

DRILL LOG

PROJECT Sulphurets 2153	GROUND ELEV. 4610' 1405m
HOLE NO. 19	BEARING -
LOCATION Sulphurets Gold Zone	DIP -90°
	TOTAL LENGTH 558' 170.08m
LOGGED BY R. Baang, D. Bridge	HORIZONTAL PROJECT 4.29m
DATE June 29 - July 2/81	VERTICAL PROJECT 169.96
CONTRACTOR Arctic Diamond Drilling	ALTERATION SCALE
CORE SIZE B5	
DATE STARTED June 22, Drilling June 26, 1981	TOTAL SULPHIDE SCALE
DATE COMPLETED June 29, 1981 surveyed by 9:00 PM	
DIP TESTS 195' - 89.1° 159.5 132 obs 345' - 83.7° 145.0 117.5 440' - 87.7° 161.5 134 545' - 85.2° 174.0 146.5	
COMMENTS 0.3 m stickup on casing	LEGEND

Don A. Bridge

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACTURE INTENSITY	% VEIN QTZ.
					no. <1% A	of py >K10 B	v. >10 C	qtz D	cal E		
				0.0 - 2.7: overburden							
				2.7 - 3.55: bleached Andesite: med gr to lt gr, residual patches, main unit cream colored (hydrothermal alt?) with chl patches, chl on fractures	7	2	0	0	0	M	
				3.55 - 6.70: mod. alt. Andesite med gr, chl patches, recementing by cal on fracts.	7	1	0	1	26	H	
5.0				minor (.5-1.0mm) cal. veins, chl. and cal on fracts, chl. frags decrease toward bottom.							
				6.70 - 15.5: mod. alt. and: med gr - gry, py often in or surrounding chl patches, locally fractured and healed with cal., cal veins minor (.5-1mm) with one vein to 10mm, chl locally in stringers (.5-1mm) and patches							
10.0				chl varies from gr-blk to lt gr. bottom .5m becomes highly fractured, unit mod. silicified	58	3	0	0	59	H	
15.0											
				15.5 - 17.58: mod to int alt. and: med dk gr to pale gr and mottled, chl patches in upper part also highly fractured in first .5m, mod. silicified, chl on fracts.	14	0	0	1	9	H	
				17.58 - 18.85: Flow Breccia: int. alt.	12	1	1	0	2	L	
20.0				Breccia: locally some chl patches with py in or around them, very minor cal veining, well silicified							
				18.85 - 20.85: mod. alt. breccia frags .5mm to 3cm, dk chl? groundmass, some frags replaced by py, frags subround to subangular	15	0	0	10	0	0	

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES			SAMPLE NUMBER	ASSAYS			
		FROM	TO	WIDTH		oz/t Au	ir Ag	%. Cu	ppm Mo
		159.0							
				1.00	3744	.031			
160.0 - 164.4: py - 5% avg, f. - m. g., mainly		160.0					2.6	.620	288
25 patches + dissem, 1-12cm				2.00	3745	.007			
py seam, py on fractis, trace							1.6	.041	12
chalco + hematite inqtz		162.0							
veins.				3.0	3746	.007			
							1.4	.040	8
164.4 - 170.08: py - 10% f = m. g., mainly		165.0							
dissem + patches, trace chalco				3.0	3747	.008			
py is developed as weak							2.0	.025	18
bands locally.		168.0							
				2.08	3748	.010			
							2.0	.021	24
		170.08							

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH		g/tm Au	ppm Ag	% Cu	ppm Mo	
				2.0	3733	.009				
							8.2	.116	32	
	137.0									
137.0 - 138.30: py - 19% f-m.g.				1.0	3734	.002				
	138.0						2.0	.025	14	
mainly as sm. patches, trace hematite in cal vein	138.30			0.30	3735	.002		2.4	.024	16
138.30 - 139.65: py - 5% f-m.g.				1.70	3736	.003				
trace chalco along qtz veins, trace maly along veins + fract.							4.0	.076	24	
trace hematite in a qtz-cal vein, trace silver - metallic mineral in qtz-cal-sp-chl vein	141.0									
py mainly as sm. patches				3.0	3737	.003				
							2.8	.079	54	
	144.0									
				3.0	3738	.003				
							2.2	.040	11	
	147.0									
				0.65	3739	.004				
147.65 - 160.00: py - 3-5% f-m.g.	147.65						2.4	.091	44	
dissem. and patches, trace chalco and maly. chalco mainly assoc. in qtz-cal veins				2.35	3740	.003				
maly on discont. fract.	150.0						2.0	.098	30	
				3.0	3741	.001				
							1.6	.097	72	
	153.0									
				3.0	3742	.004				
							1.2	.040	36	
	156.0									
				3.0	3743	.001				
							1.2	.068	72	

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES			SAMPLE NUMBER	ASSAYS			
		FROM	TO	WIDTH		oz/tm Au	ppm Ag	% Cu	ppm Mo
106.55 - 127.50: cont.									
24 times usually in larger veins and toward top of the unit. Moly as f. dissemin. or on fract. throughout, trace sph.		114.0							
				3.0	3725	.037			
						.014	2.0	.455	276
		117.0							
				3.0	3726	.022			
						.021	2.4	.570	232
		120.0							
				3.0	3727	.039			
						.040	3.6	.825	160
		123.0							
				3.0	3728	.028			
						.020	3.6	.795	128
		126.0							
				1.5	3729	.028			
127.50 - 137.00: py - sph, mainly as patches, trace chalc. as patches and in some minor gtz veins, trace moly on fract. & in gtz veins, py is f-mg, chalc. is f-mg		127.5				.030	20.0	.630	132
				1.5	3730	.009			
		129.0					1.8	.226	34
				3.0	3731	.019			
							2.0	.138	36
		132.0							
				3.0	3732	.007			
							2.4	.140	46
		135.0							

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES			SAMPLE NUMBER	ASSAYS			
		FROM	TO	WIDTH		g/tm Au	ppm Ag	% Cu	ppm Mo.
				1.65	3715	.005			
		91.65					1.6	.037	16
91.65 - 98.70: py - 4-6%, f-mg, mainly patches				1.35	3716	.007			
chalco - 0-1%, mainly patches trace moly + hematite?		93.0					1.4	.183	72
92.70 - 94.20: py - 5%, chalco - 1%, patches and on shear surfaces, see patch to 2cm. silicified-bleached zone				3.0	3717	.047			
							2.2	.472	88
96.70 - 98.70: py - 5%, mainly patches, chalco - 0-5% mainly in patches and on fract's, pale br silic zone		96.0							
				3.0	3718	.019			
							1.8	.360	78
98.70 - 105.50: py - 2-3%, mainly in patches, chalco - trace, trace moly, both occur on fract's chalco as patches, moly as fine dissem layer. py occurs mainly in and around chl patches		99.0							
				3.0	3719	.003			
							1.2	.081	52
		102.0							
				3.0	3720	.002			
							1.0	.045	21
		105.0							
105.50 - 106.55: py - 3-5%, mainly as sm. patches, trace chalco - dissem + sm patches, also in larger grt veins trace moly				1.55	3721	.006			
		106.55					1.6	.172	104
				1.45	3722	.003			
		108.0				.009	1.0	.060	56
				3.0	3723	.020			
						.022	2.4	.540	304
106.55 - 127.50: py - 3-5%, f-mg, mainly in patches, chalco - 2-5%, f-mg, dissem patches, along fract's, occur in grt veins		111.0							
				3.0	3724	.016			
						.032	2.4	.950	340

DEPTH	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACTURE INTENSITY	% VEIN QTZ.
					py < 1 cm A	veins (cm's) 1-10 B	ns > 10 C	qtz D	cal E		
91.65 - 98.70				aph-cherty and: highly fract, lt-med gr to lt br, locally well silicified, int cal + qtz hairline veins (rehealed fracts?) one vein to 1cm, chl + ep alt on fracts, several bleached pale brown, zones (hematite staining?) several shears where rock is ground up and weakly recemented, locally graph on shears,	0	0	0	19	7	H	
95.0			shear shear								
98.70 - 106.55			shear	98.70 - 106.55: aph-cherty and: lt-med gr, highly fract, irreg. qtz - cal veining, rehealing of fracts, veins to 1mm, locally well chloritized, chl + ep. on fracts some sm. chl frags, mod well silic.	10	0	0	11	22	H	
105.0			shear shear								
105.50 - 106.55			shear shear	105.50 - 106.55: aph - and: lt - med gry, bleached toward lower end, well chloritized at top, toward bottom incr in chl frags, up to 2mm, frags dk blk, chl + trace graph on fracts, appears to be a transitional unit, 2 qtz intrusion events, 2 - 1cm veins crosscut, minor qtz - cal veins .5 - 1mm, relic chl frags? well silic.	1	0	0	4	4	H	
110.0			shear								
106.55 - 127.50			shear	106.55 - 127.50: mod. alt and: lt gry - lt gry-gr, well silic, int qtz - cal veining, larger veins are qtz - cal combined, fg to granular texture (relic?), local	0	0	0	68	48	L	

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH		oz/tm Au	ppm Ag	ppm Cu	ppm Mo	
				3.0	3705	.024				
						.022	1.2	162	16	
		69.0								
				3.0	3706	.063				
						.052	1.8	440	18	
		72.0								
				1.43	3707	.199				
73.43 - 74.70: py - 5%, f-m g, mainly as patches, increases with chertiness, chalco - 2% in cherty rock		73.43				.131	2.0	670	36	
				1.27	3708	.023				
		74.70				.020	5.4	2720	190	
		75.75		0.45	3709	.039				
						.039	600.0	3720	94	
				2.85	3710	.016				
74.70 - 75.15: py - 5%, f, g, chalco - 1-2%, mainly on outer edge of vein, py in patches also mainly on outer edges. 2-3% metallic silver min over 2.7cm in center of vein.		78.0				.013	9.8	1800	64	
				3.00	3711	.009		3.0	550	46
75.15 - 91.65: py - 5%, m-f, g, mainly patches, and dissem, chalco - 0-3%, dissem + patches on shears + fract trace hematite		81.0								
				3.00	3712	.006				
75.15 - 79.3: py - 5-10%, f-m g, mainly dissem, and patches, chalco - 1-2%, patches mainly on shears + fract		84.0					2.4	600	24	
79.3 - 91.65: py - 0-3%, f-m, g, mainly as patches, chalco - trace, hematite - trace, chalco mainly on shears + fract		97.0					1.6	400	20	
				3.00	3714	.003				
							1.6	314	16	
		90.0								

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES			SAMPLE NUMBER	ASSAYS			
		FROM	TO	WIDTH		oz/tm Au	ppm Ag	ppm Cu	ppm Mo
		45.0							
				3.0	3694	.015			
						.012	0.8	350	24
		48.0							
				3.0	3695	.038			
49.80 - 58.00: py - 35-40% mainly diss. + patches, several qtz - py veins, trace chalc in the larger qtz veins py - f - mg		51.0				.040	1.2	394	22
				3.0	3696	.029			
						.020	0.7	350	8
		54.0							
				3.0	3697	.290			
						.230	1.0	430	6
		57.0		assume .100					
				0.80	3698	lost			
		57.80		0.60	3699	.111			
57.80 - 58.40: py - 85-90%, f - mg, massive		58.40				.112	7.1	142	38
58.40 - 64.58: py - 20-25%, f - mg, mainly patches + disseminated, sm. amt's found with qtz veins.				1.60	3700	.120			
		60.0				.098	3.7	1250	11
				3.0	3701	.040			
						.038	0.6	320	10
		63.0							
				1.58	3702	.046			
64.58 - 64.95: py - 90-95% f - mg, massive		64.58				.039	1.0	350	4
		64.95		0.37	3703	.105			
						.079	3.6	160	16
64.95 - 73.43: py - 30-35% f - mg, mainly veins and patches, trace chalc		66.0		1.07	3704	.079			
						.054	1.2	102	23

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACTURE INTENSITY	% VEIN QTZ.
					py A	veins B	gtz C	cal D	E		
15.0											
			45	3.5cm py v							
			50	3.5cm py v							
			55	2.0cm py v							
50.0			50	49.80 - 58.00: int. alt							
			35	2.5cm py v							
			15	8cm py v	breccia: highly fractured and weakly cemented with gtz + cal, some local ep + chl. alt., locally well silicified, locally breccia texture destroyed, py incr.	23	6	0	6	7	H
			65	9cm gtz py v 2.5cm py v	with fract int., locally chl on fract s., sericite development in highly fract zones.						
55.0			65	3cm py v							
			30	60cm qtz py v	57.80 - 58.40: mass. py v minor gtz + cal veining (≈.5mm), siliceous matrix	0	0	1	5	3	0
60.0					58.40 - 64.58: int. alt. breccia: most frags altered or destroyed, locally highly fract., locally well silicified, chl locally developed and on fractures, minor gtz + cal veining up to 1mm, locally frags replaced by py., ep. + sericite on fract s. in int. fractured zones, frags sub angular to sub round.	21	0	0	17	5	H
			80	37cm py v	64.58 - 64.95: mass. py v, fractured and cemented w/ minor gtz veins (to ≈.5mm)	0	0	1	7	0	L
65.0			85	4cm py v	64.95 - 73.43: mod alt breccia: frags locally distinct to indistinct, frags up to 3cm, distinct breccia zones well silicified upper silicified zone grades into	59	7	0	29	3	L

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES			SAMPLE NUMBER	ASSAYS			
		FROM	TO	WIDTH		wt% Au	ppm Ag	ppm Cu	ppm Mo
				3.0	3686	.025			
						.020	4.2	72	5
		24.0							
20.85 - 49.80: py - 30-35%, massive veins, patches and disseminated				3.0	3687	.062			
						.057	1.2	135	29
		27.0							
26.7: mass. qtz py v, f-m g, anh - subh.				3.0	3688	.035			
						.090	1.2	273	12
		30.0							
				3.0	3689	.083			
30.6: mass. qtz py v, f g, py anh.						.067	1.1	355	2
		33.0							
				3.0	3690	.024			
						.020	1.3	300	3
		36.0							
				3.0	3691	.032			
						.029	0.9	438	3
		39.0							
				3.0	3692	.044			
						.047	0.6	456	10
		42.0							
42.83: py v, f-m g with qtz, py anh. to subh.				3.0	3693	.033			
						.028	0.8	258	16
44.83: mass. py v, f-m g, py subh to anh.		45.0							

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH		$\frac{\text{oz}}{\text{ton}}$	ppm	ppm	ppm	
						Au	Ag	Cu	Mo	
2.7 - 3.55: 5-10% py, f → c g, mainly veins	3.7									
	3.55		0.85	3676	.009					
3.55 - 6.70: 1-5% py, f-m g mainly veins						1.3	725	18		
			2.45	3677	.004					
						1.3	329	9		
	6.00									
	6.70		0.70	3678	.003					
6.70 - 15.5: 20-25% py, f-m g, mainly disseminated						1.4	298	7		
			2.30	3679	.008					
						1.0	855	8		
	9.00									
			3.0	3680	.005	1.0	377	8		
	12.0									
			3.0	3681	.004	1.7	469	6		
	15.0									
15.5 - 17.58: 5-10% py, f-m g, mainly disseminated and small patches	15.5		0.5	3682	.008	1.4	338	4		
			2.08	3683	.006					
						1.5	685	3		
	17.58									
	18.0		0.42	3684	.165					
						.130	1.4	1300	16	
17.58 - 18.85: py - 40% f-m g, mainly veins, 1 massive vein 15cm thick			3.0	3685	.037					
						.028	1.1	200	7	
18.85 - 20.85: py - 30-35% f-m g, mainly disseminated and patches	21.0									