-150'		0.07	0.004			
149'-153'	Bda Porphy	1750	150'-160'		0.40	0.014			
	149'-152' Mo + Cp diss.	1751	160'-170'		0.11	0.046			
	151' Cp-Qtz VL. 1/2" W								
	152'-153' QV Mo + Cp + Bo								
153'-167'	B.Q.D. Mod-intense ALT (K-spar Argill)								
	153'-159' Py + Mo + cp diss or in fract								
	159' Bo + Cp in fract								
	159'-160' Bo + Cp diss								
	161' Mo in fract.								
	162' Bo in fract.								
	162.5' sheared Zone								
	163'-163.5' QV Mo.								

SUMITOMO METAL MINING CO. OF CANADA LTD.

PROPERTY Sheba Copper Mines Ltd.

HOLE No. 14

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 14 Sheet No. 5 Of 11
 Section.....
 Date Begun.....
 Date Finished.....

Lat.....
 Dep.....
 Bearing.....
 Elev. Collar.....

Total Depth.....
 Logged By.....
 Claim.....
 Core Size.....

DEPTH	DESCRIPTION	SAMPLE No.	FOOTAGE	WIDTH OF SAMPLE	Cu	Mo			
	165' QVL Mo.								
	165.5 Mo diss. (very few)								
167'-178'	B.Q.D. Generally Mod. ALT. (K-spar chlz)								
	171' Mo. diss. (very few)	1752	170'-180'		0.15	0.017			
	171.5' Cp in fract								
	173.5' Bo + Cp in fract								
	175' Bo in fract								
	175.5' Bo in fract								
	176' Bo in fract								
	176.5' Mo in fract								
	177' Bo. Qtz. VL.								
	178' Bo + Mo & Mo in fract.								
178'-190'	B.Q.D. intense K-spar	1753	180'-190'		0.20	0.004			
	179' Bo. in fract.								
	182' Bo + Mo in fract.								
	185' crushed zone 0.5' W								
190'-206'	B.Q.D. Mod. chlz. WK K-spar								
	190' Bo. in fract	1754	190'-200'		0.02	0.002			
	190.5' Cp. in fract								
	190.5'-192.5' Cp diss or in fract.								
	192.5'-194' Py. diss. (Cp. few)								

SUMITOMO METAL MINING CO. OF CANADA LTD.

PROPERTY Sheba Copper Mines Ltd.

HOLE No. 14

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 14 Sheet No. 6 of 11
 Section.....
 Date Begun.....
 Date Finished.....

Lat.....
 Dep.....
 Bearing.....
 Elev. Collar.....

Total Depth.....
 Logged By.....
 Claim.....
 Core Size.....

DEPTH	DESCRIPTION	SAMPLE No.	FOOTAGE	WIDTH OF SAMPLE	Cu	Mo			
	198' py in fract (very few Cp)								
	201'-202' Py diss and in fract								
	202' barren QV 1" W	1755	200'-210'		0.12	0.020			
206'-218'	B.Q.D. Mod. K-spar, Argill in places								
	207.5' barren qtz VL								
	207.5'-208.5' black stuff in irr. fract (Mo?)								
	208.5' Mo Q.V. 2" W. (with black clay containing Mo)								
	209'-209.5' crushed zone intense argill.								
	210' black stuff network(Mo?)								
	210.5' Bo. in fract.	1756	210'-220'		0.14	0.058			
	215'-216' Mo + Cp diss.								
	216' Mo. QVL.								
	216.5' Mo QVL.								
	216'-216.5' Mo + Cp diss.								
218'-223'	B.Q.D. mod-intense Argill mod. K-spar								
	222' Mo diss. (very few)								
	223' Mo QVL. 2 strings								
	222.5'-223' Cp + Mo diss.								
223'-234'	B.Q.D. WK ALT.	1757	220'-230'		0.03	0.013			
	227'-228' K-spar barren								
	229' Mo. diss. (very few)								

SUMITOMO METAL MINING CO. OF CANADA LTD.

PROPERTY Sheba Copper Mines Ltd.

HOLE No. 14

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 14 Sheet No. 7 of 11
 Section.....
 Date Begun.....
 Date Finished.....

Lat.....
 Dep.....
 Bearing.....
 Elev. Collar.....

Total Depth.....
 Logged By G.H.
 Claim.....
 Core Size.....

DEPTH	DESCRIPTION	SAMPLE No.	FOOTAGE	WIDTH OF SAMPLE	Cu	Mo			
	232' Mo. diss (very few)								
234'-240'	B.Q.D. Mod. K-spar	1758	230'-240'		0.01	0.004			
	236.5'-238' Mo. diss (few)								
	239'-240' Hem. network								
240'-257'	B.Q.D. WK ALT. (chlz Mod-WK)	1759	240'-250'		<0.01	0.004			
	242.5' Mo diss (very few)								
	243.5' Mo diss (very few)								
	247' Mo diss (very few)								
	252' Mo idss (very few)	1760	250'-260'		0.01	0.006			
	255.5-256' crushed zone								
	256' (Bo) qtz VL								
257'-261'	B.Q.D. Mod. K-spar, WK-Mod. chlz								
261'-267'	B.Q.D. Mod-WK, chlz. generally Wk. ALT.	1761	260'-270'		<0.01	0.003			
	267' Mo. diss (very few)								
267'-319'	B.Q.D. intense-Mod. K-spar, Mod. chlz. in places								
	270' Hm in fract.								
	271' Mo. in fract.								
	275'-276' Hm fract network								
	276'-278.5' QV. Mo.	1762	270'-280'		0.07	0.110			
	278.5'-279.5' clay with black stuff Network (Mo?)								
	280' Mo in fract.								

SUMITOMO METAL MINING CO. OF CANADA LTD.

PROPERTY Sheba Copper Mines Ltd.

HOLE No. 14

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 14 Sheet No. 8 of 11
 Section.....
 Date Begun.....
 Date Finished.....

Lat.....
 Dep.....
 Bearing.....
 Elev. Collar.....

Total Depth.....
 Logged By G.H.
 Claim.....
 Core Size.....

DEPTH	DESCRIPTION	SAMPLE No.	FOOTAGE	WIDTH OF SAMPLE	Cu	Mo			
	281' Mo. diss	1763	280'-290'		<0.01	0.002			
	290' Qtz. VL Hm (+ Mo?)	1764	290'-300'		0.16	0.021			
	293' Mo. QV 1" Width								
	293'-294' Cp diss								
	295' Mo diss								
	297'-300' Mo intracts (partly slicken-side)								
	303' Mo. intract in Fractures	1765	300'-310'		0.17	0.029			
	303.5' Mo + Cp in fract.	1766	310'-320'		0.035	0.016			
	303.5'-304' Mo in fract								
	308' Mo + Cp + Bo QV. 3" Width								
	309' Mo diss or (Net work) in argill								
	312' Mo in fract.								
	317.5' Mo QV 3"								
	317.5'-318' Cp diss very few								
319'-335'	B.Q.D. generally WK ALT	1767	320'-330'		<0.01	0.003			
	333' Mo in fract	1768	330'-340'		<0.01	0.011			
335'-348'	B.Q.D. Mod. K-spar (intensive in places)	1769	340-350'		0.02	0.018			
	337' Mo. in fract	1770	350'-360'		0.03	0.006			
	339' Hm in fract.								
	342' Mo in fract.								
	345' Mo Q.V. 2" Width								

SUMITOMO METAL MINING CO. OF CANADA LTD.

PROPERTY Sheba Copper Mines Ltd.

HOLE No. 14

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 14 Sheet No. 9 of 11
 Section.....
 Date Begun.....
 Date Finished.....

Lat.....
 Dep.....
 Bearing.....
 Elev. Collar.....

Total Depth.....
 Logged By G. H.
 Claim.....
 Core Size.....

DEPTH	DESCRIPTION	SAMPLE No.	FOOTAGE	WIDTH OF SAMPLE	Cu	Mo			
	345.5' Mo in fract.	1771	360'-370'		<0.01	0.003			
348'-357'	B.Q.D. Generally WK. ALT. 357' diss Mo (few)	1772	370'-380'		0.075	0.014			
357'-361'	B.Q.D. Mod-(intense) Argill, Mod K-spar in places 358.5' Bo + Cp QVL (1/2" Width)								
361'-375'	B.Q.D. WK - Mod. ALT. 362'-362.5' Aplite dike 363'-363.5' Aplite dike 374.5'-375' Crushed zone								
375'-396'	B.Q.D. Mod K-spar	1773	380'-390'		0.05	0.016			
	377'-378' Cp diss (few)	1776	390'-400'		0.025	0.006			
	379' Hm.	1777	400'-410'		0.03	0.050			
	379.5' Mo. QC 3" Width								
	381'-381.4' Crushed Quartz Vein (Mo)								
	381.4' Black Network (Mo)								
	382' Cp in fract.								
	389' Cp in fract.								
396'-409'	B.Q.D. Mod-intense argill Mod intense chlz 397.5-402' Mo. diss. (few)								
	405.5-408 Mo. QV								
409'-419'	B.Q.D. Mod intense chlz K-spar	1778	410'-420'		0.02	0.012			

SUMITOMO METAL MINING CO. OF CANADA LTD.

PROPERTY Sheba Copper Mines Ltd.

HOLE No. 14

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 14 Sheet No. 10 of 11
 Section.....
 Date Begun.....
 Date Finished.....

Lat.....
 Dep.....
 Bearing.....
 Elev. Collar.....

Total Depth.....
 Logged By G. H.
 Claim.....
 Core Size.....

DEPTH	DESCRIPTION	SAMPLE No.	FOOTAGE	WIDTH OF SAMPLE	Cu	Mo			
	414' Mo diss (very few)	1779	420'-430'		0.045	0.014			
	416' Cp in fract	1787	430'-440'		0.25	0.031			
	416.5' Mo + (Cp) in fract.	1788	440'-450'		0.07	0.009			
419'-427'	B.Q.D. intense K-spar, mod. chlz	1789	450'-460'		0.10	0.016			
	420' Mo. in fract.								
	420.5'-421.2' Mo + Cp + (Bo) + (^{Cc} Cp ?) 1/2" W (core 10° ±)								
	421.5' Bo diss (very few)								
	422.5' Bo in fract.								
	423' Bo + Cp in fract.								
	424.5' Bo in fract.								
	426' Mo diss (very)								
427'-439.0'	B.Q.D. mod. chlz: WK. K-spar								
	427.5 cp + Mo in fract.								
	434'-437' Cp in fract.								
	436.5 Bo + Cp in fract.								
	438' Bo in fract.								
	438.5' Bo in fract.								
439.0'-441.5'	B.Q.D. intense K-spar								
	439-440 Bo in fract.								
	441' Bo QVL								
441.5'-457'	B.Q.D. mod. chlz. WK K-spar								

SUMITOMO METAL MINING CO. OF CANADA LTD.

PROPERTY Sheba Copper Mines Ltd.

HOLE No. 14

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 14 Sheet No. 11 of 11
 Section.....
 Date Begun.....
 Date Finished.....

Lat.....
 Dep.....
 Bearing.....
 Elev. Collar.....

Total Depth.....
 Logged By G.H.
 Claim.....
 Core Size.....

DEPTH	DESCRIPTION	SAMPLE No.	FOOTAGE	WIDTH OF SAMPLE	Cu	Mo			
	444' Cp in fract.								
	445.5' Cp in fract.	1792	460'-470'		0.02	0.009			
	449' Hm QVL.	1793	470'-480'		0.01	0.005			
	450.5' QV. (barren) 1" W								
	453' Mo-Cp in fract.								
457'-461'	B.Q.D. intense K-spar								
	457.5 Mo. Cp. in fract.								
	459'-460' Mo. in fract.								
	460' Mo. Q.V. 3" W								
461'-471'	B.Q.D (chlz + K-fld) Mod. alt.								
	463' Bo.-along fr.								
	464' Cp-diss.								
	467.5' B-diss.								
	472' Cp-along fr.								
471'-502'	B.Q.D. mod-alt (chlz)								
	473' moly-diss.								
	479.2' qtz VL hem, (barren)								
	483.7' Bo + Cp. in fr.	1794	480'-490'		0.07	0.005			
	484'-484.5' Cp in fr. cp-diss	1795	490'- 502		0.04	0.016			
	498.5' Cp in fr.		502						
	501' moly + cp in fr.								

502' End of Hole

SUMITOMO METAL MINING CO. OF CANADA LTD.

PROPERTY Sheba Copper Mines Ltd.

HOLE No. 15

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 15 Sheet No. 1 of 4
 Section 44 + 140'S
 Date Begun Dec 12 '67
 Date Finished Dec 16 '67

Lot 44 + 140'S
 Dep. 37 + 41'W
 Bearing East - 45°
 Elev. Collar

Total Depth 346'
 Logged By H. O.
 Claim CU #2
 Core Size

DEPTH	DESCRIPTION	SAMPLE No.	FOOTAGE	WIDTH OF SAMPLE	Cu	Mo			
0' - 7'	O/B casing	1774	7' - 20'		<0.01	<0.001			
7' - 32'	B.Q.D. Wk. Alt	1775	20' - 30'		<0.01	<0.001			
32' - 62'	B.Q.D. Mod chlz. K-spar	1780	30' - 40'		0.095	0.011			
	32'-37' Bo + Cp diss & in fract.	1781	40' - 50'		0.045	0.001			
	37'-38.5' Mo + Cp QV	1782	50' - 60'		0.05	0.001			
	38.5'~41' Cp in fract.	1783	60' - 70'		<0.01	<0.001			
	45'-46' Cp in fract.	1784	70' - 80'		0.10	0.021			
	52' Cp in fract.								
	53' Cp in fract.								
	55' Cp in fract.								
	56' Cp in fract.								
	57'-59' Cp in fract.								
62' - 70'	B.Q.D. Wk. Alt								
70' - 76'	B.Q.D. Mod K-spar								
	72' Hm. QV								
76' - 82'	B.Q.D. Mod. argill + K-spar	1785	80' - 90'		0.095	0.002			
	78'-79' Cp. diss	1786	90' - 100'		0.05	0.007			
	79'-79.5' qtz. (moly)								
82' - 88'	B.Q.D. wk-unalt.								
88' - 91'	Porphyry (Bda (?) or P ₃)								
	88' Cp diss								

SUMITOMO METAL MINING CO. OF CANADA LTD.

PROPERTY Sheba Copper Mines Ltd.

HOLE No. 15

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 15 Sheet No. 2 of 4
 Section.....
 Date Begun.....
 Date Finished.....

Lat.....
 Dep.....
 Bearing.....
 Elev. Collar.....

Total Depth.....
 Logged By.....
 Claim.....
 Core Size.....

DEPTH	DESCRIPTION	SAMPLE No.	FOOTAGE	WIDTH OF SAMPLE	Cu	Mo			
	91' py + cp in fract.								
91' - 104.5'	B.Q.D. mod alt. (K-fd. chlz) wk in places	1790	100-110		0.01	0.002			
	95' py in fract.	1791	110-120		0.01	<0.001			
	95.5' cp in fract.								
	97' cp in fract.								
	99.5' py in fract.								
	100' Py + Cp in fract.								
104.5' - 105.5'	Bda Porphy.								
105.5' - 110.5'	B.Q.D. mod. alt. wk in places								
110.5' - 122'	Bda Porphy								
	110.5'-122' no visible mineralization								
122' - 128.5'	Bda-qt. porphyry.								
128.5' - 130'	B.Q.D. argill.								
130' - 134'	B.Q.D. wk alt.								
134' - 135'	aplite (reddish)	1797	130-140		0.01	0.007			
135' - 156'	B.Q.D. wk. alt (chlz) bt is stable								
	138.1' qt. v (moly) 1½"								
	153' aphanitic dyke (Bda?) 2"								
156' - 226'	B.Q.D. mod-alt (chlz + K fld.)	1800	160-170		<0.01	0.008			
	163' Cp-diss (wk)	1801	170-180		0.02	0.005			
	169' moly in fr.	1802	180-190		0.01	0.004			

SUMITOMO METAL MINING CO. OF CANADA LTD.

PROPERTY Sheba Copper Mines Ltd.

HOLE No. 15

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. 15 Sheet No. 4 of 4
 Section.....
 Date Begun.....
 Date Finished.....

Lat.....
 Dep.....
 Bearing.....
 Elev. Collar.....

Total Depth 346'
 Logged By Y. H.
 Claim.....
 Core Size.....

DEPTH	DESCRIPTION	SAMPLE No.	FOOTAGE	WIDTH OF SAMPLE	Cu%	Mo%			
	237' qt v 1" (barren)								
	240' Bo + Cp in fr.								
	240.5' " "								
	244' Cp in fr.								
	244.5' " "								
	246' " "								
	246.5' " " & diss.								
	249.5' Cp - diss (wk)								
251' - 279'	B.Q.D. wk-alt (chlz)								
	269.5' py in fr. fr.	1810	260-270		<0.01	0.002			
	276.5' py in fract.	1811	270-280		0.01	0.004			
	278.5' qt. calc vein (with moly)								
279' - 285'	B.Q.D. wk alt (k-fl'd. argill)								
285' - 325'	B.Q.D. mod alt (chlz, K-fl'd.)								
325' - 334'	B.Q.D. wk alt (chlz)								
	334'-334.5' moly diss (wk)								
334' - 346'	B.Q.D. mod alt (chlz. K-fl'd)								
	345' moly-diss. (wk)								
	346' end of hole								