Dip_

) West Coast 0+90 North_) Coordinates East_ 4+85 Elevation_ 4580 240° -60 Azimuth_

812775

Hole No. 137-71-1		
Commenced July 2, 19	71	•
Finished July 5, 197	7]	
Purpose Of Hole Tort	Night Hamle Zana	

Logge		M. R. Swanson	DI	AMON	D DRILI	L RECOR	RD				ose or no	ne <u>lest</u>	Night Ha	wk Zone	
				CORE	LENGTH			ŀ	ASSAYS	SAYS ACCUMULATIVE AVERAGES					
FROM	ТО	DESCRIPTION	FROM	ТО	ACC WIDTH	SAMPLE NO.	AU OZ.	AG OZ.	% си		AU W	AG W	CU W		
0	114	Coarse grain diorite; slightly magnetic			-										
		intensely fractured with grains healed by			-										
		chlorite. Secondary biotite and magnetic													
		associated with hornblende. Later calcite			ļ										
		occurs along open joints. A second stage			ļ										
		quartz also occurs as veinlets which cut an			-										
		earlier quartz-K-spar-epidote veins.													
114	155 ⁵	Same rock with intermitent local shearing													
		with chloritic slickened sides and 1 to 1 1/2													
		inches of offset on the quartz veins.						_							
155 ⁵	158 ⁰	Same rock with altered epidote-quartz-													
		K-spar vein with small speck of chalcopyrite.													
158 ⁰	175 ⁰	Same rock with intermitent shearing becoming													
		less frequent.													
1750	184 ⁵	Hornblende porphyritic andesite dike with													
		calcite filled fractures and chloritic													
		slickened sides.													
184 ⁵	226^{0}	Coarse grain diorite well fractured propylitic													
		alteration with feldspars partially altered to													
		sericite. Intermitent shears with 1 1/2 inch			-										
		offsets. Small calcite stringers earlier than													
		shears. Small K-spar zones 1 to 6 inches			-										
		wide along joints.													
2260	227 ⁵	Fault zone: chloritized with 15% sulfides	224	229	5'	711			1.62				5'@1.62		
		chalcopyrite and pyrite.	2												

				CORE	LENGTH			F	SSAYS			ACCUMUL	ATIVE AVE	ERAGES	
FROM	ТО	DESCRIPTION	FROM	T0	ACC WIDTH	SAMPLE NO.	AU OZ.	AG OZ.	% CU		AU W	AG W	CU W		
227 ⁵	264 ⁵	Same rock, diorite with slight increase in													
		quartz.													
264 ⁵	269 ⁰	Andesite: fine grain with epidote and calcite											-		
		in fractures.													
269 ⁰	302 ⁰	Coarse grain diorite: propylitic alteration,	297	307	10'	712			.04						
		fractured with quartz-epidote; quartz and	307	317	10'	714			.06						
		calcite veins then local minor shears in	317	322	5'	713			.22)					
		that order.	322	327	5'	715			.52				20' @,28	%	
302 ⁰	317 ⁰	Same rock: shearing more intense.								4					
317 ⁰	3670	Chloritic fault zone with sulfides cut by	327	332	5'	716			. 26						
		calcite veins.	332	337	5'	717			.14						
367 ⁰	3870	Coarse grain diorite; propylitic alteration,	337	347	10'	718			.02						
		well fractured, slightly magnetic with	347	357	10'	719			.06						
		local shearing.	357	367	10'	720			.06						
387 ⁰	3890	Same rock: fault zone.													
3890	515 ⁰	Same rock: with infrequent K-spar-quartz-													
		epidote veins, numerous quartz veins and													
		later calcite veins.													
515 ⁰	517 ⁰	Andesite dike, fine grain with 1 inch of												And the second	
		disseminated sulphide at border. Appears													
		dike is earlier than sulfides along same													
		shear.													
5170	668 ⁰	Coarse grain diorite; well fractured with													
		propylitic alteration with increase in K-spar,													
		calcite, siliceous.													

					LENGTH		ļ ,	ASSAYS	II.	ATIVE AVERAGES	
FROM	ТО	DESCRIPTION	FROM	ТО	ACC WIDTH	SAMPLE NO.	AU OZ. AG OZ.	% CU	AU W AG W	CU W	
		Acid Test = -60%									
		100% Recovery									
					-						
					ļ						

COLLAR

North	3+85	<u>) W</u> est Coast
East	5±30)_Coordinates
Elevation_	4540	· ·
Azimuth	2400	
Dip	-900	
Logged By	M. R. Swanson	

Hole No	137-71-2
Commenced	July 5, 1971
Finished	July 8, 1971
Purpose Of Ho	le Test Night Hawk Zone

				CORE	LENGTH			ŀ	ASSAYS	ACCUMULATIVE AVERAGES				
FROM	ТО	DESCRIPTION	FROM	ТО	ACC WIDTH	SAMPLE NO.	AU OZ.	AG OZ.	% CU	AU W	AG W	CU W		
00	35 ⁰	Coarse grain diorite, well fractured slight												
		propylitic alteration, local minor shears with												
		chlorite slickened sides and linch offsets.												
		Minor calcite veins later than quartz veins												
		which are later than quartz - K-spar - epidote												
		veins. Slightly magnetic. Minor biotite												
		replacing hornblende.												
350	1220	Same rock; more intense shearing with calcite												
		later; increased K-spar (secondary K-spar) to												
		10-15%.												
1220	135 ⁰	Same rock with sporadic minor sulfides along									-			
		shear planes.												
135 ⁰	161	Same rock with less shearing.												
1610	190 ⁰	Fault - shear zone with chloritic with minor												
		(less than 1%) sulfides.												
190 ⁰	2270	Same rock.												
2270	475 ⁰	Same rock with late intense shearing.												
475 ⁰	4770	Andesite dike fine grain, altered and												
		fractured.												
477 ⁰	479 ⁵	Coarse grain diorite, well fractured, slightly												
		altered with local chloritic slickened sided												
		shears, with earlier calcite, quartz veins.												
4795	4830	Andesite, fine grain, fractured, altered												
		epidote.												
4830	4880	Coarse grain diorite fractured and sheared.												

				CORE	LENGTH		F	ASSAYS		ACCUMULATIVE AVERAGES				
FROM	ТО	DESCRIPTION	FROM	ТО	ACC WIDTH	SAMPLE NO.	AU OZ. AG OZ.	% CU	AU W	AG W	cu w			
4880	488 ⁵	Andesite fine grain, fractured, altered.												
4885	5310	Coarse grain diorite, altered, well fractured,	529	534	5'	7 21		.02						
		and locally sheared.	534	539	5'	722		.45			15'@. 25			
5310	534 ⁰	Fault zone: chloritic with sulfides.	539	544	5'	723		.17						
534 ⁰	5350	Massive sulfides - chalcopyrite, pyrite and	544	549	5'	724		.12						
		pyrrhotite.	549	554	5'	725		.06						
535 ⁰	5580	Fault zone: chloritic with sulfides.	554	559	5'	726		.03						
558 ⁰	586 ⁵	Coarse grain diorite, well fractured and	559	569	10'	7 2 7		.02						
		sheared with very minor sulfides.	569	579	10'	728		.02						
586 ⁵	589 ⁰	Andesite dike, fine grain epidote veins.												
5890	614 ⁵	Coarse grain diorite, well fractured, slightly		-										
		altered with biotite replacing hornblende;												
		local sheared.												
614 ⁵	650 ⁰	Fault and shear zone with minor and sporadic												
		sulfide mineralization.												
650 ⁰	7280	Coarse grain diorite, well fractured with local												
		shears.							<u> </u>					
		Acid Test = -90°												
		100% Core Recovery												

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North	15+09) West Coast
East	0+35)_Coordinates
Elevation_	4420		<u> </u>
Àzimuth	2400		
Dip	-60°		
Logged By	M R	Swanson	

Hole No. 137-71-3

Commenced July 8, 1971

Finished July 10, 1971

Purpose Of Hole Test I.P. North of Night Hawk Zone

Logg	DI.	AMON	D DRILL	RECOR	RD			Hawk Zone							
				CORE	LENGTH			Æ	ASSAYS			ACCUMULA	ATIVE AV	ERAGES	
FROM	ТО	DESCRIPTION	FROM	ТО	ACC WIDTH	SAMPLE NO.	AU OZ.	AG OZ.	% CU		AU W	AG W	CU W		
00	10 ⁰	Coarse grain hornblende diorite, fractured													
		with local shears widely spaced.													
100	12 ⁵	Massive calcite.								ļ					
125	280	Coarse grain diorite as above.													
280	290	Same rock, intense shear zone.													
290	555	Coarse grain diorite with biotite replacing													
		hornblende, fractured and sheared, with												-	
		quartz veins.													
555	63 ⁰	Sheared and chloritic zone.													-
630	820	Coarse grain diorite as above.													
820	108 ⁰	Altered diorite with recrystallization to very													
		coarse grain feldspars, hematite and													
		magnetite crystals in a ground mass of													
		chlorite and sericite.													
108 ⁰	1450	Diorite - magnetite; course grain; magnetite													
		is earlier than quartz and calcite and						-							
		fracturing. Magnetite = 5%-10%.													-
145 ⁰	150 ⁰	Shear zone - altered, chloritic with large													
		blebs of magnetite.													
150 ⁰	158 ⁰	Coarse grain magnetite diorite, fractured.													
158 ⁰	170 ⁰	Shear zone - altered with large blebs of													
_		magnetite which are pre calcite.													
1700	1800	Coarse grain magnetite diorite.													
1800	1870	Fault gouge zone - late; lost water.													
187 ⁰	2050	Coarse grain magnetite diorite intensely shear	ed.												

				CORE	LENGTH			P	ASSAYS			ACCUMULA	ATIVE AV	ERAGES	
FROM	ТО	DESCRIPTION	FROM	T0	ACC WIDTH	SAMPLE NO.	AU OZ.	AG OZ.	% CU		AU W	AG W	CU W		
205 ⁰	2190	Same rock, mild shears locally.													
219	2195	Small quartz zone with minor sulfides.													
219 ⁵	2725	Same diorite as above.													
2725	2800	Shear zone: in diorite; epidote alteration													
		with fresh magnetite, small veinlets of													
		soft nonreactive to acid = gypsum?													
2800	2840	Coarse grain magnetite diorite, fractured													
		with biotite replacing hornblende.													
2840	508 ⁰	Fault - shear zone: chloritized with													
		abundant anhedral coarse grain magnetite													
		with epidote on later hairline fractures.													
		Acid Test = -64°													
		100% Core Recovery													
								,							
														- VANU	

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North	2+15) West Coas
East	13+30	<u>)</u> Coordinate
Elevation_	4430	
Azimuth	240 ⁰	
Dip	-600	
Logged By	M. R. Swanson	

Hole No	137-71-4
Commenced	July 12, 1971 a.m.
Finished	July 15, 1971 p.m.
Purpose Of H	ole Test Depth of Night Hawk Dip

			ال	AMOIN	DRILL	. KECOK					-				
				CORE	LENGTH			F	ASSAYS			ACCUMULA	ATIVE AV	ERAGES	
FROM	ТО	DESCRIPTION	FROM	ТО	ACC WIDTH	SAMPLE NO	AU OZ.	AG OZ.	% CU		AU W	AG W	CU W		
00	70 ⁰	Coarse grain slightly magnetic, hornblende													
		diorite; well fractured with small chloritic		-											
		shears every few inches. Some biotite re-													
		placing hornblende and hematite replacing							·						
		magnetite. Small (2"-6") K-spar rich veins													
		and epidote-calcite and epidote-quartz veins													
		in hairline fra c tures.													
700	75 ⁰	Pre-shearing altered dike, porphyritic andesite													
75 ⁰	830	Coarse grain magnetic hornblende diorite well													<u> </u>
		fractured and sheared and slightly altered.													
830	840	Preshearing, altered, porphyritic andesite													
		dike.													
84 ⁰	980	Coarse grain magnetic hornblende diorite.													
980	995	Pre-shears altered porphyritic andesite dike.													
995	1900	Coarse grain magnetic hornblende diorite													
		well fractured; with pre-shear quartz-epidote													
		veins and post shear minor sulfides.													
190 ⁰	205 ⁰	Andesite dike with phenocrysts of plagioclase													
		and hornblende; appears to be post shearing.													
205 ⁰	216 ⁰	Coarse grain, magnetic, hornblende diorite								-	-				
		well fractured with local shears.													
216 ⁰	2250	Andesite dike with plagioclase phenocrysts,													
		post shears.													
2250	403 ⁰	Coarse grain magnetic hornblende diorite													
		altered with epidote and K-spar along joints.													

		DECODART CO		CORE	LENGTH			P	SSAYS		ACCUMULA	ATIVE AV	ERAGES	_
FROM	ТО	DESCRIPTION	FROM	ТО	ACC WIDTH	SAMPLE NO.	AU OZ.	AG OZ.	% CU	AU W	AG W	CU W		
		Minor chalcopyrite along shears with calcite												
		veining.												
4030	404 ⁰	Dike, fine grain, grey.												
4040	4190	Same diorite as above.												
4190	4215	Dike, fine grain, grey.												
4215	500 ⁰	Same coarse grain diorite.												
500 ⁰	517 ⁰	Same coarse grain diorite with pervasive												
		K-spar alteration and increased shearing.												
517 ⁰	5195	Andesite, fine grain, altered, cut by calcite												
		veining.												
519 ⁵	525 ⁵	K-spar altered coarse grain diorite.												
525 ⁵	5290	Andesite, fine grain, altered, cut by calcite												
		veining.												
5290	5320	Coarse grain diorite - K-spar altered.												
5320	5380	Same rock - intense shear zone and altered.												
5380	5500	Coarse grain diorite less sheared with K-spar												
		alteration.						-						
550 ⁰	558 ⁰	Same rock with intense shear on fault zone.												
5580	563 ⁰	Same rock less sheared with K-spar alteration												
563 ⁰	814 ⁰	Coarse grain, magnetite - hornblende diorite												
		well fractured with local shears. Mild												
		alteration.												
8140	817 ⁰	Andesite dike, fine grain with calcite veins.												
8170	8445	Coarse grain magnetic - hornblende diorite												
		well fractured with local chloritic shears												

	DIAMOND DRILL RECORD										
		DECORART LON		CORE	LENGTH		F	ASSAYS	ACCUMUL	ATIVE AVERAGES	
FROM	ТО	DESCRIPTION	FROM	ТО	ACC WIDTH	SAMPLE NO.	AU OZ. AG OZ.	% CU	AU W AG W	CU W	
		with minor (0.5%) sulfides with calcite along									
		shears.									
844 ⁵	846 ⁵	Andesite dike, fine grain with calcite veins.									
8465	9110	Same coarse grain diorite with no sulfides									
		in shears.						·			
9110	9140	K-spar syenite dike, medium grain.									
9140	10000	Coarse grain, biotite diorite with magnetite									
		grains. Rock becoming less sheared and									
		more fresh.									
		Acid Test = -64°									
		100% Core Recovery									

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North	51+	25		<u>)</u> West Coast
East	2+0			<u>)</u> Coordinate:
Elevation_	395	50		
Azimuth	240			
Dip	-45	50		
I D.	J/ /[D	Swangon	

Hole No	137-71-5	
Commenced	July 15, 1971 p.m.	
Finished	July 19, 1971 a.m.	
Purpose Of Ho	le Test Middle Zone	

				CORE	LENGTH			ŀ	ASSAYS		ACCUMULATIVE AVERAGES			
FROM	ТО	DESCRIPTION	FROM	ТО	ACC WIDTH	SAMPLE NO.	AU OZ.	AG OZ.	% CU	AU W	AG W	CU W		
00	1255	Coarse grain slightly magnetic hornblende												
		diorite, well fractured with locally intense												
		shears and alteration. Small calcite veinlets												
		are pre shears and some hairline post shears												
		calcite stringers. Quartz is very minor.												
125 ⁵	1310	Same rock with less intense and more widely												
		spaced shears.												
1310	131 ⁵	Fault zone.												
131 ⁵	1430	Same rock as above.	-											
1430	154 ⁰	Shear zone with minor sulfides - D Target												
		Zone: small magnetite veins.												
154 ⁰	206 ⁵	Coarse grain diorite.												
206 ⁵	2085	Pegmatitic K-spar - quartz dike.												
208 ⁵	2150	Coarse grain diorite.												
2150	278 ⁰	Intense shear - fault zone with abundant small												
		calcite veins. Most veins are pre-late												
		shearing with some veins being post-late										·		
		stage shears.												
2780	2785	Minor chalcopyrite replacing altered mafics												
		in a shear zone.												
278 ⁵	339 ⁰	Same shear zone as above in diorite.												
3390	345 ⁰	Phlogopite with massive crystalline calcite												
		and magnetite along shear planes.												
345 ⁰	397 ⁰	Intense shear zone in coarse grain horn-												
		blende diorite.												

VERAGES

COLLAR

North	80+007	<u>) W</u> est Coas
East	2+50)_Coordinate
Elevation_	3365	<u> </u>
Azimuth	2400	
Dip	-600	
Logged By	M. R. Swanson	

Hole No	137-71-6	
Commenced	July 19, 1971 p.m.	
Finished	July 20, 1971 p.m.	
Purpose Of H	lole Test Vector Zone	

FROM TO DESCRIPTION TO ACC SAMPLE FROM TO ACC SAMPLE FROM TO ACC SAMPLE AU OZ. AG OZ. % CU AU W AG W CU W AG W CU						I KLCON				 				
FROM TO 0 630 Coarse grain slightly magnetic propylitic altered diorite; chloritic, minor sericite with minor widespread K-spar alteration. Well fractured with minor quartz and widespread calcite veins, local shears. Epidote veins occur in fractures. 630 700 Fault zone with magnetite vein, minor sulfides and numerous calcite veins. 700 1200 Same diorite with more intense shearing with randomly spaced small sulfide veins l/2 inch wide cut by calcite veins. 1200 1600 Same diorite, less shearing and no sulfides. Same diorite, less shearing and no sulfides alteration with random small minor sulfide veins, mostly pyrite. 2560 2570 Magnetite vein with minor chalcopyrite - pyrite. 2570 2800 Coarse grain slightly magnetic - hornblende diorite: hiotite replacing the hornblende, swarms of small (4 to 6 inch wide) K-spar dikes every few feet. 2800 3200 Coarse grain diorite as above with sporadic magnetite rich finer grain zones 6-12 inches			- 05000 LDT LOV		CORE			Д	SSAYS		ACCUMUL	ATIVE AV	ERAGES	
altered diorite; chloritic, minor sericite with minor widespread K-spar alteration. Well fractured with minor quartz and widespread calcite veins, local shears. Epidote veins occur in fractures. 53° 70° Fault zone with magnetite vein, minor sulfides and numerous calcite veins. 70° 120° Same diorite with more intense shearing with randomly spaced small sulfide veins 1/2 inch wide cut by calcite veins. 120° 160° Same diorite, less shearing and no sulfides. 160° 256° Same diorite with more intense shears and alteration with random small minor sulfide veins, mostly pyrite, 256° 257° Magnetite vein with minor chalcopyrite – pyrite. 257° 280° Coarse grain slightly magnetic – hornblende diorite: biotite replacing the hornblende, swarms of small (4 to 6 inch wide) K-spar dikes every few feet. 280° 320° Coarse grain diorite as above with sporadic magnetite rich finer grain zones 6-12 inches			DESCRIPTION	FROM	ТО		AU OZ.	AG OZ.	% CU	AU W	AG W	CU W		
minor widespread K-spar alteration. Well fractured with minor quartz and widespread calcite veins, local shears. Epidote veins occur in fractures, 30 700 Fault zone with magnetite vein, minor sulfides and numerous calcite veins. 700 1200 Same diorite with more intense shearing with randomly spaced small sulfide veins 1/2 inch wide cut by calcite veins. 120 1600 Same diorite, less shearing and no sulfides. 1600 2560 Same diorite with more intense shears and alteration with random small minor sulfide veins, mostly pyrite. 2560 2570 Magnetite vien with minor chalcopyrite - pyrite. 2570 2800 Coarse grain slightly magnetic - hornblende diorite: biorite replacing the hornblende, swarms of small (4 to 6 inch wide) K-spar dikes every few feet. 2800 3200 Coarse grain diorite as above with sporadic magnetite rich finer grain zones 6-12 inches	00	63 ⁰	Coarse grain slightly magnetic propylitic											
fractured with minor quartz and widespread calcite veins, local shears. Epidote veins occur in fractures. 63° 70° Fault zone with magnetite vein, minor sulfides and numerous calcite veins. 70° 120° Same diorite with more intense shearing with randomly spaced small sulfide veins 1/2 inch wide cut by calcite veins. 120° 160° Same diorite, less shearing and no sulfides. 160° 256° Same diorite with more intense shears and alteration with random small minor sulfide veins, mostly pyrite. 256° 257° Magnetite vein with minor chalcopyrite - pyrite. 257° 280° Coarse grain slightly magnetic - hornblende diorite: biotite replacing the hornblende, swarms of small (4 to 6 inch wide) K-spar dikes every few feet. 280° 320° Coarse grain diorite as above with sporadic magnetite rich finer grain zones 6-12 inches			altered diorite; chloritic, minor sericite with								-			
calcite veins, local shears. Epidote veins occur in fractures. 63 ⁰ 70 ⁰ Fault zone with magnetite vein, minor sulfides and numerous calcite veins. 70 ⁰ 120 ⁰ Same diorite with more intense shearing with randomly spaced small sulfide veins 1/2 inch wide cut by calcite veins. 120 ⁰ 160 ⁰ Same diorite, less shearing and no sulfides. 160 ⁰ 255 ⁰ Same diorite with more intense shears and alteration with random small minor sulfide veins, mostly pyrite. 256 ⁰ 257 ⁰ Magnetite vein with minor chalcopyrite - pyrite. 257 ⁰ 280 ⁰ Coarse grain slightly magnetic - hornblende diorite: biotite replacing the hornblende, swarms of small (4 to 6 inch wide) K-spar dikes every few feet. 280 ⁰ 320 ⁰ Coarse grain diorite as above with sporadic magnetite rich finer grain zones 6-12 inches			minor widespread K-spar alteration. Well										,	
occur in fractures. 63º 70º Fault zone with magnetite vein, minor sulfides and numerous calcite veins. 70º 120º Same diorite with more intense shearing with randomly spaced small sulfide veins 1/2 inch wide cut by calcite veins. 120º 160º Same diorite, less shearing and no sulfides. 160º 256º Same diorite with more intense shears and alteration with random small minor sulfide veins, mostly pyrite. 256º 257º Magnetite vein with minor chalcopyrite - pyrite. 257º 280º Coarse grain slightly magnetic - hornblende diorite: biotite replacing the hornblende, swarms of small (4 to 6 inch wide) K-spar dikes every few feet. 280º 320º Coarse grain diorite as above with sporadic magnetite rich finer grain zones 6-12 inches			fractured with minor quartz and widespread			 					-			-
630 700 Fault zone with magnetite vein, minor sulfides and numerous calcite veins. 700 1200 Same diorite with more intense shearing with randomly spaced small sulfide veins 1/2 inch wide cut by calcite veins. 1200 1600 Same diorite, less shearing and no sulfides. 1600 2560 Same diorite with more intense shears and alteration with random small minor sulfide veins, mostly pyrite. 2560 2570 Magnetite vein with minor chalcopyrite - pyrite. 2570 2800 Coarse grain slightly magnetic - hornblende diorite: biotite replacing the hornblende, swarms of small (4 to 6 inch wide) K-spar dikes every few feet. 2800 3200 Coarse grain diorite as above with sporadic magnetite rich finer grain zones 6-12 inches			calcite veins, local shears. Epidote veins											
sulfides and numerous calcite veins. 70° 120° Same diorite with more intense shearing with randomly spaced small sulfide veins 1/2 inch wide cut by calcite veins. 120° 160° Same diorite, less shearing and no sulfides. 160° 256° Same diorite with more intense shears and alteration with random small minor sulfide veins, mostly pyrite. 256° 257° Magnetite vein with minor chalcopyrite - pyrite. 257° 280° Coarse grain slightly magnetic - hornblende diorite: biotite replacing the hornblende, swarms of small (4 to 6 inch wide) K-spar dikes every few feet. 280° 320° Coarse grain diorite as above with sporadic magnetite rich finer grain zones 6-12 inches			occur in fractures.											
700 1200 Same diorite with more intense shearing with randomly spaced small sulfide veins 1/2 inch wide cut by calcite veins. 1200 1600 Same diorite, less shearing and no sulfides. 1600 2560 Same diorite with more intense shears and alteration with random small minor sulfide veins, mostly pyrite. 2560 2570 Magnetite vein with minor chalcopyrite - pyrite. 2570 2800 Coarse grain slightly magnetic - hornblende diorite: biotite replacing the hornblende, swarms of small (4 to 6 inch wide) K-spar dikes every few feet. 2800 3200 Coarse grain diorite as above with sporadic magnetite rich finer grain zones 6-12 inches	63 ⁰	70 ⁰	Fault zone with magnetite vein, minor											
randomly spaced small sulfide veins 1/2 inch wide cut by calcite veins. 120 ⁰ 160 ⁰ Same diorite, less shearing and no sulfides. 160 ⁰ 256 ⁰ Same diorite with more intense shears and alteration with random small minor sulfide veins, mostly pyrite. 256 ⁰ 257 ⁰ Magnetite vein with minor chalcopyrite - pyrite. 257 ⁰ 280 ⁰ Coarse grain slightly magnetic - hornblende diorite: biotite replacing the hornblende, swarms of small (4 to 6 inch wide) K-spar dikes every few feet. 280 ⁰ 320 ⁰ Coarse grain diorite as above with sporadic magnetite rich finer grain zones 6-12 inches			sulfides and numerous calcite veins.											
wide cut by calcite veins. 120 160 Same diorite, less shearing and no sulfides. 160 256 Same diorite with more intense shears and alteration with random small minor sulfide veins, mostly pyrite. 256 257 Magnetite vein with minor chalcopyrite - pyrite. 2570 2800 Coarse grain slightly magnetic - hornblende diorite: biotite replacing the hornblende, swarms of small (4 to 6 inch wide) K-spar dikes every few feet. 2800 3200 Coarse grain diorite as above with sporadic magnetite rich finer grain zones 6-12 inches	70 ⁰	1200	Same diorite with more intense shearing with											
120 ⁰ 160 ⁰ Same diorite, less shearing and no sulfides. 160 ⁰ 256 ⁰ Same diorite with more intense shears and alteration with random small minor sulfide veins, mostly pyrite. 256 ⁰ 257 ⁰ Magnetite vein with minor chalcopyrite - pyrite. 257 ⁰ 280 ⁰ Coarse grain slightly magnetic - hornblende diorite: biotite replacing the hornblende, swarms of small (4 to 6 inch wide) K-spar dikes every few feet. 280 ⁰ 320 ⁰ Coarse grain diorite as above with sporadic magnetite rich finer grain zones 6-12 inches			randomly spaced small sulfide veins 1/2 inch											
1600 2560 Same diorite with more intense shears and alteration with random small minor sulfide veins, mostly pyrite. 2560 2570 Magnetite vein with minor chalcopyrite - pyrite. 2570 2800 Coarse grain slightly magnetic - hornblende diorite: biotite replacing the hornblende, swarms of small (4 to 6 inch wide) K-spar dikes every few feet. 2800 3200 Coarse grain diorite as above with sporadic magnetite rich finer grain zones 6-12 inches			wide cut by calcite veins.											
alteration with random small minor sulfide veins, mostly pyrite. 256 ⁰ 257 ⁰ Magnetite vein with minor chalcopyrite - pyrite. 257 ⁰ 280 ⁰ Coarse grain slightly magnetic - hornblende diorite: biotite replacing the hornblende, swarms of small (4 to 6 inch wide) K-spar dikes every few feet. 280 ⁰ 320 ⁰ Coarse grain diorite as above with sporadic magnetite rich finer grain zones 6-12 inches	1200	160 ⁰	Same diorite, less shearing and no sulfides.											
veins, mostly pyrite. 256 ⁰ 257 ⁰ Magnetite vein with minor chalcopyrite - pyrite. 257 ⁰ 280 ⁰ Coarse grain slightly magnetic - hornblende diorite: biotite replacing the hornblende, swarms of small (4 to 6 inch wide) K-spar dikes every few feet. 280 ⁰ 320 ⁰ Coarse grain diorite as above with sporadic magnetite rich finer grain zones 6-12 inches	160 ⁰	256 ⁰	Same diorite with more intense shears and											
256 ⁰ 257 ⁰ Magnetite vein with minor chalcopyrite - pyrite. 257 ⁰ 280 ⁰ Coarse grain slightly magnetic - hornblende diorite: biotite replacing the hornblende, swarms of small (4 to 6 inch wide) K-spar dikes every few feet. 280 ⁰ 320 ⁰ Coarse grain diorite as above with sporadic magnetite rich finer grain zones 6-12 inches			alteration with random small minor sulfide											
pyrite. 257 ⁰ 280 ⁰ Coarse grain slightly magnetic - hornblende diorite: biotite replacing the hornblende, swarms of small (4 to 6 inch wide) K-spar dikes every few feet. 280 ⁰ 320 ⁰ Coarse grain diorite as above with sporadic magnetite rich finer grain zones 6-12 inches			veins, mostly pyrite.											
pyrite. 257 ⁰ 280 ⁰ Coarse grain slightly magnetic - hornblende diorite: biotite replacing the hornblende, swarms of small (4 to 6 inch wide) K-spar dikes every few feet. 280 ⁰ 320 ⁰ Coarse grain diorite as above with sporadic magnetite rich finer grain zones 6-12 inches	256 ⁰	2570	Magnetite vein with minor chalcopyrite -											
diorite: biotite replacing the hornblende, swarms of small (4 to 6 inch wide) K-spar dikes every few feet. 280 ⁰ 320 ⁰ Coarse grain diorite as above with sporadic magnetite rich finer grain zones 6-12 inches			pyrite.											
diorite: biotite replacing the hornblende, swarms of small (4 to 6 inch wide) K-spar dikes every few feet. 280 ⁰ 320 ⁰ Coarse grain diorite as above with sporadic magnetite rich finer grain zones 6-12 inches	2570	2800	Coarse grain slightly magnetic - hornblende											
dikes every few feet. 280 ⁰ 320 ⁰ Coarse grain diorite as above with sporadic magnetite rich finer grain zones 6-12 inches														
280 ⁰ 320 ⁰ Coarse grain diorite as above with sporadic magnetite rich finer grain zones 6-12 inches														
magnetite rich finer grain zones 6-12 inches			dikes every few feet.											
	2800	3200	Coarse grain diorite as above with sporadic											
			magnetite rich finer grain zones 6-12 inches											
			_											
becoming less frequent - rock becoming														

				CORE	LENGTH			Α	ASSAYS			ACCUMULA	ATIVE AV	ERAGES	
FROM	T0	DESCRIPTION	FROM	T0	ACC WIDTH	SAMPLE NO	AU OZ.	AG OZ.	% CU		AU W	AG W	CU W		
		less altered.													
3200	3420	Coarse grain diorite, fractured with widely													
		spaced local shears.													
3420	3440	Intense K-spar and quartz altered zone,													
3440	363 ⁰	Coarse grain diorite as above.													
3630	368 ⁰	Silicified zone.													
368 ⁰	388 ⁰	Coarse grain fresh diorite.													
		Acid Test = -650													
		100% Core Recovery													
												· · · · ·			

	<u> </u>														

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North	84+007	_West Coas
East	3+50	Coordinate
Elevation_	3350	
	2500	_
Dip	-600	_
	M. R. Swanson	_

Hole No	137-71-7
Commenced	July 21, 1971 a.m.
Finished	July 23, 1971 p.m.
Purpose Of Hol	e Test Vector Zone

				CORE	LENGTH			Д	ASSAYS	ACCUMULATIVE			ERAGES	187
FROM	ТО	DESCRIPTION	FROM	T0	ACC WIDTH	SAMPLE NO.	AU OZ.	AG OZ.	% CU	AU W	AG W	CU W		
00	85 ⁰	Coarse grain, altered, slightly magnetic												
		biotitic diorite; well fractured, with local		.,										
		minor shearing with wide spaced earlier												
		calcite and epidote in fractures and earlier											: 	
		shears.												
85 ⁰	104	Same rock: badly broken section due to												
		cross shearing (2 phases).												
1040	1430	Same rock with very minor small veinlets of												
	,	chalcopyrite - pyrite in chloritic shear zones.												
1430	193 ⁰	Same coarse grain diorite badly broken.												
1930	2170	Same rock: with intense sheared and altered												
		zone with calcite veinlets every few inches.												
2170	286 ⁰	Same rock: fresher with less shearing:												
		K-spar along widely spaced shear zones and												
-		calcite veins every few feet with minor												
		chalcopyrite - pyrite less than 0.5% in												
		chloritic shears.												
286 ⁰	365 ⁰	Coarse grain diorite with shearing, well												
		fractured, slight alteration with very minor										L		
		sulphides.												
365 ⁰	369 ⁰	Same rock with K-spar alteration.						-						
369 ⁰	3830	Same rock as above.												
3830	395 ⁰	Fault zone; altered; minor K-spar alteration												
		cut by epidote veins then cut by calcite,												
		sheared, then cut by second epidote and								 				

				71/10/11	DRICE	- KLCOK								
				CORE	LENGTH			ASSAY	S		ACCUMUL	ATIVE AV	ERAGES	
FROM	ТО	DESCRIPTION	FROM	ТО	ACC WIDTH	SAMPLE NO.	AU OZ.	AG 0Z. % C	U	AU W	AG W	CU W		
		calcite along the shears.			-									
395 ⁰	4650	Coarse grain diorite with minor shears,									ļ			
		fractured and slight alteration.												
465 ⁰	467 ⁰	Fault zone.												
467 ⁰	5170	Same diorite with increase in shears.												
517 ⁰	5180	Fault.												
51 8 ⁰	5350	Same diorite with increase in shears.												
535 ⁰	538 ⁰	Fault.												
538 ⁰	608 ⁰	Coarse grain diorite; with minor local shears,												
		well fractured and slight alteration.												
		_												
		Acid Test = -65°												
		100% Core Recovery												
		•		·										
L	L	1	L	L			<u> </u>					-L		

	0.00	~~~	1					
North_	0+90	JN		West	Coas	t		
East _	4+85	5E		Coo	rdinat	tes		
Elevat	ion		<u>5</u> ,5	25 '				
Ázimut	h	<u>_</u> S60	\overline{M}					0
Dip	-60	SW			acid	<u>tes</u> t	=	-65
Logged	Ву	Μ.	R.	Swar	nson			
	Elevat Azimut Dip	North 0+90 East 4+8! Elevation Azimuth	North 0+90N East 4+85E Elevation 4 Azimuth 560 Dip -60 SW	North 0+90N)	North 0+90N) West East 4+85E) Coor Elevation 4.525' Azimuth 860 W Dip -60 SW	North 0+90N) West Coast East 4+85E) Coordinat Elevation 4,525' Azimuth S60 W Dip -60 SW acid	North $0+90N$ West Coast East $4+85E$ Coordinates Elevation 4.525 ' Azimuth 860 W Dip -60 SW acid test	North $0+90N$) West Coast East $4+85E$) Coordinates Elevation 4.525 ' Azimuth 860 W Dip -60 SW acid test =

Hole No	137-71-1
Commenced	July 2, 1971 a.m.
Finished	July 4, 1971 p.m.
Purpose Of	Hole To test Night Hawk

						I KECON					
		OF CODERTION		CORE	LENGTH		F	ASSAYS	ACCUMULA	ATIVE AVERAGES	
FROM	T0	DESCRIPTION	FROM	<i>Ј</i> то	ACC WIDTH	SAMPLE NO.	AU OZ. AG OZ.	% cu	AU W AG W	CU W	
0	688	Coarse-grain plagioclase-hornblende									
acid t	est=	diorite: slightly magnetic with									
-60%		fractured grains healed by chlorite.									
		Intermittently localized shearing									
		with 1 to 1-1/2 in. offsets with									
		chloritized slickened sides.									
		Secondary biotite replaces hornblende									
		to by about 50% along the edges.									
		K-spar metasomatisn zones from 1 to 6									
		inches along fractures, sometimes									
		associated with quartz-epidote.									
		Calcite (pink & white) occurs along									
		hairline joints. These are later than	***************************************								
		the quartz veinlets, which are earlier									
		than the quartz-K-spar-epidote veins.									
		Chalcopyrites-pyrites (50-50%) occur									
		usually assoc. with the quartz and									
		quartz- epidote veins.									
		The significant chalcopyrites occur in									
		two fault zones at 226 - 227.5 &									
		317 - 367									

CORE LENGTH	DIAMOND DRILL RECORD													
FROM TO FROM TO WIDTH NO. AU OZ. AG OZ. % CU AU W AG W CU W WIDTH NO. AU OZ. AG OZ. % CU AU W AG W CU W WIDTH NO. AU OZ. AG OZ. % CU AU W AG W CU W WIDTH NO. AU OZ. AG OZ. % CU AU W AG W CU W WIDTH NO. AU OZ. AG OZ. % CU AU W AG W CU W WIDTH NO. AU OZ. AG OZ. % CU AU W AG W CU W WIDTH NO. AU OZ. AG OZ. % CU AU W AG W CU W AG W CU W WIDTH NO. AU OZ. AG OZ. % CU AU W AG W CU W AG W A			272221771011		CORE				ŀ	ASSAYS		ACCUMULA	ATIVE AV	ERAGES
andesite dyke with calcite filled fractures & intermittent chlorite faced shears. 264 269 Fine-grain andesite dyke with epidote calcite fractures 226 227.5 faults with chalcopyrites-pyrites 317 367 quartz and calcite veins. 389 fault gouge	FROM	ТО	DESCRIPTION	FROM	ТО	ACC WIDTH	SAMPLE NO.	AU OZ.	AG OZ.	% CU	AU W	AG W	CU W	
fractures & intermittent chlorite faced shears. 264 269 Fine-grain andesite dyke with epidote calcite fractures 226 227.5) faults with chalcopyrites-pyrites 317 367 quartz and calcite veins. 387 389 fault gouge	175	184.5	Fine-grain hornblende porphyritic											
faced shears. 264 269 Fine-grain andesite dyke with epidote calcite fractures 226 227.5) faults with chalcopyrites-pyrites 317 367) quartz and calcite veins. 387 389 fault gouge			andesite dyke with calcite filled											
264 269 Fine-grain andesite dyke with epidote calcite fractures 226 227.5) faults with chalcopyrites-pyrites 317 367 quartz and calcite veins. 387 389 fault gouge			fractures & intermittent chlorite											
calcite fractures 226 227.5) faults with chalcopyrites-pyrites 317 367) quartz and calcite veins. 389 fault gouge			faced shears.							-				
226 227.5) faults with chalcopyrites-pyrites 317 367) quartz and calcite veins. 387 389 fault gouge	264	269	Fine-grain andesite dyke with epidote								-			
317 367) quartz and calcite veins. 389 fault gouge			calcite fractures											
387 389 fault gouge	226	227.5)	faults with chalcopyrites-pyrites											
	317	367	quartz and calcite veins.											
Core Recovery - 100%	387	389	fault gouge											
Core Recovery - 100%														
			Core Recovery - 100%											
														-

Drilled by: D.W. Coates Enterprises Ltd.

3+85 North__ East <u>5+30</u> Elevation 4,540' (approx.) Azimuth_ <u>-90</u>° acid test Dip_

137-71-2 Hole No._ July 5, 1971 Commenced July 8, 1971 Finished_ Purpose Of Hole To test Night Hawk structure

Logged by	M. R. Swanson	וט			. RECOR						ructure	=
	DESCRIPTION		CORE	LENGTH	CAMBLE	,	ASSAYS		ACCUMULA	ATIVE AV	ERAGES	
FROM TO	DEGOTAL TON	FROM	T0	ACC WIDTH	SAMPLE NO.	AU OZ. AG OZ.	% CU	AU W	AG W	CU W		
0 728	Coarse grain hornblende diorite: well											
	fractured & local shearing with											
	chloritic slickened sides about every											
	few inches along most of core.											
	Secondary biotite replacing the horn-											
	blende, slightly magnetic.											
	Epidote, K-spar & Quartz veins usually											
	less than 1/2 inch across are cut by	-										
	calcite veins and infrequently by			ļ								
	calcite-epidote veins, also less than											
	1/2 inch across.											
	Some late calcite forms euhedral											
	crystals in open fractures.											
	Fractures dip about -60° to core axis;											
	shears dip close to -85° to axis with											
	some shears also at -60°.											
	68 - 68.5) Calcite-chalcopyrites-										<u> </u>	
	71.5 - 72) pyrites in chloritic shear											
	102 - 135.5 Fault zone chloritic with											
	calcite & quartz eyes.											

						RECOR									
		, ACCOLOTION		CORE	LENGTH			А	ASSAYS		ACCUMULATIVE AVERAGES				
FROM	ТО	DESCRIPTION	FROM	ТО	ACC WIDTH	SAMPLE NO.	AU OZ.	AG OZ.	% CU	AU W	AG W	CU W			
107	107.5	Chalcopyrites-pyrites in quartz zone													
122	135	Minor sporadic sulphides along chloriti	С												
		shear planes.													
161	190	Chloritic fault zone, recrystalized													
		Calcite for 161-163													
		Disseminated sulphides in fault zone, less than 1% sulphides.													
227	263	Intense shear zone with calcite veins near 90° dip.													
288	531	Small calcite veins cut by chloritic													
		shears, quartz veins very scarce.													
475	477) Fine grain andesite dyke with													
479	483	epidote alteration along fractures													
485	519	Sporadic pyrite veins less than													
		1/2 inch													
-															
														- 1	

	DESCRIPTION			CORE LENGTH					ASSAYS					ACCUMULATIVE AVERAGES				
FROM	ТО	DESCRIPTION	FROM	ТО	ACC WIDTH	SAMPLE NO.	AU OZ.	AG OZ.	% CU			AU W	AG W	CU W				
534	535	Massive pyrrhotite and pyrite	529	534		721												
535	548	Sulphides = 10% - 15% of zone	534	539		722												
		<u>.</u>	539	544		723												
			544	549		724												
531	558	Chloritic fault zone	549	554		725												
			554	559		726												
558	585	Sulphides in minor shears: sporadic.	559	569		727												
336	363	Sarpinades in minor shears; sporadic.	569	579		728												
586.5	587	Fine grain adesite dyke																
587.5	589	with epidote on fractures																
614.5	650	Sheared zone with calcite - sulphide							and the second									
		veins near -90° dip; sulphides						-										
		very spotty.																

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North	2+15) Wes	t Coast	: Base	<u>Li</u> ne
East _	13 +	30			
Elevat	ion	4430			
Äzimut	h	S.60V	V		
Dip		-60°			
Logged	Ву	M	R. Swar	nson	

Hole	No	137	/-/1	. –4

Commenced July 12, 1971 a.m.

Finished July 15, 1971 p.m.

Purpose Of Hole Test depth of Night Hawk Shear

		W. K. Swanson				L KECO							
		OF CORLET LON		CORE	LENGTH		ļ	ASSAYS	ACCUMULATIVE AVER			RAGES	
FROM	ТО	DESCRIPTION	FROM	TO	ACC WIDTH	SAMPLE NO.	AU OZ. AG OZ.	% CU	AU W	AG W	CU W		
0	375	Slightly magnetic, coarse grained horne-											
		blende diorite. Well fractured and shear											
		planes every few inches with up to one											
		inch offsets where observable. Some											
		biotitic alteration of the edges of horn-											
		blende grains. Hematitic alteration of											
		magnetite. Calcite-epidote; calcite, and											
		minor qua r tz and quartz K-spar-epidote											
		veining along the fractures and earlier											
		shears. Sequence is quartz-epidote-											
		K-spar and calcite-epidote veining are con-											
		temporary with one another; later cut by											
		sulfides along chloritic shears i.e. sulfides											
		with a later calcite-epidote and minor quartz											
		veins. These are then cut by plain calcite											
		hairline veins.											
20	100	Small (2-6") syenite dikes; K-metasomatism											
		in association with these dikes.											
45	50	More intensely sheared zone with											
65	75	attendant retrograde alteration of plagio-											
91	93	clase and mafics											

						L KLCO								
		-5000 1071 011		CORE	LENGTH				ASSAYS		ACCUMUL	ATIVE AV	ERAGES	
FROM	ТО	DESCRIPTION	FROM	ТО	ACC WIDTH	SAMPLE NO.	AU OZ.	AG OZ.	% CU	AU W	AG W	CU W		
70	75	Pre shear (altered) andesite porphyry dike												
83	84	with grey anhedral phenocrysts of brown												
98	99.5	mica.												
132	148	Sheared zone with pre shear quartz-epidote-												
		K-spar and post shear c halcopyrite-pyrite							,					
		(minor)												
190	205	Post shear (along altered zone) plagio-												
		hornblende andesite porphyritic dike.												
216	225	Plagio-porphyry andesite dike-post shear												
		EM RESPONSE ZONE												
341	375	Sheared - altered zone with calcite-epidote												
-		and minor chalcopyrite-pyrite veining.												
375	1000	Generally more sheared with more intense												
		attendant alteration of feldspars. Calcite												
		veins more numerous about every 1 1/2"												
		some with minor offsets. Very minor traces												
		of chalcopyrite along edges of biotite.												
		Mafics are partially chloritized and local												
		zones of K-spar alteration range from a few												
		inches to several feet in more intensely												
		sheared zones.												
403	404	Grey fine grained dike												
419	421													-
500	563	pervasive K-spar with shearing.												

						. KLCON								
		25020107121		CORE	LENGTH			P	ASSAYS		ACCUMULA	ATIVE AV	ERAGES	
FROM	ТО	DESCRIPTION	FROM	ТО	ACC WIDTH	SAMPLE NO.	AU OZ.	AG OZ.	% CU	AU W	AG W	CU W		
517	519.5				-									
525	529	Fine grained andesite dike with												
814	817	hairline calcite veining.												
844	846.5													
		TARGET ZONE												
782	838	Spotty blebs of chalcopyrite-pyrite along												
		chloritic shears and calcite veins. Not												
		intensely sheared												
900	1000	Rock becoming more biotitic with small												
		magnetite grains = biotite diorite. Rock is												
		fresher.												
911	914	Medium grained syenite dike												
928	929	Massive coarse grained calcite vein												
	1000	END:												
		Acid tests at 458 and 1000 showed straight												
		hole at -620												
		This hole showed in general more sheared												
		and altered rock than previous holes in												
		this zone but showed less sulfides.												
				-										
		Core: 100% recovery												

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r	Λ	1	Λ	

lorth	51+25) West Co	ast
ast) Grid	_
levati	on		_
zimuth	56 ^O W		
)ip	- 45		100% recovery
oaged	By M.R.	Swanson	Acid test = -45°

Hole No	137-71-5
Commenced_	July 17, 1971 p.m.
Finished	
Purpose Of	Hole Test 50+OON-Middle
	zone West Coast Grid

Logg	еи <u>ву</u>	M. R. Swanson Acid test = -45°	ال 	AMON	DOKILI	L KECOR	H H	ore we	nt to 38	 zone West Coast Grid					
				CORE	LENGTH			ŀ	ASSAYS		ACCUMULA	ATIVE AV	ERAGES		
FROM	ТО	DESCRIPTION	FROM	TO	ACC WIDTH	SAMPLE NO.	AU OZ.	AG OZ.	% CU	AU W	AG W	CU W			
0	25	Coarse grained, slightly magnetic													
		hornblende diorite. Well fractured and													
		sheared with local intense shearing and													
		alteration over a few feet. These intense							-						
		shear zones will have chloritic and K-spar													
		alteration. Small calcite veinlets are pre													
		shear, but some hairline veins appear to be													
		post-shearing. Quartz is generally scarce													
		both as veinlets and in the rock as	,												
		constituent material.			-										
17	21	Intense shear zone with K-spar, minor													
51	53	epidote and chlorite													
66	74.	(This zone has some quartz eyes and minor													
		sulfides).													
125		Moderately sheared with extremely intense													
		(gouge) zones of 131-131.5						-							
		TARGET													
143	154	2% sulfides @ 145 with massive (1 inch)													
		magnetite		-											
206	208	Pegmatic K-spar dike													
		,													

				CORE	LENGTH			ļ	ASSAYS		ACCUMULATIVE AVERAGES					
FROM	TO	DESCRIPTION	FROM	ТО	ACC WIDTH	SAMPLE NO.	AU OZ.	AG OZ.	% CU	AU W	AG W	CU W				
215	397	Intense shear and fault zone with														
		abundant small calcite veins, some pink.														
		Most veins are pre-late shearing, some are														
		post late-stage shears. Sporadic epidote														
		veins up to 6 inches wide. K-spar														
		alteration in the most intensely sheared														
		zones. Alteration of the chloritic facies														
		is attendant with the shearing.														
		from 215-397 rock looked like bottom half														
		of 137-71-3 with exception that this hole														
		was more altered and more calcite														
		No assay as there was no ore intercept														
233	397	Blebs and coarse grained magnetite is														
		abundant in the shear zone. The														
		magnetite is unaltered in the intensely														
		altered rock.														
278		Minor chalcopyrite replacing the altered						-								
		mafics.														
339	345	Phlogopite with massive crystalline calcite														
		and magnetite along shear direction.														
								-								

COLLAR	
North_	80+00) West Coast Grid
East	2 + 50)
Elevat	ion <u>3365 (estimate)</u>
	h S-60°W
Dip	-60°

Core recovery = effective 100% Acid test = -65°

Hole No	137-71-6	
Commenced	July 19-71 p.m.	
Finished	July 20-71 p.m.	-
Purpose Of H	oleTest Vector Zone	

	ged By	M. R. Swanson	DI	AMON	D DRILI	RECOR	RD.			ose or no					
				CORE	LENGTH			Д	SSAYS			ACCUMULA	ATIVE AV	ERAGES	
FROM	ТО	DESCRIPTION	FROM	ТО	ACC WIDTH	SAMPLE NO.	AU OZ.	AG OZ.	% CU		AU W	AG W	CU W		
0	388	Crse grn, slightly magnetic, propylitic altered													
		diorite: chloritic and minor sericitic and wide spread K-spar alteration. Small grains of													
		biotite and magnetite and widespread calcite veins throughout entire core						-							
		section.													
		COMMENTS:													
		The target intercept was as expected from the geophysics (E.M. and I.P.) as being of less													
		intensity than the Night Hawk zone. The													
		shearing alteration and especially the													
		sulfide mineralization were significantly													
		less than the Night Hawk.													
25	30	intense chloritic shear zone with numerous hairline calcite veins.													
39	63	Hematite staining on shear surfaces.													
		Sporadic local intense shears about 6 inches													
		wide every few feet, with small epidote veins													
		K-spar associated with shear zones.								1.2					
63	70	Fault zone near parallel to core axis with													
		magnetite vein, minor sulfides and			-										
		numerous calcite veins.													
		· ·													
,															

				CORE	LENGTH			,	ASSAYS			ACCUMULA	ATIVE AV	ERAGES	
FROM	ТО	DESCRIPTION	FROM	ТО	ACC WIDTH	SAMPLE NO.	AU OZ.	AG OZ.	% CU		AU W	AG W	CU W		
70	120	Sheared and broken zone with cross													
		shearing													
99	100	Small veinlets of chalcopyrite-pyrite													
107	108	in chloritic shears. Sulfides cut by													
113	114	calcite - no magnetite in veins. Sulfide													
		veins less than $1/2$ " wide. Sulfide veins													
		run about 60 to core axis and are pre-													· .
		parallel-to-core calcite veins.													
160	169	same as above - chalcopyrite-pyrite													
		less than one percent.													
178		4" wide chalcopyrite-pyrite = 50% with													
182		some smaller veinlets 160-192													
190		This constitutes the target zone. The													
201		entire intersection would not go more													
214		than .2 copper. Generally very sparse													
224		chalcopyrite - mostly pyrite.													
226								-							
248															
251															
256	257	Magnetite chalcopyrite-pyrite vein													
		marker vein found on surface to indicate													
		target zone													
250	388	Rock becoming slightly more biotitic													
250	275	4 to 6 inch wide K-spar syenite dike every													
		few feet.													

				CORE	LENGTH			I	ASSAYS		ACCUMULATIVE AVERAGES					
FROM	ТО	DESCRIPTION	FROM	ТО	ACC WIDTH	SAMPLE NO.	AU OZ.	AG OZ.	% CU		AU W	AG W	CU W			
		There appears to be at least two phases of											····			
		shearing and associated calcite veining and														
		related alteration. The earlier is dipping at														
		60° to hole dip (.60°) the later one at														
		parallel to hole dip (or near to it). The			-											
		sulfides are associated with the earlier														
		shearing direction.													:	
280	320	Sporadic magnetite rich finer grained zones														
		6-12 inches wide every few feet. Calcite										-				
		veining becoming less frequent - becoming														
		less altered.														
306	306.5	Small magnetite chalcopyrite-pyrite vein in														
		association with chloritic shear zone.														
310.5		Small bleb of chalcopyrite-pyrite in shear				-										
342	344	Intense K-spar with quartz			-											
363	388	Vein and silicified zone.														
	388	End. Fresh looking rock.						÷								

COLLAR		
North	84+00	
East	3+50	
Elevat	ion_3350	

Azimuth <u>570°W</u> Dip___60

Core recovery - effective 100% Acid test = 65° at 608' - bottom

Hole No. 137-71-7 Commenced July 21, 1971 a.m. Finished July 23, 1971 p.m. Purpose Of Hole Test Vector zone depth

Logg	ged By	M. R. Swanson	DI	AMON	D DRIL	L RECOR	RD								
				CORE	LENGTH			А	SSAYS			ACCUMULA	ATIVE AV	ERAGES	,
FROM	ТО	DESCRIPTION	FROM	ТО	ACC WIDTH	SAMPLE NO.	AU OZ.	AG OZ.	% CU		AU W	AG W	CU W		
0	608	Altered, biotitic, slightly serecitic													
		magnetic diorite; well fractured (broken								,					
		grains) and local, minor shearing with small													
		calcite veins every two feet and wide spaced													
		epidote veins in shear zones.													
24	47	small bleb of chalcopyrite in 1/2 inch quartz													
		vein in chloritic shear.			ļ										
85	218	broken section due to cross shearing. Zones													
		of K-spar alteration with minor epidote -											-		
		more serecitic.													
104	143	small veinlets of chalcopyrite-pyrite with 1"													
		in chloritic shear zone; 60° to core axis.													
		parallel to core axis.													
193	217	Intense shear and altered with calcite veinlets	5						-						
		every few inches with K-spar;													
208	217	Clay alteration													
217	266	fresher rock diorite with minor K-spar along													
		shear zones; calcite every couple of feet.											,		
		Minor chloritic and serecitic alteration.													
266	267	Chloritic, nonmagnetic shears													
280	286	about 70° to core axis with minor													
		chalcopyrite-pyrite.													
	1	1		+		L									

				CORE	LENGTH			,	ASSAYS		ACCUMULA	ATIVE AV	ERAGES	
FROM	ТО	DESCRIPTION	FROM	T0	ACC WIDTH	SAMPLE NO.	AU OZ.	AG OZ.	% CU	AU W	AG W	CU W		
286	290	broken zone												
291 - :	295	shear nearly parallel to core axis-chlorite,												
		epidote with very minor sulfides												
365	369	K-spar alteration												
369	372	Calcite vein in shear no sulfides.												
383	395	Fault: altered zone: K-spar alteration cut by								 				
		epidote veins, cut then by calcite, sheared												
		and cut by 2nd epidote and cut by 2nd												
		calcite along later shears												
383	400	broken zone												
408	540	increase in small shears and calcite veining												
		spotty epidote in shears. Also increase in												
		alteration due to shearing.												
465	538	Gouge zone - no sulfides												
608		End												
		TARGET:												
		was projected to be around 400'. The only												
		intercept which could be interpreted as being						-			 			
		the ta r get was broken and altered zone from			-		-	-		 				
		365-400 with the increase in shears on												
		either side from 266 - 365 and 408 - 540.												
		The sulfide zone and shear zone which												
		carries the values dies off at depth as												
		indicated by surface assays being higher												
		than estimated values of intercept on hole	-											
		137-71-6 and complete lack of values and	-											

shea**r**s in 137171-7