EQUITY ENGINEERING LTD.

DRILL LOG

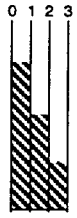
PROJECT: REIN	COLLAR ELEVATION: 1390m
HOLE: REN97-08	AZIMUTH: 000°
LOCATION: 7179895N 637535E	DIP: -60°
LOGGED BY: C. BAKER	LENGTH: 66.15m
DRILLED BY: FALCON DRILLING	HORIZONTAL PROJECTION:
ASSAYED BY: CHEMEX LABS	VERTICAL PROJECTION:
CORE SIZE: BTW	
DATE STARTED: 30/08/97	DATE COMPLETED: 31/08/97
DIP TESTS BY: NONE	

DEPTH	DIP	AZIM	DEPTH	DIP	AZIM

OBJECTIVE

TO TEST NI-MO-PD-AS-ZN SOIL GEOCHEMICAL ANOMALY ON THE MM GRID

ALTERATION SCALE



absent
slight
moderate
intense

SULPHIDE SCALE

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

SUMMARY LOG

LITHOLOGY:

0-4.57	OVERBURDEN (CASED)	51.1 - 52.5 SHALE
4.57-8.2	BLACK SHALE	52.5 - 56.1 CHERTY ARGILLITE
8.2-9.5	CHERTY ARGILLITE	56.1 - 66.15 ARGILLACEOUS LIMESTONE
9.5-21.2	BLACK SHALE	
21.2-21.7	SILTY LIMESTONE / ARGILLITE	MINERALIZATION:
21.7-29.9	BLACK SHALE	FOSSILIFEROUS EVENT BED IS Fe-RICH = CONTAINS TRACE HYDROZINCITE, FRACTURE
29.9-31.9	FOSSILIFEROUS EVENT BED	CONTROLLED ANNABERGITE & TRACE ANNABERGITE IN CALCITE VEINS WITH
31.9-32.6	LIMESTONE BALL	HYDROZINCITE. SIGNIFICANT GOETHITE AND ANNABERGITE IN CALCAREOUS BARITE
32.6-33.75	FOSSILIFEROUS EVENT BED	HORIZON. SAMPLES TAKEN FROM 25.3m TO 66.2m. BEST INTERSECTIONS
33.75-34.04	LIMESTONE BALL	52.5m TO 56.1m AND NARROW BRECCIA ZONE FROM 55.0 TO 55.1 m
34.04-34.95	FOSSILIFEROUS EVENT BED.	CONTAINING ANNABERGITE AND HYDROZINCITE.
34.95-35.2	LIMESTONE BALL	
35.2-40.6	BLACK SHALE	
40.6-49.9	CALCAREOUS BARITE HORIZON	
49.9-50.6	BLACK SHALE	
50.6-51.1	SILTY LIMESTONE	

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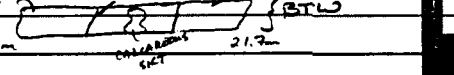
DEPTH (M)	% CORE REC	% RQD	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION: CA VEINLETS	GYPSUM VEINLETS	JAROSITE	DOLOMITE	FRACTURE INTENSITY
					0-4.57 OVERBURDEN (CASED)					
4.57 / 5.18	100	0	BL SH		4.57-8.2 BLACK SHALE					
	36	0			BLACK WITH UNIFORM FINE GRAIN SIZE, NO MATRIX CALCITE & UNIT IS QUITE SOFT AND FRIABLE.					
8.23			CH AR		CORE IS VERY RUBBLY MAKING STRUCTURAL MEASUREMENTS IMPOSSIBLE, VERY WEAKLY CONDUCTIVE, TRACE JAROSITE					
10 / 10.52	74	27			8.2 -9.5 CHERTY ARGILLITE					
	92	0			DARK GREY IN COLOUR, FINE GRAINED AND UNSPATCHABLE					
12.80					MATRIX CALCITE CONTENT IS LOW BUT CALCITE VEINING					
14.33	42	0			IS LOW TO LOCALLY MODERATE. JAROSITE IS PRESENT					
15				BEDDING @ 75°	ON FRACTURES AND WITHIN THE CALCITE VEINS. NON-					
	92	5		CLAY SEAM	CONDUCTIVE. UPPER AND LOWER CONTACTS SHARP BUT					
17.37					IN RUBBLY CORE. NON CONDUCTIVE.					
					9.5-21.2 BLACK SHALE					
	33	0			AS PER 4.57-8.23m. CALCITE VEINING IS HIGHER THAN					
20 / 20.42				BEDDING @ 50°	ABOVE BLACK SHALE AND JAROSITE PRESENT ON SOME					
21.18	100	0			FRACTURES AND IN CARBONATE VEINS. AT 15.2m A 15cm					
			SILTY LS		RELATIVELY WELL BEDDED & HARD SECTION OCCURS WHICH					
	100	28			CONTAINS FINELY BEDDED ARGILLACEOUS MATERIAL AND					
23.47					HEMATITE. THE REMAINDER OF THE UNIT IS RUBBLE. A					
	100	0		BEDDING @ 65°	NARROW 63mm WIDE CLAY SEAM OCCURS AT 17.1m DEPTH.					
25 / 25.30					REACTION TO HCL IS SPORADIC AND WEAK. THE UNIT					
			BL LH		IS WEAKLY TO MODERATELY CONDUCTIVE					
	100	5		BEDDING @ 70°	21.2 -21.7 SILTY LIMESTONE / ARGILLITE					
28.04					MEDIUM-DARK GREY IN COLOUR WITH COARSER GRAIN SIZE.					
	95	17			REACTION TO HCL IS VERY STRONG. MODERATELY TO					
30			FCB	F	COARSELY LAMINATED. TRACE JAROSITE ON FRACTURE					
31.09				LIMESTONE BALL	SURFACES & NO CALCITE VEINS. UNUSUAL "ZONING"					
			LB	BEDDING @ 45°	TO THIS INTERVAL: OUTER 10cm ON EITHER SIDE					
	100	98	FCB	F	IS STRONGLY CALCAREOUS & COARSER GRAINED; INNER					
34.14			LB	LIMESTONE BALL	20cm IS FINE GRAINED & NON REACTIVE; IN THE					
35			FCB	BEDDING @ 20°	CENTER OF THIS SECTION IS AN AMEBOID SHAPED,					
	100	57	LCB	F	COARSER GRAINED & STRONGLY CALCAREOUS BODY					
37.19				LIMESTONE BALL	APPROX 2cm ACROSS, POSSIBLY A CONCRETION OF "LIME-					
	74	35	BL LH		STONE BALL". 					
38.71										
39.93 / 40	77	20		BEDDING @ 85°	WEAKLY CONDUCTIVE THROUGHOUT.					
	100	81			21.7-29.9 BLACK SHALE					
41.76			CA		AS PER 4.57-8.23 & IS WEAKLY CALCAREOUS					
	100	69	BA		THROUGHOUT. PARTINGS ARE PARALLEL TO BEDDING.					
					TRACE CALCITE VEINING. LOWER CONTACT IN RUBBLE					
44.81 / 45										

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MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Au ppb	Pt ppb	Pd ppb	Mo ppm	Ni ppm	Zn ppm
		4.57	8.23	3.66	299786	6	<5	4	28	38	246
		8.23	9.50	1.27	87	<2	<5	<2	41	223	1130
		9.50	10.52	1.02	88	<2	<5	<2	67	227	1210
		10.52	12.80	2.28	89	<2	<5	4	70	71	216
		12.80	14.33	1.53	299790	<2	<5	<2	69	216	2470
		14.33	15.83	1.50	91	4	<10	<4	64	184	534
		15.83	17.37	1.54	92	<2	<5	<2	66	49	56
		17.37	20.42	3.05	93	<2	<5	<2	45	308	484
		20.42	21.18	0.76	94	<2	<5	<2	40	190	860
		21.18	21.70	0.52	95	<2	<5	<2	63	370	588
		21.70	23.70	2.00	96	<2	<5	<2	70	297	928
		23.70	25.30	1.60	97	<2	<5	<2	67	219	336
		25.3	27.0	1.7	299704	4	<5	4	73	273	412
		27.0	29.0	2.0	299705	2	<5	4	71	309	290
		29.0	29.9	0.9	299706	18	30	24	103	2290	1025
FOLIATED/GNEISSIC EVENT BED CONTAINS SIGNIFICANT		29.9	31.0	1.1	299707	8	50	30	182	6690	3710
IRON THROUGHOUT. TRACE PYRITE PLACED ON		31.0	31.9	0.9	299708	12	105	62	314	>10,000	1.41%
ON EVENT BED THINNER PRIMARILY THE PYRITE		31.9	32.6	0.7	299709	4	20	18	133	>10,000	3220
ALSO RUSTY RED INDICATING HYDROBIOTITE.		32.60	33.75	1.15	299710	14	130	78	330	>10,000	8030
TRACE ANNABERGITE NOTED ON FRACTURES		33.75	34.04	0.29	299711	6	25	18	107	8760	4010
AND IN CALCITE VEINS WHICH ALSO CONTAINED											
TRACE HYDROBIOTITE. THE PYRITE HORIZON		34.04	34.95	0.91	299712	6	50	32	262	>10,000	7380
IS MINERALIZED EXCEPT FOR GOETHITE &		34.95	35.2	0.25	299713	2	5	6	44	7220	3400
JAROSITE (ZINC-ZAP INDICATE TRACE ONLY)		35.2	37.2	2.0	299714	2	<5	4	80	1430	1030
		37.2	39.2	2.0	299715	4	5	8	99	3270	2960
		39.2	40.6	1.4	299716	2	<5	4	67	1200	2840
		40.6	42.6	2.0	299717	<2	<5	<2	4	652	1810
		42.6	44.6	2.0	299718	<2	5	4	18	1260	4180
		44.6	46.6	2.0	299719	<2	<5	<2	4	434	5050
		46.6	48.6	2.0	M9720	<2	<5	2	7	590	7000

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DEPTH (M)	% CORE REC	% RQD	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION: CA VEINLETS	ENDIGN VEINLETS	JAROSITE	GOETHITE	FRACTURE INTENSITY
47.85	100	56			29.9-31.9 FOSSILIFEROUS EVENT BED. MOTTLED OLIVE GREEN & BROWN. UNIT IS MODERATELY SOFT AND CONSISTS OF CRINOID OSICLES AND SMALL (<2mm) BIVALVE SHELL FRAGMENTS IN A MATRIX OF SILT. CALCITE IS VIRTUALLY NON-EXISTANT EXCEPT FOR RARE RIP-UP CLASTS OF WEAKLY CALCAREOUS SILT. JAROSITE IS WIDESPREAD. ZINC-ZAP POURED ON (INDICATING HYDROZINCITE). THIS UNIT TURNED A RUSTY ORANGE-RED COLOUR. IN BOTTOM 10cm OF UNIT IS A ROUND CALCAREOUS BODY WITH A SHARP BOUNDARY THAT MEASURED 7cm ACROSS LARGEST DIMENSION (CONCRETION).					
50				CONTACT @ 65° FAULT @ 30°						
50.30	100	52	SH	CONTACT @ 40° BEDDING @ 40° CONTACT @						
53.94	100	53	CH AR							
55	100	77								
57.00	100	57	AR LS	BEDDING @ 55°	31.9-32.6 LIMESTONE BALL (CONCRETION) MEDIUM DARK GREY IN COLOUR. STRONG REACTION TO HCL EXCEPT IN NARROW (~7cm) ZONES WITHIN THE OUTER 15cm OF EACH SIDE THAT DO NOT REACT. UPPER AND LOWER CONTACTS SHARP AND CONCAVE. CONCAVE SIDES OF THE CONTACTS FACE TOWARDS EACH OTHER. TRACE AMOUNTS OF ANNABERGITE PRESENT IN CARBONATE VEINS AND ON FRACTURES.					
60 60.05				BEDDING @ 60°						
60.10	100	69								
65	95	55		BEDDING @ 55°						
66.15 COH					32.6-33.8 FOSSILIFEROUS EVENT BED AS PER 29.9-31.9m. ZINC-ZAP DOES NOT REACT.					
					33.8-34.0 LIMESTONE BALL (CONCRETION) AS PER 31.9-32.6m EXCEPT REACTIVE TO HCL OVER THE WHOLE INTERVAL.					
					34.0-34.9 FOSSILIFEROUS EVENT BED AS PER 29.9-31.9m. A 0.5cm (@10° CARBONATE VEIN CONTAINING JAROSITE AND TRACE ANNABERGITE & HYDROZINCITE RUNS SUBPARALLEL TO THE CORE AXIS.					
					34.9-35.2 LIMESTONE BALL AS PER 31.9-32.6m WHERE CORE OF THE CONCRETION IS NON-REACTIVE. MINOR CALCITE VEINING AND IN ONE VUGGY CALCITE VEIN SMALL, PRISMATIC GYPSUM CRYSTALS (UP TO 3mm LONG) WERE NOTED					
					35.2-40.6 BLACK SHALE AS PER 4.57-8.73m EXCEPT CALCITE VEINING IS MORE INTENSE. JAROSITE IS COMMON WITH THE CALCITE VEINING WHICH BECOMES MORE INTENSE BELOW 39.9m. MINOR BRECCIATION AT 40.8m WHERE CALCITE FORMS THE MATRIX AND GYPSUM CRYSTALS ARE FOUND IN OPEN SPACES. BOTTOM CONTACT SHARP AT 75°					
	1				40.6-49.9 CALCAREOUS BARITE HORIZON PATCHY MEDIUM GREY w/ GOETHITE (TR. JAROSITE) & SIDERITE BRECCIATION THROUGHOUT THE UNIT. UNIT					

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MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Au ppb	Pt ppb	Pd ppb	Mo ppm	Ni ppm	Zn ppm
		48.6	49.9	1.3	299721	<2	<5	<2	10	829	7620
		49.9	50.6	0.7	299722	6	10	6	135	815	1050
		50.6	51.1	0.5	299723	<2	<5	<2	47	2930	4410
		51.1	52.5	1.4	299724	12	50	36	257	1430	1080
		52.5	54.5	2.0	299725	<2	<5	4	67	1550	2130
		54.5	56.1	1.6	299726	<2	<5	4	50	415	1270
TRACE AMOUNTS OF ANNABERGITE NOTED IN THE INTERVAL 52.5 TO 56.1 m. MODE OF OCCURENCE IS FRACTURE COATINGS AND IN NARROW CALCITE VEINLETS. A NARROW BRECCIA ZONE FROM 55.0 - 55.1 m CONTAINS BOTH ANNABERGITE AND HYDRO-BIOTITE.		56.1	58.1	2.0	299727	4	15	12	93	431	952
		58.1	60.1	2.0	299728	2	<5	8	48	253	3800
		60.1	62.1	2.0	299729	4	<5	8	49	192	2930
		62.1	64.1	2.0	299730	<2	5	6	60	234	2990
		64.1	66.15	2.05	299731	<2	<5	8	75	253	3680

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DEPTH (M)	% CORE REC	% RQD	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION	FRACTURE INTENSITY
					VARIABLY BRECCIATED THROUGHOUT AND THE GOETHITE & SERICITE ARE GENERALLY ASSOCIATED IN THE BRECCIATED SECTIONS BUT GOETHITE IS MORE COMMON THROUGHOUT. ACICULAR GYPSUM CRYSTALS ARE GROWING IN CAVITIES AND ON FRACTURE SURFACES THROUGHOUT THE INTERVAL. REACTION TO HCL IS UNIFORMLY STRONG OVER THE UNIT. THE BOTTOM 2m OF THE UNIT ARE THE MOST INTENSELY BRECCIATED WITH UBIQUITOUS GOETHITE/ JAROSITE AND SERICITE (MINOR). GYPSUM VEINS ARE RARE IN THE BARITE HORIZON AND HAVE GOETHITE ALONG VEIN BOUNDARIES.		
					49.9-50.6 BLACK SHALE AS PER 4.57-823, LOWER 20cm IS FAULTED. NO CALCITE & MINOR JAROSITE, LOWER CONTACT SHARP @ 40°		
					50.6-51.1 SILTY LIMESTONE FINE TO MEDIUM GRAINED, MEDIUM DARK GREY WITH STRONG REACTION TO HCL. SIGNIFICANT GOETHITE ON PARALLEL/SUBPARALLEL PARTINGS (BEDDING) AND WEAK CALCITE VEINS. BOTTOM CONTACT SHARP.		
					51.1-52.5 SHALE DARK GREY, FINE GRAINED, SOFT, NONCALCAREOUS, TRACE JAROSITE & LIMONITE ON FRACTURE SURFACES. LOWER CONTACT DIFFUSE. WEAK CONDUCTIVITY		
					52.5-58.1 CHERTY ARGILLITE DARK GREY, FINEGRAINED, UNSCRATCHABLE & NON-CALCAREOUS. CALCITE VEINING IS WEAK TO MODERATE WITH INTENSITY INCREASING DOWN-HOLE. ANNABERGITE PRESENT ON FRACTURES AND TRACE HYDROBENCITE NOTED IN A NARROW CALCITE BRECCIA FROM 55.0 TO 55.1 m. NON-CONDUCTIVE		
					58.1-66.2 ARGILLACEOUS LIMESTONE DARK GREY, FINE GRAINED, FINELY LAMINATED. MODERATELY TO STRONGLY CALCAREOUS. RARE TENTICULITES PRESENT. UNIT IS QUITE HARD BUT SCRATCHABLE & CALCITE VEINING IS INTENSE AT TOP & DECREASES TO MODERATE DOWN-HOLE. NON CONDUCTIVE.		