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Drill Hole Elevations

X 304 — 2530
X 306 — 2440
X 305 — 2458
X 311 — ~~2501~~ 2500
X 308 — 2518
X 302 — 2555
424 — 2510
426 — 2590
X 301 — 2590
X 315 — 2520
423 — 2490
422 — 2526
421 — 2547
425 — 2563
X 309 — 2585
X 310 — 2505
419 — 2517
420 — 2540
400 — 2508
418 — 2519
419 — 2517
420 — 2540
401-A — 2515
V 412 — 2556
411 — 2588

X 303 — 2570
406 — 2585
401 — 2538
V 410 — 2592
404 — 2670
405 — 2690
409 — 2640
403 — 2693
407 — 2560
408 — 2625
402 — 2700
413 — 2593
415 — 2648
416 — 2705
414 — 2605
417 — 2590

B S & K

I - 139

Frank H. Buchella, Jr.
1802 West Grant Road, Suite 110 • Tucson, Arizona 85705 • 602/623-9007

September 30, 1980

Mr. A. M. Kalaf, President
Venture Drilling Company
P.O. Box 50325
Tucson, Arizona 85703

Dear Mr. Kalaf:

A pilot mine on the B. S. & K. property was developed in 1977 to provide bulk samples for metallurgical testing and to confirm assays on three percussion holes drilled by Venture Drilling Company using your patented sampling prodedure in 1970 and 1971. A total of 179 feet of raise work was necessary to reach through the sulfide zone and into the oxide zone. Agreement between the raise assays and the drill hole assays was very good. Tabulation of the results are as follows:

Drill Hole vs Raise	406 (71')	411 (46')	412 (62')	Total (179')
Hole Assay % Total Cu	0.60	0.41	0.45	0.51
Muck Assay % Total Cu	0.60	0.38	0.51	0.51
Ratio: Muck / Hole Assay	100%	93%	113%	100%

Engineers under my direction oversaw the drilling and raise work conducted on this project and to the best of my knowledge, all the work was conducted in a professional manner and the results are accurate.

Sincerely,

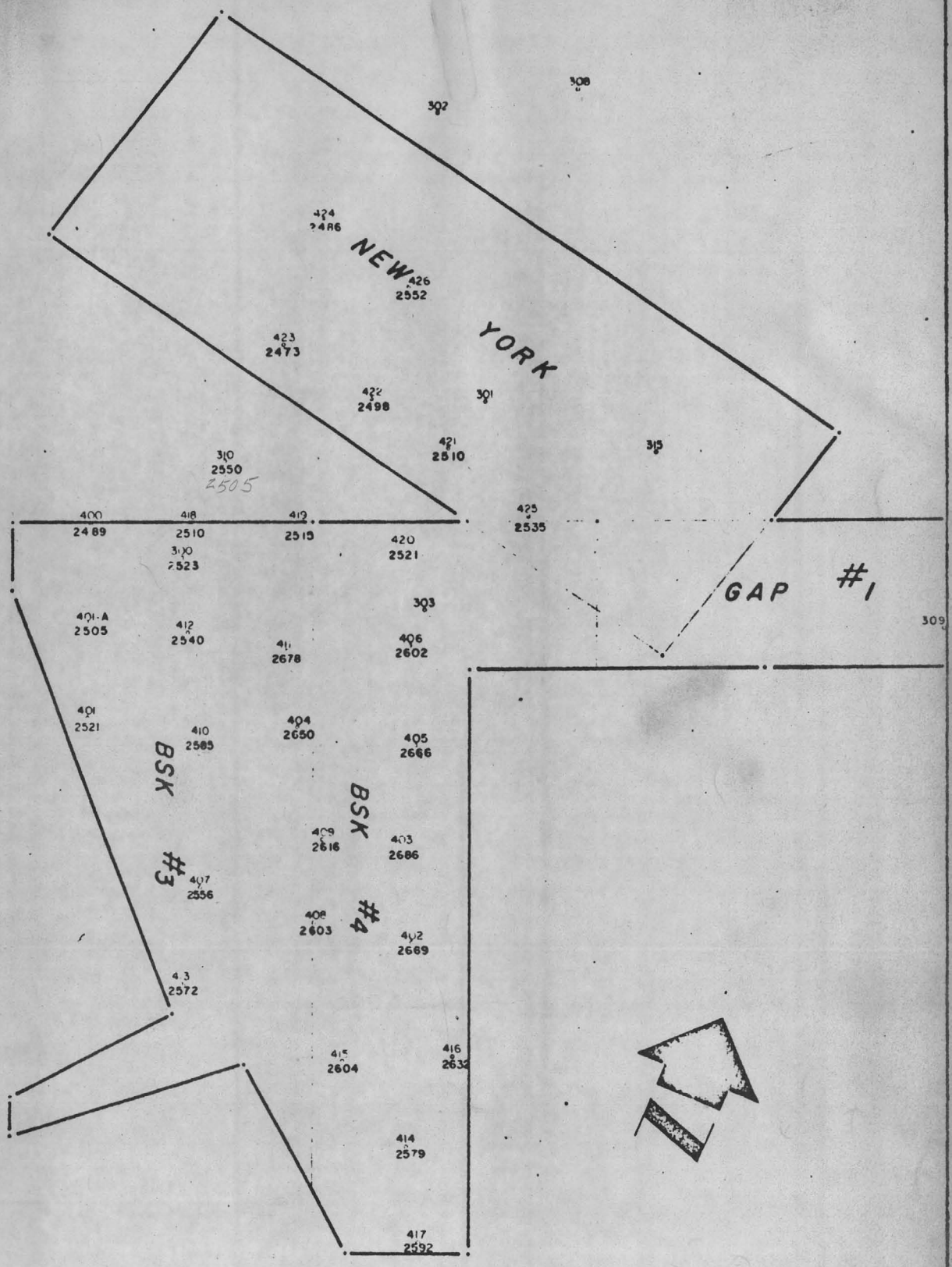
F. H. Buchella, Jr.
Mining Consultant

Registered Professional Engineer
CERTIFICATE
FRANK H.
BUCHELLA, JR.
Date Signed 9/30/80
ARIZONA, U.S.A.

Drill Hole Elevations

✓304	2530
✓306	2440
✓305	2458
✓311	2501
✓308	2518
✓302	2555
424	2510
426	2590
✓301	2590
✓315	2520
423	2490
422	2526
421	2547
425	2563
✓309	2585
✓310	2505
419	2517
420	2510
400	2508
418	2519
419	2517
420	2540
401-A	2515
✓412	2556
411	2588
✓303	2570
406	2585
401	2538
✓410	2592
404	2670
405	2690
409	2640
403	2693
407	2560
408	2625
402	2700
413	2593
415	2648
416	2705
414	2605
417	2590
300	2537

B S & R

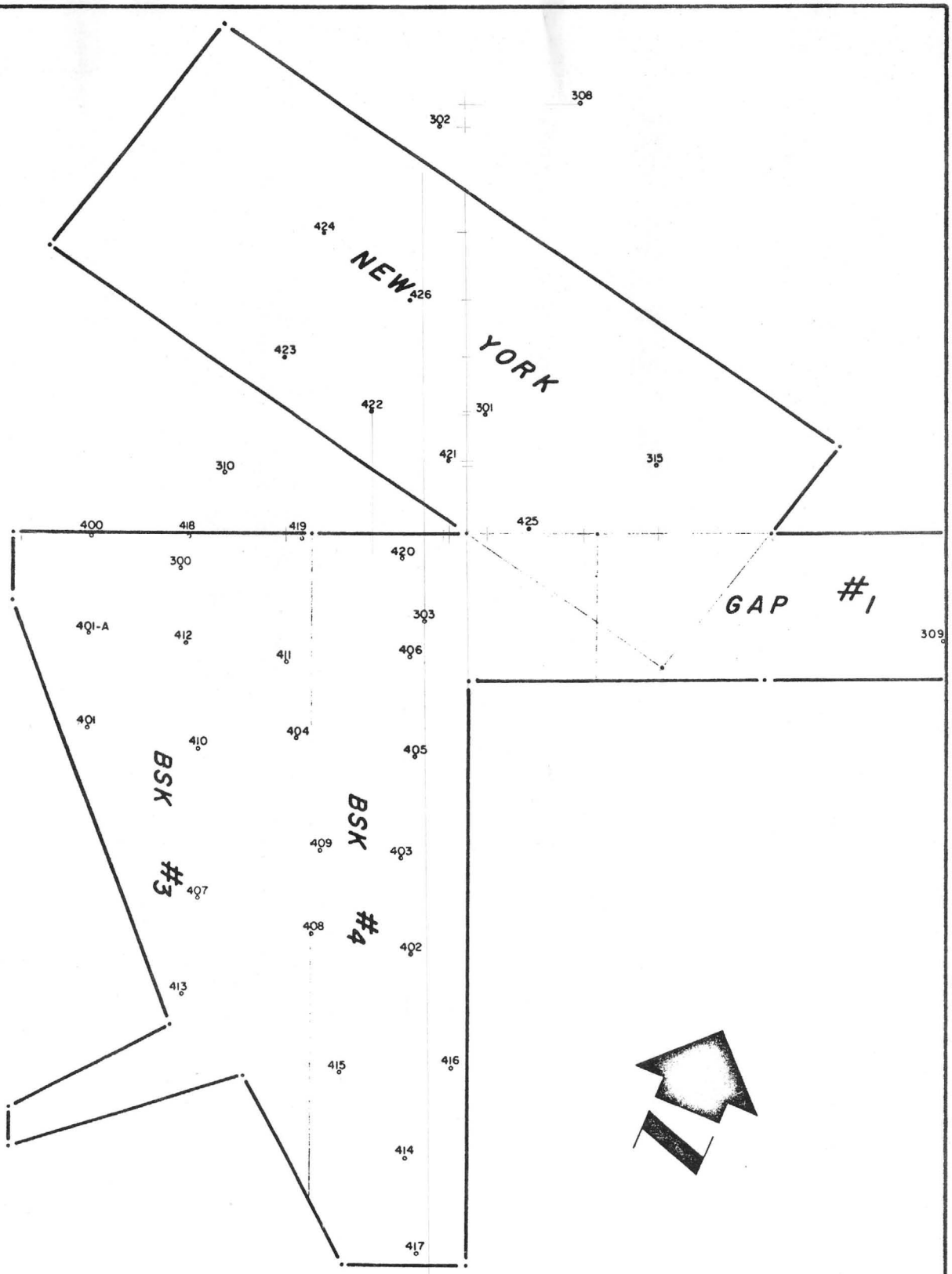


B S & K MINING COMPANY

EXPLORATION & DEVELOPMENT DRILL HOLE LOCATION

SCALE

APPENDIX B



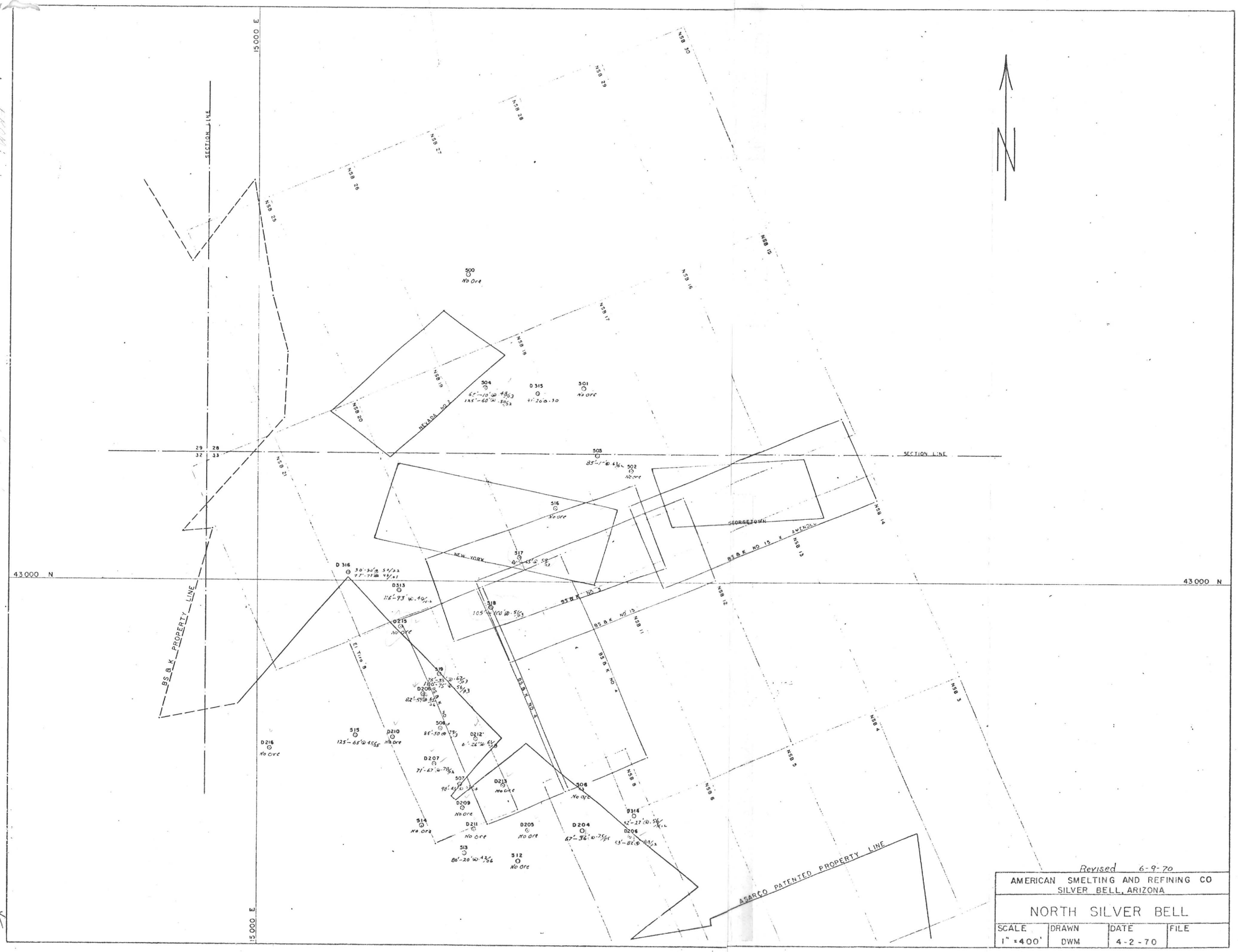
B S & K MINING COMPANY

EXPLORATION & DEVELOPMENT DRILL HOLE LOCATION

SCALE

100 50 0 100 200 300

APPENDIX B



Revised 6-9-70

AMERICAN SMELTING AND REFINING CO
SILVER BELL, ARIZONA

NORTH SILVER BELL

SCALE	DRAWN	DATE	FILE
1" = 400'	DWM	4-2-70	

HOLE NO.	ELEV. FROM CONTOUR SHEET	ELEV. FROM LOG SHEET
500	2542	2528
504	2504	2506
501	2553	2533
503	2530	2556
502	2569	2556
516	2514	2519
517	2550	2536
313	2492	2515 ?
518	2570	2585
215	2502	2516
519	2539	2540
208	2530	2538
216	2552	2561
515	2583	2591
210	2600	2615
207	2592	2607 B S & K
508	2537	2551
212	2557 + pos	2561
507	2613	2615
213	2560	2578
506	2579	2581
209	2637	2646
514	2572	2586
211	2626	2629
205	2640	2643
513	2611	2614
512	2655	2649 ?
204	2623	2657
206	2597	
314	2622	2626

COMPOSITE LOG

AMERICAN SMELTING & REFINING CO.

CHURN DRILL HOLE NO. 500

PROPERTY: SILVER BELL. NSB AREA

COLLAR COORDINATES: N 45090.49 E 16403.51 CLAIM NSB 27

COLLAR ELEVATION: 2528.12 2542

DEPTH 205'

SCALE: 1 INCH = 50 FEET

DATE STARTED 5-16-55

DATE FINISHED 5-19-55

NO. 8 HR. SHIFTS: 7

LOG BY WMJ - JJS

SURVEY BY JJS

ELEVATION	DEPTH	COPPER ASSAYS TOTAL	COPPER ASSAYS NON SOL	COMPOSITE ASSAYS	ROCK CLASSIFICATION	MINERALIZATION OXIDE: CHRYSOCOLLA	MINERALIZATION OXIDE: NATIVE COPPER	MINERALIZATION SULPHIDE: LIMONITE	MINERALIZATION SULPHIDE: CHALCOCITE	MINERALIZATION SULPHIDE: CHALCOPYRITE	MINERALIZATION SULPHIDE: PYRITE	ALTERATION	MINERALIZATION	LBS DRY WEIGHT	OZ DITSPLIT SAMPLES	CLOTHOIL SAMPLE	CASINGS	CASING: HOLE DRILLED	CASING: HOLE LEAVED	CASING: CASING	LEGEND ROCK CLASSIFICATION
				5'@.07 2540																	
	5	0.07	2/3																		
	10	0.03	5	.05																	BEDROCK
	15	0.03	5				DP			A			W.K				MH				
	20	0.05	5																		
	25	0.05	2/3																		
2500	30	0.05	5																		
	35	0.04	5	.04																	
	40	0.04	5																		
	45	0.04	2/3	2500																	
	50	0.04	5					LEACHED													
	55	0.03	5	.03															15"		
	60	0.05	5																		
	65	0.03	2/3				DP MZ						W.K MOD								
	70	0.04	5				DP														
	75	0.04	5	.04						Y											
	80	0.04	5																		
	85	0.05	2/3																		
	90	0.07	5	.07																	
	95	0.07	5																		
	100	0.08	5																		
	105	0.07	2/3																		
	110	0.07	5	.08																	
	115	0.09	5																		
	120	0.09	AVG.	0.06															10"		
	125	0.10	2/3																		
2400	130	0.12	5	.11																	
	135	0.11	5																		
	140	0.11	5																		
	145	0.06	2/3	2400																	
	150	0.05	5																		WATER
	155	0.05	5	.06																	
	160	0.07	5																8"		
	165	0.05	2/3																		
	170	0.05	5																		
	175	0.04	5	.04																	
	180	0.04	5																		
	185	0.04	2/3																		
	190	0.04	5	.04																	
	195	0.04	5																		
	200	0.04	5																6"		
	205	0.03	2/3	2340 3'@.05						Y		Y									
	210																				
	215																				
	220																				
	225																				
2300	230																				
	235																				
	240																				
	245																				
	250																				
	255																				
	260																				
	265																				
	270																				
	275																				
	280																				
	285																				
	290																				
	295																				
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	360																				
	365																				
	370																				
	375																				
	380																				
	385																				
	390																				
	395																				
	400																				
	405																				
	410																				

COMPOSITE LOG

AMERICAN SMELTING & REFINING CO.

CHURN DRILL HOLE NO. 501

PROPERTY: SILVER BELL, NSB AREA

COLLAR COORDINATES: N. 44320.65 E. 17176.95

CLAIM NSB 17

COLLAR ELEVATION: 2532.98 2553

DEPTH 115

SCALE: 1 INCH = 50 FEET

FILE NO.

DATE STARTED: 5-19-55

DATE FINISHED: 5-23-55

NO. 8 HR. SHIFTS: 6

LOG BY: WMJ - JJS

SURVEY BY: JJS

ELEVATION	SAMPLE DEPTH	COPPER ASSAYS TOTAL	COPPER ASSAYS NONSUL	COMPOSITE	ASSAYS	ROCK CLASSIFICATION	MINERALIZATION OXIDE: CHRYSOCOLLA	MINERALIZATION OXIDE: NATIVE COPPER	MINERALIZATION OXIDE: LIMONITE	MINERALIZATION SULPHIDE: CHALCOCITE	MINERALIZATION SULPHIDE: CHALCOPYRITE	MINERALIZATION SULPHIDE: PYRITE	ALTERATION SLIME (CLAYS)	LBS. DRY WEIGHT OF SPLIT SAMPLES	OZ.	% OF TOTAL SAMPLE	HARDNESS	CASING: HOLE DRILLED	CASING: HOLE REAMED	CASING: CASING	REMARKS
	5	0.01		5	.01	DP							W/C				H				BEDROCK
	10	0.02		5	.2540			LEACHED													
	15	0.01		3/2														13"			
	20	0.02		5	.03																
	25	0.02		5																	
2500	30	0.02		5																	
	35	009		3/2	.9																
	40	032		5	.32																
	45	039	.34	5																	
	50	040		5													MH				
	55	023		3/2	.2500																
	60	0.18		5																	
	65	0.14 AVG		5	0.18													10"			
	70	0.12		5																	
	75	0.13		3/2																	
	80	0.19		5	.18												S				
	85	0.25	.24	5	.21																
	90	0.22		5																	
	95	0.20		3/2														8"			
	100	0.24		5	.24																
	105	0.24		5																	
	110	0.23		5	.2440																
	115	0.25		3/2	@ .25																
	120																				
	125																				
	130																				
2400	135																				
	140																				
	145																				
	150																				
	155																				
	160																				
	165																				
	170																				
	175																				
	180																				
	185																				
	190																				
	195																				
	200																				
	205																				
	210																				
	215																				
	220																				
	225																				
	230																				
	235																				
	240																				
	245																				
	250																				
	255																				
	260																				
	265																				
	270																				
	275																				
	280																				
	285																				
	290																				
	295																				
	300																				
	305																				
	310																				
	315																				
	320																				
	325																				
	330																				
	335																				
	340																				
	345																				
	350																				
	355																				
	360																				
	365																				
	370																				
	375																				
	380																				
	385																				
	390																				

LEGEND

ROCK CLASSIFICATION

W — WASH
M — MONZONITE
DP — DACITE PORPHYRY
A — ALASKITE
EV — EARLY VOLCANICS (DACITE, ANDESITE FLOWS, INTERCOLATED SEDIMENTS)
LS — LIMESTONE
QT — QUARTZITE
SM — PHASE
DR — DIKE ROCKS

COMPOSITE LOG

AMERICAN SMELTING & REFINING CO.

CHURN DRILL HOLE NO. 502

PROPERTY: SILVER BELL, NSB AREA

COLLAR COORDINATES. N. 43758.73 E. 17506.85 CLAIM NSB 17

COLLAR ELEVATION 2555.92 2569

DEPTH 105

SCALE: 1 INCH=50 FEET

FILE NO.

DATE STARTED 5-23-54

DATE FINISHED 5-25-54

NO. 8 HR. SHIFTS 4

LOG BY: WMJ - JJS

SURVEY BY JJS

ELEVATION	SAMPLE DEPTH	COPPER ASSAYS TOTAL	NON-SUL	COMPOSITE	ACID SOL	ROCK CLASSIFICATION	MINERALIZATION OXIDE CHRYSOCOLLA	NATIVE COPPER	SULPHIDE CHALCOCITE	CHALCOPYRITE	PYRITE	ALTERATION LIME SILICA	IRON OXIDE	SULPHUR EXPOSURE	CLOR-TOPAZ SERICITE	HARDNESS	CASING HOLE DRILLED	HOLE REAMED	CALIB	ORIGINAL ROCK CLASSIFICATION	REMARKS
	5	0.00				5	96@.02														
	10	0.04				4/1	2560					WK				MH					BEDROCK
	15	0.03				5															
	20	0.04				5	.04														
	25	0.04				5		LEACHED													
	30	0.04				4/1											13"				
	35	0.03				5	.04														
	40	0.03				5															
	45	0.04				5															
	50	0.04				4/1															
2500	55	0.11				5	.18									S					
	60	0.19				5															
	65	0.22				5															
	70	0.25				4/1	2500														
	75	0.27				5						WK-MOD									
	80	0.27				4/1	.26														
	85	0.26				5															
	90	0.24				4/1	2480										10"				
	95	0.25				5	.29	16'													
	100	0.29				5															
	105	0.34				5															

COMPOSITE LOG

AMERICAN SMELTING & REFINING CO.

CHURN DRILL HOLE NO. 503

PROPERTY: SILVER BELL. NSB AREA

COLLAR COORDINATES: N 43,860.32 E 17,266.50

COLLAR ELEVATION: 2555.71 2530

DEPTH 180

CLAIM NSB 18

SCALE: 1 INCH = 50 FEET

FILE NO.

DATE STARTED 5-25-55

DATE FINISHED 5-28-55

NO. 8 HR SHIFTS 6

LOG BY WMJ - JJS

SURVEY BY: JJS

ELEVATION	SAMPLE DEPTH	COPPER ASSAYS TOTAL	COPPER ASSAYS NON-SOL	COMPOSITE ASSAYS	ROCK CLASSIFICATION	MINERALIZATION OXIDE / SULPHIDE	HARDNESS	CASING	REMARKS
	5	0.07			5	.06 - 10'			BEDROCK
	10	0.04			DP 5	→ 2520	WK MOD	MH	
	15	0.04			5				
	20	0.03			5	.03			
	25	0.02			5				
	30	0.02			5	→ 2500			
	35	0.01			5	LEACHED			
	40	0.01			5	.02		13"	
	45	0.02			5				
	50	0.02			5				
2500	55	0.02			5			S	
	60	0.02			5	.03			
	65	0.03			5				
	70	0.04			5				
	75	0.19			5				
	80	0.25		AU = TR.	5	.28			
	85	0.25		AG = TR.	5				
	90	0.41	0.01	CU = .40	5				
	95	0.70	0.03	ISCU = .02	5				
	100	0.70	0.03	FE = .41	5	.51			
	105	0.34		INSOL = 87.8	5				
	110	0.31		MnS2 = .002	5				
	115	0.21		S = 4.2	5			10"	
	120	0.14			5	.14			
	125	0.11			5				
	130	0.10			5	→ 2400			
	135	0.11			5				
	140	0.08			5	.11	WK		
	145	0.10			5				
	150	0.13			A 5				
2400	155	0.13			5			8"	
	160	0.15			5	.12			
	165	0.11			5				
	170	0.11			DP 5	→ 2360			
	175	0.11			5	.10 - 10'			
	180	0.09			5				

CHURN DRILL LOG

AMERICAN SMELTING & REFINING CO.

CHURN DRILL HOLE NO. 504

PROPERTY: SILVER BELL, N.S.B. AREA

COLLAR COORDINATES: N 44,318.65 E 16,519.75

CLAIM NSB 18

COLLAR ELEVATION: 2505.67

SCALE: 1 INCH = 50 FEET

DEPTH: 200'

DATE STARTED: 5-26-52

DATE FINISHED: 6-2-55

NO. 8 HR. SHIFTS: 7

LOG BY: WMJ - JJS

SURVEY BY: WMJ

ELEVATION	SAMPLE DEPTH	COPPER ASSAYS TOTAL	COPPER ASSAYS NON-SUL	COMPOSITE	ASSAYS	ROCK CLASSIFICATION	MINERALIZATION OXIDE CHRYSOCOLLA	MINERALIZATION OXIDE NATIVE COPPER	MINERALIZATION SULPHIDE LIMONITE	MINERALIZATION SULPHIDE CHALCOCITE	MINERALIZATION SULPHIDE CHALCOPYRITE	MINERALIZATION SULPHIDE PYRITE	ALTERATION SILICIFICATION	DRY WEIGHT OF SPLIT SAMPLES	% OF TOTAL SAMPLE	HARDNESS	HOLE DRILLED	HOLE REAMED	CASING	LEGEND ROCK CLASSIFICATION	REMARKS
2500	0	0.03					5		0 = 57												PEDROCK
	10	0.04				M7	7	4.3	2500				WKMOD			MH					
	15	0.05					5			.05											
	20	0.04					5														
	25	0.07					5														
	30	0.06					7	4.3	ACHED							S					
	35	0.06			.07		5														
	40	0.06	2440				5			.06							13'				
	45	0.05					5														
	50	0.06					7	4.3													
	55	0.12					5			.22											
	60	0.29					5														
	65	0.35					5														
	70	0.55	0.03		.37		7	4.3													
	75	0.42	0.02		.02		5			.40			MOD-ST								
	80	0.33					5														
	85	0.34					5														
	90	0.34					7	4.3													
2400	95	0.32					5			.30										SP.MOLD	
	100	0.29					5														
	105	0.24					5		2400											SP.MOLY	
	110	0.28		AU=TR.			7	4.3									10'				
	115	0.34		AG=TR.			5			.31											
	120	0.30	2390	CU=.41			5														
	125	0.31		NS.CU=.01			5														
	130	0.43	0.02	FE=2.5			7	4.3													
	135	0.45	0.04	INSOL=90.4			5			.53											
	140	0.41	0.02	MoS_2=.028			5														
	145	0.56	0.01	S=27			5														
	150	0.80	0.03				7	4.3													
	155	0.49	0.01				5			.59											
	160	0.56	0.01				5										8'				
	165	0.52	0.01	.43X	.54		5														
	170	0.53	0.01				7	4.3													
	175	0.50	0.01				5			.48			MOD								
	180	0.48	TR				5														
	185	0.44	0.01				5		2320												
	190	.033					7	4.3									6'				
2300	195	0.25					5			.25 @ 4.3			WK MOD								
	200	0.19					5														
	205																				
	210																				
	215	MM 0.31																			
	220																				
	225																				
	230																				
	235																				
	240																				
	245																				
	250																				
	255																				
	260																				
	265																				
	270																				
	275																				
	280																				
	285																				
	290																				
	295																				
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	325																				
	330																				
	335																				
	340																				
	345																				
	350																				
	355																				
	360																				
	365																				
	370																				
	375																				
	380																				
	385																				
	390																				
	395																				
	400																				
	405																				
	410																				

COMPOSITE LOG

AMERICAN SMELTING & REFINING CO.

CHURN DRILL HOLE NO. 506

PROPERTY: SILVER BELL. NSB AREA

COLLAR COORDINATES: N. 41582.29 E. 17172.37 CLAIM NSB 7

COLLAR ELEVATION 2581.08

DEPTH 175'

SCALE 1 INCH = 50 FEET

FILE NO.

DATE STARTED: 6-7-55

DATE FINISHED: 6-10-55

NO. 8 HR. SHIFTS: 6

LOG BY: WMJ-JJS

SURVEY BY JJS

ELEVATION	FOOT	COPPER ASSAYS TOTAL	COPPER ASSAYS NON-SUL	COMPOSITE ASSAYS	ROCK CLASSIFICATION	MINERALIZATION OXIDE CHRYSOCOLLA	MINERALIZATION OXIDE NATIVE COPPER	MINERALIZATION OXIDE LIMONITE	MINERALIZATION SULPHIDE CHALCOCITE	MINERALIZATION SULPHIDE CHALCOPYRITE	MINERALIZATION SULPHIDE PYRITE	ALTERATION	SUMMARY LOG	DRY WEIGHT OF SPLIT SAMPLES	%	PILOT TOTAL SAMPLE	WATER	CASING HOLE DRILLED	CASING HOLE REAMED	CASING CASING	LEGEND ROCK CLASSIFICATION	REMARKS
	0-5	0.03	1/3.9	0-11' 2.580																		
	10	0.05	S																			
	15	0.37	S	.132																		
	20	0.82	0.70		DP							WK-MOD										BEDROCK
	25	0.25	1/3.9		2560																	SP-CUP
	30	0.08	S	.10			LEACHED															
	35	0.08	S															13"				
	40	0.04	S	.13																		
	45	0.04	1/3.9	X																		
	50	0.15	S	.15																		
	55	0.26	S																			
	60	0.18	S																			
	65	0.17	1/3.9									MOD										
	70	0.13	S	.16																		
	75	0.11	S																			
2500	80	0.25	S																			
	85	0.13	1/3.9	1.5 2.500								WK-MOD						10"				
	90	0.15	S																			
	95	0.12	S	.13																		
	100	0.10	S																			
	105	0.03	1/3.9																			
	110	0.12	S	.16																		
	115	0.09	S																			
	120	0.23	S	.14																		
	125	0.29	1/3.9	X														8"				
	130	0.25	S																			
	135	0.19	S	.22																		
	140	0.16	S																			
	145	0.26	1/3.9																			
	150	0.18	S	.29								MOD										
	155	0.39	S														MH					
	160	0.29	1/3.9	2.420														6"				
	165	0.39																				
	170	0.30	S	.31 - 13.9																		
	175	0.55	S	X																		
2400	180																					
	185																					
	190	Ave. 0.20																				
	195																					

COMPOSITE LOG

AMERICAN SMELTING & REFINING CO.

CHURN DRILL HOLE NO. 507

PROPERTY: SILVER BELL. NSB AREA

COLLAR COORDINATES: N. 41 617.87 E. 16 361.07

CLAIM NSB 9

COLLAR ELEVATION: 2615.04

SCALE: 1 INCH = 50 FEET

DEPTH 185'

DATE STARTED: 6-10-55

DATE FINISHED: 6-15-55

NO. 8 HR SHIFTS: 8

LOG BY: WMJ-JJS

SURVEY BY: JJS

ELEVATION	SAMPLE DEPTH	COPPER ASSAYS TOTAL	COPPER ASSAYS SOLUBLE	COPPER ASSAYS COMPOSITE	COPPER ASSAYS ASSAYS	ROCK CLASSIFICATION	MINERALIZATION OXIDE: CHRYSOCOLLA	MINERALIZATION OXIDE: NATIVE COPPER	MINERALIZATION OXIDE: LIMONITE	MINERALIZATION SULPHIDE: CHALCOCITE	MINERALIZATION SULPHIDE: CHALCOPYRITE	MINERALIZATION SULPHIDE: PYRITE	ALTERATION SLIME (CLAY)	SPG. DRY WEIGHT LBS. PER CU. FT. OF SPLIT	OZ.	% OF TOTAL SAMPLE	HARDNESS	CASING: DRILLED	CASING: WHOLE BLANKED	CASING: CASING	W-WASH M-MICROMONITE DP-DACITE PORPHYRY A-ANDESITE BV-BASALT VOLCANICS, SITE FLOWS, INTERCALATED MINTS	ROCK CLASSIFICATION LS-LIMESTONE QT-QUARTZITE SH-SHALE CPL-CHERT PEBBLE CONGL.	REMARKS
	0	0.22																					
	10	0.07																					
	15	0.07								.03-15'													
2600	20	0.09																				BEDROCK	
	25	0.10				58 MF				2600			WK-MOD				MU						
	30	0.12								.12													
	35	0.16																					
	40	NS 02				.10													13"				
	45	0.06				X																	
	50	0.09							LEACHED	.08 .09							S						
	55	0.07																					
	60	0.07				MF-DP																	
	65	0.08				DP				.08													
	70	0.08																					
	75	0.10				.12																	
	80	0.12				X																	
	85	0.12								.16													
	90	0.12											MOD										
	95	0.09																					
	100	0.5	0.04																				
	105	0.09	0.02																				
	110	0.14	0.01							.74													
2500	115	1.00	0.06																				
	120	0.59	0.06							>2500													
	125	0.02	0.03																10"				
	130	0.55	0.02							.45													
	135	0.01	0.02																				
	140	0.05	0.03																				
	145	0.07								.53			WK-MOD										
	150	0.02																					
	155	0.02																					
	160	0.02																					
	165	0.06				.28													8"			WATER	
	170	0.07				X				.24													
	175	0.24																					
	180	0.05								.22													
	185	0.09																					
	190																						
	195	Avg. 0.27																					
	200																						
	205																						
	210																						
	215																						
	220																						
	225																						
	230																						
	235																						
	240																						
	245																						
	250																						
	255																						
	260																						
	265																						
	270																						
	275																						
	280																						
	285																						
	290																						
	295																						
	300																						
	305																						
	310																						
	315																						
	320																						
	325																						
	330																						
	335																						
	340																						
	345																						
	350																						
	355																						
	360																						
	365																						
	370																						
	375																						
	380																						
	385																						
	390																						
	395																						
	400																						

COMPOSITE LOG

AMERICAN SMELTING & REFINING CO.

CHURN DRILL HOLE NO. 508 ?

PROPERTY: SILVER BELL, NSP AREA

COLLAR COORDINATES: N. 41998.20 E. 16221.78 CLAIM NSB 9

COLLAR ELEVATION: 2551.04 2537

DEPTH 160

SCALE 1 INCH=50 FEET

FILE NO.

DATE STARTED: 6-17-55

DATE FINISHED: 6-18-55

NO. 8 HR. SHIFTS 6

LOG BY: WHW-JJS

SURVEY BY: JJS

SAMPLE DEPTH	COPPER ASSAYS TOTAL	COPPER ASSAYS NONSOL	COMPOSITE ASSAYS	ROCK CLASSIFICATION	MINERALIZATION OXIDES: NATIVE COPPER	MINERALIZATION OXIDES: LIMONITE	MINERALIZATION SULPHIDES: CHALCOCITE	MINERALIZATION SULPHIDES: CHALCOPYRITE	MINERALIZATION SULPHIDES: PYRITE	ASSAYS	DRY WEIGHT OF DRILL SAMPLES LBS.	% OF TOTAL SAMPLE	HARDNESS	CASING: HOLE DRILLED	CASING: HOLE PLUGGED	CASING: CASING	ROCK CLASSIFICATION	REMARKS
5	0.00																	
10	0.18																	
15	0.14																	
20	0.13		.13	DP														
25	0.12																	
30	0.10	.2520																
35	0.08																	
40	0.16			DOMZ														
45	0.15																	
50	0.16			MZ														
55	0.19																	
60	0.14		.15	DOMZ														
65	0.15			DP														
70	0.15	.2500																
75	0.24																	
80	0.27																	
85	0.28																	
90	0.46	0.18																
95	0.50	0.12	AVERAGE	.10														
100	0.79	0.05	ACID SOL															
105	1.00	0.06	CU=.08															
110	0.93	0.07	NSCU=.05															
115	0.87	0.04	FE=15															
120	0.69	0.02	INSOL=91.1															
125	0.58	0.02	MOS2=.021															
130	0.49	0.02	SI=7															
135	0.52	0.03																
140	0.39																	
145	0.35																	
150	0.26	2400																
155	0.25		.25															
160	0.20																	
165																		
170																		
175	Avg. 0.20																	
180																		
185																		
190																		
195																		
200																		
205																		
210																		
215																		
220																		
225																		
230																		
235																		
240																		
245																		
250																		
255																		
260																		
265																		
270																		
275																		
280																		
285																		
290																		
295																		
300																		
305																		
310																		
315																		
320																		
325																		
330																		
335																		
340																		
345																		
350																		
355																		
360																		
365																		
370																		
375																		
380																		
385																		
390																		
395																		

BEDROCK

WK MOD .10-.47 2320 MH

.09-.11 2500

LEACHED .16 13"

MOD .17

.45

SPMO.

MOD-ST .90

WATER

MOD .57 10" SPMO. MOD-ST. KAOLIN

2400

WK MOD .29 8"

2380 .20-.34 SPMO.

COMPOSITE LOG

AMERICAN SMELTING & REFINING CO.

CHURN DRILL HOLE NO. 512

PROPERTY SILVER BELL. N S B AREA

COLLAR COORDINATES N. 4109.64 E. 1574.6 COLUMBIA 2791

COLLAR ELEVATION 2649.17

DEPTH 155

SCALE: 1 INCH=50 FEET

FILE NO.

DATE STARTED: 9-23-55

DATE FINISHED: 9-27-55

NO 8 HR SHIFTS: 6

LOG BY: WMJ - RAB

SURVEY BY: RAB

ELEVATION	DEPTH	SAMPLE NO.	COPPER ASSAYS TOTAL	COPPER ASSAYS NON-SULF	COMPOSITE ASSAYS	ROCK CLASSIFICATION	MINERALIZATION OXIDE: CHRYSOCOLLA	MINERALIZATION OXIDE: NATIVE COPPER	MINERALIZATION SULPHIDE: LIMONITE	MINERALIZATION SULPHIDE: CHALCOCITE	MINERALIZATION SULPHIDE: CHALCOPYRITE	MINERALIZATION SULPHIDE: PYRITE	ALTERATION SERICITIZATION	LBS. OF WEIGHT OF SAMPLE OR %	% OF TOTAL SAMPLE	HARDNESS	HOLE DRILLED	HOLE REAMED	CASING	ROCK CLASSIFICATION	REMARKS
	5		0.03			DP	5		.03-9.2				WK			M				← OLD ROCK	
	10		0.06				4.2/8		2640												
	15		0.05				5														
	20		0.04				5		.07												
	25		0.04				5														
	30		0.04		.05		4.2/8														
	35		0.04				5		.06				WK MOD								
	40		0.07				5														
	45		0.07				5									S		13"			
2600	50		0.07				4.2/8		2600												
	55		0.39				5						MOD								
	60		0.37				5		.38												
	65		0.43	0.05			5														
	70		0.40	0.05			4.2/8													SOME EPIDOTE IN DP ?	
	75		0.52		.37		5		.41											" " "	
	80		0.40	0.09			5													JAROSITE ?	
	85		0.39				5														
	90		0.33				4.2/8		.16							M		10"			
	95		0.20				5									S					
	100		0.14				5														
	105		0.12				5														
	110		0.13				4.2/8														
	115		0.11		.13		5		.12				WK MOD								
	120		0.10				5														
	125		0.15				5									M		8"		JAROSITE ?	
	130		0.11				4.2/8														
	135		0.11				5														
	140		0.13				5		.14												
	145		0.16		(.23)		5														
2500	150		0.18		.15		4.2/8		2500 .18-5.8							S					
	155		0.18				5														
	160																				
	165																				
	170																				
	175																				
	180																				
	185																				
	190																				
	195																				
	200																				
	205																				
	210																				
	215																				
	220																				
	225																				
	230																				
	235																				
	240																				
	245																				
	250																				
	255																				
	260																				
	265																				
	270																				
	275																				
	280																				
	285																				
	290																				
	295																				
	300																				
	305																				
	310																				
	315																				
	320																				
	325																				
	330																				
	335																				
	340																				
	345																				
	350																				
	355																				
	360																				
	365																				
	370																				
	375																				
	380																				
	385																				
	390																				

ROCK CLASSIFICATION: W — WASH; M — MONZONITE; DP — DACITE PORPHYRY; AP — APLASITE; EV — EARLY VOLCANICS; SITE — FLOW; MATER — INTERCOLATED; LS — LIMESTONE; QT — QUARTZITE; SH — SHALE; DIK — DIKE ROCK; DACITE; AND

LEGEND

COMPOSITE LOG

AMERICAN SMELTING & REFINING CO.

CHURN DRILL HOLE NO. 513

PROPERTY: SILVER BELL. NSB AREA

COLLAR COORDINATES. N 41146.10 E 16393.79

CLAIM COLUMBIA 2791

COLLAR ELEVATION: 2614.42 ✓

DEPTH 160

SCALE: 1 INCH=50 FEET

FILE NO. ____

DATE STARTED 9-27-55

DATE FINISHED 9-30-55

NO. 8 MEN SHIFTS 6 KENLLEY & ESSEK CO.

LOG BY: WMJ RAB

SURVEY BY: RAB

LEGEND — ROCK CLASSIFICATION: W—WASH; LS—LIMESTONE; M—MONZONITE; QT—QUARTZITE; DP—DACITE PORPHYRY; SH—SHALE; A—ALASKITE; OR—OTHER ROCKS; EV—EARLY VOLCANICS (DACITE, ANDESITE, FLOWS, INTERCALATED SEDIMENTS)

Columns: ELEVATION | SAMPLE DEPTH | COPPER ASSAY: TOTAL, SOLUBLE | COMPOSITE | ASSAYS | ROCK CLASSIFICATION | MINERALIZATION: OXIDE (CHRYSOCOLLA, NATIVE COPPER, LIMONITE), SULPHIDE (CHALCOCITE, CHALCOPYRITE, PYRITE) | ALTERATION, SLIME (CLAY) % | LBS. DRY WEIGHT OF SAMPLES | CU. FT. SAMPLED | % OF TOTAL SAMPLE | HARDNESS | HOLE DRILLED | HOLE REAMED | CASING | REMARKS

Elevation	Sample Depth	Total Cu	Soluble Cu	Composite / Assays	Rock	Remarks
	5	0.02				BEDROCK
	10	0.03				
2600	15	0.04			DP	
	20	0.04				
	25	0.03				
	30	0.07				
	35	0.12		.15 / X		
	40	0.14			DP MZ	
	45	0.21			DP	
	50	0.33			MZ DP	
	55	0.27		2550		
	60	0.27				
	65	0.28				
	70	0.25			DP	CAVING
	75	0.23				
	80	0.39		.33 / X		WATER
	85	0.41	0.06			
	90	0.44	0.06			
	95	0.42	0.05			
	100	0.42	0.05			
	105	0.16				OUT OF WATER
	110	0.19				
2500	115	0.17		.18 / X		
	120	0.16				
	125	0.09				
	130	0.11				
	135	0.13				
	140	.16				
	145	0.21		(.25')		
	150	0.14				
	155	0.14		.16 / X		
	160	0.24				

Avg 0.20

Mineralization column annotations: 5 / 5 / 4.4/6 ... (intervals bracketed); .02 — 14.4'; → 2600; .06; .23; .25; .44; .24; → 2500; ~~.15~~ .12; .16; → 2460; .23 — 5.6'

Alteration: WK (to 55); MOD (55–160)

Hardness: S, H, M ... (by interval)

Casing: 13" ; 10" ; 0"

Sample depth scale continues: 165, 170, 175, 180, 185, 190, 195, 200, 205, 210, 215, 220, 225, 230, 235, 240, 245, 250, 255, 260, 265, 270, 275, 280, 285, 290, 295, 300, 305, 310, 315, 320, 325, 330, 335, 340, 345, 350, 355, 360, 365, 370, 375, 380, 385, 390, 395

COMPOSITE LOG

AMERICAN SMELTING & REFINING CO.

CHURN DRILL HOLE NO. 514

PROPERTY: SILVER BELL. NS B AREA

COLLAR COORDINATES: N 41335.83 E 16102.73 CLAIM CROWN AMD.4329

KENNECOTT COPPER CO.

COLLAR ELEVATION: 2585.64 2572

DEPTH 145

SCALE: 1 INCH=50 FEET

FILE NO.

DATE STARTED: 9-30-55

DATE FINISHED: 10-4-55

NO. 8 HR. SHIFTS: 6

LOG BY: WMJ FAB

SURVEY BY RAN

ELEVATION	SAMPLE DEPTH	COPPER ASSAYS TOTAL	NON SUL	COMPOSITE	ASSAYS	ROCK CLASSIFICATION	CHRYSOCALLA	NATIVE COPPER	CUPRITE	CHALCOCITE	CHALCOPYRITE	PYRITE	ALTERATION (CLAY)	% OF SPLIT SAMPLES	% OF TOTAL SAMPLE	HARDNESS	HOLE DRILLED	HOLE REAMED	CASING	REMARKS
	5	0.03																		BEDROCK
	10	0.04																		
	15	0.05			.04	DP														
	20	0.05																		
	25	0.03						2560												BLASTED HOLE
	30	0.03																		
	35	0.03																		
	40	0.04																		
	45	0.08			.18															
	50	0.22																		TRACE MO.
	55	0.42	0.04																	
	60	0.31																		CAVING
	65	0.34																		
	70	0.34																		
	75	0.10	0.05																	
	80	0.30																		
2500	85	0.35																		
	90	0.16			.22															
	95	0.10																		
	100	0.19																		TRACE MO.
	105	0.27																		
	110	0.20																		
	115	0.09																		
	120	0.11																		
	125	0.09			.13															
	130	0.11																		
	135	0.20																		
	140	0.11																		
	145	0.09																		
	150																			
	155	Avg 0.17																		
	160																			
	165																			
	170																			
	175																			
2400	180																			
	185																			
	190																			
	195																			
	200																			
	205																			
	210																			
	215																			
	220																			
	225																			
	230																			
	235																			
	240																			
	245																			
	250																			
	255																			
	260																			
	265																			
	270																			
	275																			
	280																			
	285																			
	290																			
	295																			
	300																			
	305																			
	310																			
	315																			
	320																			
	325																			
	330																			
	335																			
	340																			
	345																			
	350																			
	355																			
	360																			
	365																			
	370																			
	375																			
	380																			
	385																			
	390																			
	395																			
	400																			

MINERALIZATION: OXIDE / SULPHIDE

Depth	Mineralization	Hardness
5–12'	.03	M
12–13'	2560 WK WK.MOD	
13–20	.04	
20–25	.13 MOD	S
25–30	3.5	
30–35	2590	
35–40	2.91	
40–45	.19	M
45–50	.11	S
50–55	2440	
55–60	.12	M
60–145		

CASING: 13" (0–50), 10" (50–100), 8" (100–145)

LEGEND — ROCK CLASSIFICATION: ASH, BENTONITE, DACITE PORPHYRY, DACITE, FELSITE, FLOWS, INTERCALATED SEDIMENTS, LIMESTONE, QUARTZITE, SHALE, DIKE ROCKS, ANDESITE

COMPOSITE LOG

AMERICAN SMELTING & REFINING CO.

CHURN DRILL HOLE NO. 515

PROPERTY: SILVER BELL. NSB AREA

COLLAR COORDINATES N. 41946.73 E. 15650.58

CLAIM NORTHERN STAR 2794

COLLAR ELEVATION: 2590.51 2583

SCALE: 1 INCH = 50 FEET

FILE NO.

DATE STARTED: 10-4-55

DATE FINISHED: 10-8-55

NO. 8 HR. SHIFTS: 8

LOG BY: WMJ-RAB

SURVEY BY: RAB

DEPTH: 235

ELEVATION	SAMPLE DEPTH	COPPER ASSAYS TOTAL	COPPER ASSAYS NONSUL	COPPER ASSAYS COMPOSITE	ASSAYS	ROCK CLASSIFICATION	MINERALIZATION OXIDE: CHRYSOCALLA	MINERALIZATION OXIDE: NATIVE COPPER	MINERALIZATION SULPHIDE: CUPRITE	MINERALIZATION SULPHIDE: CHALCOCITE	MINERALIZATION SULPHIDE: CHALCOPYRITE	MINERALIZATION SULPHIDE: PYRITE	ALTERATION CLAY (CLAYICE)	DRY WEIGHT OF SPLIT SAMPLES LBS	DRY WEIGHT OF SPLIT SAMPLES OZ	% OF TOTAL SAMPLE	HARDNESS	CASING: HOLE DRILLED	CASING: HOLE REAMED	CASING: CASING	REMARKS
	0.00																				
	10	0.06																			BEDROCK
	15	0.07																			
	20	0.06																			
	25	0.08																			
	30	0.07																			
	35	0.08																			
	40	0.08																			
	45	0.09																			
	50	0.10																			
	55	0.12																			
	60	0.10																			
	65	0.06																			
	70	0.06																			
	75	0.04																			
	80	0.05																			
	85	0.05																			
	90	0.07																			CAVING
2500	95	0.06																			
	100	0.06																			
	105	0.11																			
	110	0.23																			
	115	0.12																			
	120	0.17																			
	125	0.24																			
	130	0.48	0.06																		
	135	0.54	0.06																		
	140	0.46	0.06																		
	145	0.46	0.07																		
	150	0.48	0.06																		
	155	0.42	0.06	AU = TR																	
	160	0.63	0.06	AG = .015																	
	165	0.45	0.03	CU = .42																	
	170	0.47	0.03	INSCU = .05																	
	175	0.34		FE = 1.3																	
	180	0.34		INSOL = 94.2																	
	185	0.42	0.04	MOS2 = .028																	
2400	190	0.42	0.03	S = 8																	
	195	0.54																			
	200	0.39																			
	205	0.34																			
	210	0.30																			
	215	0.40	0.02																		
	220	0.37																			
	225	0.44	0.02																		
	230	0.42	0.01																		
	235	0.45	0.01																		
	240																				
	245																				
	250																				
	255																				
	260																				
	265																				
	270																				
	275																				
	280																				
	285																				
	290																				
	295																				
	300																				
	305																				
	310																				
	315																				
	320																				
	325																				
	330																				
	335																				
	340																				
	345																				
	350																				
	355																				
	360																				
	365																				
	370																				
	375																				
	380																				
	385																				

LEGEND

ROCK CLASSIFICATION

W — WASH
M — MONZONITE
DP — DACITE PORPHYRY
A — ALASKITE
EV — EARLY VOLCANICS (DACITE, ANDESITE FLOWS, INTERCOLATED SEDIMENTS)
LS — LIMESTONE
QT — QUARTZITE
SH — SHALE
DR — DIKE ROCKS

REMARKS

DP
.07
X
DP MZ
MZ 2560
.09
X
DP
.08
X
DP MZ
DP
.37
X
.39
X
.13
.06
.08
WK MOD
.10
.05
2540
.07 WK
.18 MOD
.46
.50
.40
2440
WK MOD
.38
MOD
.37
WK MOD
2360
.44 = .12'
S
M
S
M
S
M
M
S
M
S
13"
CAVING
10"
8"
6"
SP. MO.
TRACE MO.
SP. MO.
TRACE MO.
SP. MO.
TRACE MO.
SP. MO.
TRACE MO.
SP. MO.
TRACE MO.
CAVING
V. SP. CC. FROM 190' - 235'

HUG 025

COMPOSITE LOG

AMERICAN SMELTING & REFINING CO.

CHURN DRILL HOLE NO 516

PROPERTY: SILVER BELL, NSB AREA

COLLAR COORDINATES N. 43500.67 E. 16999.28 CLAIM NSB 18

COLLAR ELEVATION 2519.48

DEPTH 127'

SCALE 1 INCH = 50 FEET

FILE NO

DATE STARTED: 11-8-55

DATE FINISHED: 11-14-55

NO. 8 HR. SHIFTS: 7

LOG BY: WMJ - RAB

SURVEY BY: RAB

ELEVATION	SAMPLE DEPTH	COPPER ASSAYS TOTAL	COPPER ASSAYS ION SUL	COMPOSITE ASSAYS	ROCK CLASSIFICATION	MINERALIZATION OXIDE: CHRYSOCALLA	MINERALIZATION OXIDE: NATIVE COPPER	MINERALIZATION OXIDE: LIMONITE	MINERALIZATION SULPHIDE: CHALCOCITE	MINERALIZATION SULPHIDE: CHALCOPYRITE	PYRITE	ALTERATION	SLIME (CLAY) CC	LBS DRY WEIGHT OF SPLIT	OZ OF SAMPLES	% OF TOTAL SAMPLE	HARDNESS	HOLE DRILLED	HOLE REAMED	CASING	REMARKS
	5	0.00				S											M				
	10	0.02				S															
	15	0.03				S															
2500	20	0.03				4.5															
	25	0.03		.03		S															
	30	0.04				S															
	35	0.04				S													13"		BEDROCK
	40	0.02			D	4.5						WK									
	45	0.07				S															
	50	0.03				S															
	55	0.08				S															
	60	0.12				4.5											H				
	65	0.10		.06		S						WK MOD					M				
	70	0.09				S											H				
	75	0.10				S											M				CAVING
	80	0.08				4.5															WATER
	85	0.06				S															
	90	0.08				S															
	95	0.07				S															
	100	0.06				4.5						MOD									
	105	0.18		.13		S															
	110	0.28				S															CAVING
	115	0.14				S													8"		
2400	120	0.13				4.5						WK MOD									
	125	0.10				S															
	130																				
	135																				
	140																				
	145																				
	150	Avg 0.08																			
	155																				
	160																				
	165																				
	170																				
	175																				
	180																				
	185																				
	190																				
	195																				
	200																				
	205																				
	210																				
	215																				
	220																				
	225																				
	230																				
	235																				
	240																				
	245																				
	250																				
	255																				
	260																				
	265																				
	270																				
	275																				
	280																				
	285																				
	290																				
	295																				
	300																				
	305																				
	310																				
	315																				
	320																				
	325																				
	330																				
	335																				
	340																				
	345																				
	350																				
	355																				
	360																				
	365																				
	370																				
	375																				
	380																				
	385																				
	390																				

LEGEND

ROCK CLASSIFICATION

W — WASH; LS — LIMESTONE; M — MONZONITE; QT — QUARTZITE; DR — DACITE PORPHYRY; SH — SHALE; A — ALASKITE; DR — DIKE ROCKS; EV — EARLY VOLCANICS (DACITE, ANDESITE, FLOWS, INTERCOLATED VENTS)

.02 - 19.5'

→ 2500

.03

.07

.09

.07

.18

→ 2400

.10 - 5.5'

COMPOSITE LOG

AMERICAN SMELTING & REFINING CO.

CHURN DRILL HOLE NO. 517

PROPERTY: SILVER BELL, NSB AREA

COLLAR COORDINATES N. 43163.27 E. 16745.28 CLAIM NSB 19

COLLAR ELEVATION 2536.21 2550

DEPTH 235'

SCALE: 1 INCH = 50 FEET

FILE NO.

DATE STARTED 11-14-55

DATE FINISHED 11-19-55

NO. 8 HR. SHIFTS: 10

LOG BY: WMJ - RAB

SURVEY BY: RAB

ELEVATION	SAMPLE DEPTH	COPPER ASSAYS TOTAL	NON-SUL	COMPOSITE ASSAYS	CLASS	ROCK CLASSIFICATION	MINERALIZATION OXIDE: CHRYSOCALLA	NATIVE COPPER	LIMONITE	CHALCOCITE	COVELLITE	SULPHIDE: PYRITE	ALTERATION	SLIME (CLAY) %	DRY WEIGHT OF SPLIT SAMPLES LBS	OZ	% OF TOTAL SAMPLE	HARDNESS	HOLE DRILLED	HOLE REAMED	CASING	REMARKS
	5	0.00																				BEDROCK
	10	0.31				DP				.16								M				CU. PITCH
	15	0.23																				
	20	0.15								>2540				WK MOD								SP. CUP. ?
	25	0.22								.22												
	30	0.25																				
2500	35	0.09																				
	40	0.11								.14												
	45	0.16																	13"			SP. CUP.
	50	0.20								>2500												
	55	0.24				DP MZ																
	60	0.19				DP				.17												
	65	0.16																				
	70	0.10																				
	75	0.09																				TR. MO.
	80	0.12				DP MZ				1.37				MOD ST				S				
	85	0.60	0.06																			
	90	0.66	0.05	AG=.035		DP																
	95	0.62	0.02	CU=.59		DP MZ																
	100	0.69	0.07	NSCU=.01		MZ				.62												TR. MO.
	105	0.69	0.02	FE = 1.8																		CAVING TR. MO.
	110	0.40	0.03	INSOL=92.0																		
	115	0.31		MOS = .018															10"			
	120	0.55	0.01	S = .8														M				WATER FAULT TR. MO.
	125	0.70	0.01							.48												CAVING TR. MO.
	130	0.35				MZ DP								MOD								
2400	135	0.28																				TR. MO.
	140	0.28								.32												
	145	0.42				MZ													8"			
	150	0.28								>2400												
	155	0.23																				TR. MO.
	160	0.24								.26												
	165	0.26																				
	170	0.26				MZ DP								WK MOD								
	175	0.19				DP																
	180	0.26								.26									6"			
	185	0.37																				
	190	0.20																				
	195	0.21																				TR. MO.
	200	0.32																				
	205	0.39								.30				MOD ST				S				
	210	0.29				DP MZ												M				
	215	0.36				MZ																
	220	0.31								.35												
	225	0.32																				
	230	0.41	TR																			SP. MO.
2300	235	0.32								>2320												
	240									.32				51'								
	245																					
	250	AVG	0.32																			
	255																					
	260																					
	265																					
	270																					
	275																					
	280																					
	285																					
	290																					
	295																					
	300																					
	305																					
	310																					
	315																					
	320																					
	325																					
	330																					
	335																					
	340																					
	345																					
	350																					
	355																					
	360																					
	365																					
	370																					
	375																					
	380																					
	385																					
	390																					
	395																					

LEGEND — ROCK CLASSIFICATION

W — WASH, M — MONZONITE, DR — DACITE, A — ALASKITE, EY — EARLY VOLCANICS (DACITE, ANDESITE, FLOWS, INTERCOLATED SEDI-VENTS), LS — LIMESTONE, QT — QUARTZITE, SH — SHALE, DR — DIKE ROCKS

COMPOSITE LOG

AMERICAN SMELTING & REFINING CO.

CHURN DRILL HOLE NO 518

PROPERTY: SILVER BELL. NSB AREA

COLLAR COORDINATES N 42823.69 E 16560.47 CLAIM NSB 10

COLLAR ELEVATION 2584.65 2570

DEPTH 285'

SCALE 1 INCH = 50 FEET

FILE NO

DATE STARTED 11-19-55

DATE FINISHED 11-26-55

NO. 8 HR. SHIFTS 13

LOG BY: WMJ-RAB

SURVEY BY RAB.

ELEVATION	SAMPLE DEPTH	COPPER ASSAYS TOTAL	COPPER ASSAYS NON-SUL	COMPOSITE ASSAYS	ROCK CLASSIFICATION	CHRYSOCALLA	MINERALIZATION OXIDE NATIVE COPPER	LIMONITE	SULPHIDE CHALCOCITE	CHALCOPYRITE	PYRITE	ALTERATION	CONC (CENT)	DRY WEIGHT OF ENTIRE SAMPLE OZ.	% OF TOTAL SAMPLE	HARDNESS	CASING HOLE DRILLED	HOLE REAMED	CASING	LEGEND ROCK CLASSIFICATION	REMARKS
	5	0.00																			
	10	0.11				MZ		.06-.10													← BEDROCK
	15	0.21							>2560			WK	MOD								
	20	0.26																			
	25	0.15							.21												
	30	0.21																			
	35	0.21											MOD	ST							
	40	0.19																			
	45	0.21							.20												
	50	0.17		.19														13"			
	55	0.16																			
	60	0.19		X					.17			WK	MOD								
	65	0.17																			
	70	0.17							>2500												
	75	0.18																			
	80	0.20							.17				MOD								
2500	85	0.15		.19																	
	90	0.24		X																	
	95	0.16																			
	100	0.19																			
	105	0.22							.32												
	110	0.69	0.10																		TR. MO.
	115	1.08	0.05																		" "
	120	0.64	0.04	AU TR	.52							WK	MOD								
	125	0.58	0.03	AG .02	.03				.65												
	130	.31		CU .58																	
	135	0.38		NS CU=.04																	
	140	0.45	0.02	FE 2.7					.39									10"			
	145	0.39		INSOL=90.0																	
	150	0.34		MOS2=.040																	SP. MO.
	155	0.62	0.02	S=1.2																	" "
	160	0.54	0.01																		TR. MO.
	165	0.76	0.02		.51				.64												WATER SP. MO.
	170	0.63	TR.																		TR. MO.
	175	0.37		AU TR	.01				>2400									8"			CAVING " "
	180	0.46	0.01	AG=.02								WK									
2400	185	0.36		CU .44					.40												
	190	0.41	0.02	NS CU=.03																	" "
	195	0.32		FE=2.4																	
	200	0.32		INSOL=90.5	.25																SP. MO.
	205	0.54	0.02	MOS2=.039					.38												CAVING
	210	0.33		S=1.2	.02													6"			
	215	0.31																			SP. MO.
	220	0.29																			" "
	225	0.28							.29												
	230	0.23				39															TR. MO.
	235	0.30																			SP. MOD. MO.
	240	0.30																			" "
	245	0.30							.27												
	250	0.26																			SP. MO.
	255	0.26																			" "
	260	0.36							.30												
	265	0.30																			TR. MO.
	270	0.28																			
	275	0.35							>2300												TR. MO.
	280	0.43	TR																		
2300	285	0.41	0.01						.40-.15									5"			
	290																				
	295																				
	300	Avg 0.37																			
	305																				
	310																				
	315																				
	320																				
	325																				
	330																				
	335																				
	340																				
	345																				
	350																				
	355																				
	360																				
	365																				
	370																				
	375																				
	380																				
	385																				
	390																				
	395																				

COMPOSITE LOG

AMERICAN SMELTING & REFINING CO.

CHURN DRILL HOLE NO 519

PROPERTY: SILVER BELL, NSB AREA

COLLAR COORDINATES: N 42367.40 E 16213.95

CLAIM NSB 9

COLLAR ELEVATION: 2539.56

285'

SCALE: 1 INCH = 50 FEET

FILE NO

DATE STARTED 11-28-55

DATE FINISHED 12-5-55

NO. 8 HR SHIFTS 14

LOG BY WMJ - RAB

SURVEY BY R.A.D.

Elevation	Sample Depth	Copper Assays Total	Non-Sulf.	Composite	Assays	Classification	Mineralization Oxide: Chrysocolla	Native Copper	Limonite	Chalcocite	Sulphide: Pyrite	Alteration	Slime (Clay)	Dry Weight on Sulphide Sample	%	Cs Total Sample	Hardness	Hole Drilled	Hole Reamed	Casing	Rock Classification	Remarks
	5	0.00															M				BEDROCK	
	10	0.38			(15)																SP. CUP	
	15	0.27			33	DP																
	20	0.33			X																	
	25	0.31				25.20																
	30	0.28																				
	35	0.14																				
	40	0.1																				
2500	45	0.38			33																	
	50	0.28			X																	
	55	0.50	0.25														S					
	60	0.60	0.05															13"				TR. AZUR.
	65	0.42	0.24																			SP. AZUR., MAL.
	70	0.63	0.60		59																SP. MAL	
	75	0.34	0.32		X																	
	80	0.69	0.14	AU = TR																	SP. Mo	
	85	0.75	0.11	AG = TR		DP, AP?																
	90	0.64	0.10	CU = .68		DP															TR. Mo	
	95	0.59	0.10	NSCU = .13																		
	100	0.62	0.15	FE = 1.3		DP, AP																
	105	0.76	0.14	INSOL = 90.9																		
	110	0.63	0.14	MoS_2 = .010		AP																
	115	0.28																10"			WATER	
	120	0.20																				
	125	0.29			36																SP. Mo	
	130	0.14			X																TR. Mo	
	135	0.23				DP																
2400	140	0.37																				
	145	0.31																				
	150	0.24				DP, AP																
	155	0.20				DP																
	160	0.21			21																	
	165	0.17			X																	
	170	0.22																				
	175	0.16																				
	180	0.15																				
	185	0.39	0.03														M					
	190	0.72	0.03	AU = TR																		
	195	0.63	0.03	AG = TR		MZ																
	200	1.01	0.04	CU = .62			(1)															
	205	0.59	0.03	NSCU = .04			.03											6"				
	210	0.39	0.02	FE = 3.4																		
	215	0.49	0.02	INSOL = 67.9																		
	220	0.65	0.03	MoS_2 = .022		DP, AP																
	225	0.48	0.03			DP, MZ															SP. Mo	
	230	0.90	0.05																			
	235	0.46	0.02																			
2300	240	0.48	0.01																			
	245	0.43	0.02																			
	250	0.31	0.01																			
	255	0.48	TR																			
	260	0.30	0.01			VET																
	265	0.55																			BLASTED HOLE	TR. Mo
	270	0.29			(25)	MZ											VH					
	275	0.28			.27												M					
	280	0.28			X																	
	285	0.23																				
	290																					
	295																					
	300																					
	305																					
	310																					
	315																					
	320																					
	325																					
	330																					
	335																					
	340																					
	345																					
	350																					
	355																					
	360																					
	365																					
	370																					
	375																					
	380																					
	385																					
	390																					
	395																					
	400																					

LEGEND

ROCK CLASSIFICATION

W — WARP, LS — LIMESTONE, M — MONZONITE, QT — QUARTZITE, DR — DACITE PORPHYRY, SH — SHALE, A — ALASKITE, DR — DIKE ROCK, EV — EARLY VOLCANICS (DACITE ANDESITE), T — TUFFS, QWD — INTERCOLATED SEDIMENTS

X plotted wrong on small map!

SHEET 1 OF 2

ASARCO
GEOLOGIC – ASSAY LOG

Final Depth 367.0'
Collar Elevation 2657.02 2625.5
Coordinates 41302.29 N, 17182.00 E
Inclination Vertical

Property Silver Bell

HOLE NO. D-204
Sheet No. 1 of 2
Date Completed 7-22-[illegible]
Logged By [illegible]

Depth	Interval	Core Size	Sp Grav	Core Rec %	Core Assay - % Cu: Total	Non-S	Average	Mineralization: Oxides	Pyrite	Cpy	Cc	Other	Alteration: Clay Sericite	Lim Hem	Rock Type	Remarks
0-5.5	5.5	RB	—	0	—	5.5	0 / 2620	—	—	—	—	—	—	—	—	Rock Bit
14.2	8.7	NXWL	2.55	99	.06	8.7	.06	.06					wk clay sec	wk-Mod lim sp hem	Dp.	Wk-Mod Alt, wk lim, sp hem, tr chal
22.9	8.7		2.49	99	.05	8.7		.05					wk-Mod clay sec	wk-Mod lim-hem tr sulf		Wk-Mod Alt, wk-Mod hem, wk lim, sp-wk sulf
31.9	9.0		2.46	88	.06	2.6 / 6.4	2600	.06								Wk-Mod Alt, wk-Mod hem, wk lim
40.7	8.8		2.54	95	.04	8.8	.05	.04	tr		tr	tr grn cu		wk lim wk-Mod hem		Alt as above, wk veins of quartz pyrite & sil, wk-Mod hem, wk lim
50.1	9.4		2.57	94	.06	4.8 / 4.6	.13	.06						wk-Mod lim, wk hem		Wk-Mod Alt, wk sil, wk-Mod hem & sil, wk lim on fracs
59.2	9.1		2.56	94	.07	9.1		.06	tr		.01			wk-Mod lim hem	Patchy Sub	Wk Alt, sp-wk lim, hem, spp, cc, sp-wk [illegible]
67.0	7.8		2.45	88	.28	6.3 / 0.3		.03			.25?				sp patchy sulf	Wk-Mod Alt, wk lim, sp hem, sp py, c tr grn Cu on fracs
74.7	9.7		2.54	91	.66	.05 / 9.7	.70	.05	sp		.61			tr lim	Sulf 267	Wk-Mod Alt sp-wk py wk-Mod cc, sp lim tr Cu
85.5	8.8		2.59	86	.82	.03 / 8.8	35.8 / 7.5 / 2.65	.03	sp-wk		.79			sp lim		Wk-Mod Alt, sp-wk py, wk(?) cc, sp cpy, sp lim on fracs
94.5	9.0		2.65	78	.87	.08 / 9.6		.03	1	.05	.74			sp-wk lim		Alt as above, sp-wk py, wk-Mod cc, sp cpy, sp lim on fracs
102.8	8.3		2.63	82	.65	.03 / 8.3	.69	.03	wk	.20	.42					Wk-Mod Alt, wk py, wk cc, sp-wk cpy, tr lim on fracs
111.6	8.8		2.63	92	.22	2.7 / 6.1	.31	.01	1	.18	.02		wk clay sec	tr lim		Wk-Mod Alt, wk-Mod py in [illegible] cpy in [illegible]
120.6	9.0		2.77	91	.35	9.0	2500	.02	sp-wk	.15	.18?		wk-Mod clay sec	sp lim	1st Elf Bk 2-115.1	Alt + Min as above, sp cc
133.4	12.8		2.63	62	.33	4.9 / 7.9	.30	.01	wk	.31	.01					Wk-Mod Alt, wk py, sp-wk cpy, tr cc, tr lim on fracs
141.8	8.4		2.63	95	.25	8.4		tr	1	.24	.01		wk-Mod clay sec	tr lim		Alt as above, cpy in long [illegible] fracs, tr cc
150.6	8.8		2.67	94	.36	3.7 / 5.1	.31	1	wk(?)	.26	.10?					As above
158.8	8.2		2.63	100	.30	8.2			1	.22	.08	tr-No Su				Wk-Mod Alt, sp-wk lim, sp-wk disp py, sp-wk cpy, [illegible]
168.1	9.3		2.68	95	.28	6.7 / 2.6			wk	.24	.04			—		As above cpy [illegible] dipping [illegible]
177.7	9.6		2.61	95	.16	9.6	.17		1	.16	tr	—				As above, slightly less cpy
187.3	3.6		2.63	99	.09	3.6			1	.09	1		wk clay sec			Wk-Mod Alt, wk-[illegible], sp-wk cpy, tr cc
190.2	8.9		2.63	90	.20	4.2 / 4.7	138.7 / 0.29		sp-wk	.20	tr?					Wk-Mod Alt, wk py, tr cpy, patchy [illegible]
193.5	8.1		2.69	98	.34	8.1	.30		wk	.31	tr		sp-wk clay sec			Wk-Mod Alt, wk py, wk cpy in [illegible]
203.6	5.3		2.59	76	.25	5.3		.01	1	.24	1		1		[illegible]	As above, slightly less cpy
211.8	8.2		2.22	59	.42	1.7 / 6.3		.01	sp-wk	.42	.21?	tr Mod	wk clay sec			Wk-Mod Alt, wk py, cpy, tr Mod cc, RX [illegible]
216.7	4.9		2.24	100	.21	.04 / 4.9	.36	.01	1	.26	tr		1			As above? core [illegible]
224.1	7.4		2.60	66	.42	7.4	2400	Tr	1	.39	.03		1			Wk-Mod Alt, wk py, cpy, RX composed of [illegible]
232.3	8.2		2.61	85	.35	1.4 / 6.8			wk	.32	.03		1			Alt & Min as above, RX has [illegible]
236.4	4.1		2.19	56	.54	4.1	.35	1	wk	.51	.03		1			As above, RX [illegible]
241.5	5.1		2.63	97	.35	5.1		1	wk	.35	Tr		1		[illegible]	[illegible]
249.8	8.3		2.63	97	.17	4.0 / 4.3			sp-wk	.17	Tr		1			[illegible]
255.5	5.7		2.62	78	.09	5.7	.17		wk	.09	Tr		1			As above [illegible]
261.3	5.8		2.62	92	.25	5.8			1	.25		tr Mod	1			[illegible]
[illegible]	[illegible]		2.59	96	.19	4.2		tr	wk-Mod	.19	tr	1	1			[illegible]
[illegible]	[illegible]		2.62	91	.15	?	.17		wk	.15	tr	tr gn	1			[illegible]
[illegible]	[illegible]		2.62	94	.12				1	.11	.01	tr Mod	1			[illegible]
[illegible]	[illegible]		2.69	88	.21	.2	.25		sp-wk	.15	.02		1			[illegible]
298.0	[illegible]		2.59	85	.32	[illegible]			[illegible]	.30	.02		1			[illegible]

Sheet # 2 of 2

Final Depth 3[illegible]7.0'
Collar Elevation 2657.02
Coordinates 41302.29N 17182.00E
Inclination Vertical

ASARCO
GEOLOGIC – ASSAY LOG

Property Silver Bell

HOLE NO. C-204
Sheet No. 2 of 2
Date Completed [illegible]
Logged By [illegible]

Depth	Interval	Core Size	Sp Grav	Core Rec %	Core Assay – % Cu Total	Non-S	Average	Mineralization Oxides	Pyrite	Cpy	Cc	Other	Alteration Clay Serpentine	Lim Hem	Rock Type	Remarks
[illegible]-3067	8.7	NQ	2.[illegible]	91	.23	7.5/1.2			sp	.22	.01	tr MoS2	wk sw, sp clay		Op	[illegible]
3115.2	8.5		2.41	95	.26	8.5	.22		wk	.25	.01	v.sp in sw	1			[illegible]
3124.2	9.0		2.44	89	.18	9.0	≥2300	Protoxide	sp	.18	tr	sp MoS2	1			As above [illegible]
3132.5	8.3		2.42	99	.18	1.3/7.0	.22	73.0	wk	.29	tr		wk ser		Sp-wk Sp-wk Sp-wk	As above [illegible]
3140.5	8.0		2.45	97	.29	8.0		@	sp-wk	.26	.03	tr MoS2				[illegible]
3148.6	8.1		2.41	95	.20	5.0/3.1		0.22	sp	.15	.05	tr MoS2	1			[illegible]
3154.4	5.8		2.44	96	.21	5.8	.21		wk	.18	.03	tr MoS2	mod ser			[illegible]
3162.7	8.3		2.40	89	.17	8.3	≥2260		wk	.14	.03		1			All as above [illegible]
3167.0	4.3		2.40	95	.35	1.5	.35-1.5		sp-wk	.30	.05					[illegible]
		Core rec. over			89%											

End of hole

Final Depth 202.3'
Collar Elevation 2642.85
Coordinates 41335.6 N, 16813.08 E
Inclination Vertical

ASARCO
GEOLOGIC – ASSAY LOG

Property SILVER BELL

HOLE NO. C 205
Sheet No. 1 of 1
Date Completed 7-23-
Logged By NN + BNW

Depth	Interval	Core Size	Sp Grav	Core Rec %	Core Assay - % Cu: Total	Non-S	Average	Mineralization: Oxides	Pyrite	Cpy	Cc	Other	Alteration: Clay Sericite	Lim. Hem	Rock Type	Remarks
0-5.0	5.0	RB	—	0		2.4, 2.1 → 2640		—	—	—	—	—	—	—	—	ROCK BIT
5.7	10.7	NX	2.46	76	.06	10.7	.05	.06					Mod Clay-Ser	Wk-Mod Lim, Mod-Hem	DP? Mg?	MOD-LIM. ALT WK-MOD LIM IN FRAC. PERVASIVE - NO PYRITE - TR SPEC
17.6	11.9		2.51	59	.04	4.7	.05	.06	Tr				—	Wk-Lim Hem, Tr Lim	DP Tr? Sulfs @ 35'	ALT MOD - BOTH LIM-HEM - WHITE BEHIND FRAC - PROBABLY CARB. APPARENTLY SULFS @ 35' - THIS BEHIND? LEACHED
32.4	9.8		2.50	87	.05	8.8	→ 2600	.04	Sp	Tr	.01		Mod Clay-Ser	Wk-Lim Sp-Wk Hem	DP	ALT AS ABOVE - WK-MOD LIM - WK PY - SP - Tr CPY - Tr MoS2 - Tr MOD Clay-Ser - Tr Lim-Hem - Tr Hem - Tr Lim - Hem
45.0	8.6		2.57	94	.06	2.1		.04	Sp	Tr	.02		Mod Clay-Ser	Wk-Mod Lim-Hem	DP	ALT AS ABOVE - WK-MOD LIM-HEM - WK PY - SP - Tr CPY - Tr MoS2
53.7	8.7		2.61	93	.16	8.7	.12	.04	Sp-Wk	Tr	.12		"	Sp-Wk Lim-Hem	DP	ALT WK-MOD - MINOR WK-HEM - WK PY - SP - Tr CPY - BIOTITE PRESENT
62.0	8.3		2.57	90	.07	8.3		.02	Sp-Wk	Tr	.05		"	Wk Lim-Hem	DP	ALT AS ABOVE - WK LIM-HEM - SP-WK PYRITE - Tr CPY - Tr MoS2 - Tr Lim-Hem
69.5	7.5		2.42	96	.25	6.6	.15	.02	Sp-Wk	.04 Tr-2A	.19	Tr MoS2	"	Tr Lim-Hem	"	ALT AS ABOVE - SP LIM-TR HEM - WK PY - Tr CPY
79.6	10.1		2.63	73	.11	10.1		.01	Wk	.06	.04	Tr MoS2	"	"	"	ALT AS ABOVE; SP LIM OR FRAC; WK PY, SP-WK CP; SP CPY.
88.0	8.4		2.64	94	.10	3.3, 5	.08	Tr	Wk	.03	.02	"	"	Tr Lim	"	ALT AS BIOTITE WASHED; TR LIM ON FRAC; WK PY, SP-WK CP, SP CPY
97.0	9.0		2.66	94	.07	9.0		Tr	Wk-Mod	.06	.01	"	Wk-Mod Clay-Ser	—	Silicified DP	ALT AS ABOVE; WK LIM-HEM; MOD PY, SP CPY
105.7	8.7		2.63	90	.09	5.9, 2.8		Tr	Wk-Mod	.08	.01	"	"	—	"	ALT AS ABOVE; AS ABOVE; MIN AS ABOVE - NO BIOTITE
113.6	7.9		2.64	100+	.07	7.9	.08		Wk	.07	Tr	"	"	—	Biotite DP	ALT WK-MOD; WK PY, SP CPY, Tr CP - OCCURRENCE OF ABOVE
122.3	8.7		2.67	90	.09	8.7			1	.09	1		"	—	DP	ALT WK-MOD; WK PY, SP CPY; SULFS BOTH DISM & ALONG FRACS.
129.0	7.7		2.74	93	.13	7.1	.15	Tr	Wk-Mod	.12	.01		"	—	"	ALT WK-MOD; MIN AS ABOVE WITH ADDITION OF SOME MoS2
137.7	7.7		2.73	90	.21	7.7	→ 2500		1	.20	.01	Tr MoS2	"	—	"	ALT WK-MOD; INCREASE IN SULFIDES - WK-MIN PY, WK CPY, Tr-SP MoS2
146.3	8.6		2.78	91	.08	5.2, 3.4			Wk	.06	.02		"	—	"	ALT WK-MOD; MIN AS ABOVE; TR CPY - SAMPLE MORE TOWARD
153.6	7.3		2.67	94	.10	7.3	.10	Probore	Mod	.08	.02		"	—	DP? Mg?	ALT AS ABOVE; MIN AS ABOVE - TR CPY; MOD BIOTITE
160.9	7.3		2.64	93	.11	7.3			Wk	.09	.02	Tr MoS2	"	—	DP	ALT MOD; WK PY, SP CP, CPY, Tr MoS2
163.1	2.2		2.64	93	.13	2.0, 2		72.1' @ .14	Wk-Mod	.11	.02		Sp Wk Ser	—	"	ALL AS ABOVE AS ABOVE
168.5	5.4		2.69	97	.15	5.4	.20		1	.12	.03		Wk Ser	—	Bunyo DP	CONTACT AT 163.1 BIO DP CONTINUES FROM 163.1 - PRESUMAB LY TOPPED DP ALT WK-MOD; WK-MOD PY, SP-WK CP, CPY, Tr MoS2; SULFIDES SEDIMENTATION - BIOTITE DEVELOPING
172.0	3.5		2.66	88	.26	9.5	→ 7460		1	.25	.01		"	—	"	ALT AS ABOVE; WK-MOD PY, WK CPY, SP, Tr MoS2 - OCCURRENCE
187.0	9.0		2.65	93	.16	4.1			1	.15	.01		"	—	DP	ALT AS ABOVE; WK PY, CPY, SP-CP; VEINLETS BETWEEN 2 & 3
194.8	7.8		2.64	99	.11	7.8	.16-19.4'		Wk	.11	Tr		"	—	"	ALT WK-MOD; WK PY, SP, WK CPY, Tr CP, MoS2 - SULFIDES OCCURRING IN SEDIMENTS & IN VEIN
200.6	5.8		2.65	93	.26	5.8			1	.21	.05	Tr MoS2	"	—	"	EVERYTHING AS ABOVE
202.3	1.7		2.65	98	.11	1.7			1	.11	Tr		"	—	"	" " "
			AVG.	=	.17%											E.C.H.

plotted wrong on 200 scale map?

Final Depth [illegible]
Collar Elevation 2600.31
Coordinates 41,289.89 N, [illegible] E
Inclination Vertical 41,289.89 N?, 17,510.78 E?

ASARCO
GEOLOGIC – ASSAY LOG

Property Silver Bell

HOLE NO. 206
Sheet No. 1
Date Completed [illegible]
Logged By [illegible]

Depth	Interval	Core Size	Sp Grav	Core Rec %	Core Assay – % Cu Total	Non-S	Average	Mineralization Oxides	Pyrite	Cpy	Cc	Other	Alteration		Rock Type	Remarks
0-17.4	17.4	5.5	–	–		0.3	2600 -.08	-2.9'			–	–	–	–	–	Rock Bit
2.73	9.9	[illegible]	2.46	24	0.08	2.9 / 7.0	.06	0.08					Mod-ex	Sl-lim / wk-mod	OP	Alt-Mod-ex; lim wk-mod; Mod sp-wk; No sulfides; [illegible]
36.2	8.9		2.46	22	.05	8.9		0.03	sp		.02		Mod-st clay-ser / Mod clay-ser	Mod lim / wk lim / wk-lim / wk-mod	"	Alt as above; lim wk-mod; [illegible]
44.7	8.5		2.47	24	.05	4.1 / 4.4		.05							"	Alt mod; wk lim-mod; Tr py; [illegible]
52.8	8.1		2.50	21	.20	8.1	.33	.10	sp	tr	.10		"	"	Sulfs @ 2.9'	Alt mod; wk-mod; Sp-wk py; sp cc; tr cpy; [illegible]
54.8	2.0		2.52	27	.78	.03	2.0	.03	wk	tr	.75			Sp lim / mod-wk lim	"	Alt mod; Sp-lim-mod; [illegible]
58.4	3.6		2.22	12	.54	.03	3.6	.03	sp		.51		Mod st clay-ser	Sp-lim / mod	SP(?) @ 57.8'	Alt mod-st; wk lim on fr; wk py; sp cc; [illegible]
67.0	8.6		2.52	15	.66	.02	1.9 / 7.7	.02	tr		.64		"	Mod lim	"	Alt as above; lim as above; wk py; [illegible]
76.1	9.1		2.5	22	1.16	.06	9.1	.06	tr		1.10		Mod clay-ser	"	SP(?) 2-0 PP	Alt same; lim same; wk py; [illegible]
86.1	10.0		2.41	22	1.21	.07	4.7 / 5.8	.07	sp	.10	1.07		"	"	SP(?)	Alt same; lim same; wk py; [illegible]
94.3	8.2		2.45	15	.89	.02	82.2@	.02	sp	.04	.83		"	Sp lim	SP(?)	Alt same; lim sp-mod; wk py; wk cc; sp cpy
102.1	7.8		2.57	21	1.07	.01	6.0 / 7.8	.01	tr	.05	1.01		"	"	SP(?)	Alt mod; lim same; wk py; [illegible]
110.3	8.2		2.57	13	.71	.01	.02 / 8.2	.01	sp	.10	.60		"	"		Alt mod; lim same; wk py; [illegible]
118.2	7.9		2.55	15	.60	tr	7.9	tr	wk	.10	.50		"	—	Silicified-altered D(?)	Alt mod; lim absent; wk-mod py; wk-cc; sp-wk cpy
126.7	2.5		2.55	24	.50	nil	7.1 / 6.4	nil	sp	.03	.47		"	—	Silicified-altered D(?)	Alt mod; Mineralization same; [illegible]
131.2	4.5		2.57	21	.35	.01	4.5	.01	wk	.20	.14		"	—	"	Alt mod; wk-py; sp-wk cc; [illegible]
135.0	3.8		2.2	17	.42	.01	3.8	.01	wk	.25	.16		Wk-mod clay-ser	—	Monzonite dike	Alt wk-mod; wk-py; sp-wk cc-cpy
142.8	7.8		2.52	19	.29	.01	5.3 / 6.5	.01	wk	.20	.09		"	—	Silicified Alt. dike [illegible]	Alt wk-mod; wk-mod py; sp [illegible]
150.8	8.0		2.60	25	.22		8.0	.20	wk	.12	.10		"	—	"	Alt wk-mod; wk-mod py; [illegible]
158.8	8.0		2.53	22	.16		8.0		sp-wk	.08	.08		"	—	"	Alt mod; wk-mod py; [illegible]
166.5	7.7		2.5	20	.19		1.5		sp	.11	.08		"	—	"	Alt mod; wk-py; sp-wk cpy; [illegible]
175.4	8.9		2.63	21	.20	8.9 / 6.4	.19		sp	.15	.05		Sp clay ser		Mz?	Mod-st sil'n, wk py, k-[illegible]
183.9	8.5		2.51	19	.19	4.7 / 3.8			wk	.15	.04				good Mz @ 170.1'	[illegible]
192.2	8.1		2.53	15	.16	8.1	.17		sp-wk	.14	.02		Tr clay ser			Mz in silicified [illegible]
199.7	7.7		2.51	21	.16	7.7		Pyrite,	sp	.16	tr					[illegible]
207.8	8.1		2.55	21	.13	0.4 / 7.7	2400 .18	48.1 @	sp	.10	.03					As above [illegible]
216.7	8.9		2.57	21	.22	8.9	2380 .16		sp-wk	.17	.04					Sil'n [illegible]
224.0	7.3		[illegible]	12	.18	3.4 / 5.9	.21-11.9'			.18	tr?					As features same as above
232.0	8.0		[illegible]	45	.22	8.0				.22						As above; [illegible]
[illegible]			Sp. Grav.	2.37												

Final Depth 255.7
Collar Elevation 2607.47 2592
Coordinates 41758 S N, 16183.03 E
Inclination Vertical

ASARCO
GEOLOGIC – ASSAY LOG

Property SILVER BELL

HOLE NO. 2-
Sheet No. 1 of 1
Date Completed 8-2-
Logged By NN, BNW,

Depth	Interval	Core Size	Sp Grav	Core Rec %	Core Assay – % Cu Total	Non-S	Average	Mineralization Oxides	Pyrite	Cpy	Cc	Other	Alteration		Rock Type	Remarks
0-5.0	5.0	Co.	-	-	-	5.0	.02-7'									
14.0	9.0	NX wl	2.48	92	0.02	7.0 / 6.5	.03	-	-		-	-	—	-		Rock Bit
26.0	12.0		2.48	97	.03	12.0		0.02					MOD CLAY-SER	WK-MOD LIM		
35.2	9.2		2.48	94	.05	13 / 7.7	.05	.03					"	MOD-HEM LIM	DP	ALT MOD
44.4	9.2		2.21	102	.05	9.2		.05					"	WK-MOD LIM	"	ALT MOD
55.0	10.6		2.47	97	.06	3.1 / 7.5	.09	.05	tr				MOD CLAY WK-SER	WK-MOD LIM	"	ALT MOD
62.7	7.7		2.47	97	.08	7.7		.06					MOD CLAY WK-SER	WK-MOD LIM	"	ALT WK-MOD
70.7	8.0		2.45	97	.17	4.8 / 3.2		.03	sp		0.05		"	"	"	ALT MN
77.9	7.2		2.45	93	1.00	0.01 7.2	.68	.05	sp		.12		"	"	Sulfs 0.65%	ALT SILICIFIED
85.9	8.0		2.52	92	.47	tr 8.0	>2500	.01	sp		.99		MOD CLAY WK-SER	—	"	ALT
94.0	8.1		2.42	96	1.17	.01 / 1.6	1.09	tr	sp		.49		MOD CLAY WK-SER	—	DP ?	ALT MOD-SER
96.7	2.7		2.54	91	2.33	.01 2.1	2.15	.01			1.16		"	—	"	ALT MOD-ST
105.8	9.1		2.52	87	.77	N.I 9.1	.78	.01	sp-WK	.30	2.03		"	—	MOD ≈ 85%	ALT MOD-ST
114.2	8.4		2.47	94	.50	.01 1.7	.51	N.I	sp		.77		"	—	"	ALT SAME
122.0	7.8		2.51	96	.54	.01	.59	.01	tr-sp		.49	1	MOD CLAY WK SER	—	MOUZ (?)	ALT ST.
130.1	8.1		2.52	99	.76	.04		.01	sp		.53	1	WK-MOD CLAY WK-SER	—	DP @ 105	ALT MOD-ST
138.2	8.1		2.46	95	.51	.02	8.1 .39	.04	tr	tr-sp	.72	-	"	sp/lim	DP SILICIFIED	ALT WK-MOD
146.5	8.3		2.54	94	.18	8.3		.02	sp	.03	.46		"	sp/lim	DP SILICIFIED	ALT WK-MOD
156.1	9.6		2.57	96	.13	1.0 / 8.0	.15	sp-WK		tr	.18?		SP CLAY, tr SER	—	DP	ALT SAME
164.2	8.1		2.61	91	.16	8.1		1		.07?	.06?		1	-		WK-MOD
172.8	8.6		2.57	92	.20	3.3 / 5.3	.16	sp-WK-1		.38	.08?		tr SER	-	Mz by 155	WK Sil'n
180.2	7.4		2.61	97	.15	7.4	>2400	sp		.10?	.10?	tr MoS2	1	-	Mz?	Mod Sil'n
188.2	8.0		2.63	95	.13	7.3 / 0.7		1		.16	tr	1	1	-		Mod-st Sil'n
196.2	8.0		2.52	97	.20	8.0	.22	sp-WK		.13		-	1	-		Mod-st Sil'n
204.7	8.5		2.61	97	.25	8.5		1		.20			1	-	QTZ Mz ?	Mod Sil'n
212.9	8.2		2.62	97	.24	2.8 / 5.4	.20	1		.25		tr MoS2	1	-		Mod Sil'n
221.5	8.6		2.59	96	.20	8.6		1		.24		—	-	-		Mod-st Sil'n
230.1	8.6		2.57	93	.17	6.0 / 2.6		1		.20		-	WK CLAY	-	SILICIFIED DP (?)	Mod-st Sil'n
234.5	4.4		2.52	92	.20	4.4	.16	1		.17		tr MoS2	1	-		Mod Sil'n
242.6	8.1		2.55	91	.14	8.1	2340	1		.20		1	1	-		WK-MOD Sil'n
251.0	8.4		2.62	92	.13	4.9 / 3.5	.15-8.2'	1		.14		1	1	-		Mod Sil'n
255.7	4.7		2.51	97	.17	4.7		WK		.13		1	1	-		ALL FEATURES SAME AS ABOVE
			Avg Rock	2.57				sp-WK		.17		1		-		Mod Sil'n
																Mod Sil'n

Tenore 755' @ .19%

Final Depth 382.2
Collar Elevation 2537.92
Coordinates 42230.69N, 16107.48E
Inclination Vertical

ASARCO
GEOLOGIC – ASSAY LOG

Property Silver Belt

HOLE NO. E-208
Sheet No. 1 of 2
Date Completed 8-8-66
Logged By: GNW, NN, JAB

Depth	Interval	Core Size	Sp Grav	Core Rec %	Core Assay – % Cu: Total	Non-S	Average	Mineralization: Oxides	Pyrite	Cpy	Cc	Other	Alteration: clay sericite	limonite	Rock Type	Remarks
34.0	34.0	RO														
44.0	10.0	NX	2.53	73	.20		10.0	.33	.16				wk clay	wk lim	rock bit Mz	wk-mod alt, jar on frac's, good Mz test, sp epidote
53.8	9.8		2.[illegible]	98	.54	.42	6.0	.56			.12?				Dp ca. 42.5 ox @ 45.0	wk Cu ox on frac's, bx w/ qtz, tr frags, tr silicification
63.5	8.7		2.54	72	.56	.45	27.6				.11?	wk-mod wk carb	sp clay		Porph. intr @ 61.5	wk Cu ox on frac's & in vugs, tr silicification, porph in bx
74.5	12.0		2.53	61	.58	.33	.61	.66			.19					wk Cu ox throughout, sp py, tr cc, rock type? sp silicification
82.4	7.9		2.54	76	.74	.44	7.9	.44	tr		.30					Definite porph for 1' then st silic, sp py, wk cc, some ox
90.1	7.7		2.53	76	.61	.11	7.6	.11		.10	.40				Dp (?) @ 82.4	Veins indicate Dp, wk ox w/ mod green c/w fine chlor, silic, mod alt
98.8	8.7		2.54	88	.79	.08	8.7	.08	.78	tr	.71			wk lim	Dp (cont)	Sp clay, wk-mod silic; sp py, cc, tr chlor; good Mz test, less cc
107.6	8.8		2.54	77	.84	.08	8.8			tr	.76	tr Mos				Sp clay, wk silic; sp py, cc, tr cpy, tr Mos; Mz [illegible]
115.9	8.3		2.56	92	.56	.05	5.9	.05	.61	.04	.47					Rk. virtually same, some angular pieces from 3" to 1" dia.
123.4	7.5		2.56	76	.70	.05	.65	.02	2400	.02	.63	t				Sp clay, mod silic; sp py, cc, tr cpy & Mos; Mz [illegible]
132.4	9.0		2.55	81	.55	.01	6.6	.01	sp	.20	.39					Sp clay, wk silic, wk chlor; wk py, sp-wk cc, tr cpy
134.7	2.3		2.54	74	.44	.02	2.3	.46tr		.01	.41	tr Mos				Clay, silic & chlor same as above; sp py & cc, tr cpy
141.0	6.3		2.51	40	.51	.01	6.3	.01	wk	.01	.49	t	sp-wk clay	sp lim		Sp-wk clay, wk silic; wk py, tr cc & cpy
145.6	4.6		2.52	71	.36	.02	4.6	.02	sp	.01	.33	t		—	Porph int @ 141.0	Sp clay, biotite now hydrothermal, some chlorite; sp-wk cpy, sp cc
155.5	9.9		2.53	83	.24		4.4	.16	sp	.02	.21	t		—	Silicified intrusion	Mod-st. silic, wk clay, wk chlor; sp-wk py, sp cc & cpy
163.0	7.5		2.54	91	.13		7.5	.01	wk	.08	.04	t	sp clay & sericite	—	Dp	Wk. silic, sp clay, wk chlor; sp-wk py, sp cpy, tr cc
172.8	9.8		2.54	73	.12		7.0	.01	sp	.06	.05	t		—		Wk-mod silic, sp clay; sp-wk py, sp cpy, tr-wk cc, [illegible]
182.4	9.6		2.54	73	.14		9.6	.14	sp-wk	.06	.08		mod clay-sec			Mod clay, wk silic; wk py, sp-wk cpy, tr cc; [illegible]
190.1	7.7		2.54	76	.14		7.6		wk	.06	.06		wk-mod clay-sec			Wk clay, wk silic; wk py, sp-wk cpy, tr-sp cc; some [illegible]
192.5	2.4		2.54	58	.17		2.4		wk(?)	.05	.12	—			Mouz porph dike @ 192.1	Sp-wk clay, wk-mod py; wk cpy; some [illegible]
195.2	2.7		2.51	81	.26		2.7	.15	1	.16	.10	tr Mos	wk clay sec			All features as above
206.1	10.9		2.53	72	.13		10.9		wk-mod [illegible]	.26	.07	-			Dp @ 205.2	Wk clay, wk silic; sp-wk py, sp cpy; [illegible]
217.5	11.4		2.53	57	.11		3.9	.12	wk	.04	.07	-	wk-mod clay sec			Wk clay, mod-wk silic; wk py, sp cpy, tr cc; [illegible]
230.0	12.5		2.54	54	.13		12.5	2300	1	.03	.10	tr Mos			Mouz Dike 225-225	Dacite as above; mouz is wk-mod silic; sp-wk py, sp cpy, tr cc
239.6	9.6		2.57	55	.09		9.6	.10	sp-wk	.03	.06				Dp	Mod silic, sp clay; sp-wk py, sp cpy, tr Mos, tr cc; [illegible]
249.6	10.0		2.52	77	.10		10.0		sp	?	.12	?	mod-st clay sec			Wk-mod silic, wk clay; wk py, wk-mod cc, tr Mos; [illegible]
258.7	9.1		2.54	81	.12		8.1	.10	tr	.12					Alaskite (?) intrusive Dike	Mod clay, sp silic, sp-wk py, tr-sp cpy, tr cc; [illegible]
267.8	9.1		2.54	72	.09		9.1		1	.09	tr?	tr Mos			AK	Mod clay, wk-mod silic, sp py, sp cpy, tr cc & Mos
276.2	8.4		2.52	72	.08		7.2	.10	tr-sp	.09			mod-st clay sec			Mod clay, wk-mod silic, sp-wk py, sp cpy, tr cc & Mos
286.1	9.9		2.54	75	.11		9.9		1	.11						Wk-mod clay, wk silic, sp py, sp-wk cpy, tr cc & Mos
295.1	9.0		2.54	71	.12		3.9		1	.12						All features as above
305.3	10.2		2.52	72	.14		10.2	.12	1	.14		0.29% Sp wk Mos 5 mm Sp Mos 0.22 tr Mos 0.08				Wk-mod clay, mod silic; sp py, tr-sp cpy, tr cc, wk Mos
310.1	4.8		2.52	71	.09		4.7	.05	1	.09						Wk clay, tr-sp wk-mod silic; sp py, tr-sp cpy, wk Mos
318.3	8.2		2.52	72	.10		8.2		2200	.12	tr cc	tr Mos 0.08				As above, lower zone 312-318.3
326.7	8.4		2.52	77	.03		3.3	.09	1	.03		Wk Mos	st sec clay, mod st sec			Wk clay, mod silic, sp py, tr cpy, wk Mos
335.9	9.2		2.54	73	.11		9.2									Wk clay, sp silic, tr sp py, sp cpy, tr cc, tr Mos
345.0	9.1		2.52	72	.10		5.7	.16	.21							Wk-mod clay; sp wk py, sp cpy, tr cc, tr Mos
354.5	9.5		2.54	81	.11		9.5		1				st sec clay, mod sec			Wk-mod clay, wk silic; sp wk py, sp cpy, tr cc, tr Mos
366.1	11.6		[illegible]	[illegible]	.41	.01	9.1		1		.41					[illegible]

Final Depth 382.2
Collar Elevation ~~2357.92~~
Coordinates 42230.69 N, 16107.48 E
Inclination VERTICAL

ASARCO
GEOLOGIC – ASSAY LOG

Property [illegible]

HOLE NO. 208
Sheet No. [illegible]
Date Completed 8-8-66
Logged By BNW, NN, JAB

Depth	Interval	Core Size	Sp Grav	Core Rec %	Core Assay – % Cu: Total	Non-S	Average	Mineralization: Oxides	Pyrite	Cpy	Cc	Other	Alteration: [illegible]	[illegible]	Rock Type	Remarks
73.1	7.0		[illegible]	[illegible]	.33	7.0	.22		Wk	.33	–		[illegible]		Sed (?)	Mod. [illegible] Alt, wk chlor; Sp. [illegible]
75.8	2.7		[illegible]	[illegible]	.05	2.7	>2140		1	.05			[illegible]		Bx Dike 373.1–375.8	Wk Alt, Mod Pr, Sp [illegible]
82.2	6.4		[illegible]	[illegible]	.03	5.8 / 0.6	.03 – .6'		Wk	.03			[illegible]		[illegible]	Mod Alt, Mod Pr, [illegible]
OH																
		Avg.	Recly =	79%												

al Depth 223.0 2637
llar Elevation 2645.56
ordinates 41456.52N, 16380.82E
lination VERTICAL

ASARCO
GEOLOGIC – ASSAY LOG

Property: Silver Bell

HOLE NO. D-209
Sheet No. 1
Date Completed 3-11-66
Logged By N N JAB

h	Interval	Core Size	Sp Grav	Core Rec %	Core Assay – % Cu: Total	Non-S	Average	Mineralization: Oxides	Pyrite	Cpy	Cc	Other	Alteration: Clay Carbonate	Hem	Rock Type	Remarks
0	5.0	RB	–	0	–	5.0	.10-12' → 2620	–	–	–	–	–	–	–	–	ROCK BIT
2	15.2	VR WL	2.47	57	.10	12.0 / 3.2	.06	.10	–				SP CLAY SER		DP	MOD ALT, MOD HEM, WK SIL'N, LIM FRACTURES, WK CLOR ON FRACS
0	13.8		2.32	50	.05	13.8	→ 2600	.05								MOD-ST ALT, WK LIM, MOD HEM STAIN, WK-MOD SIL'N ON FRACS & INTERVS
1	10.1		2.3	–	.04	3.0 / 7.1	.04	.04					MOD CLAY SER			ALT-ST, LIM HEM & LIM AS ABOVE, WK MOD SIL'N & EVE (MOD 14.0 – 22.9')
0	7.9		2.57	71	.03	7.9		.03								MOD ALT, WK SIL'N ALONG ALL FRACTURES, WK MOD LIM, WK HEM STAIN
0	8.2		2.54	9	.04	5.0 / 3.2	.05	.04								MOD ALT, WK SIL'N, WK-MOD LIM ON FRACTURES, WK HEM STAIN, TR LIM
0	9.8		2.53	72	.05	9.8		.05								ALT AS ABOVE, WK LIM, WK HEM, SP LIM, TR CLOR, TYPICAL DP TEX GOUGE, MARGINAL TEX
5	9.5		2.22	33	.06	7.0 / 2.5		.06					ST CLAY SER			ST ALT, WK LIM, HEM + JAR; WK CLOR, SP TURQ, FROM 70-83
0	3.5		2.42	21	.07	3.5	.12	.07					ST CLAY SER			MOD-ST. ALT.; WK LIM; WK CLOR, SP TURQ
3	5.3		2.53	27	.07	5.3		.07					MOD CLAY-SER			MOD-ST CLAY ALT, SP SIL'N; SP LIM + HEM; SP-WK TURQ
5	7.2		2.42	25	.09	7.2		.09				Tr MAD				MOD CLAY ALT; WK LIM + HEM, TR CLOR + TURQ
1	4.4		2.62	23	.60	1.3 / 3.2		.03	MOD	.02	.55		MOD CLAY SER		MOD DIOR SUNSET SILICIFIED AK (?)	MOD ALT; WK-MOD PY, WK C.C., SP CPY, TR TURQ, AT MOST CM
5.4	5.5		2.60	24	.25	5.5 / .02	.31	.02	SP-WK	.02	.21		MOD CLAY SER WK SER			INTENSELY SILICIFIED, TEX DESTROYED, WK PY, SP C.C., TR CPY
1.4	6.0		2.60	25	.25	6.0		.02	WK	.06	.17					MOD ALT OF REMAINING FELDS.; WK PY, SP C.C., TR CPY
3.5	2.1		2.55	21	.21	2.1		.03	WK-MOD	.03	.15		MOD-ST MOD SER	–		WK-MOD ALT; WK PY SP WK C.C. SP CPY, TR-SP TURQ.
116.6	3.1		2.52	25	.34	3.1		.03		.04	.27					ALL FEATURES AS ABOVE
1.8	5.2		2.52	22	.26	0.4 / 4.8		.02	WK	.08	.16		SP CLAY WK SER	TR WK		WK PY & CPY, SP C.C.
6.1	4.3		2.52	21	.23	4.3	.21	.02	WK	.02	.18					WK-MOD PY, WK CPY, SP C.C.
5.8	9.7		2.52	27	.12	9.7	→ 2500	.12		.12						MIN AS ABOVE OR FOR INTENSELY SILICIFIED ZONE WHICH TEX BEGINS TO SHOW UP
4.4	8.6		2.52	22	.65	1.5 / tr 7.4	.36		SP-WK	.22	.25					SP-WK SIL, WK CPY, SP C.C. IN BIOTITE & VEINLETS, MOD AK LIM TEX END OF RUN
3.1	8.7		2.54	22	.21	8.7				.21	Tr					AS ABOVE PATCHY TEXT CONTINUES INTERMITTENTLY
1.2	8.1		2.55	27	.14	3.9 / 4.2	.20	–		.14		Tr MAD				SILN AS ABOVE WK PY, TR-SP CPY, SP PATCHY AK TEXT
9.9	8.7		2.55	25	.23	8.7				.23					AK(?)	AS ABOVE, TEXT BECOMING MORE DISCERNABLE
8.6	8.7		2.52	27	.20	7.1 / 1.0				.20			WK CLAY-SER			SILN ST BUT NOT COMPLETE REPLACEMENTS ABOVE, TEX AS ABOVE, WK PY, SP CPY
7.4	8.8		2.52	23	.14	8.8	.16	Protore 75.7 @ .17%		.14						[illegible]
5.7	8.3		2.52	22	.17	8.3				.17			WK-MOD SER-CLAY			[illegible]
3.2	7.5		2.52	100	.17	1.3 / 6.2	.15		WK	.17						AS ABOVE
2.3	9.1		2.52	22	.13	9.1	→ 2420			.13						ST ALT MOD [illegible]
1.7	9.4		2.52	23	.16	9.1 / 0.3	.01-6'			.16						[illegible]
30	1.3		2.52	22	.01	1.3				.01			MOD SER			MOD ALT [illegible]
																END OF HOLE

Note: This hole is inconclusive for determining the presence or absence of a carbonate blanket because of the occurrence of the impermeable silicified zone, probably related to a fault zone, which blocks sequence development.

Final Depth 331.7 2600.1
Collar Elevation 2615.88
Coordinates 41732.70 N, 15911.39 E
Inclination Vertical

ASARCO
GEOLOGIC – ASSAY LOG

Property Silver Bell

HOLE NO. D-210
Sheet No. 1 of 2
Date Completed 8-18-66
Logged By JAB, NH

Depth	Interval	Core Size	Sp Grav	Core Rec %	Core Assay – % Cu Total	Non-S	Average	Mineralization Oxides	Pyrite	Cpy	Cc	Other	Alteration Clay Sericite	Lim HEM	Rock Type	Remarks
0.0-2.0	2.0	RB	–	0	2.0	–	→ 2600 –	–	–	–	–	–	–	–	–	Rock Bit
10.7	8.7	NXW			.05	8.7	.07-18	.05					Wk-Mod Ser, Clay	Wk Lim Sp HEM	Dp	Wk-Mod Alt, Sp-Wk Sil'n, Sp Wk HEM, Tr Cpy, Tr Tuff
21.8	11.1				.10	9.3 / 1.8		.10					Mod Clay	1		Wk-Mod Alt, Sp Sil'n; Wk Lim, Sp HEM, Tr Cpy, Tr Tuff
31.1	9.3				.06	9.3	.06	.06					Ser Wk-Mod Clay-Ser	Wk Lim		Wk-Mod Alt, Sp Sil'n; Wk Lim, Wk HEM, Sp Cpy, Tr HEM
39.9	8.8				.05	8.8		.05					1	Wk Lim Wk HEM		Mod Alt, Sp Sil'n; Wk. Lim, Wk HEM, Sp Cp, Sp Mod Alt, Miscellaneous
49.3	9.4				.06	0.1 / 9.3		.06			–		1	Wk Lim Wk HEM Wk Lim Wk HEM Wk Lim		Wk-Mod Alt, Sp Sil'n; Wk-Mod HEM, Wk Cpy; Mk ZEMOS
59.0	9.7				.05	9.7	.06	.05				tr Tuff	1	Wk-Mod Hem		Wk-Mod Alt, Sp-Wk Sil'n, Sp-Wk HEM, Sp Cpy; Tr Py = C.C. of Brown
69.0	9.0				.09	1.0 / 8.0		.05 .05 tr Tuff					1	Wk Lim Tr HEM Wk Lim	MONZ DIKE 69.0-79.8	Dp Wk Wk-Mod Alt, Mod Sil'n, Wk Lim, Sp-Wk HEM Stain; Sp Cpy, Tr Cpy
79.8	11.8				.12	11.8	.11	.05 .05 tr Tuff					1			Monz Mod Clay Alt; Wk Lim, Tr HEM; Sp Cpy, Tr Cpy = Chalcocite
87.9	8.1				.13	0.2 / 7.9	.76	.13					Mod Clay Ser Sp Clay	1		Monz-Mod-Ist Alt, Mod Sil'n; Wk Lim, Tr HEM; Sp Cpy, Tr Cpy
92.1	4.2				.67	.53	1.47'	.67	Nil	Visible	Sulfides		Ser	1		Dp - Wk-Mod Alt, Wk-Mod Sil'n; Sp-Wk Lim, Tr HEM, Tr Cpy
102.6	10.5				1.30	1.11	→ 2500 1.12	1.30	"	"	"	"	Wk-Mod Clay	Sp-Wk Lim	Dp Andesite 92.1-102.6	Mod Alt, Wk Sil'n; Wk Brown Chemical with Numerous Green Talc Like Cpy Numerous Lim
108.9	6.3				.30	.20	.94 .34	.30	"	"	"	"	Mod Clay	Wk Lim		Andesite Dk Green Ex; Dk Green Clay Cu Numerous Spots, Mod Alt
118.4	9.5				.12	9.5		.10	Sp Sp-Wk	tr	.02		Wk-Mod Clay-Ser	Wk-Mod Lim	Dp Silt @ 118 Dp Dp Grad Dp Dp	Wk-Mod Alt, Mod Sil'n; Wk Lim, Sp HEM; Sp Py, Tr-Sp Cc = Cpy; Cc
126.9	8.5				.20	1.6 / 6.9	.21	.02		.09	.09		Sp-Wk Clay-Ser	Wk Lim Chlorite		Wk Alt, Sp Sil'n; Wk Py, Sp Cc, Tr Cpy; Mod Mod Alt Silt Tr
136.1	9.2				.22	9.2		.02	1	.10	.10		1	1	Dp	Wk-Mod Alt, Wk Sil'n; Sp-Wk; Wk Cc, Sp Wk Cpy, Sp Cc, Tr Mos; Quartz Vein
144.9	8.8				.22	3.9 / 4.9	.17	.02	1	.09	.11		1	1		Wk-Mod Alt, Mod Sil'n; Sp-Wk Py, Tr-Sp Cc = Cpy
154.0	9.1				.14	9.1		.01	1	.10	.04	tr MoS2	1	Sp-Wk Lim Chlorite		Wk-Mod Alt, Wk-Mod Sil'n; Sp-Wk; Wk Py, Sp Cc = Cpy; Cc Tr Mos
163.1	9.1		-		.18	6.0 / 3.1	.27	–	Sp	.15	.03		1	tr Lim		Wk-Mod Alt, Mod Sil'n; Wk-Mod Py, Sp-Wk Cc = Cpy, Tr Mos
171.7	8.6				.22	8.6			Sp-Wk	.20	.02		1			Mod Alt, Wk Sil'n; Wk Py, Sp-Wk Cpy, Sp Cc; Mod Mod Alt Sil'n
180.2	8.5				.36	8.3 .01	0.2	.01	Wk Lim	.25	.12	tr MoS2	Wk-Mod Clay Ser			Wk-Mod Alt, Wk Sil'n, Sp Cpy, Cpy, Sp-Wk Cc on Fract
188.6	8.4				.57	8.4 .01	.31	.01		.40	.16					Alt to Mod, Wk Cpy, Cpy, Sp-Wk Cc on Fract
196.7	8.1				.12	8.1			Wk	.12	–					Wk-Mod Alt, Compete with 190.4-194.2
206.9	10.2				.09	3.3 / 6.9	→ 2400		1	.09	–		Sp-Wk Clay-Ser			Wk Alt, Wk Sil'n, Wk Cpy, Cpy, dis.
215.6	8.7				.29	8.7	.14	—	Wk-Mod	.29	–	Tr MoS2	1			Wk Alt, Wk Sil'n; Sp-Wk Py, Wk Cpy or Hem, Tr MoS2
218.1	2.5				.19	2.5		–	Wk	.19	–	1	Sp-Wk Clay			Wk Alt, Wk Sil'n; Sp Py, Cpy, Tr Cc = Tr MoS2
227.1	9.0				.11	1.9 / 7.1		–	Sp-Wk	.11	–	1	1			Wk Alt, Wk-Mod Sil'n; Sp Py, Cpy, Tr Cc = MoS2
236.4	9.3				.25	9.3	.21	–	Wk	.13	.12	1	1			Wk Alt, Mod Sil'n; Sp Py, Wk Cpy, Tr MoS2
239.0	2.6				.30	2.6		–	Wk-Mod	.20	.10	1	Tr Wk Clay Ser, Sec			Alt Feldspars to Clay
247.6	8.6				.23	1.0 / 7.6	.18	–	Wk	.20	.03	1	1			Wk Alt, Wk-Mod Sil'n
255.9	8.3				.15	8.3		–	Wk-Mod	.14	.01	1	Sp Wk Sec			Wk Alt, Mod Sil'n; Sp Py, Wk HEM, Cpy, Tr MoS2
261.9	12.0				.15	4.1 / 7.9	.20	–	1	.14	.01	1	Sp Clay Sec			Wk-Mod Alt, Wk Sil'n, Wk Py, Cpy, Tr MoS2
277.7	9.8				.26	9.8			1	.26	tr	1				Wk Alt, Mod Sil'n; Wk Py, Cpy, Tr MoS2
286.8	9.1				.11	2.3 / 6.8	.13		1	.11	1	1			Ac 277.7-285.5 Dp	St Bill with Vaggs Alt to 285.5 Tr Cpy, Sp Py
295.1	8.3				.13	8.3			1	.13	–	1	Wk-Mod Sec			Contact Mod Sil (Intrusive) Dp to 287.7 Tr Cpy, Wk-Mod Alt, Wk Sil'n
300.0	4.9				.13	4.9	→ 2300		1	.13	–	1	Wk Sec			Pegs Remnant; Wk Alt, Sp Cpy, Wk Sil'n
309.1	9.1				.19	9.1	.22		Wk	.17	tr	1	1		Dp Bit Dp	Wk Alt, Mod Sil'n; Sp-Wk Py, Sp Cpy, Tr Cc, Sp MoS2
317.4	8.3				.27	8.3	→ 2280		Wk-Mod	.27	1				Andesite Tuff Mod Bit	Wk Alt, Wk-Mod Sil'n; Sp-Wk Py, Cpy, Tr Cc, Sp MoS2
325.9	8.5				.16 ?	2.6 / 5.9	.14 –	11.7'	Sp-Wk	.12	–		1		Sp Bill	Wk Alt, Mod Sil'n; Sp Py, Cpy, Tr Cc, Sp MoS2
330.1	4.2				.11 ?	4.2						1				

Final Depth 331.7
Collar Elevation 2015.08
Coordinates 41,932.70 N, 15911.39 E
Inclination Vertical

ASARCO

GEOLOGIC – ASSAY LOG

Property Silver Bell

HOLE NO. C 210
Sheet No. [illegible]
Date Completed Aug 18, 1962
Logged By J T [illegible]

Depth	Interval	Core Size	Sp Grav	Core Rec %	Core Assay – % Cu Total	Non-S	Average	Mineralization Oxides	Pyrite	Cpy	Cc	Other	Alteration [illegible]	[illegible]	Rock Type	Remarks
331.7	1.6				.12	1.6			Sp	.12	tr	tr Mal	[illegible]	—	Dp	[illegible]

Final Depth 173.0
Collar Elevation 2629.02
Coordinates 41310.96 N, 16460.02 E
Inclination Vertical

ASARCO
GEOLOGIC – ASSAY · LOG

Property Silver Fox

HOLE NO. 1-211
Sheet No.
Date Completed 8-18-66
Logged By J.H.B. + N.R.N.

Depth	Interval	Core Size	Sp Grav	Core Rec %	Core Assay – % Cu Total	Non-S	Average	Mineralization Oxides	Pyrite	Cpy	Cc	Other	Alteration		Rock Type	Remarks
0.0-5.0	5.0	RB	–	0	–	5.0	.03-4' → 2620	–	–	–	–	–	–	–	–	Rock Bit
18.9	13.9	NX wl			.03	4.0 9.9	.03	.03	–	–	–		Sr clay wk ser	wk lim sp hem sp lim	Dd Mz & Zon	Mod-St Alt, Wk lim, hem, Sp lim on frac + vsc, Sp-wk silicon, wk cl
27.7	8.8				.03	8.8	.2600	.02	Sp	–	.01		Mod clay wk ser	wk-mod lim sp hem		Alt + Min as above, Mz-Mod St Alt, Wk lim, sp hem on frac +
36.8	9.1				.05	1.3 7.8	.19	.02	Sp-wk	Tr	.03		Mod silic sp ser	mod-wk lim sp hem	Sp Sms	Mod Alt, Sp py, cc, tr sps in patches Wk-Mod lim on fr
45.0	8.2				.35	8.2		.02	wk +	.03	.02		Mod-lim wk ser	wk lim		Wk M Alt, Wk Sil'n; wk Py, sp-wk cc, Tr CPY
54.2	9.2				.13	4.0 5.2	.10	.02	wk	tr	.11				Cerus Diorite (?) Dpr Silicified G.D.(?)	Wk-Mod Alt; wk-Mod Py, Sp-wk cc, Tr CPY;
62.5	8.3				.09	8.3		.02	wk-Mod		.07					Wk-Mod Alt, wk sil'n; wk Py, Sp cc, Tr CPY;
74.4	11.9				.09	4.5 5.4		.02			.07		Mod ser – clay			Wk-Mod Alt; wk-Mod Py, Sp cc, CPY;
79.1	4.7				.09	4.7	.09	.02			.07					All features same except Rx is weakly silicified
86.9	7.8		–		.08	7.8		.01	wk(+)	.05	.02		wk sil, chlor, ser	wk sil'n on lim		Wk-Mod Alt; wk-Mod Py, Tr CPY, cc; lim on frms mod @ 85°;
94.4	7.5				.13	8.1 5.4	.14	tr		.13	tr		Mod chlor wk ser	tr lim		Wk Alt, wk-Mod Sil'n; wk Mod Py, sp CPY, Tr cc
102.6	8.2				.18	8.2			wk	.18?						Rx is mod silic, wk + fractured; mod chlor-ser; wk Py, sp CPY, Tr cc
112.3	9.7				.11	6.4 3.3	.17			.11						All features same; Tex is indistinguishable
119.3	7.0				.14	7.0			Sp-wk	.14						Rx is Mod silic, broken + altered; wk chlor; wk Py, Tr-Sp CPY, Tex
131.1	11.8				.21	9.7 2.1	→ 2500		wk(+)	.21			Mod-St silic wk ser			Most features same as above; Rx zone 121'-126'; fair cc, Tr
140.3	9.2				.16	9.2	.16		wk	.16			Mod (wk) sp ser			Wk Alt, Sp sil'n, wk chlor; Mod Py, Sp CPY
147.6	7.3				.18	7.3			wk-mod	.18			wk-mod ser, clay			Alt as above, wk-mod silic, wk chlor – Mz – Mod St Alt, Wk lim, sp hem on frac
155.6	8.0				.18	1.4 6.6	.13		wk	.18	tr?		wk mod silicon, chlor, ser			Mz as above, slightly stronger silicon
163.9	8.1				.09	8.1	→ 2460		sp-wk	.09	–		wk-mod sil, ser			
172.0	9.3				.11	5.3 4.0	.11-4'			.11	–					Complete silicic alteration of the 3 rock types
EOH																as above

Final Depth 199.1
Collar Elevation 2560.70
Coordinates 41927.32 N, 16466.99 E
Inclination Vertical

ASARCO
GEOLOGIC – ASSAY LOG

Property Silver Ball

HOLE NO. D-212
Sheet No.
Date Completed 8-24-66
Logged By J.H.B.

Depth	Interval	Core Size	Sp Grav	Core Rec %	Core Assay – % Cu: Total	Non-S	Average	Mineralization: Oxides	Pyrite	Cpy	Cc	Other	Alteration: Clay Sericite	Fe Mn Hem	Rock Type	Remarks
35.0	35.0	RB	—	0	–	0.17 – 20	2560 → 2540 / 5.9 –	.31 –	5.7'	–	–	–	–	–	--	Rock Bit
43.6	8.6				.31	.16	2.9	→ 2520 .16	tr vis	Sulfides	.15?		Wk Mod	Wk-Mod lim	Mz OP @ 39.5'	Mz - Mod-st Alt, Wk lim, Tr - Wk-Mod Alt sp lim anhedral
52.0	8.4				.45	.27	8.6	.32 .45?	No vis	Sulfides			Wk-Mod	Wk lim		Chrom Andesite Mz Tr to 48.2' Mod-st Alt & Brecc Mz w/ [illegible]
60.8	8.8				.19	.11	8.5 / 0.3	→ 2500 .14 Wk	"	"			1	1	Mz	Wk-Mod Alt, Wk lim Mostly erotic along fract
69.8	9.0				.89	.17	17.1 9.0	.70 .77	Sp	.36	.37		Wk clay sec chlor	Sp-Wk lim	Sulfide @ 63.1' OP @ 72.4 – 74.7	Wk Alt Sp-wk Py, Cc, Fe? Cpy, Sp lim
77.9	8.1				.56	.05	0.73 8.1	.05	Wk	.20	.31		Wk clay sec	tr-sp lim		Wk Alt, Mz sp Alt chlor but increasing in Dp, Sp wk Py, [illegible]
86.7	8.8				.38	.03	9.11 / 0.6	.03 .29	1	.20	.15		Wk clay sec	tr-sp lim	Mz to 88.1 then Dp	Wk Alt, Sp [illegible], Sp [illegible] Py, [illegible] tr lim
95.6	8.9				.28		8.9	.02	1	.18	.08		1			Wk-Mod Alt, Wk Sil'n Dp; Sp Py & Cpy, Tr Cc, Tr lim
104.1	8.5				.21		4.9 / 3.0	.16 .02	1	.16	.03	Tr MoS2	1		Dp	Wk-Mod Alt, wk-mod Sil'n; Sp-wk Py, Sp Cpy, Tr Mo & MoS2
112.3	8.2				.16		8.2	.01	Wk-Mod	.14	.01	Tr MoS2	Sp clay sec chlor			Py, Rec, indistinct Tex, Alt wk, Sil'n wk-mod, Sp Py & Cpy, Tr Cc; Dp & [illegible]
121.7	9.4				.15		8.2 / 1.2	.01	Wk	.11	.03	1	1			Rx as above, Sp-mod Rx, Sp. Inlets & disp. [illegible]
130.0	8.3				.18		8.3	.15	Wk	.15	.03	1	1			Mod Alt, wk Sil'n, wk chlor Sp-wk [illegible]
138.5	8.5				.13		8.5	—	Sp-wk	.09	.04	1	Sp clay sec chlor			Alt as above, Sp-wk Py, Cpy, Sp MoS2, Tr Cc
146.4	7.9				.14		8.0 / 5.9	.13	Sp-wk	.12	.02	1	1			Alt as above, [illegible]
154.4	8.0				.13		8.0	→ 2400	Wk	.11	.02	1	Sp clay sec chlor		Mz 150.5' – Sulf	Mod Alt & brecciation, wk Py, Sp-wk Cpy, Sp Cc, Mz, Mz - Dp [illegible]
162.8	8.4				.13		6.1 / 2.3	—	Sp-wk	.10	.03	1	1		Dp (?)	Wk-Mod Alt, Mod Sil'n, wk chlor; Sp Py, Tr-Sp Cpy, Tr-Sp Cc, Mz [illegible]
172.0	9.2				.15		9.2	.14 → 2380	Wk	.12	.03	Wk MoS2	Sp clay sec chlor			Leached Digitate(?) RK Even between 168' on 70.3; Wk-Mod Alt as above
180.9	8.9				.13		8.5 / 0.4	–	Wk-Mod	.13	Tr	Wk MoS2	1			Same Mottled Rock; 15% Biotite, Non Qtz-disper Inlets, wk Py, Sp-wk Cpy, Tr MoS2
189.7	8.8				.21		8.8	.17-18.6'	Wk	.20	.01	Sp MoS2	1			Wk-Mod Rxtz Sil'n, wk-mod [illegible] ; wk Py, Sp-wk Cpy, Tr MoS2
199.1	9.4				.14		9.4	–	1	.13	.01	Sp-wk MoS2	1			Rx Above ; Sp disper born in inlets and disim grains
E.O.H.																E.O.H.

Final Depth 136.7 2560.0
Collar Elevation 2577.80
Coordinates 41610.89 N, 16647.34 E
Inclination Vertical

ASARCO
GEOLOGIC – ASSAY LOG

Property Silver Bell

HOLE NO. D-213
Sheet No. 1 of
Date Completed 8-24-66
Logged By NRN, JAB

Depth	Interval	Core Size	Sp Grav	Core Rec %	Core Assay – % Cu: Total	Non-S	Average	Mineralization: Oxides	Pyrite	Cpy	Cc	Other	Alteration: Clay Ser	Hem Lim	Rock Type	Remarks
0-5.0	5.0	RB				5.0	2560 .05-15								—	Rock Bit
5.6	10.6	NQ			.06	10.6		.06	–	–	–		Mod Clay Ser	Mod Lim Wk Hem Tr Lim	Dp	Mod-St Alt, Sp Sil'n; Wk-Mod Lim-Hem, Sp Jar, Tr Lim
6.4	10.8				.04	4.4 6.4		.04	–	–	–			Tr Lim		Wk-Mod Alt, Sp Sil'n, Wk-Mod Lim-Hem Sp Jar
4.4	8.0				.05	8.0	.06	.04	Tr	–	.01		Wk Ser	Wk Lim Tr Hem Tr Jar	Sp Sup @ ∠ 30°	Alt Sil'd as Above, Wk Hem-Lim, Mod Jar on Fracs; Tr-Sp Py, Cpy
3.3	8.9				.10	5.6 3.3		.10	–	–	–		Mod-St Clay-Ser	Mod-St Lim Wk Hem	Flt Gouge	Det wk Sil'n Sp; No Sulf Evident; Flt Zone Mat 30° on Core, Limonite Stain
19.6	6.3				.08	6.3	.32	.06	Tr	–	.02		Wk Clay Ser	Wk Lim Tr Hem Sp Jar	Sulf Concrete	Flt Mat As Above with some Diss Py
59.1	9.5				.57	9.5	>2500	.11	Sp-Wk	?	.46		Mod Clay Ser	—		Flt Gouge Ends @ 60.8; Talc + Clay, Wk-Mod Py, Tr CC
8.1	9.0				.18	.9 8.1	.21	.01	1	.17	tr		Wk Clay Ser	—	Dp	Wk Mod Alt, Sp Chlor; Sp-Wk Py + Cpy; Rk Broken
17.7	9.6				.25	9.6		.01	1	.22	.02		1			Wk Mod Alt, Sp Serpentine; Wk Py, Sp-Mk Cpy, Tr CC
34.3	6.6				.13	2.3 4.3	.13	tr	1	.13	tr		1			Wk Mod Alt, Sp Serpentine; Sp-Wk Py, Tr-Sp Cpy, Tr CC
42.6	8.3				.16	8.3		–	1	.16	tr?		1			Wk Mod Alt, Sp Serp; Wk Py, Sp Cpy, Tr CC
54.2	11.6				.10	7.4 4.2	.15	–	1	.10	1	Tr MoS_2	Wk Clay Ser Talc			Wk-Mod Alt, Sp Sil'n, Sp to Gen. Clay (Talc); Sp-Wk Py, Tr-Sp Cpy, Tr Moly
68.5	14.3				.16	14.3	~2440	–	1	.16	Tr	Sp MoS_2	1			Alt As Above, Gen. Clay. Wk; Wk Py, Sp-Wk Cpy, Sp MoS_2 in Qtz Lets
127.9	9.1				.14	1.3 7.9	11-16.7	–	1	.14	1	1	1			Alt Wk-Mod Gen Clay Sp-Wk; Min As Above; Rk Shattered
136.7	8.8				.09	8.8		–	1	.09	1	Tr MoS_2	1			Rk Becomes Mottled + Tex Same as in D-213 with high Sul + Tot K-spar By Cond Possibly Ro Cond. Dome

Final Depth 262.3 2502.
Collar Elevation 2516.11
Coordinates 42657.49 N 15864.01 E
Inclination Vertical

ASARCO
GEOLOGIC – ASSAY LOG

Property Silver Bell

HOLE NO. S-215
Sheet No 1 of 1
Date Completed 9-14-66
Logged By [illegible]

Depth	Interval	Core Size	Sp Grav	Core Rec %	Core Assay – % Cu: Total	Non-S	Average	Mineralization: Oxides	Pyrite	Cpy	Cc	Other	Alteration		Rock Type	Remarks
0-14.2	14.2	8.5	–	–	–	–	2.0 / 12.2	2500 / –	–	–	–	–	–	–	–	Rock Bit
21.9	7.7		2.55	91	.27	.19	7.7	.27 – 7.8	No visable sulfides				sp-clay sp	sp-wk lim	Biotite DACITE P.	wk Alt, Sp Silif, wk lim; wk Chl, Tr MnO, Mod Frac; 3 To Biot
29.6	7.7		2.54	91	.41	.31	7.6	.35	"	"	"					wk Alt, Sp Silf, wk-Mod Chlor Alter Biot, Sp lim; wk Chl, [illegible]
37.0	7.4		2.46	96	.34	.22	7.4	.34	"	"					Dp	wk Alt, Sp-wk Sil'n, Sp lim, Sp-wk Chl, Tr MnO; [illegible]
45.1	8.1		2.44	89	.24	.15	5.0 / 3.1	.24	tr lim	[illegible]		Sp Mo Sz Sp-wk [illegible]				wk Alt, Sp-wk Sil'n, Sp lim, Tr Chl
53.3	8.2		2.51	88	.41	.39	8.2	.43 / .49	No visable sulfides			Sp-wk [illegible]				wk Alt, Sp-wk Sil'n, Sp lim; wk Chl, [illegible]
61.3	8.0		2.60	92	.44	.35	8.0	.40			.04?	Sp-wk				wk Alt, Sp [illegible]
69.2	7.9		2.61	91	.42	.33	31.8 @ 7.2 / 0.44 @ 7.7	.42 / .38	No visable sulfides		.02?					As above, decreasing Frac, Sp [illegible]
76.9	7.7		2.61	88	.41	.36		.39	tr visable		Lt. Vein					As above, less [illegible], wk [illegible]
84.5	7.6		2.60	88	.26	.22	5.1 / 2.5	.22 / .25	tr		.04					wk Alt, Sp Silf, [illegible]
93.3	8.8		2.58	77	.30	.22	8.8	.22	No visable sulfide		.05?				Hanna P. Sina 91'	As above, core broken & probably [illegible]
104.1	10.8		2.56	76	.20		8.7 / 2.1	2400 / .15	tr	–	.05?					wk Alt, Sp Limonite, Chl on fracs; Some [illegible]
112.9	8.8		2.61	96	.25		8.8	.28 / .20	tr-Sp	–	.05?				Intr Hnd Sulfide Banded Mz @ 117.5' Sz Sulf 117.8' Dp @ 123.4'	As Above; Rx has dull gray Metallic Appear. Tr Py & Cc. Sulfs still [illegible]
120.3	7.4		2.55	100	.30	.09	9.4	.09	wk	Sp	.14	tr Mo Sz				Dp Hs moderate wk Alt, Bec mn chlor; Mod Py, Sp Cpy, Sp Cc; Tr [illegible]
128.1	7.8		2.55	92	.41	.08	1.7 / 6.1	.08 Bar	1	.16	.17	1				As above. Pr wk Alt, wk Sil'n, Sel'l, Sp Cc on [illegible]
136.2	8.1		2.54	96	.22	.14	8.1	.35 / .14	Sp	–	.08	–			Tiny Cap F Sulf @ 124'	wk Alt, Sp Cpy, Cc, tr Py, Sp-wk lim on fracs & disk [illegible]
144.5	8.3		2.56	91	.44	.14	42.5 / 5.8 @ 2.5	.14 Chlor	Sp-wk	.15	.15	–				As above
155.0	10.5		2.56	75	.58	.13	10.5 / 2.45 / 1.11	.53 / .13	1	.10	.35				Chlor Sulf 155.0 Mz @ 157.5	Mod Alt, wk Sil'n, Sp-wk Py, wk-Mod Sp, Sp-wk Cc, tr Mo Sz, Sp-wk [illegible]
162.8	7.8		2.55	90	.48	.03	7.0 / 0.8	.03	wk-Mod		.10	.35	Mn-Mod (-) Chlor Sp-wk Chlor-Sec Sp-wk Chlor-Sec	tr lim Sp-wk lim tr lim		wk-Mod Alt, wk Sil'n, wk Py, wk-t Cpy disc in blebs, Sp-wk [illegible]
170.1	7.3		2.61	92	.27	.05	7.3 / .21	.05	Sp-wk	.05	.17				Dp Circa 164.3	Dk Lt-rich Dp (Granodiorite ?) [illegible]
177.8	7.7		2.56	96	.14	7.7		tr	Sp	tr	.14					As above. def. Dp. bio. shows gently dipping layering [illegible]
183.1	5.3		2.61	84	.17	4.2 / 1.1	.22	1	1	.04	.13			Sp lim		As above. Intense Silf 182' to end of Box @ 182.1'
194.7	11.6		2.58	67	.28	11.6	2300	–	Sp-wk	.18	.10	tr Mo Sz		tr lim	Mz @ 183.5 – 192.2 Dp. [illegible]	wk-Mod Alt, phenos smaller than normal [illegible]
203.7	9.0		2.58	94	.12	7.3 / 1.7			Sp	.06	.06	1	Sp Sor Sulf? Mod. Sor? Chlor Sulf wk-Mod Clay-Sec Sp-wk Clay-Sec	–		Dp grades into intensely Silf rk [illegible]
211.8	8.1		2.57	100	.16	8.1	.14		1	.10	.06	1				As above, poss pre-Silf bx, slight chlor [illegible]
220.8	9.0		2.60	92	.11	9.0			1	.06	.05	1				As above, patchy. poss Alt test. No post Silf [illegible]
228.3	7.5		2.58	100	.26	1.2 / 6.3			Sp-wk	.20	.06	1			Alt	Tr. Brownish Garnet. wk Alt, wk [illegible]
							.22									wk Py, Sp-wk Mo Sz & Sp-wk Py. [illegible]
237.3	9.0		2.57	93	.15	9.0			1	.12	.03	1				Alt. Sulfate Chlor. Numerous [illegible]
246.4	9.1		2.65	82	.22	4.7 / 4.4				.20	.02	1			Mz 241.4' 244.4'	Sp-wk Alt, [illegible] Silf, Sp Chlor; Sp-Py, [illegible]
							.24								Alt	Mz Cpy & Lim Stained Dissm. Mz [illegible]
255.3	8.9		2.59	100	.23	8.9			1	.21	.02	1	Sp-wk Sec			wk Alt, [illegible] Silf, [illegible]
							2240									Sp-wk Cpy, tr Py, Tr Sp Mo Sz [illegible]
262.3	7.0		2.67	87	.22	6.1	.22-.3	1	Sp	.22	.02		1			wk Alt, wk Silf, Sp Chlor, Sp Py, [illegible]
Eom																

Final Depth 915.2
Collar Elevation 2561.28 2552
Coordinates 41857.28 N 15086.02 E
Inclination Vertical

ASARCO
GEOLOGIC – ASSAY LOG

Property _____

HOLE NO. 216
Sheet No 3
Date Completed 10-14-66
Logged By NRN

Depth	Interval	Core Size	Sp Grav	Core Rec %	Core Assay - % Cu: Total	Non-S	Average	Mineralization: Oxides	Pyrite	Cpy	Cc	Other	Alteration		Rock Type	Remarks
AC-150	73.0	RS	–	–	–	72.0-9	→ 2480								–	Rock Bit
81.3	8.3	NQW	2.58	100	.04	.04 8.3	.04	.04				tr. Cuprite	WK PLAG	WK-MOD SP LIM	Dp	[illegible]
90.8	9.5		2.58	93	.04	9.5		.03			.01		WK-MOD CLAY-SER	MOD LIM TO SPR	Dp	As above. SP [illegible]
99.1	8.3		2.65	91	.07	1.2 / 7.1		.03		.02	.02			MOD LIM TO SPR	[illegible]	[illegible]
107.2	8.1		2.60	88	.09	8.1	.08	.03		.04	.07			SP LIM		[illegible]
115.3	8.1		2.65	77	.06	4.8 / 3.3		.02		.02	.02		WK-MOD SERIC WK PLAG SP-WK CLAY-SER	SP LIM		[illegible]
123.2	7.9		2.64	77	.03	7.9	.03	–	WK	.03	tr			tr LIM		Mod Alt, wk Silf; Sp-wk Py, tr Cp. Some Diorite + Qv Frags
133.7	10.5		2.66	62	.02	8.8 / 1.7		–	1	.02	–		1	–	Biot Dp	wk-Mod Alt, 4% Alt Biot, wk Qtz veins, Sp tan; wk Py, tr Cp
142.0	8.3		2.65	87	.02	8.3	.02		SP(?)	.02			1		1	wk-Mod Alt, Mod Silf, 4% Biot, sp-wk Py, tr Cpy
149.0	7.0		2.63	65	.02	7.0	→ 2400		1	.02			1		1	Mod Alt, Mod Other Feldspar As above
156.5	7.5		2.63	93	.04	3.0 / 4.5			1	.04			1		1	Mod Alt, Mod Silf 4% Alt Biot, wk-Mod Py, Sp Cpy, tr [illegible]
164.3	7.8		2.63	91	.04	7.8	.04		wk-wk	.04			1			Mod-st Silf, wk-Mod Py, Sp Cpy
171.5	7.2		2.64	98	.03	7.2			sp-wk	.03			Talc			Mod-st Silf, Med + Fine Felds Frags Abundant, Sp-wk Py
179.1	7.6		2.65	89	.03	5 / 7.1	.04		wk	.03						As above. Felds Frags and larger than normal 1/4" [illegible] 68° [illegible]
186.6	7.5		2.65	92	.03	7.5			Sp-wk	.03						[illegible]
195.6	9.0		2.64	77	.05	5.4 / 3.6			wk	.05					Mz w G.D.P @ 189.1'	Dp Wk Silf 2% Fine Biot, Mz Diorite Py, tr Cp
202.7	7.1		2.64	100	.12	7.1	.08		wk	.10			Sp-wk Chlorite		Mz	Sp-wk Alt, 2% Biot, wk Diorite Py, sp-wk Cpy
210.3	7.6		2.69	93	.09	7.6			1	.09			1			Sp-wk Alt, wk-Mod Silf, 1% Fine Biot, wk Dp, Frags some [illegible]
217.5	7.2		2.65	89	.07	1.7 / 5.5	.05		wk	.07			1		Dp Mzcz 217.5'	Shattered, small Frag Stack 2.5 Sink Alt, Sp-wk Silf; wk Py, tr-Sp Cpy; Tan Marker Bx Silf
225.0	7.5		2.65	90	.07	7.5			1	.07			Sp-wk Flag Sp-wk Talc		Dp	Mod Silf dp, Sp Alt, Local Hyp Biot. Py Concentrations, [illegible]
233.2	8.2		2.66	97	.03	7.0 / 1.2			1	.03			Sp-wk Clay Sp Talc		Biot Dp	Wk-Mod Silf dp, Sp Alt, 1% Fine Biot, Cross Cond. [illegible] Line Mz.
241.3	8.1		2.65	97	.04	8.1	.04		Sp-wk	.04						As Above. Biot 5%, sp-wk Py, tr Cpy
249.7	8.4		2.66	93	.04	8.4	→ 2300		wk	.04			Sp-wk Chlorite + Talc			As Above
257.9	8.2		2.64	94	.03	2.3 / 5.9			wk	.03					Normal Dp	[illegible]
266.9	9.0		2.64	89	.03	9.0	.03		wk	.03						[illegible]
274.6	7.7		2.67	93	.03	5.1 / 2.6			wk	.03						[illegible] about 15-20°
282.7	8.1		2.63	100	.06	8.1	.05		wk	.06			Sp-wk Flag Sp Talc			As above, [illegible]
291.0	8.3		2.64	94	.05	8.3			wk	.05			Mod Talc			Silica Dp, Sp-wk Alt, Distinct Tan Frags Dm [illegible]
298.9	7.9		2.63	100	.09	1.0 / 6.9	.10		wk	.09					Cmbr Mz 294.7 Dp @ 298.9	Dp As above, Dense [illegible]
306.6	7.7		2.64	93	.16	7.7			wk	.16						Mz As above, Dp wk-Mod Silf, sp-wk Alt, [illegible]
314.2	7.6		2.63	96	.04	5.4 / 2.2			wk	.04						Sp-wk Alt, wk Silf, 2% Biot, Sp-wk Py
321.8	7.6		2.64	99	.07	7.6	.05		wk	.07						As above. Sparse [illegible]
330.3	8.5		2.65	96	.05	8.5			wk	.05						Sp-wk Alt, tr Silf, 5% Biot, Sp Py, tr Cpy, [illegible]
338.0	7.7		2.64	97	.02	1.7 / 6.0			sp-wk	.02						[illegible]
345.4	7.4		2.65	99	.03	7.4	.03 → 2200		wk-wk	.03						wk Alt, wk Silf, Sp Py, tr Cpy, tr Mzcz
352.6	7.2		2.66	98	.04	6.6 / .6			wk	.04			Sp-wk Talc			[illegible]
361.8	9.2		2.63	94	.03	9.2	.03		wk	.03						Mod Silica [illegible] wk Py, tr Sp Cpy, tr Mzcz
364.5	2.7		2.65	97	.02	2.7			wk	.02						As above
372.3	7.8		2.64	98	.04	7.5 / 0.3			wk-wk	.04						Sp-wk Alt, wk-Mod Silf, Sp Py, tr Cpy, tr Mzcz

nal Depth 915.2
ollar Elevation 2561.28
oordinates 4185T.28N, 15086.02E
clination Vertical

ASARCO
GEOLOGIC – ASSAY LOG

Property Oil Er Bell

HOLE NO. C-216
Sheet No. 2 of 3
Date Completed 10-14-[illegible]
Logged By J.A.B. NPN

h	Interval	Core Size	Sp Grav	Core Rec %	Core Assay – % Cu Total	Non-S	Average	Mineralization Oxides	Pyrite	Cpy	Cc	Other	Alteration Clay Sen	Lim Hem	Rock Type	Remarks
380.8 8	8.5		2.62	94	.09	8.5	.05		wk	.09			Sp-wk Clay-Ser Mod Talc			Sp-wk Alt, Mod Sil'n, wk Talc; 70° [illegible]
8.6	7.8		2.63	98	.03	7.8			wk	.03						Alt + Sil'n As Above, Sp-wk Py, [illegible]
7.1	8.5		2.64	95	.02	3.4 / 5.1	.03		wk	.02						Sp-wk Alt, wk Alt Biot, [illegible]
8.7	11.6		2.65	95	.04	11.6			Sp-wk	.04			Sp-wk Clay Ser Mod Talc			Sp wk Alt, wk Sil'n, [illegible]
5.7	7.0		2.64	100	.03	3.3 / 3.7			wk	.03						Alt Sp-wk, wk-Mod Sil'n, 70° [illegible]
8.4	7.7		2.63	100	.06	7.7	.04		wk	.06						As Above [illegible]
1.5	8.1	431.5	2.63	99	.07	8.1			Sp-wk	.04						As Above
0.4	8.9	440.4	2.65	98	.03	15 / 8.4	.03		Sp	.03						Sp-wk Alt, wk Sil'n, 10 To Biot, Sp-wk Py, [illegible]
8.7	8.3	448.7	2.64	98	[illegible]	8.3			Sp-wk	.03						As Above, Mod Fracs 35-50°, Alt Along Fracs
7.5	8.8	457.5	2.65	96	.02	3.3 / 5.5	>2100		1	.02						As Above
5.5	8.0	465.5	2.65	98	.04	8.0	.04		1	.04						Sp-wk Alt, Mod Sil, Sp Alt Biot [illegible]
2.9	7.4	472.9	2.64	97	.05	6.5 / 0.9			wk	.05					Mz @ 471.7'	Dp As Above; Mz [illegible]
8	8.9	481.8	2.62	92	.11	8.9	.09		wk-Mod	.11			wk-Clay-Ser			As Witrmk Dp, wk Alt, wk-Mod Sil'n, wk-Mod Py, Sp Cpy, [illegible]
9.2	7.4	489.2	2.65	99	.08	7.4			1	.08						Sp-wk Alt, wk Sil'n, wk-Mod Py, Sp-Cpy, To MoS2. Fair [illegible]
8.1	8.9	498.1	2.65	98	.07	2.8 / 6.1	.07		1	.07			wk-Mod Clay-Ser			Sp-wk Alt, Sil'n [illegible]
0.4	8.3	506.4	2.58	98	.06	8.3			1	.06			wk-Mod Clay-Ser + Talc			Sp-wk Alt, Sp Sil'n, [illegible]
2.5	8.1	514.5	2.65	83	.08	5.6 / 2.5	.07		1	.08						[illegible]
2	9.7	524.2	2.61	74	.05	9.7			1	.05			Mod Clay Ser [illegible]			As above [illegible]
[illegible]	11.7	535.9	2.64	61	.09	7.8 / 3.9			1	.09			[illegible]			As above [illegible]
[illegible]	5.7	541.6	2.67	96	.07	5.7	.06		1	.07						wk-Mod Alt [illegible]
[illegible]	8.2	549.8	2.65	96	.04	8.2	>2000		wk	.04						wk-Mod Alt, wk-Mod Sil'n, wk-Mod [illegible]
[illegible]	8.8	558.6	2.64	92	.03	2.2 / 6.6	.05		wk-Mod	.03			[illegible]			As Above, Rk has [illegible]
[illegible]	8.1	566.7	2.65	96	.04	8.1			1	.04			[illegible]			[illegible]
[illegible]	9.7	576.2	2.65	94	.08	5.3 / 4.4			wk	.08			[illegible]			wk-Mod Alt, Sp Sil'n, wk Py, To-Sp Cpy [illegible]
1.0	7.6	584.0	2.57	100	.06	7.6	.06		wk	.06						wk Alt, Sp-wk Sil'n, wk Py [illegible]
2.0	8.0	592.0	2.56	96	.06	8.0			wk-Mod	.06			[illegible]			wk-Mod Alt, Sp Sil'n, wk Py [illegible]
2.9	10.9	602.9	2.61	75	.08	10.9	.09		wk	.08						Mod Alt, To Sil'n, wk Py [illegible]
2	8.3	611.2	2.62	100	.10	8.3			wk-Mod	.10			[illegible]			Alt Mod, wk Sil'n, wk Py [illegible]
9.9	8.7	619.9	2.63	93	.08	1.8 / 7.9	.15		1	.08			[illegible]			[illegible]
0.2	10.3	630.2	2.63	77	.21	10.3			1	.21			Mod [illegible]			[illegible]
33.2	3.0	633.2	2.59	38	.14	1.8 / 1.2	.09		Sp	.14			St Chlor		Chlor [illegible]	Chlor [illegible]
41.0	7.8		2.58	79	.09	7.8	>1900		Sp-wk	.09			[illegible]		Mx	Mod Alt, wk Py [illegible]
52.7	11.7		2.57	64	.08	11.0 / 0.7			wk	.08			[illegible]			Mod St Alt, Sp Py [illegible]
1.8	9.1	661.8	2.51	90	.09	9.1	.12		1	.09			[illegible]			St Alt, Sp Py [illegible]
9.4	7.6		2.51	100	.14	7.6			1	.14			[illegible]			[illegible]
8.1	8.7		2.62	100	.16	2.6 / 6.1	.13		1	.16			[illegible]		[illegible]	[illegible]
86.2	8.1		2.44	100	.12	8.1			1	.12			[illegible]		[illegible]	[illegible]
695.3	9.1		2.41	96	.10	5.8 / 3.3			1	.10			[illegible]		[illegible]	[illegible]
704.3	9.0		2.65	90	.13	9.0	.08		1	.13			[illegible]			[illegible]

Final Depth 915.2
Collar Elevation 2561.28
Coordinates 41257 2EN, 15086.02E
Inclination VERTICAL

ASARCO
GEOLOGIC – ASSAY LOG

Property [illegible]

HOLE NO. D 216
Sheet No. [illegible] of 3
Date Completed 10-14-66
Logged By JAB, NRN

Depth	Interval	Core Size	Sp Grav	Core Rec %	Core Assay – % Cu Total	Non-S	Average	Mineralization Oxides	Pyrite	Cpy	Cc	Other	Alteration Clay Sep	Lim Hem	Rock Type	Remarks
713.8	9.5	B Stemmer	2.67	99	.21	7.7/1.8			Wk	.21			Sp clay	–	M2	Med grained [illegible]
722.3	8.5		2.70	100	.08	8.5	.10		1	.08			1	–		Fgd Alt wk; Biot Alt Mod-St [illegible]
730.8	8.5		2.70	93	.13	8.5			Wk(+)	.13			1	–		As above wk Py, Sp [illegible]
739.3	9.2		2.67	95	.10	1.2/8.0			1	.10			1	–		Fgd Alt wk, Biot Alt Mod [illegible]
746.8	8.8		2.66	98	.3	8.8	.12		1	.13			Sp Alt SGR			Mod Alt, Mod-St Silic, wk Py [illegible]
757.0	8.2	Mem	2.66	98	.12	3.2/5.0	>1800		1	.12			1	–		Wk-Mod Alt, Mod [illegible]
765.7	8.7		2.67	94	.12	8.7	.16		Wk-Mod	.12			1	–		Wk Mod Alt + Silic, Sp-Wk Py [illegible]
777.0	11.3		2.59	85	.24	6.3/5.0			1	.24			1		Hanging wall to 270.0' Alt Sed D776.0-778.5	Sp-Conglomerate Portion contains [illegible]
780.5	3.5		3.12	99	.16	3.5	.16		Mod	.16			1			[illegible]
786.9	6.4		2.67	98	.15	6.4			Mod	.15			1			Coarser Grained, less silicified variety [illegible]
794.8	7.9		2.68	100	.12	5.1/2.8			Wk-Mod(+)	.12			1			M2 [illegible]
802.6	7.8		2.67	94	.09	7.8	.10		Wk	.09			Wk-Mod clay-Sec Sp clay-Sec			Intermixed M2° + M2° E (Al [illegible]) [illegible]
811.2	8.6		2.64	95	.11	8.6			Wk-Mod(?)	.11		Tremolite				Mod Silicified M2 wk MN Alt, Sp-Wk Zone + [illegible]
820.3	9.1		2.60	95	.12	8/8.3	.13		Wk	.13		1	1			Mod-Mod S [illegible] A Pegmatite [illegible]
828.3	8.0		2.68	98	.11	8.0			1	.11		1	1			MN Alt, Mod-St Silic; Wk-1 [illegible]
836.8	8.5		2.73	96	.19	3.7/4.8	.17		Wk-Mod	.19		1	1			Mod Alt, Mod-St Silic, Wk-Mod Py, Sp-Wk [illegible]
845.8	9.0		2.69	83	.15	9.0	>1700		1	.15		1	1			As above to 841.4 [illegible]
854.1	8.3		2.62	95	.12	6.2/2.1			Wk	.12			Wk clay-Sec			[illegible]
862.0	7.9		2.63	100	.11	7.9	.12		Wk(+)	.11		Tremolite	1			As above [illegible]
871.1	9.1		2.64	92	.12	9.1			Wk-1	.12		1	1			As above [illegible]
881.2	10.1		2.65	89	.10	7.9/9.2	.12		Wk(+)	.15		1	Sp clay-Sec			As above, Sp-Wk [illegible]
887.8	8.0		2.59	97	.15	8.0			Wk	.15		1	1			As above
896.5	9.3		2.59	88	.13	2.8/6.5	.12		1	.13		1	1			[illegible]
907.4	8.9		2.63	93	.11	8.9	>1740		1-3:1	.11		–	Wk clay-Sec			As above [illegible]
915.2	7.8		2.62	91	.12	4.6/0.2	.12-.2		Sp-Wk	.12		–	1			As above with [illegible]
EOH																Wk-Mod [illegible]

PRELIMINARY GEOLOGIC LOG

(Subject to Revised Logging)

ASARCO- SILVER BELL UNIT

2492'

Tr - Tuff
Hf - Hornfels
Mb - Marble
Qt - Quartzite
Bx - Breccia
Da - Dacite
Mz - Monzonite
An - Andesite

V - Vein
F - Fault
D - Dike
C - Contact
Ig - Undif igneous

(2492.) Page 1 of 1 Pages

Collar Elev 2515.17 Final Depth 2090
Coords. N 42 936.49 E 15 959.25
Inclination vertical
Logged by D.S.
Date: Start 4-5-69 Finish 4-10-69

D 313

Depth From	Depth To	Int'vl	Elev.	% Cu Total	% Cu Avg	% Cu NS	% Cu Avg	% Core Recov.	Sp. Gr.	Cu (1) Chrys.	Pitch	Black	Blue Green		Cc.	Cpy.	Born	Fe (2) Lim.	Py.	Mag.	Hem.	Spec.	Other (2) Galena	Sphal.	Molyb.	Calcite	Garnet	Silicates	Sericite	Clay	Vn. Qtz	QUARTZ	CHLORITE	(3) Rock Type	Structures (4) Depth	True Dip	Remarks
0	20.0	20.0	12.0	→ 2480		—	12.8																														Rock bit. Alluvium
20.0	29.6	9.6	9.6	.70	.35	.33	.68	75	12'				.70	(no visible sulfides)				nil											nil		10	nil		Mz			C.gr. Mz. w/20% lath shaped, brown chl. gen'lly throughout. wk. chrys on fract.
[illegible]	40.0	11.8	11.8	.60	.60	.01		57					.60	"	"	"		nil											55	nil		.8	nil					Bcn. bcn of Mz. on fract, else warm gray clay min. Mi'ly broken
41.4	50.6	9.2	9.2	.40	.03	.20	.48	86					.40	"	"	"		nil	Tr										50	nil		.10	nil			Sheeting	70-85	several thin mafic stringers wk chrys on fract partial'y altered to white
50.6	60.1	9.5	9.5	.27				82					.23		.04			nil											50	nil		2.50	nil			"	"	grn staining ends at 57.0 wk sulfides as veins & disc
60.1	70.0	9.9	9.9	.33			.30	73							.32	.01		Tr											55	nil		.10	nil					wk. sil. chl. alt. wavy grn clay mic on fract wk. disc. sulfides
70.0	83.0	13.0	13.0	.23	.03	.20	.25	76							.20	.03		—											nil		.10	50					st'ly sheared & broken st. chl. alt. wk. disc. sulfides
83.0	93.0	10.0	9.0	.27	.03	.24	→ 2400	50							.24	.03		—											nil		.10	50					" " " Breccia from 91.5 to end of int wk cc
93.0	98.5	5.5	5.5	.73		Nil		73							.33	.40			Tr										nil		.10	50		Mz	90°		Mz. bx. broken & sheared cps & cc as veins & fracture fill
98.5	108.0	9.5	9.5?	.01			.22	93					.01						Tr										nil			50		Porphyritic Mz	Fill plane	45°	Pgn. Post min dyke wk. chl. alt. to Bx
108.0	116.3	8.3	8.3	.01				80					.01						Tr										nil			50			Mz 3	70-80	As above st'ly sheared & broken
116.3	123.6	7.3	7.3	.38			.25	73							.25	.10													nil	SL	.10	SL		Mz			C.gr. Mz. brecciated & granulated veins & small stringers of cps & cc
123.6	132.5	8.9	8.9	.27				27							.22	.05													nil	SL		SL					" " " st'ly broken less cps & cc than above
132.5	140.8	8.3	8.3	.26			.33	80							.21	.05													nil	SL		SL					brecciated & broken w/ local gouge cps & cc as veins & disc
140.8	148.0	7.2	7.2	.33				100							.28	.05													nil	SL		SL					st'ly mild broken & sheared gouge 140.0-140.8 wk mal cc
148.0	156.0	8.0	8.0	.32				93							.27	.05													nil	SL	.10	SL					" " " " very crushed local gouge wk sulfides
156.0	164.5	8.5	8.5	.29			.34	91							.24	.05													nil	SL	.10	SL					As above wk cps
164.5	173.0	8.5	8.0	.40		Nil		93							.25	.15													nil	SL	.10	nil SL					Local as in gouge less broken than above w/ lots of cc veins
173.0	181.0	8.0	8.0	.33			.28	93							.18	.15							.004						nil	SL	.12	SL					C.gr. Mz mi'ly Alted st'ly broken wk Mz on fract
181.0	191.0	10.0	10.0	.21	→ 2300			82							.05	.16							.005						nil	SL	.15	SL					As above wk'ly silicified wk disc cps
191.0	199.9	8.9	10.0 8.9	.37				58								.37			Tr										nil	SL	.12	SL					st'ly sheared & broken brecciated 196.5-199.9 Tr Mz wk cps
199.9	209.0	9.1	9.1	.115		Nil	.79	77	17'							.115			Tr										nil	SL	.2	.12	SL	Mz			" " " wk silicification 207.4-207.7 Glass w/ cc
EOH																																					
Average Grade: .81%																																					

PRELIMINARY GEOLOGIC LOG
(Subject to Pevised Logging)

ASARCO - SILVER BELL UNIT

Tt - Tuffite
Hf - Hornfels
Mb - Marble
Qt - Quartzite
Bx - Breccia
Da - Dacite
Mz - Monzonite
An - Andesite

V - Vein
F - Fault
D - Dike
C - Contact
Ig - Undif igneous

Page 1 of 1 Pages

Collar Elev 2626.52 Final Depth 200'
Coords. N 41,40849 E 175,3519
Inclination Vertical
Logged by R.O.
Date: Start 4-12-59 Finish 5-6-59

D 314

Depth From	Depth To	Intvl	Elev	% Cu Total	% Cu Avg	% Cu N S	% Cu Avg	% Core Recov	Sp. Gr.	Cu (1) Chrys.	Pitch	Black	Blue Green	Yellow	Y. S.	Cc.	Cpy.	Cov Born	Fe (2) Lim.	Py	Mag.	Hem	Spec.	Other (2) Galena	Sphal.	Molyb.	Calcite	Garnet	Silicates	Sericite	Clay	Vn. Qtz.	QUARTZ	CHLORITE	(3) Rock Type	Structures (4) Depth	True Dip	Remarks
				2620		6.5'																																Rock bit, Alluvium
0	7.7	7.7	6.5			1.2'									.08																							Pp w/ broad Qtz phase. Leached sul. unit. sl. ser. ... sl. non sla
7.7	15.1	8.1	8.1	.08			.08	90	18.8'						.07				sl			sl							sl	wk								sl. jarosite on fracs. and blue limonite. sl. Qtz-ser alt.
15.8	25.2	9.4	9.4	.07	2600			82							.15	.02			sl			sl							sl	sl								sl'ly altd. v. sl. hem staining. Clay in some fracs
25.2	34.3	9.1	9.1	.17			.17	95							.12				sl			sl							sl	wk	.15	.20			Qtz vns	60°	mdly silicified. Several Qtz vns length 50°. Cc. jarosite on fracs
34.3	43.5	9.2	9.2	.12				90								.25		.04	wk	sl		md							sl	sl	.5	.20						w/ oxidation. sl'ly altd. fract. sul. e. 45° w. qtz vns. cc. jarosite on fracs.
43.5	52.0	8.5	3.0	.29				83								.66		.06											sl	wk	.12				Sulfides			Pp. sl'ly sheared & broken. w/ mod. less sulfides, sometimes cpy.
52.0	61.0	9.0	9.0	.22	.25	Nil	.54	90								.46		.03		.2									sl	wk	.15							" " " cbn on fracs. Tr. cpy
61.0	70.0	9.0	5.5	.49	.46	Nil		81								.35	.06	.06		.2									sl	wk	3.20							As above. Tr. Bn. film on fracs. wk. cpy
70.0	78.5	8.5	8.5	.47	Nil	Nil	.38	70								.10	.10	.03		.2									sl	wk	5.22				Sheared fracs.	60-90°	mo-sl'ly broken & fractured. Several parallel Qtz vns. w. mod cc
78.5	86.2	7.7	7.7	.23		Nil		95								.08	.08			2									sl	wk	5.25							As above. numerous pajce units
86.2	94.9	8.7	8.7	.16			.13	94								.05	.06			2									sl	wk	3.15				Post min. dike 950-985 and 020-1030			& as above
94.9	107.0	12.1	11.0	.11				79								.04	.11			2									md	wk	3.15	md						sl'ly broken. mod chl. w. cc & cpy
107.0	116.0	9.0	9.0	.15			.18	85								.06	.15			1.2									md	wk	5.18	md				Above	85°	mdly sheared & broken. chl on fracs. wk. sul
116.0	124.0	8.0	8.0	.21	2500			76								.05	.16			2									md	wk	3.15	md						As above. ½" pyr. e. 220. sl. cc & cpy
124.0	133.0	9.0	6.5	.21				100								.04	.17			2									sl	wk	.15	md						Pp chl on fracs. post min and dike 1050-1070 and 1140-1160
133.0	146.0	13.0	13.0	.17			.18	92																					md						Rhyo.			f. gr. post min. and
146.0	156.5	10.5	10.0	.02				99							.02	.03	.13			1									md	wk					1020			As above. sl'ly broken & sheared with oxides 1040-1060. 1060-1080
156.5	166.0	9.5	9.5	.16			.09	84								.03	.17			1									md	wk	.25	md			Pp			mdly silicified. sl'ly broken & fractured. mod chl. on. wk sul
166.0	174.0	8.0	7.5	.17				102									.30			1½									md	wk	.35	md						Less broken than above. numerous stringers cpy as veins & disc
174.0	183.5	9.5	9.5	.20	2940		.18	83									.12			1.2									md	wk	3.25	md						As above. numerous Qtz veins
183.5	192.0	8.5	3.0	.12			.15	79	-13.51								.17			1									mo	wk	5.25	md			Pp			mdly broken. chl on fracs. Tr. moly. disc.
192.0	200.0	8.0	8.0	.17				90																														
Average Recovery 95%																																						

PRELIMINARY GEOLOGIC LOG
(Subject to Revised Logging)

ASARCO - SILVER BELL UNIT

Tt - Tactite; Hf - Hornfels; Mb - Marble; Qt - Quartzite; Bx - Breccia; Da - Dacite; Mz - Monzonite; An - Andesite

V - Vein; F - Fault; D - Dike; C - Contact; Ig - Undif igneous

Hole No. D216E
Page 1 of 2 Pages
Collar Elev. 2722.[illegible]
Final Depth 903.9?
Coords. N [illegible]
E 15,809.10
Inclination vertical
Logged by [illegible]
Date: Start [illegible] Finish [illegible]

Depth From	Depth To	Int.	Elev.	% Cu Total	Avg.	NS	Avg	% Core Recov.	Sp Gr	Chrys.	Pitch	Black	Blue Green	Unknown N.S.	Cc.	Cpy.	Born	Lim.	Py	Mag	Hem	Spec	Other (2) (Galena, Sphal, Molyb, Calcite, Garnet, Silicates, Sericite, Clay, Vn Qz, Quartz, Chlorite)	(3) Rock Type	Structures (4) Depth	True Dip	Remarks
455.9	464.1	8.2		.16				94	2.56							.16			2				md st 2 40	AK			mod-ST Alt., No Cc, ST cpy mineralized [illegible]
464.1	472.7	8.6		.12				100	2.59							.12			2				md st 5 45	"	VTS Sulf Veins	75°	As Above... 3-4% Total (Hypogene) Sulfides
472.7	481.9	9.2		.10				98	2.56							.10			2				md st 2 43	"	Fault 478.0'	65°	Broken c gouges, otherwise as above.
481.9	490.8	8.9		.11				94	2.56							.11			2				calc md st 2 43	"			Numerous small holes in alt. RK-like small solution cavities, mod-ST Alt.
490.8	499.4	8.6		.26				98	2.58							.26		-	1-2	-	-	-	? 11 - 10 md ST - 30 31	AK	Shears	?9°	Xenoliths of min. Hf in AK. AK becomes fine grained along contacts
499.4	509.8	10.4		.44		.01		95	2.68					.01		.43?		-	<1	-	-	-	diop 10 3 80 - - Tr	Hf			light green-tan, f.g., limey, diop(?) Hf, py:cpy = 2:1
509.8	523.6	13.8		.30				96	2.71							.30		-	<1	-	-	-	diop 10 3 80 - - Tr	Hf			light green-cream-color, limey. cpy dis. and in stringers
523.6	534.3	10.7		.28				86	2.65							.28		-	1	-	-	-	diop 5 10 Tr 85 - - Tr	Hf			dark green; numerous calcite veinlets, abundant serpentine on fract., epidote
534.3	543.3	9.0		.27				94	2.66							.24		-	1	-	-	-	diop 5 Tr 85 - - Tr	Hf	-509.3		As above except for vertical shears filled with quartz-calcite veins and
543.3	552.6	9.3		.18		x		88	2.41							.18		-	2	-	-	-	3 - Tr md - 3 ST	SP?			well mineralized dark porphyritic dike, wk. alt., still contains
552.6	558.6	6.0		.26		x		85	2.57							.26		-	2	-	-	-	3 - Tr md - 3 ST	SP? (Diop?)	5?0.6		plagioclase laths in a sub-diabasic texture. gradational contacts
558.6	568.0	9.4		.54		.03		73	2.80					.03		.51		-	2	-	-	-	diop 5 10 80 - - Tr	Hf			dark green, f.g., hornfels, strongly sheared, st. cpy c serpentine along shears
568.0	581.6	13.6		.44		.01		90	2.90					.01		.43		-	2	-	-	-	diop 5 20 70 - - Tr	"	Qtz py vein	60°	garnet increasing; serpentine decreasing; mineralization same [illegible]
581.6	590.4	8.8		.48	.55	.02	.01	89	2.70					.07		.46		-	2	-	-	-	diop 10 10 75 - 2 2 ?	"	590.4		strongly broken. ST cpy along irregular calcite veins and fractures
590.4	599.5	9.1		.39		.02		80	2.98					.02		.37		-	2	-	-	-	diop 8 40 40 - 2 2 ?	Tr			ST cpy in QTZ and calcite veins, cpy veinlets up to 1/2" thick
599.5	608.2	8.7		.55		Nil		87	3.06					Nil		.55		-	<4	-	-	-	5 40 40 -	Diop? Hf	sulfide veinlets	≥90°	very hard, very strongly broken; 5-7% Total sulfides.
608.2	617.8	9.6		.44		Nil		90	2.76					Nil		.44		-	<4	-	-	-	3 10 70 -	"			As above only less garnet, remains strongly broken with high sulfide content.
617.8	625.9	8.1		.20				90	2.70							.20		-	2	-	-	-	3 10 70 -	"			not as strongly broken, less py than above. Fracturing is proportional to mineralization.
625.9	634.9	9.0		.28				78	3.07							.28		-	1-2	-	-	-	5 10 70 -	"			RK as above, fewer sulfides. Typical f.g. dark green hornfels
634.9	644.2	9.3		.39				91	2.48							.39		-	1	-	-	-	5 10 80 -	"			f.g. dk green to tan Hf. Strongly broken but weakly mineralized
644.2	654.1	9.9		.35				87	2.62							.33		-	1-2	-	-	-	5 10 80 - ?	"			mod. broken, serpentine & calcite in fractures, about 3% [illegible]
654.1	663.2	9.1		.22				90	2.65							.22		-	1	-	-	-	3 5 85 - 2?	"			mottled texture, white to dk green, very hard, dense, f.g., wk sulfides
663.2	671.3	8.1		.08				97	2.68							.08		-	1	-	-	-	2 5 85 - ?	"			As above, rock is not acid reactive, except for calcite in fractures
671.3	680.5	9.2		.07				87	2.62							.07		-	1-2	-	-	-	Tr 2 10 Tr 85 -	limey T garnet Hf	Bedding?	60°	v.f.g., dense, green-tan Hf; stly broken, wk mineralization, cpy on fracts.
680.5	689.2	8.7		.22				96	2.87							.22		-	<1	-	-	-	20 20 55 - 3 3	garnet Hf			coarse fabric due to aggregates of garnet, rock is more reactive, less mineralized than above.
689.2	698.7	9.5		.17				97	2.70							.17		-	<1	-	-	-	Tr 10 30 50 -				Grading into tactite. Numerous veins of gypsum containing cpy.
698.7	708.3	9.6		.15				97	2.74							.15		-	<1	-	-	-	5 10 40 -	Tactite			most outstanding feature is large blebs of cpy in gypsum veins
708.3	716.6	8.3		.16				90	2.78							.16		-	1	-	-	-	Tr 5 20 50 -	"	Gypsum veins	60°	Thick (up to 2") gypsum veins contain dis. cpy and tr. of galena
716.6	725.7	9.1		.14				98	2.74							.14		-	<1	-	-	-	2 65 30 -	"	Tactite Hf Contact	55°	Garnetiferous rk contains bands and xenoliths like [illegible] of green Hf
725.7	735.4	9.7		.12				93	2.67							.12		-	<1	-	-	-	2 25 70 -	Hf			Garnet content decreasing; light green, f.g. Hf with [illegible]
735.4	744.0	8.6		.20				97	2.83							.20		-	<1	-	-	-	Tr 2 30 60 - 2 2	Tact Hf			mineralization becomes strong where large patches of brown garnet are cut by Qtz veins, gypsum veins (secondary [illegible])
744.0	753.5	9.5		.26				89	2.79							.26		-	1	-	-	-	Tr 1 20 50 Tr Tr 5 5 wk	TT & MZ	py veins	90°	TT cut by thin dikes of MZ. Gradational contacts
753.5	761.3	7.8		.22				89	2.65							.22		-	1	-	-	-	5 5 40 Tr Tr 5 5 md	Hf MZ	757.2		Hf to 757.2 followed by MZ porphyry with 10% phenos in a granular matrix
761.3	770.3	9.0		.16				100	2.60							.15		-	1	-	-	-	Tr Tr - wk md 1 10 md	MZ			fine sugary texture persists 763.0 where there is a sharp irregular contact with a typical coarse monzonite
770.3	779.1	8.8		.15				78	2.61							.15		-	1	-	-	-	Tr - md st - 10 ST	"			MZ has higher than average cpy content, and Kspar, gypsum on fracts.
779.1	786.1	7.0		.14				100	2.66							.14		-	1	-	-	-	- md md - 20 ST	"			Gypsum: 779.1-790.0. mod-st alt. c silicification, and Kspar.
786.1	796.2	10.1		.15				90	2.68							.15		-	2	-	-	-	Tr - md md Tr 10 md	"			mod-ST alt., occasionally st. moly
796.2	808.5	12.3		.13				74	2.63							.13		-	2	-	-	-	- md md 1 15 md	MZ Post-Min. And. MZ	802.0-805.2		short interval of Post-mineral Andesite, MZ as above
808.5	817.3	8.8		.11				47	2.65							.11		-	1	-	-	-	- md md 1 20 md	"			mod-st alt. c silicification, sp secondary Kspar; py:cpy [illegible]
817.3	827.0	9.7		.20				90	2.63							.26		-	1-2	-	-	-	- md md 1 15 md	"			As above.
827.0	835.7	8.7		.14				100	2.67							.12		-	1-2	-	-	-	- md md 1 15 md	"			As above, gypsum continues in fractures
835.7	844.7	9.0		.16				100	2.63							.15		-	1-2	-	-	-	- md md 1 15 md	"	Qtz py vein	60°	As above
844.7	853.6	8.9		.13				97	2.63							.13		-	2	-	-	-	Tr md md 5 20 md	"	"	65°	V. ST silicification, cpy is uniformly disseminated
853.6	862.6	9.0		.15				94	2.61							.16		-	2	-	-	-	md md 3 20 md	"			As above.

PRELIMINARY GEOLOGIC LOG
(Subject to Revised Logging)
ASARCO-SILVER BELL UNIT

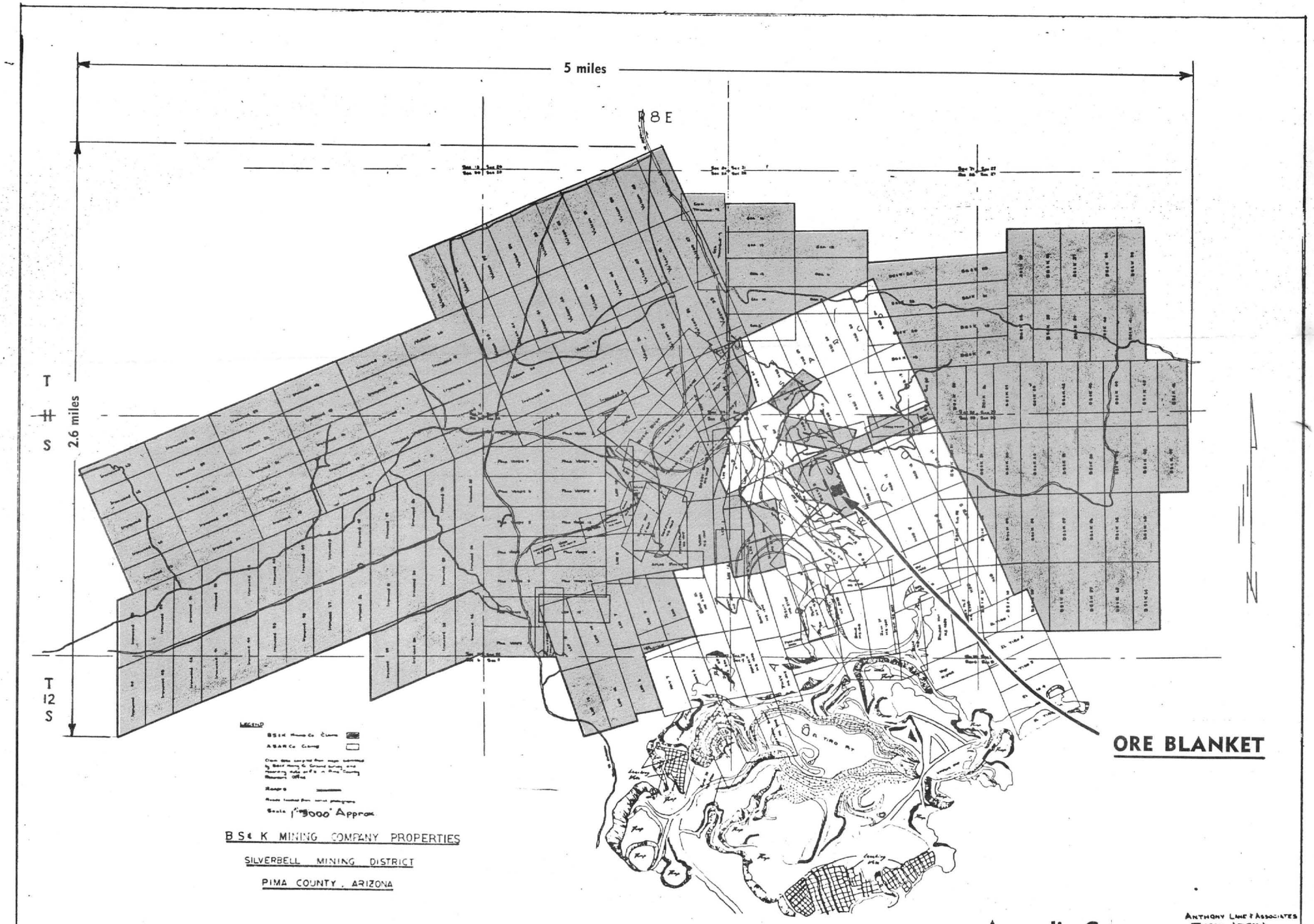
Note (3)
Tt - Tactite
Hf - Hornfels
Mb - Marble
Qt - Quartzite
Bx - Breccia
Da - Dacite
Mz - Monzonite
An - Andesite

Note (4)
V - Vein
F - Fault
D - Dike
C - Contact
Ig - Undif igneous

37,735

Hole No. D-216 E
Page 2 of 2 Pages
Collar Elev. 2722.42
Final Depth [illegible]
Coords N [illegible]
E 15807.10
Inclination vertical
Logged by RC
Date: Start [illegible]
Finish 5-15-58

Depth From	Depth To	Depth Int'vl	Elev.	% Cu Total	% Cu Avg.	% Cu NS	% Cu Avg	% Core Recov.	Sp Gr.	Cu (1) Chrys.	Cu (1) Pitch	Cu (1) Black	Cu (1) Blue Green	Cu (1) Cc.	Cu (1) Cpy.	Cu (1) Born	Fe (2) Lim.	Fe (2) Py.	Fe (2) Mag.	Fe (2) Hem	Fe (2) Spec.	Other (2) Sphal	Other (2) Molyb.	Other (2) Calcite	Other (2) Garnet	Other (2) Silicates	Other (2) Sericite	Other (2) Clay	Other (2) Vn. Qtz	Other (2) QUARTZ	Other (2) CHLORITE	(3) Rock Type	Structures (4) Depth	Structures (4) True Dip	Remarks
862.6	871.9	9.3		.12				96	2.66						.12		-	1	-	-	-		Tr	Tr		mdwk		-	20	Tr	MZ			md. ST silicification, dis py/cpy; moly along fractures
871.9	881.0	9.1		.08				100	2.59						.08		-	2	-	-	-			Tr		ST md		1	20	Tr				more py, sec., less silicification than above
881.0	890.1	9.1		.06				98	2.57						.06		-	2	-	-	-			Tr		ST md		1	20	Tr				As above
890.1	898.5	8.4		.04				96	2.71						.04		-	2	-	-	-			Tr		md md		1	20	Tr				As above
898.5	907.9	5.4						0	—																									(Core lost in hole)
	EOH																																	(Note: see log for D198E for comparison of similar hornfels, monzonite sequence).


5 miles
R 8 E
T 11 S
2.6 miles
T 12 S
ORE BLANKET
LEGEND
Scale 1" = 3000' Approx
B S & K MINING COMPANY PROPERTIES
SILVERBELL MINING DISTRICT
PIMA COUNTY, ARIZONA
ANTHONY LANE & ASSOCIATES
TUCSON, ARIZONA

Appendix C

July 23, 1971

TO: H. Lanier

FROM: G. Jackson

SUBJECT: BS&K Project

The following are results of a preliminary mineable ore reserve study of the BS&K property near Silverbell:

Sulfide Reserves (Chalcocite Ores)

Cutoff (% Cu)	Tons	Grade (% Cu)	Stripping Ratio
.40%	6,742,400	.71	3.05:1
.30% Cu	7,276,800	.68	2.75:1
.20% Cu	7,780,600	.65	2.51:1

Oxide Reserves

Cutoff	Tons	Grade
.40% Cu	378,300	.45
.30% Cu	1,658,300	.36
.20% Cu	4,524,700	.28

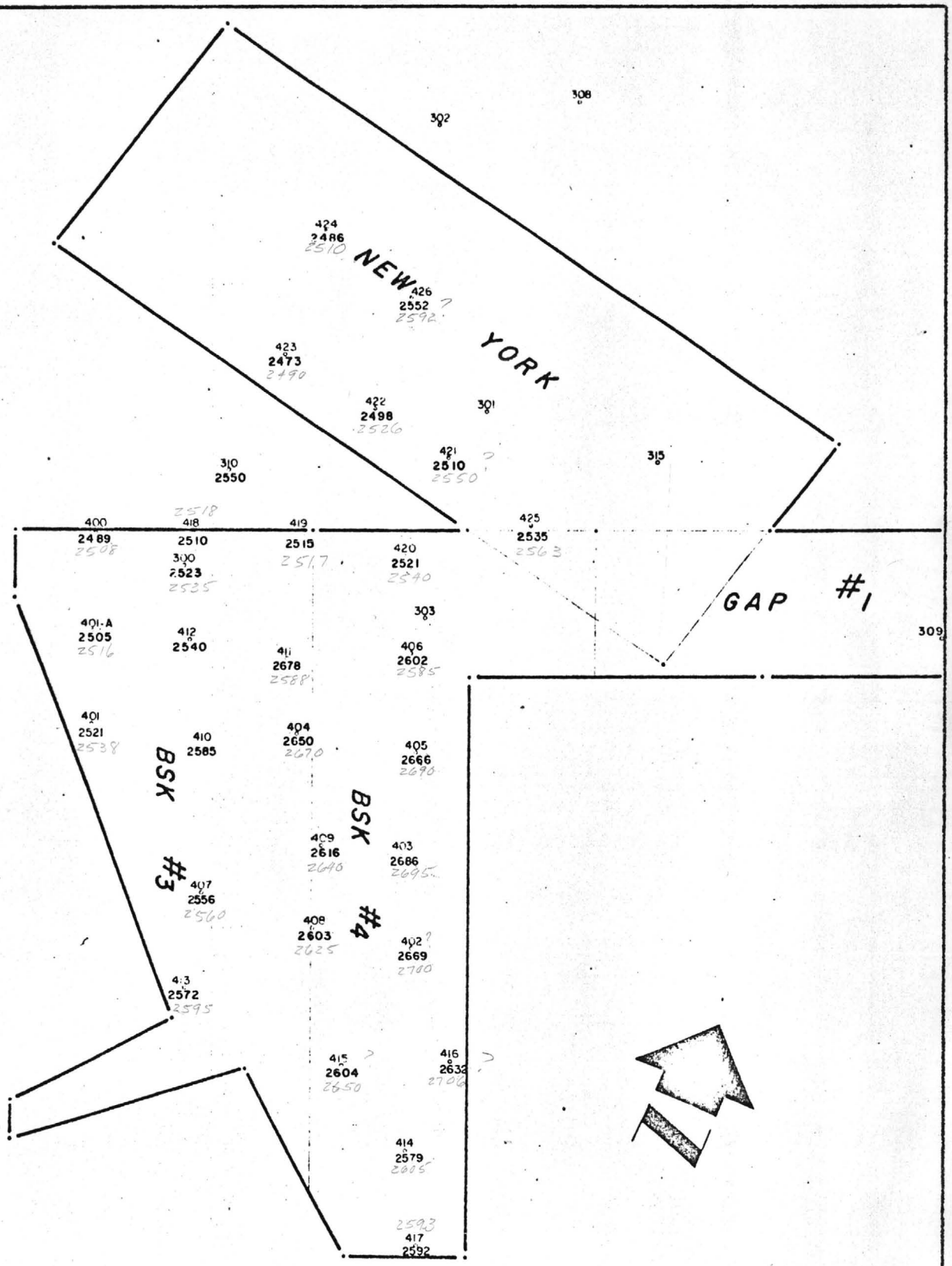
ASARCO Stripping - 6,852,600 tons

Total Reserves (Sulfide & Oxide Plus ASARCO Stripping)

Cutoff (% Cu)	Tons	Grade (% Cu)	Stripping Ratio
.40% Cu	7,120,700	.69	2.84:1
.30% Cu	8,935,100	.62	2.06:1
.20% Cu	12,305,300	.52	1.22:1

G. Jackson

GJ:ed



B S & K MINING COMPANY

EXPLORATION & DEVELOPMENT DRILL HOLE LOCATION

SCALE

APPENDIX B

PERCENT COPPER

Hole No.	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426
Deposit Depth	Percent Copper																										
0- 10	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.
10- 20	N.S.	0.78	0.20	0.40	0.07	0.10	0.35	0.15	0.20	0.35	0.10	0.15	0.15	0.25	0.10	0.05	0.10	0.15	0.35	0.35	0.35	0.75	0.35	0.30	0.15	0.15	0.30
20- 30	0.48	0.35	0.15	0.30	0.10	0.14	0.20	0.10	0.10	0.30	0.15	0.15	0.15	0.20	0.15	0.05	0.10	0.10	0.30	0.20	0.25	0.55	0.50	0.35	0.15	0.15	0.30
30- 40	0.39	0.55	0.20	0.30	0.13	0.07	0.25	0.15	0.15	0.30	0.20	0.15	0.15	0.15	0.15	0.05	0.10	0.10	0.20	0.20	0.25	0.60	0.40	0.20	0.15	0.25	0.35
40- 50	0.50	0.68	0.15	0.45	0.15	0.07	0.25	0.15	0.15	0.30	0.20	0.15	0.15	0.30	0.15	0.10	0.10	0.10	0.25	0.20	0.30	0.45	0.25	0.50	0.20	0.20	0.25
50- 60	0.19	0.63	0.25	0.25	0.14	0.05	0.25	0.10	0.10	0.25	0.20	0.35	0.15	0.25	0.20	0.10	0.10	0.25	0.45	0.30	0.30	0.25	0.25	0.40	0.15	0.20	0.20
60- 70	0.30	0.47	0.20	0.35	0.37	0.15	0.25	0.10	0.25	0.25	0.15	0.35	0.20	0.20	0.30	0.10	0.10	0.50	1.15	0.25	0.20	0.20	0.35	0.30	0.20	0.25	0.15
70- 80	0.22	0.85	0.25	0.50	0.45	0.20	0.20	0.20	0.65	0.25	0.15	0.35	0.30	0.20	1.45	0.10	0.10	0.60	0.90	0.55	0.25	0.20	0.45	0.35	0.60	0.30	0.20
80- 90	0.34	0.90	0.20	0.40	0.22	0.20	0.15	0.60	0.60	0.20	0.15	0.25	0.30	~~0.35~~	0.65	0.10	0.15	0.60	0.80	0.40	0.25	0.45	0.35	0.30	0.35	0.25	0.20
90-100	0.33	1.15	0.60	0.35	0.26	0.25	0.15	0.55	0.60	0.25	0.25	0.25	0.65	0.70	0.70	0.30	0.45	0.55	0.75	0.45	0.35	0.55	0.30	0.40	0.15	1.65	0.20
100-110	0.21	1.08	0.60	0.30	0.33	0.35	0.20	0.50	0.65	0.35	0.35	0.20	0.70	0.85	0.90	0.75	0.65	0.70	0.40	1.20	0.30	0.45	0.30	0.40	0.35	2.50	0.20
110-120	0.24	0.90	0.70	0.20	0.32	0.25	0.20	0.85	0.65	0.25	0.40	0.30	0.80	0.70	0.65	0.65	0.70	0.60	0.30	1.15	0.20	0.35	0.30	0.20	0.40	1.90	0.25
120-130	0.27	0.68	0.55	0.20	0.10	0.25	~~0.35~~	0.70	0.90	0.35	0.60	0.30	0.25	0.95	0.70	0.45	0.75	0.50	0.35	0.40	0.20	0.35	0.50	0.30	0.25	1.20	0.80
130-140	0.27	0.52	0.75	0.25	0.13	0.15	0.70	0.40	0.80	0.30	0.70	0.40	0.25	0.70	0.75	0.50	0.80	0.40	0.45	0.30	0.30	0.30	0.35	0.25	0.20	1.00	0.70
140-150	0.31	0.48	0.65	0.20	0.11	0.20	1.00	0.35	0.90	0.25	0.50	0.50	0.35	0.90	0.55	0.85	0.90	0.25	0.35	0.35	0.30	0.35	0.40	0.25	0.20	1.00	0.90
150-160	0.26	0.49	0.70	0.30	0.09	0.15	0.85	0.30	0.95	0.20	0.55	0.40	0.30	0.80	0.55	0.55	0.70	0.30	0.25	0.55	0.30	0.30	0.30	0.20	0.40	1.05	0.80
160-170	0.33	0.23	0.35	0.30	0.10	0.20	0.80	0.30	0.75	0.20	0.45	0.30	0.20	0.60	0.40	0.65	0.75	0.30	0.25	0.45	0.30	0.30	0.35	0.25	0.40	1.15	0.90
170-180	0.57	1.00	0.75	0.65	0.14	0.35	0.35	0.35	0.85	0.20	0.30	0.45	0.20	0.40	0.30	0.45	0.70	0.40	0.30	0.35	0.30	0.35	0.35	0.25	0.40	0.90	0.85
180-190	N.S.		0.65	4.25	0.35	0.65	0.50	0.20	0.70	0.20	0.30	0.40	0.15	0.50	0.40	0.75	0.75	0.40	0.25	0.40	0.30	0.40	0.40	0.25	0.45	0.60	0.60
190-200	N.S.		0.65	1.60	0.55	0.90	0.35	0.35	0.45	0.25	0.35	0.30		0.45	0.40		0.75	0.40	0.35	0.40	0.30	0.35	0.35	0.25	0.60	0.50	0.55
200-210	N.S.	1.26	0.95	1.00	0.27	0.40	0.40	0.30	0.30	0.40	0.35	0.30	0.25	0.40	0.30	0.55	0.65	0.45	0.25		0.45	0.35	0.30	0.25	0.25	0.55	0.35
210-220	N.S.		0.80	1.10	0.15	0.25	0.30	0.30	0.25	0.25	0.15	0.25	0.25	0.35	0.35	0.50	0.65	0.50	0.30		0.40	0.40	0.35	0.35	0.20	0.45	0.30
220-230	0.65	1.10	0.70	0.95	0.20	0.20	0.30	0.30	0.30	0.25	0.25	0.25	0.25	0.40	0.30	0.55	0.75	0.45			0.30	0.40	0.35	0.20	0.25	0.45	0.50
230-240			0.65	0.90	0.21	0.20	0.30	0.25	0.15	0.20	0.20	0.20	0.30	0.35	0.35	0.50	0.55	0.30			0.40	0.45	0.35	0.25	0.20	0.35	0.30
240-250			0.90	0.75	0.26	0.25	0.25	0.30	0.25	0.20	0.20	0.20	0.30	0.45	0.35	0.50	1.00	0.35			0.50	0.45	0.50	0.55	0.30	0.45	0.30
250-260			0.75	0.60	0.23	0.25	0.35																				
260-270			1.30	0.65	0.34	0.25	0.30																				
270-280			0.80	0.55	0.25	0.20	0.35																				
280-290			0.85	0.35	0.34	0.20	0.30																				
290-300			0.65	0.35	0.18	0.35	0.35																				
300-310			0.60	0.22	0.20	0.30	0.55																				
310-320			0.35	0.25	0.14		**																				
320-330			0.35	0.28	0.19																						
330-340				0.20																							
340-350				0.30	0.10																						
350-360				0.17																							
360-370				0.25	0.15																						
370-380				0.18																							
380-390					0.14																						
390-400																											
400-410																											
410-420																											
420-430													APPENDIX A														

N.S. — No Sample Taken

** — Hole No. 406:

0.32% average copper — 310-480 feet

0.45% average copper — 480-505 feet

PERCENT COPPER

Hole No.	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426
Deposit Depth	Collar 2508 Percent Copper		2700	2695 2693	2670	2690	2585	2560	2625	2640	2592	2588	2556	2593	2605	2648	2705	2590	2520	2513	2540	2547	2526	2491	2510	2567	2550
0- 10	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.
10- 20	N.S.	0.78	0.20	0.40	0.07	0.10	0.35	0.15	0.20	0.35	0.10	0.15	0.15	0.25	0.10	0.05	0.10	0.15	0.35	0.35	0.35	0.75	0.35	0.30	0.15	0.15	0.30
20- 30	0.48	0.35	0.15	0.30	0.10	0.14	-0.20	0.10	-0.10	0.30	0.15	-0.15	0.15	0.20	-0.15	-0.05	-0.10	0.10	0.30	0.20	0.25	-0.55	-0.50	0.35	0.15	-0.15	0.30
30- 40	0.39	-0.55	0.20	-0.30	0.13	0.07	0.25	0.15	0.15	0.30	-0.20	0.15	-0.15	-0.15	0.15	0.05	0.10	0.10	0.20	-0.20	0.25	0.60	0.40	0.20	0.15	0.25	0.35
40- 50	0.50	0.68	0.15	0.45	0.15	0.07	-0.25	0.15	-0.15	0.30	0.20	-0.15	0.15	0.30	-0.15	-0.10	-0.10	0.10	0.25	0.20	0.30	-0.45	-0.25	0.50	0.20	-0.20	0.25
50- 60	0.19	-0.63	0.25	-0.25	0.14	0.05	0.25	0.10	0.10	0.25	-0.20	0.35	-0.15	-0.25	0.20	0.10	0.10	0.25	0.45	-0.30	0.30	0.25	0.25	0.40	0.15	0.20	0.20
60- 70	0.30	0.47	0.20	0.35	0.37	0.15	-0.25	0.10	-0.25	0.25	0.15	-0.35	0.20	0.20	-0.30	-0.10	-0.10	0.50	1.15	0.25	0.20	-0.20	-0.35	0.30	0.20	-0.25	0.15
70- 80	0.22	-0.85	0.25	-0.50	0.45	0.20	0.20	0.20	0.65	0.25	-0.15	0.35	-0.30	-0.20	1.45	0.10	0.10	0.60	0.90	-0.55	0.25	0.20	0.45	0.35	0.60	0.30	0.20
80- 90	0.34	0.90	0.20	0.40	0.22	0.20	-0.15	0.60	-0.60	0.20	0.15	-0.25	0.30	-0.35	-0.65	-0.10	-0.15	0.60	0.80	0.40	0.25	-0.45	-0.35	0.30	0.35	-0.25	0.20
90-100	0.33	-1.15	0.60	-0.35	0.26	0.25	0.15	0.55	0.60	0.25	-0.25	0.25	-0.65	0.70	0.70	0.30	0.45	0.55	0.75	-0.45	0.35	0.55	0.30	0.40	0.15	1.65	0.20
100-110	0.21	1.08	0.60	0.30	0.33	0.35	-0.20	0.50	-0.65	0.35	0.35	-0.20	0.70	0.85	-0.90	-0.75	-0.65	0.70	0.40	1.20	0.30	-0.45	-0.30	0.40	0.35	-2.50	0.20
110-120	0.24	-0.90	0.70	-0.20	0.32	0.25	0.20	0.85	0.65	0.25	-0.40	0.30	-0.80	-0.70	0.65	0.65	0.70	0.60	0.30	-1.15	0.20	0.35	0.30	0.20	0.40	1.90	0.25
120-130	0.27	0.68	0.55	0.20	0.10	0.25	-0.35	0.70	-0.90	0.35	0.60	-0.30	0.25	0.95	-0.70	-0.45	-0.75	0.50	0.35	0.40	0.20	-0.35	-0.50	0.30	0.25	-1.20	0.80
130-140	0.27	0.52	0.75	-0.25	0.13	0.15	0.70	0.40	0.80	0.30	-0.70	0.40	-0.25	-0.70	0.75	0.50	0.80	0.40	0.45	-0.30	0.30	0.30	0.35	0.25	0.20	1.00	0.70
140-150	0.31	0.48	0.65	0.20	0.11	0.20	-1.00	0.35	-0.90	0.25	0.50	-0.50	0.35	0.90	-0.55	-0.85	-0.90	0.25	0.35	0.35	0.30	-0.35	-0.40	0.25	0.20	-1.00	0.90
150-160	0.26	-0.49	0.70	-0.30	0.09	0.15	0.85	0.30	0.95	0.20	-0.55	0.40	-0.30	-0.80	0.55	0.55	0.70	0.30	0.25	-0.55	0.30	0.30	0.30	0.20	0.40	1.05	0.80
160-170	0.33	0.23	0.35	0.30	0.10	0.20	-0.80	0.30	-0.75	0.20	0.45	-0.30	0.20	0.60	-0.40	-0.65	-0.75	0.30	0.25	0.45	0.30	-0.30	-0.35	0.25	0.40	-1.15	0.90
170-180	0.57	1.00	0.75	-0.65	0.14	0.35	0.35	0.35	0.85	0.20	-0.30	0.45	-0.20	-0.40	0.30	0.45	0.70	0.40	0.30	0.35	0.30	0.35	0.35	0.25	0.40	0.90	0.85
180-190	N.S.		0.65	4.25	0.35	0.65	-0.50	0.20	-0.70	0.20	0.30	-0.40	0.15	0.50	-0.40	0.75	-0.75	0.40	0.25	0.40	0.30	-0.40	-0.40	0.25	0.45	-0.60	0.60
190-200	N.S.		0.65	-1.60	0.55	0.90	0.35	0.35	0.45	0.25	-0.35	0.30		-0.45	0.40		0.75	0.40	0.35	-0.40	0.30	0.35	0.35	0.25	0.60	0.50	0.55
200-210	N.S.	1.26	0.95	1.00	0.27	0.40	-0.40	0.30	-0.30	0.40	0.35	-0.30	0.25	0.40	-0.30	-0.55	-0.65	0.45	0.25		0.45	-0.35	-0.30	0.25	0.25	-0.55	0.35
210-220	N.S.		0.80	-1.10	0.15	0.25	0.30	0.30	0.25	0.25	-0.15	0.25	-0.25	-0.35	0.35	0.50	0.65	0.50	0.30		0.40	0.40	0.35	0.35	0.20	0.45	0.30
220-230	0.65	1.10	0.70	0.95	0.20	0.20	-0.30	0.30	-0.30	0.25	0.25	-0.25	0.25	0.40	-0.30	0.55	-0.75	0.45			0.30	-0.40	-0.35	0.20	0.25	-0.45	0.50
230-240			0.65	-0.90	0.21	0.20	0.30	0.25	0.15	0.20	-0.20	0.20	-0.30	-0.35	0.35	0.50	0.55	0.30			0.40	0.45	0.35	0.25	0.20	0.35	0.30
240-250			0.90	0.75	0.26	0.25	-0.25	0.30	0.25	0.20	0.20	0.20	0.30	0.45	0.35	0.50	1.00	0.35			0.50	0.45	0.50	0.55	0.30	0.45	0.30
250-260			0.75	-0.60	0.23	0.25	0.35																				
260-270			1.30	0.65	0.34	0.25	0.30																				
270-280			0.80	-0.55	0.25	0.20	0.35																				
280-290			0.85	0.35	0.34	0.20	-0.30																				
290-300			0.65	-0.35	0.18	0.35	0.35																				
300-310			0.60	0.22	0.20	0.30	0.55																				
310-320			0.35	-0.25	0.14		**																				
320-330			0.35	0.28	0.19																						
330-340				-0.20																							
340-350				0.30	0.10																						
350-360				-0.17																							
360-370				0.25	0.15																						
370-380				0.18																							
380-390					0.14																						
390-400																											
400-410																											
410-420																											
420-430																											

N.S. — No Sample Taken

** — Hole No. 406:

0.32% average copper — 310-480 feet

0.45% average copper — 480-505 feet

APPENDIX A

4906 – Buff
8906 – Green
4206 – White

6-30-91

BS&K
Ore Reserve Estimate
Bench Composites

	Hole No.	Level	Int.	%Cu			
1	400	2508	Collar				
2		2500	8	N.S	✓	OK	
3		2480	20	.24	✓	2488 - Sulf.	
4		2460		.44	✓		
5		2440		.265	✓		
6		2420		.276	✓		
7		2400		.285	✓		
8		2380		.249	✓		
9		2360		.286	✓		
10		2340		.293	✓		
11		2320		.53	✓		
12		2300		N.S.	✓		
13		2280		N.S.			
14		2278	2	.65			
15		E.O.H.					
16							
17							
18	401	2538	Collar				
19		2520	18	.39	✓	SULF. - 2528	
20		2500	20	.473	✓		
21		2480		.647	✓		
22		2460		.638	✓		
23		2440		.995	✓		
24		2420		1.105	✓		
25		2400		.638	✓		
26		2380		.488	✓		
27		2360		.564	✓		
28		2340		1.104	✓		
29		2320		1.26	✓		
30		2308	12	1.127	✓		
31		E.O.H.					
32							
33							
34							
35							
36							
37							
38							
39							
40							
41							
42							
43							
44							
45							
46							
47							

4906 – Buff
8906 – Green
4206 – White

7-1-71
G.W.

B.S.&K
ORE RESERVE EST.
BENCH COMPOSITES

	Hole No.	Level	Int	% Cu		
1	402	2700	Collar			
2		2680	20	.10	✓	ox
3		60		.175	✓	
4		40		.20	✓	
5		20		.225	✓	
6		2600		.40	✓	SULF. 2610
7		2580		.65	✓	
8		60		.65	✓	
9		40		.675	✓	
10		20		.55	✓	
11		2500		.65	✓	
12		2480		.875	✓	
13		60		.675	✓	
14		40		.825	✓	
15		20		1.05	✓	
16		2400		.75	✓	
17		2380		.475	✓	
18		2370	10	.35	✓	
19		E.O.H.				
20						
21						
22	403	2695	Collar			
23		2680	15	.075	✓	ox
24		60	20	.325	✓	
25		40		.362	✓	
26		20		.362	✓	
27		2600		.412	✓	
28		2580		.288	✓	
29		60		.212	✓	
30		40		.238	✓	
31		20		.388	✓	SULF. – 2525
32		2500		2.688	✓	
33		2480		1.175	✓	
34		60		.975	✓	
35		40		.75	✓	
36		20		.612	✓	
37		2400		.40	✓	
38		2380		.26	✓	
39		60		.252	✓	
40		40		.242	✓	
41		20		.212	✓	
42		2315	5	.18	✓	
43		E.O.H.				
44						
45						
46						
47						

4906 – Buff
8906 – Green
4206 – White

7-1-71
G.J.

B.S.&K.
ORE RESERVE EST.
BENCH COMPOSITES

	Hole No.	Level	Int.	%Cu			
1	404	2670	CULLAR				1
2		2660	10	N.S.	✓	OK	2
3		40	20	.135	✓		3
4		20		.14	✓		4
5		2600		.255	✓		5
6		2580		.335	✓		6
7		60		.295	✓		7
8		40		.21	✓		8
9		20		.12	✓		9
10		2500		.10	✓		10
11		2480		.245	✓	SULF. – 2490	11
12		60		.41	✓		12
13		40		.175	✓		13
14		20		.235	✓		14
15		2400		.285	✓		15
16		2380		.295	✓		16
17		60		.19	✓		17
18		40		.165	✓		18
19		20		.145	✓		19
20		2300		.125	✓		20
21		2280		.14			21
22		2270	10	.14			22
23		E.O.H					23
24							24
25							25
26	405	2690	TINT.				26
27		80	10	N.S.	✓	OK	27
28		60	20	.12	✓		28
29		40		.07	✓		29
30		20		.10	✓		30
31		2600		.20	✓		31
32		2580		.30	✓		32
33		60		.25	✓		33
34		40		.175	✓		34
35		20		.175	✓		35
36		2500		.50	✓	SULF. – 2510	36
37		2480		.165	✓		37
38		60		.225	✓		38
39		40		.225	✓		39
40		20		.25	✓		40
41		2400		.20	✓		41
42		2380	20	.325	✓		42
43		E.O.H.					43
44							44
45							45
46							46
47							47

4906 - Buff
8906 - Green
4206 - White

7-6-71

B.S. & K
ORE RESERVE EST.
BENCH COMPOSITES

	Hole No.	Level	Int.	% Cu			
1	406	2585	Collar				
2		2580	5	N.S.	✓	OK	
3		60	20	.225	✓		
4		40		.23	✓		
5		20		.25	✓		
6		2500		.20	✓		
7		2480		.16	✓		
8		60		.238	✓	SULF. – 2460	
9		40		.688	✓		
10		20		.875	✓		
11		2400		.50	✓		
12		2380		.40	✓		
13		60		.325	✓		
14		40		.288	✓		
15		20		.312	✓		
16		2300		.325	✓		
17		2280		.368			
18		60		.388			
19		40		.32			
20		20		.32			
21		2200		.32			
22		2180		.32			
23		60		.32			
24		40		.32			
25		20		.32			
26		2100		.352			
27		2080		.45			
28		E.O.H.					
29							
30							
31	407	2560					
32		2540	20'	.025	✓	OK	
33		20		.125	✓		
34		2500		.125	✓		
35		2480		.45	✓	SULF @ 2480	
36		60		.575	✓		
37		40		.675	✓		
38		20		.55	✓		
39		2400		.325	✓		
40		2380		.325	✓		
41		60		.275	✓		
42		40		.30	✓		
43		20		.275	✓		
44		2310	10'	.30	✓		
45		E.O.H.					
46							
47							

4906 – Buff
8906 – Green
4206 – White

7-1-71
G.J.

B. S. & K
Ore Reserve Est.
Bench Composites

	Hole No.	Level	Int	% Cu		
1	408	2625	Collar			
2		20	5	N.S.	✓	OX.
3		2600	20	.15	✓	
4		2580		.138	✓	
5		60		.15	✓	
6		40		.538	✓	Sulf. - 2555
7		20		.612	✓	
8		2500		.712	✓	
9		2480		.850	✓	
10		60		.888	✓	
11		40		.788	✓	
12		20		.475	✓	
13		2400		.275	✓	
14		2380		.212	✓	
15		75	5	.25	✓	
16		E.O.H.				
17						
18						
19	409	2640	Collar			
20		20	20	.175	✓	OX
21		2600		.30	✓	
22		2580		.275	✓	
23		60		.25	✓	
24		40		.225	✓	
25		20		.30	✓	
26		2500		.325	✓	Sulf. 2510
27		2480		.225	✓	
28		60		.20	✓	
29		40		.225	✓	
30		20		.325	✓	
31		2400		.225	✓	
32		2390	10	.20	✓	
33		E.O.H.				
34						
35						
36						
37						
38						
39						
40						
41						
42						
43						
44						
45						
46						
47						

4906 - Buff
8906 - Green
4206 - White

7-1-71
G.J.

B.S. & K
ORE RESERVE EST.
BENCH COMPOSITES

	Hole No.	Level	Int.	% Cu		
1	410	2592	Collar			
2		80	12	.05	✓	OK
3		60	20	.135	✓	
4		40		.20	✓	
5		20		.17	✓	
6		2500		.16	✓	
7		2480		.315	✓	Sulf. 2482
8		60		.53	✓	
9		40		.585	✓	
10		20		.475	✓	
11		2400		.305	✓	
12		2380		.33	✓	
13		60		.205	✓	
14		2342	18	.20	✓	
15		E.O.H.				
16						
17						
18	411	2588	Collar			
19		80	8	N.S.	✓	OK
20		60	20	.15	✓	
21		40		.15	✓	
22		20		.33	✓	
23		2500		.31	✓	
24		2480		.23	✓	
25		60		.29	✓	
26		40		.43	✓	Sulf. @ 2448
27		20		.37	✓	
28		2400		.415	✓	
29		2380		.31	✓	
30		60		.255	✓	
31		40		.205	✓	
32		2338	2	.20	✓	
33						
34						
35	412	2556	Collar			
36		40	16	.15	✓	OK
37		20	20	.15	✓	
38		2500		.15	✓	
39		2480		.22	✓	
40		60		.405	✓	Sulf. @ 2476
41		40		.72	✓	
42		20		.36	✓	
43		2400		.315	✓	
44		2380		.22	✓	
45		60		.16	✓	
46		40		.23	✓	
47		20		.265	✓	
		2306 E.O.H.	14	.30	✓	

4906 – Buff
8906 – Green
4206 – White

7-1-71
G.J.

B.S. & K
Ore Reserve Est.
Bench Composites

	Hole No.	Level	Int.	% Cu		
1	413	2593	Collar			
2		80	13	.15	✓	OX
3		60	20	.21	✓	
4		40		.24	✓	
5		20		.218	✓	
6		2500		.35	✓	Sulf. 2508
7		2480		.775	✓	
8		60		.825	✓	
9		40		.815	✓	
10		20		.64	✓	
11		2400		.458	✓	
12		2380		.41	✓	
13		60		.375	✓	
14		2343	17	.409	✓	
15		E.O.H.				
16						
17	414	2605	Collar			
18		2600	5	N.S.	✓	
19		2580	20	.12	✓	
20		60		.15	✓	
21		40		.212	✓	
22		20		.962	✓	Sulf. @ 2535
23		2500		.738	✓	
24		2480		.725	✓	
25		60		.688	✓	
26		40		.572	✓	
27		20		.35	✓	
28		2400		.375	✓	
29		2380		.325	✓	
30		60		.338	✓	
31		2355	5	.35	✓	
32		E.O.H.				
33						
34	415	2648	Collar			
35		40	8	N.S.	✓	OX
36		20	20	.05	✓	
37		2600		.07	✓	
38		2580		.10	✓	
39		60		.10	✓	
40		40		.46	✓	Sulf. @ 2548
41		20		.58	✓	
42		2500		.635	✓	
43		2480		.62	✓	
44		60		.59	✓	
45		40		.67	✓	
46		20		.525	✓	
47		2400		.505	✓	
		2398	2	.50		
		E.O.H.				

4906 - Buff
8906 - Green
4206 - White

7-1-71
GJ.

B.S.&K.
Ore Research Lab.
Bench Compositing

	Hole No.	Level	Int.	%Cu			
1	416	2705	Collar				
2		2700	5	N.S.	✓	ok.	
3		2680	20	.10	✓		
4		60		.10	✓		
5		40		.10	✓		
6		20		.12	✓		
7		2500		.425	✓	Sulf-@ 2615	
8		2580		.70	✓		
9		60		.812	✓		
10		40		.762	✓		
11		20		.725	✓		
12		2500		.725	✓		
13		2480		.675	✓		
14		60		.712	✓		
15		2455	5	1.00			
16		E.O.H.					
17							
18	417	2590	Collar				
19		80	10	N.S.	✓	ok	
20		60	20	.125	✓		
21		40		.10	✓		
22		20		.375	✓	Sulf.@ 2530	
23		2500		.60	✓		
24		2480		.625	✓		
25		60		.55	✓		
26		40		.325	✓		
27		20		.30	✓		
28		2400		.40	✓		
29		2380		.425	✓		
30		60		.475	✓		
31		2340	20	.325	✓		
32		E.O.H.					
33							
34	418	2520	Collar				
35		2500	20.	.120	✓	ok	
36		2480		.25	✓		
37		60		.35	✓	Sulf.@ 2470	
38		40		1.025	✓		
39		20		.775	✓		
40		2400		.35	✓		
41		2380		.40	✓		
42		60		.30	✓		
43		40		.275	✓		
44		20		.30	✓		
45		2300		.275	✓		
46		E.O.H.					
47							

4906 – Buff
8906 – Green
4206 – White

7-1-71
G.L.

B. S. & K
Ore Reserve Est.
Bench Composites

	Hole No.	Level	Int	% Cu		
1	419	2517	Collar			
2		2500	17	.20	✓	OX
3		2480	20	.222	✓	
4		60		.235	✓	
5		40		.362	✓	Sul. - 2447
6		20		.44	✓	
7		2400		1.07	✓	
8		2380		.478	✓	
9		60		.412	✓	
10		40		.43	✓	
11		20		.392	✓	
12		2317	3	.40	✓	
13		E.O.H.				
14						
15	420	2540	Collar			
16		20	20	.20	✓	OX
17		2500		.25	✓	
18		2480		.30	✓	
19		60		.225	✓	
20		40		.30	✓	Sul. 2440
21		20		.25	✓	
22		2400		.25	✓	
23		2380		.30	✓	
24		60		.30	✓	
25		40		.30	✓	
26		2320		.425	✓	
27		2300		.35	✓	
28		2290	10	.50		
29						
30	421	2547	Collar			
31		40	7	N.S.	✓	OX
32		20		.50	✓	
33		2500		.54	✓	
34		2480		.262	✓	
35		60		.288	✓	Sulf @ 2467
36		40		.50	✓	
37		20		.365	✓	
38		2400		.325	✓	
39		2380		.308	✓	
40		60		.36	✓	
41		40		.358	✓	
42		20		.392	✓	
43		2300		.442	✓	
44		2297	3	.45		
45						
46						
47						

4906 – Buff
8906 – Green
4206 – White

7-1-71
G.J.

B.S.&K

ORE RESERVE EST.

BENCH COMPOSITES

	Hole No.	Level	Int	% Cu		
1	422	2526	Collar			
2		20	6	N.S. ✓	OX	
3		2500	20	.41 ✓		
4		2480		.375 ✓		
5		60		.28 ✓		
6		40		.40 ✓	Surf @ 2446	
7		20		.31 ✓		
8		2400		.36 ✓		
9		2380		.395 ✓		
10		60		.335 ✓		
11		40		.365 ✓		
12		20		.345 ✓		
13		2300		.34 ✓		
14		2280		.395		
15		2276	4	.50		
16		E.O.H.				
17						
18	423	2490	Collar			
19		80	10	N.S. ✓	OX	
20		60	20	.325 ✓		
21		40		.35 ✓	Surf @ 2450	
22		20		.35 ✓		
23		2400		.325 ✓		
24		2380		.40 ✓		
25		60		.25 ✓		
26		40		.25 ✓		
27		20		.225 ✓		
28		2300		.25 ✓		
29		2280		.25		
30		60		.275		
31		2240		.40		
32		E.O.H.				
33						
34	424	2510	Collar			
35		2500	10	N.S. ✓	OX	
36		2480	20	.15 ✓		
37		60		.175 ✓		
38		40		.175 ✓	Surf @ 2490	
39		20		.475 ✓		
40		2400		.25 ✓		
41		2380		.325 ✓		
42		60		.20 ✓		
43		40		.40 ✓		
44		20		.425 ✓		
45		2300		.425 ✓		
46		2280		.225		
47		2260		.25		
		E.O.H.				

4906 – Buff
8906 – Green
4206 – White

7-1-71
G.J.

B.S.&K
ORE RESERVE EST.
BENCH COMPOSITE

	Hole No	Level	Int	% Cu			
1	425	2563	Collar				
2		60	3	N.S	✓	OX	
3		40	20	.15	✓		
4		20		.208	✓		
5		2500		.208	✓		
6		2480		.275	✓		
7		60		1.288	✓	Sulf. @ 2473	
8		40		2.005	✓		
9		20		1.07	✓		
10		2400		1.048	✓		
11		2380		.942	✓		
12		60		.5425	✓		
13		40		.485	✓		
14		20		.40	✓		
15		2313	7	.45	✓		
16		E.O.H.					
17							
18	426	2590	Collar				
19		80	10	N.S		OX	
20		60	20	.30	✓		
21		40		.30	✓		
22		20		.175	✓		
23		2500		.20	✓		
24		2480		.20	✓		
25		60		.525	✓	Sulf @ 2470	
26		40		.80	✓		
27		20		.85	✓		
28		2400		.725	✓		
29		2380		.45	✓		
30		60		.40	✓		
31		2340		.30	✓		
32		E.O.H.					
33							
34	End of	400 Series	Holes				
35							

4906 - Buff
8906 - Green
4206 - White

7-1-71
G.J.

B.S.&K
Ore Reserve Est.
Bench Composite

	Hole No.	Level	Int.	% Cu				
		1	2	3		4	5	6
1	301	2590	Collar					Dacite
2		80	10	.12	✓			Por.
3		60	20	.185	✓			
4		40		.17	✓			
5		20		.11	✓			
6		2500		.185	✓			
7		2480		.415	✓	Suf @ 2485		
8		60		.972	✓			
9		40		.625	✓			
10		20		.43	✓			
11		2400		.668	✓			
12		2384	16	.546	✓			
13		E.O.H.						
14								
15	302	2555	Collar					Dacite
16		40	15	.07	✓			Por.
17		20	20	.078	✓			
18		2500		.078	✓			
19		2480		.148	✓			Fault 2487
20		60		.292	✓	Suf. 2460		Qtz
21		40		.57	✓	Suf. 2460		Monz
22		20		.422	✓			Por.
23		2404	16	.207	✓			
24		E.O.H.						
25								
26	303	2570	Collar					Dac.
27		60	10	.09		0%		Por.
28		40	20	.12	✓			Contact-2554
29		20		.125	✓			Qtz
30		2500		.16	✓			Monz
31		2480		.235	✓			Por.
32		60		.258	✓			
33		40		.298	✓	Suf @ 2450		
34		20		.178	✓			
35		2400		.182	✓			
36		E.O.H.						
37								
38	304	2530	Collar					Qtz
39		20	10	Nil	✓	0%		Monz
40		2500		Nil	✓			Por.
41		2480		.01	✓			
42		60		.01	✓	Suf 2460		
43		40		.04	✓			
44		20		.02	✓			
45		2400		.02	✓			
46		2380		.03	✓			
47		2368	12	.02	✓			
		E.O.H.						

4906 – Buff
8906 – Green
4206 – White

7-1-71
G.J.

B.S. & K
ORE RESERVE EST.
BENCH COMPOSITES

	1	2	3	4	5	6
HOLE NO.	LEVEL	INT	% Cu			
305	2458	COLLAR				DAC. POR.
	40	18	.02 ✓	OX		CONT. @ 2443
	20	20	.145 ✓	SULF 2433		QTZ.
	2400		.237 ✓			MONZ.
	2380		.125 ✓			POR.
	60		.09 ✓			
	2349	11	.01 ✓			
	E.O.H					
306	2440	COLLAR				DACITE
	20	20	.04 ✓	OX		POR.
	2400		.15 ✓			
	2380		.36 ✓	SULF @ 2390		
	60		.22 ✓			
	40		.13 ✓			
	E.O.H.					
308	2518	COLLAR				DACITE
	2500	18	.03 ✓	OX		POR.
	2480	20	.03 ✓			
	60		.051 ✓			
	40		.059 ✓			
	20		.068 ✓			
	2400		.06 ✓	SULF. 2413		
	2380		.05 ✓			
	60		.05 ✓			
	2351	11	.04 ✓			
	E.O.H.					
309	2585	COLLAR				DACITE
	80	5	N.S.	OX		POR.
	60		.05 ✓			
	40		.08 ✓			
	20		.338 ✓	SULF @ 2533		
	2500		.415 ✓			
	2480		.295 ✓			
	2475	5	.22 ✓			
	E.O.H.					

4906 - Buff
8906 - Green
4206 - White

7-1-71
G.J.

R.S. & K

ORE RESERVE EST.
BENCH COMPOSITES

	1	2	3	4	5	6
HOLE NO.	LEVEL	INT.	% Cu			
310	2505	COLLAR				QTZ
	2500	5	N.S. ✓	OX		MONZ.
	2480		N.S. ✓			PORP.
	60		N.S. ✓			
	40		.41 ✓	SULF. @ 2450		
	20		.605 ✓			
	2400		.278 ✓			
	2380		.238 ✓			
	2365	15	.24 ✓			
	G.O.H.					
311	2500	COLLAR				DACITE
	2480	20	N.S. ✓	OX		PORP.
	60		N.S. ✓			
	40		.365 ✓			
	20		.348 ✓	SULF. @ 2420		
	2400		.225 ✓			
	2380		.228 ✓			
	60		.222 ✓			
	2350	10	.28 ✓			
	G.O.H.					
315	2520	COLLAR				DACITE
	2500	20	TR ✓	OX		PORP.
	2480		.01 ✓			
	60		.01 ✓			
	40		.06 ✓	SULF @ 2456		
	20		.05 ✓			CONT @ 2418
	2400		.04 ✓			QMP
	2380		.04 ✓			
	60		.03 ✓			
	40		.22 ✓			
	20		.04 ✓			
	2300		.04 ✓			
	2280		.04			
	60		.04			
	40		.04			
	20		.04			
	2200		.06			

4906 - Buff
8906 - Green
4206 - White

7-8-71
G.J.

B.S.&K
ORE RESERVE EST.
BENCH COMP.

	Hole No.	1 Level	2 Int.	3 %Cu	4	5	6
1	RDH 300	2537	Collar				Dacite
2		2520	17	.08 ✓	OK		Por
3		2500	20	.106 ✓			
4		2480		.147			
5		60		.155 ✓			
6		40		.423 ✓	Sulf 02442	Mineq	
7		20		.468 ✓			
8		2400		.138 ✓			
9		2380		.119 ✓			
10		60		.228 ✓			
11		40		.264 ✓			
12		20		.111 ✓			
13		2300		.128 ✓			
14		2280		.258			
15		60		.156			
16		40		.193			
17		20		.247			
18		2200		.222			
19		2180		.626			
20		60		.224			
21		40		.172			
22		2137		.20			
23		E.OH					
24							
25							
26							
27							
28							
29							
30							
31							
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47							

B.S. & K.
Preliminary Ore Reserve Estimates
Sulfide Ores

7-23-71
G.J.

P.2 of 2

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Level	Cutoff	Grade % Cu	Area in²	Tonnage Factor	.40% Cu Cutoff Tons	.40% Cu Cutoff Grade % Cu	.30% Cu Cutoff Tons	.30% Cu Cutoff Grade % Cu	.20% Cu Cutoff Tons	.20% Cu Cutoff Grade % Cu	Oxides & Waste Tons	
2380	.4	.55	4.88	64000 T/in²	312300	.55						
	.4	.42	2.08		133100	.42						
	.4	.48	1.37		87700	.48						
Totals					6742400	.7061	534400	.3449	503800	.2179		
Oxides & Waste											12687100	
Asarco Material											6852600	
Total Sulfide Reserve					6742400	.7061	534400	.3449	503800	.2179	19539700	
Stripping Ratios												S/R
.40% Cu Cutoff					6742400	.7061					20577900	3.05:1
.30% Cu Cutoff							7276800	.6796			20043500	2.75:1
.20% Cu Cutoff									7780600	.6497	19539700	2.51:1
Total Reserves												
Sulfides					6742400	.7061	534400	.3449	503800	.2179		
Oxides & Waste					378300	.4511	1280000	.3334	2866400	.2388	8162400	
Asarco Mtl											6852600	
Total Reserves					7120700	.6926	1814400	.3368	3370200	.2357	15015000	
Stripping Ratios												S/R
.40% Cu Cutoff					7120700	.6926					20199600	2.84:1
.30% Cu Cutoff							8935100	.6203			18385200	2.06:1
.20% Cu Cutoff									12305300	.5150	15015000	1.22:1

4813 · Buff
5813 · Blue
8813 · Green

B.S.&K

Preliminary Ore Reserve Estimate

Sulfide Ores

7-22-71

G.L

R1 of 2

	Level	1 Cutoff	2 Grade (%Cu)	3 Area IN²	4 Tonnage Factor	5 .40% Cu Cutoff Tons	6 Grade %Cu	7 .30% Cu Tons	8 Cutoff Grade %Cu	9 .20% Cu Tons	10 Cutoff Grade %Cu	11	12 Waste Tons	13
1	2600	.4	.42	.89	60000T/IN²	57000	.42							
2														
3	2580	.4	.68	2.00		128000	.68							
4														
5	2560	.4	.73	1.82		116500	.73							
6														
7	2540	.4	.66	2.96		189400	.66							
8														
9	2520	.4	.69	6.28		401900	.69							
10														
11	2500	.4	.96	7.71		493400	.96							
12		.4	.47	.51		32600	.47							
13														
14	2480	.4	.65	.62		39700	.65							
15		.4	.77	10.03		641900	.77							
16		.2	.22	.94						60200	.22			
17														
18	2460	.4	.93	3.59		229800	.93							
19		.3	.37	.35				22400	.37					
20		.2	.21	2.37						151700	.21			
21		.4	.64	15.48		987500	.64							
22														
23	2440	.4	.91	4.27		273300	.91							
24		.2	.21	3.25						208000	.21			
25		.4	.70	15.38		977900	.70							
26														
27	2420	.4	.71	4.39		281000	.71							
28		.3	.34	2.59				165800	.34					
29		.4	.56	.88		56300	.56							
30		.2	.25	.59						37800	.25			
31		.3	.38	1.41				90200	.38					
32		.4	.88	.47		30100	.88							
33		.4	.68	10.57		676500	.68							
34														
35	2400	.4	.81	2.95		188800	.81							
36		.3	.33	5.30				211200	.33					
37		.2	.25	.72						46100	.25			
38		.3	.35	.70				44800	.35					
39		.4	.66	1.73		110700	.66							
40		.4	.64	.57		36500	.64							
		.4	.53	4.07		260500	.53							

4813 · Buff
5813 · Blue
8813 · Green

B.S.&K.

PRELIMINARY ORE RESERVE ESTIMATE — 7-22-71 — G.J.

OXIDE ORE & WASTE — P3 OF 3

	1	2	3	4	5	6	7	8	9	10	11	12	13
LEVEL	CUTOFF	GRADE %Cu	AREA IN²	TONNAGE FACTOR	.40%Cu CUTOFF TONS	GRADE %Cu	.30%Cu CUTOFF TONS	GRADE %Cu	.20%Cu CUTOFF TONS	GRADE %Cu		WASTE TONS	
2420	W		2.08									133100	
2400	W		1.66									106200	
TOTALS					378300	.4511	1280000	.3334	2866400	.2388		8162400	
.40%Cu CUTOFF					378300	.4511							
.30%Cu CUTOFF							1658300	.3602					
.20%Cu CUTOFF									4524700	.2833			

4813 - Buff
5813 - Blue
8813 - Green

B.S.&K
PRELIMINARY ORE RESERVE ESTIMATE
OXIDES & WASTE

7-22-71
G.N.

	Level	Cutoff	Grade % Cu	Area IN²	Tonnage Factor	.40% Cu Cutoff Tons	Grade % Cu	.30% Cu Cutoff Tons	Grade % Cu	.20% Cu Cutoff Tons	Grade % Cu	Waste Tons
1	2540	.3	.30	.95	64000T/IN²			60800	.30			
2		W		6.59								421800
3		.2	.22	4.87						311700	.22	
4		.4	.46	.94		60200	.46					
5		.2	.22	3.11						199000	.22	
6		W		1.80								115200
7		W		8.23								526700
8												
9	2520	W		8.52								545300
10		.4	.50	.34		21800	.50					
11		.2	.22	3.66						234200	.22	
12		.3	.33	.40				25600	.33			
13		W		10.09								645800
14		.3	.39	.60				38400	.39			
15		.3	.34	1.53				97900	.34			
16		.2	.22	.50						35800	.22	
17		.3	.38	.63				40300	.38			
18												
19	2500	.2	.20	.96						61400	.20	
20		W	—	7.22								462100
21		.4	.46	1.82		116500	.48					
22		.2	.21	2.77						177300	.21	
23		.3	.31	.52				33300	.31			
24		W	—	10.21								653400
25		.4	.50	.66		42200	.50					
26		.3	.32	.97				62100	.32			
27		.3	.35	.66				42200	.35			
28												
29	2480	W		7.08								453100
30		.2	.25	13.57						868500	.25	
31		W	—	1.73								110700
32												
33	2460	.3	.30	2.84				181800	.30			
34		.2	.26	4.31						275800	.26	
35												
36	2440	.3	.38	3.00				192000	.38			
37		.3	.32	1.61				103000	.32			
38		W	—	2.83								181100
39		W	—	.80								51200
40		W		.66								42200

4813 - Buff
5813 - Blue
8813 - Green

B. S. & K

Preliminary Ore Reserve Estimate

Oxides

7-22-71
G.J.

A 1 of 3

	Level	Cutoff	Grade (%Cu)	Area (in²)	Tonnage Factor	.40% Cu Cutoff Tons	.40% Cu Cutoff Grade %Cu	.30% Cu Cutoff Tons	.30% Cu Cutoff Grade %Cu	.20% Cu Cutoff Tons	.20% Cu Cutoff Grade %Cu	Waste Tons
1	2740	W		.01	64000 T/in²							600
2												
3	2720	W		.61								39000
4		W		.09								5800
5												
6	2700	W		1.42								90900
7		W		.37								23700
8												
9	2680	W		3.56								227800
10												
11	2660	.3	.32	.49				31400	.32			
12		W		4.52								289300
13												
14	2640	.3	.36	.84				53900	.36			
15		W		5.88								376300
16		W		.13								8300
17												
18	2620	.3	.36	1.00				64000	.36			
19		.2	.22	1.02						65300	.22	
20		W	—	6.41								410200
21		W	—	.59								37800
22												
23	2600	.2	.23	2.56						163800	.23	
24		.3	.30	1.12				71700	.30			
25		.4	.40	2.15		137600	.40					
26		W		4.23								270700
27		W		1.82								116500
28												
29	2580	W		3.35								214400
30		W		9.27								593300
31		.3	.32	2.03				129900	.32			
32		.2	.28	2.13						136300	.28	
33												
34	2560	.3	.30	.81				51800	.30			
35		W		4.38								280300
36		W		11.39								729000
37		.2	.25	5.27						337300	.25	
38		W		.01								600
39												
40												

4813 - Buff
5813 - Blue
8813 - Green

B.S.&K
PRELIMINARY ORE RESERVE ESTIMATE
ASARCO MATERIAL

7-22-81
GJ

P. 2 OF 2

	Level	Cutoff	Grade	Area IN²	Tonnage Factor	Waste Tons
1	2520			.30	19200	
2				4.52	289300	
3				.67	42900	
4				2.60	166400	
5				.02	1300	
6						
7	2500			2.79	178600	
8				3.98	254700	
9				.54	34600	
10				1.63	104300	
11						
12	2480			3.96	253400	
13				3.43	219500	
14				.34	21800	
15				1.21	77400	
16						
17	2460			3.67	234900	
18				2.96	189400	
19				.82	52500	
20				.20	12800	
21						
22	2440			3.53	225900	
23				2.38	152300	
24				.03	1900	
25				.41	26200	
26						
27	2420			2.99	191400	
28				.53	33900	
29						
30	2400			2.78	177900	
31				.26	16600	
32						
33						
34						
35	TOTAL				6852600	
36						
37						
38						
39						
40						

4813 · Buff
5813 · Blue
8813 · Green

B.S&K
PRELIMINARY ORE RESERVE ESTIMATE
ASARCO MATERIAL

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G.J.
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	Level	Cutoff	Grade % Cu	Area ft^2	Tonnage Factor	Waste Tons
1	2780	✓		.08	64000	5100
2						
3	2760			.18		11500
4				.36		23000
5						
6	2740			2.04		130600
7						
8	2720			3.24		207400
9						
10	2700			4.07		260500
11						
12	2680			4.72		302100
13						
14	2660			5.16		330200
15						
16	2640			5.64		361000
17						
18	2620			5.69		364200
19						
20	2600			5.92		378900
21				.22		14100
22				.09		5800
23						
24	2580			6.22		398100
25				.21		13400
26				.32		20500
27				.07		4500
28				.17		10900
29						
30	2560			.19		12200
31				5.74		367400
32				1.55		99200
33				.53		33900
34						
35	2540			.13		8300
36				5.06		323800
37				.02		1300
38				1.00		64000
39				1.90		121600
40						

4813 · Buff
5813 · Blue
8813 · Green