Eastman @ 152.4m -30 93°

803680

NEWHAWK GOLD MINES

Diamond Drill Hole Record

	INCLINATION	BEARING
COLLAR	-29°21'45"	90°28'04"
A.T. @ 62.48m	-29°	
A.T. @ 136.55m (Eastman @ 152.40)	-30.2° (-30)	93°
A.T. @ 211.22m	-31°	
A.T. @ 250.85m	-33°	

PROPERTY: Sulphuretts
LOCATION: West zone - UTC
ELEVATION: 1247.803
CO-ORDINATES: 5103.826 S 2989.713 E
LENGTH ~~823~~ 951 Feet 250.85 Meters

SECTION: 510 O
HOR. COMP: VERT. COMP.:
BEARING: 90°28'04" Extended on Mon 24-26/89
STARTED: Feb/27 COMPLETED: Mar/3
CORE SIZE: B.Q RECOVERY: 98%

HOLE No. U89-236
Sheet: 1 of 17
LOGGED BY: J. P. Vavrus / Jean P. Butler
SAMPLED BY: J. Brown / Curtis

Eastman T @ 289.56 -32° 95

EXTENDED TO: 951' ALTERATION 289.56m

DESCRIPTION

INTERVAL From	INTERVAL To	RECOVERY	ROCK TYPE	DESCRIPTION	Qv	Q	S	K	Ca	SULPHIDES Py	Sp	Ga	Tet	Pyr	SAMPLE No.	FROM	TO	WIDTH	ASSAYS Au oz/t	ASSAYS Ag oz/t	MAP Ag oz/t
0	15.26	15.20	ANLT	ANDESITE LAPILLI TUFF - dark to med grey to medium greenish grey moderately foliated @ ≈ 30°-40° TO C.A., ⓦ SMALL SUBUNITS of fine gr. M/MOST MASSIVE greenish grey ANLT. IT IS moderately sericitized (MOST obvious on lapilli shapes and ⓦ IN ANLT SUBUNITS), weak silicif^{n} though increasing down hole. ANGULAR to SUBROUNDED Lapilli fragments ≈ 1/2 cm in width are supported by a dark greyish, ashy matrix. IT hosts 2-5% interstitial Pyrite as well as in small massive blebs, and in fine MASSIVE STRINGERS healing fractures (ⓦ IN THE ANLT SUBUNITS). QTZ V-letting is random and sporadic @ 30° TO 70° TO C.A., usually NO wider than 1 cm. MOSTLY sharply injected and ⓦ UP TO 10% interstitial calcite. MOST are barren of sulphide mineralization.	≤2	35	30	-	≤10 ↑	2-5	—	-	—	—	UD-9537	10.76	12.26	1.5m	.020	.99	
															UD-9538	12.26	13.76	1.5m	.017	.22	
								ⓦ IN VEINS							UD-9539	13.76	15.26	1.5m	.033	.63	
			QTZN	below 12 m down to the contact the core becomes moderately silicified and QTZ V-letting increases slightly though sulphide mineralization does not generally change.																	
				CONTACT IRREGULAR @ 60°-70° TO C.A.																	
15.26	16.51	1.25	QCVN	QUARTZ CARBONATE VEIN - Massive, milky white and chalky white, intrusive or flooded QUARTZ-calcite ⓦ < 2% random wallrock material that is intensely silicified and bleached. IT hosts 1-2% plus small blebs of wispy botryoidic Tetrahedrite, usually accompanied by	98+	-	-	-	20+? ↑	1+	Tr+	-	1-2+	-	UD-9540	15.26	16.51	1.25	.078	13.7^{c}	.038 | 13.82
								interstitially ⓦ IN QTZ													

B. V. KIRKHAM

B. V. KIRKHAM

Specify ft. or m.

HOLE NUMBER U89-236 SHEET 2 of 17

INTERVAL FROM	INTERVAL TO	RECOVERY	ROCK TYPE	DESCRIPTION	ALTERATION Qv	Q	S	K	Ca	SULPHIDES Py	Sp	Ga	Tet	Pyr	SAMPLE No.	FROM	TO	WIDTH	ASSAYS Au o/t	Ag o/t	MAP Ag o/t
				1% SMALL blebs of PYRITE forming a NUCLEI for the sulph. mineralization, and also traces splotchy honey blonde SPHALERITE.																	
				CONTACT @ 50° TOC.A.																	
16.51	25.09	8.55	QCSW WMSW	QUARTZ CARBONATE STOCKWORK - WEAK TO MODERATE ≈ 10-30% milky white ⩒ chalky white MOSTLY SHARPLY INJECTED QUARTZ CALCITE V-letting and veining MAKES UP THE STOCKWORK; ⩒ IN a FINE grained, almost MASSIVE, med grey TO med bleached greenish grey, STRONGLY silicified (weak sericite) COUNTRY ROCK MATRIX THAT HOSTS 4-6% PYRITE finely disseminated and speckled ⩒ SMALL MASSIVE blebs <.05 cm IN width. The few SMALL veins range between 20-30 cm and are weakly STAINED a pinkish orange color (calcite). The general TREND of these veins is @ 50° TO 70° TOC.A. and lack much visible sulph. MIN. except for MINOR Tr - Tet. The FINE V-lets from .2 cm TO 2 cm IN width are characteristically similar TO the SMALL veins though @ attitudes of 30° TO 70° TOC.A. Very few hosts some sulphide MIN including TET, PYRITE, and SPHALERITE (ie @ 16.73 m)	10-30	60-70	<5	-	5-20	4-6	Tr-1	?	Tr-3	-	UD-9541	16.51	18.01	1.5 m	.053	8.12	
															UD-9542	18.01	19.51	1.5 m	.041	.80	
															UD-9543	19.51	21.01	1.5 m	.052	.53	
															UD-9544	21.01	22.51	1.5 m	.067	.40	
															UD-9545	22.51	24.01	1.5 m	.103	1.38	
															UD-9546	24.01	25.09	1.08m	.037	3.01	
				IRREGULAR CONTACT TRENDING @ 75° plus TOC.A.																	
25.09	27.66	2.57	QCSW	QUARTZ CALCITE STOCKWORK - MASSIVE milky white TO faintly pinkish orangy STAINED - chalky white QUARTZ CALCITE VEIN; ⩒ <5% intensely silicified & bleached COUNTRY ROCK MATERIAL. The CALCITE CAN MAKE UP TO 20% OF THE CORE	90	-	-	-	<20 (INTERSTITIALLY)	T	-	-	T-1	-	UD-9547	25.09	26.59	1.5m	.064	7.75	
															UD-9548	26.59	27.66	1.07m	.010	1.15	

INTERVAL FROM	INTERVAL TO	RECOVERY	ROCK TYPE	DESCRIPTION	ALTERATION Qv	Q	S	K	Ca	SULPHIDES Py	Sp	Ga	Tet	Pyr	SAMPLE No.	FROM	TO	WIDTH	ASSAYS Au o/t	Ag o/t	MAP Ag o/t
				interstitially. The vein hosts Tr-1% specked to wispy dendritic Tet.																	
				CONTACT @ ≈40° TO C.A.																	
27.66	29.60	1.94	QTZM WSW	QUARTZ ZONE - ω weak stockwork; the matrix is fine gr., med grey, stk. silicified and hosts <4% pyrite finely diss & occassionally as fine massive stringers healing fine fracts. The Quartz V-letting makes up <10% of the unit mostly as fine <1/2 cm wide sharply & irregularly injected V-lets; they lack much visible sulphide mineralization and are made up ω <10% carbonates.	<10	75	—	—	<10 ↗	<4	—	—	?	—	UD-9549	27.66	28.66	1.0 m	.026	.79	
				ω in V-lets			ω								UD-9550	28.66	29.60	.94 m	.023	.90	
				CONTACT @ 40° TO C.A.																	
29.60	30.56	.96	QCVN	QUARTZ CARBONATE VEIN - Massive, milky white to chalky white quartz, ω up to 20% calcite, vein. It shows intravein textures ω a "flooding" of carb. Hosts T-2% blebs of dendritic Tet often accompanied by T-1% splotches of honey blonde sphalerite.	80+	—	—	—	20	T	T-1	—	T-2	—	UD-9551	29.60	30.56	.96 m	.031	1.96	
				CONTACT @ 40° TO C.A.																	
30.56	32.54	1.98	QTSW	QUARTZ STOCKWORK - <20% irregularly injected, massive milky white to chalky white Qtz carb V-letting makes up the stockwork ω in a fine grained, med. grey (faintly greenish) strongly silicified country rock matrix that hosts 2-4% pyrite in small massive blebs or healing fine hairline fractures. The V-letting ranges in width from .1 cm to 3 cm and a small vein occurs ≈18 cm in width. Their orientation →	<20	75+	<4	—	<15	2-4	—	—	T ↖	—	UD-9552	30.56	31.56	1.0 m	.082	0.95	
				ω in V-lets							ω				UD-9553	31.56	32.54	.98 m	.022	.66	

Specify ft. or m.

HOLE NUMBER 089-236 SHEET 4 of 17

INTERVAL FROM	INTERVAL TO	RECOVERY	ROCK TYPE	DESCRIPTION	ALTERATION Qv	Q	S	K	Ca	SULPHIDES Py	Sp	Ga	Tet	Pyr	SAMPLE No.	FROM	TO	WIDTH	ASSAYS Au o/t	Ag o/t	MAP Ag o/t
				CAN VARY FROM 30° TO 60° TO C.A. FOR THE MOST PART THEY HOST ONLY MAJOR TH TETRAHEDRITE.																	
				CONTACT @ 50° TO C.A.																	
32.59	33.78	1.29	QCVN	QUARTZ CARBONATE VEIN - BASICALLY AS DESCRIBED FOR 29.60 - 30.56 m, IT'S MILKY TO CHALKY WHITE W PINKISH STAINED CALCITE. IT HOST TH - TETRAHEDRITE	80				20	T	—	—	TH	—	UD-9554	32.59	33.78	1.29	.014	1.28	
				CONTACT @ 50° TO C.A.																	
33.18	34.92	1.14	QTSW WMSW	QUARTZ STOCKWORK - BASICALLY AS DESCRIBED PREVIOUSLY THOUGH V-LETTING MAKES UP ≈ 25% OF THE UNIT. SULPHIDE MIN. IS SPORADIC W/ SOME V-LETS HOSTING TH - 3% TET. CALCITE CONTENT ON V-LETS SEEMS TO DECREASE IE < 10%.	25	75+	<4	-	<10	4	—	—	T-3 ↑	-	UD-9555	33.78	34.92	1.14	.053	3.05	
												W/ IN VERY FEW V-LETS									
				CONTACT @ ≈ 50° TO C.A.																	
34.92	36.86	1.94	QCVN	QUARTZ CARBONATE VEIN - MASSIVE, MILKY TO CHALKY WHITE QUARTZ - CARB VEIN (< 7% CARB). IT HOST MODERATE TO STRONG SULPHIDE MIN. MADE UP OF 2 - 6% CLUSTERS OF WISPY DENDRITIC TETRAHEDRITE W/ SMALL SECTIONS OF MASSIVE UP TO 10% PLUS PYRITE & TH - 1% SPHALERITE. ONE LAST SEAM ≈ 3 cm WIDE IS MADE UP OF MASSIVE TET, PY & SPHAL @ ≈ 36.45 m.	95+	—	—	—	<7	10+	TH-1	-	2-6+	-	UD-9556	34.99	35.99	1.0 m	.567	74.77	
															UD-9557	35.99	36.86	0.92 m	1.028	267.22	
				CONTACT @ ≈ 50° TO C.A.																	
36.86	47.94	11.08	QTCM	QUARTZ ZONE - FINE GRAINED, ALMOST MASSIVE, MED GREY TO BLEACHED MED GREENISH GREY, MOD-STRONGLY SILICIFIED OVERPRINTING SOME SERICITIC ALTERATION (PREVIOUSLY STR. TO MOD). IT HOSTS UP TO 7% PY FINELY SPECKLED AND IN SOME MASSIVE FINE STRINGERS & BANDS	< 2	60+	<10	—	<8 ↑	7	—	—	T	—	UD-9558	36.86	38.36	1.5 m	.026	.98	
															UD-9559	38.36	39.86	1.5 m	.048	.59	RE MSV
									W/ IN V-LETS						UD-9560	39.86	41.36	1.5 m	.066	3.70	.073 4.06
															UD-9561	41.36	42.86	1.5 m	.060	0.51	
															UD-9562	42.86	44.36	1.5 m	.038	.42	
															UD-9563	44.36	45.86	1.5 m	.015	.32	

Specify ft. or m.

HOLE NUMBER UD89-236 SHEET 5 of 13

INTERVAL FROM	INTERVAL TO	RECOVERY	ROCK TYPE	DESCRIPTION	ALTERATION Qv	Q	S	K	Ca	SULPHIDES Py	Sp	Ga	Tet	Pyr	SAMPLE No.	FROM	TO	WIDTH	ASSAYS Au o/t	Ag o/t	MAP Ag o/t
				fractures. Qtz veining is random and sporadic (≤ 2% of core). They can be up to 2 cm wide though most are fine < 2 cm wide and also healing fractures. occassionally minor thale tet occurs w/in the veins. some calcite < 5% may be observed w/in veins.																	
				contact @ ∝ 50° to c.a.																	
47.94	49.54	1.6	QTVN	QUARTZ VEIN - massive, milky white, quartz vein w/ minor < 3% interstitial calcite. It contains < 10% intensely silicified bleached country rock material. Visible sulphide mineralization is virtually absent except for traces scattered tet.	90+	—	—	—	< 3	T	—	—	T	—	UD-9566	47.94	49.54	1.6m	.048	.95	
				contact @ ∝ 50° to c.a.																	
49.54	71.13	21.59	QTZN	QUARTZ ZONE - fine grained, almost massive, weakly to moderately crackle fractured in places, med to light bleached grey, strongly to intensely silicified. It hosts up to 6% finely disseminated pyrite, often healing fracturing as fine massive py stringers. occassionally minor open gashes (< 2 cm in width) are healed by drusy qtz. V-letting for the most part is random and sporadic most are healing the crackle fracturing. Small sections @ 49.98 - 50.20 m, 51.90 - 51.94 m, 54.05 - 54.43 have small veins & v-lets as small weak stockwork zones. The veins & v-lets are made up of qtz & < 15% calcite. their general orientation is @ 30° to 50° to c.a. The only section hosting weak to moderate sulphide min. is between 51.90 - 51.94 m where up to 9% tet & tr - 2% honey	< 2 to 40	80+	—	—	26 ↑	6	v ↖	—	v ↑	—	UD-9567	49.54	51.04	1.5m	.109	1.89	
								w/in v-lets			w/in small v-let sections				UD-9568	51.04	52.54	1.5m	.038	4.69	
															UD-9569	52.54	54.04	1.5m	.020	.98	
															UD-9570	54.04	55.54	1.5m	.024	.53	
															UD-9571	55.54	57.04	1.5m	.021	.78	
															UD-9572	57.04	58.54	1.5m	.016	1.49	
															UD-9573	58.54	60.04	1.5m	.013	.32	

Specify ft. or m.

HOLE NUMBER 089-236 SHEET 6 of 17

INTERVAL FROM	INTERVAL TO	RECOVERY	ROCK TYPE	DESCRIPTION	ALTERATION Qv	Q	S	K	Ca	SULPHIDES Py	Sp	Ga	Tet	Pyr	SAMPLE No.	FROM	TO	WIDTH	ASSAYS Au o/t	Ag o/t	MAP Ag o/t
				blonde splotchy sphalerite occur ⓦ 2% Py as the nuclei for MIN. the other veins & vlets lack much sulph. MIN.																	
				— note that intermittently through the QTZM, small QTZ-carb veins from 7 to 26 cm in width occur and between these veins the V-lettins is usually fine ∠ 2 cm in width, random, @ varying orientations from 25° to 70° TOC.A. and lack much sulph MIN, only minor to tet. sporadically; the UNIT displays some semicitic altn.															
				the small veins are @ 59.93, 61.8 m, 63.62 m, 67.34, and @ 70.1 m, these veins occassionally host some sulphides ie tet, & pyrite (ie @ 67.34); V-lettins in this UNIT can be less than 1% & up to 5 if one considers the sporadic small veining.															
				CONTACT steep & irreg @ ∡ 80° TOC.A.																	
71.13	71.53	.40 m	QTVN	QUARTZ VEIN - massive milky white QTZ ⓦ ∠ 5% interstitial chalky white calcite. minor, ∠ 2%, random intensely silicified country rock material is observed. the vein is strongly sulphidized ⓦ up to 7% massive seams and speckled wisps of dendritic tet. some small Py blebs ∠ 2% form a nuclei for some of the tet MIN^{S}.	95+	—	—	—	∠5	2	—	—	∠7	—	UD-9582	71.13	71.53	.40 m	.536	31.09	
				CONTACT @ 60° TOC.A																	
71.53	81.30	9.77	QTZM	QUARTZ ZONE - fine grained, almost massive, light bleached to med grey, strongly to intensely silicified. It hosts 2-4% finely diss Py and in small ∠ 1 cm massive blebs. Quartz veinletins is sporadic, no wider than	1%	75-80	∠4	—	?	2-4	—	—	—	—	UD-9583	71.53	73.03	1.5 m	.037	.79	
															UD-9584	73.03	74.53	1.5 m	.082	.49	
															UD-9585	74.53	76.03	1.5 m	.019	.11	
															UD-9586	76.03	77.53	1.5 m	.017	.08	
															UD-9587	77.53	79.03	1.5 m	.015	.16	
															UD-9588	79.03	80.53	1.5 m	.026	.23	

				✓ ⓦ in small veins									✓	→	UD-9578	66.09	67.59	1.5 m	.042	2.80	
				✓									✓	⇒	UD-9579	67.59	69.09	1.5 m	.019	.32	
															UD-9580	69.09	70.09	1.05	.120	.20	100/28
															UD-9581	70.09	71.14	1.05	.136	.96	
												.199	5.48								
												2.99									

Specify ft. or m.

HOLE NUMBER 089-23B SHEET 7 of 18

INTERVAL FROM	INTERVAL TO	RECOVERY	ROCK TYPE	DESCRIPTION	ALTERATION Qv	Q	S	K	Ca	SULPHIDES Py	Sp	Ga	Tet	Pyr	SAMPLE No.	FROM	TO	WIDTH	ASSAYS Au o/t	Ag o/t	MAP Ag o/t
				.2 cm wide. MOSTLY ORIENTED @ 40° TO 50° TO C.A. AND USUALLY LACKS ANY SULPHIDE MINERALIZATION. MINOR HINTS OF SERICITIC ALTERATION OCCUR SPORADICALLY, IN THE COUNTRY ROCK. MINOR FOLIATION IS FAINTLY OBSERVED, OCCASSIONALLY, @ ≈ 40° TO C.A.						-	-	T	T	-	UD-9589	80.53	82.03	1.5m	.020	.26	
				— @ 80.89 - 81.30 a SMALL QUARTZ-carb VEIN defines the end of the silicified QTZH. It is @ ≈ 40° TO C.A.. It is MASSIVE MILKY TO CHALKY WHITE ≈ 15% carb, 85% QTZ. It host MINOR TR TET & GALENA. SOME 5-10% COUNTRY ROCK MATERIAL IS SEEN W IN THE VEIN.																
				CONTACT @ ≈ 40° TO C.A define by decrease IN SILICIFICATION.																	
81.30	93.96	12.16	ANTF	ANDESITE TUFF - W SMALL SUBUNITS of ANLT. IT IS MOSTLY FINE GRAINED, EQUIGRANULAR, MED GREENISH GREY, & STILL MODERATELY SILICIFIED, THOUGH NOT STRONG ENOUGH TO ERADICATE ORIGINAL TEXTURE, AND SHOWS WEAK TO MOD. SERICITIFICATION. IT HOSTS MINOR PYRITE < 2% USUALLY FINELY DISSEMINATED. FINE (< .1 cm wide) VLETS OCCUR SPORADICALLY @ 40° TO 60° TO C.A.; THEY LACK MUCH SULPH MIN. THE COUNTRY ROCK SHOWS SOME FAINT FOLIATION @ ≈ 40° TO C.A.	< 1	50+	< 15	—	?-1 W IN VLETS	2	—	—	—	—	UD-9590	82.03	83.53	1.5m	.017	.17	
															UD-9591	91.96	93.46	1.5m	.076	.85	
				— SMALL CLAY GOUGE ZONE @ ≈ 90m, ITS ORIENTATION IS DIFFICULT TO DETERMINE DUE TO BROKEN UP NATURE OF THE CORE. NOTE THAT CORE IS QUITE FRACTURED & BROKEN DOWN TO 91.90 m THOUGH EVIDENCE OF GOUGING IS ONLY MINIMAL. NOTE, ALSO THAT THE UNIT IN THE VICINITY OF THIS														

Specify ft. or m.

HOLE NUMBER 089-236 SHEET 8 of 17

INTERVAL FROM	INTERVAL TO	RECOVERY	ROCK TYPE	DESCRIPTION	ALTERATION Qv	Q	S	K	Ca	SULPHIDES Py	Sp	Ga	Tet	Pyr	SAMPLE No.	FROM	TO	WIDTH	ASSAYS Au o/t	Ag o/t	MAP Ag o/t
				broken core shows evidence of chlorite alteration ± some sericitization.																	
				contact defined arbitrarily ± in a gradational alteration change & increase in v-letting.																	
93.46	99.70	6.24	QTFN QTSW WSW	QUARTZ ZONE ± weak to mildly moderate quartz stockwork. The host country rock is both fine grained or fragmental ± in an ashy matrix (previously ANLT); it is a med to light (bleached in places) greenish grey, strongly to intensely silicified. Minor joint foliation is still visible @ ≈ 40° to C.A.; texturally, remnants of silicified lapilli shapes are visible, though showing a greater amount of sericitization than the ashy matrix. It hosts < 3% finely diss py as well as in small massive scattered blebs. The quartz v-letting is mostly irregularly injected into the country rx. Generally their orientation is @ 30° to 90° to C.A., though minor sharp v-lettings is seen @ 70°± to C.A. Their width varies between 1/2 cm to 5 cm. Some sections may be up to 30% of the unit ± v-letting, but, although silicification continues down to 99.70 the v-letting stops @ ≈ 96.5 m occurring only sporadically after that. These v-lets may hold trace to 3% tet as fine dendritic wisps sometime accompanied by py 1% as nuclei for min^n.	<2-30 ↑ variably	75-80	<5	-	-	<3	-	-	T-3 ↑ variably ± in ore v-lettings.	-	UD-9592	93.46	99.96	1.5 m	.044	1.72	
															UD-9593	99.96	96.96	1.5 m	.034	1.23	
															UD-9594	96.96	97.96	1.5 m	.032	.49	
															UD-9595	97.96	98.83	.87 m	.029	.58	
															UD-9596	98.83	99.70	.87 m	.095	.45	
				contact arbitrarily defined by alteration change (gradational) & decrease in v-letting.																	
99.70	152.20	52.0 m	ANTF	ANDESITE TUFF - fine grained, equigranular, med green, to greyish greenish (just below QTZN zone), wk. to mod silicif near upper	T-1	<10	<15	-	-	1-3	-	-	-	-							

Specify ft. or m.

HOLE NUMBER 089-256 SHEET 9 of 17

INTERVAL FROM	INTERVAL TO	RECOVERY	ROCK TYPE	DESCRIPTION	ALTERATION Qv	Q	S	K	Ca	SULPHIDES Py	Sp	Ga	Tet	Pyr	SAMPLE No.	FROM	TO	WIDTH	ASSAYS Au o/t	Ag o/t	MAP Ag o/t
				CONTACT, decreasing down hole, The dominant alteration is weakly to mod? propyllitic (ie chloritization), w phyllic (weak sericite). MINOR SUBUNITS OF ANLT ARE SEEN NEARER THE UPPER SECTION OF THE UNIT. THE UNIT AS A WHOLE HOSTS 1-3% PYRITE. QTZ V-letting is rare MOSTLY AS WEAK. 1mm wide V-lets healing JOINT FRACTURING MOST OFTEN @ 30° TO C.A. THIS UNIT SEEMS FRESH, OF AN ANDESITIC TO WK DACITIC IN COMPOSITION.															
				— MINOR SMALL SECTIONS OF WEAK QTZ flooding are noted between 129.80 & 133.90 m. NO SIGNIFICANT VISIBLE SULPH MINERALIZATION IS NOTED. THOUGH, MINOR SUBUNITS OF WEAK ANLT ARE BEGINNING TO OCCUR AGAIN. THE DENSITY IS LAPILLI STAGE W IN THESE SUBUNITS IS LOW.		↑									UD-9597	129.80	131.3	1.5m	.090	.73	
															UD-9598	131.3	132.8	1.5m	.059	.43	
															UD-9599	132.8	134.3	1.5m	.028	.23	
				— between 142 m TO 146 m a slight INCREASE IN SILICIFICATION IS NOTED; Probably due to some MINOR QTZ V-letting OCCURRING (ie 3 veinlets 2-9 cm in width, lacking sulphide MIN) AS SEEN PREVIOUSLY THE APPEARANCE OF SMALL ANLT SUBUNITS IS NOTED, THOUGH, LIKE before the lapilli density is low.		↑															
				— below 146 m DOWN TO 152.20 m the ANTF is chloritized ONCE AGAIN W LITTLE SILICIFICATION, MINOR SECTIONS display weak sericitization. IT IS a medium green in color and hosts 1-3% PYRITE finely diss. QTZ V-letting is rare, sporadic, <.25 cm in width & lacking sulph. MIN. @ 30° & 40° TO C.A.		↓															
				CONTACT @ 55° TO C.A. (ANLT & CONTACT)																	

Specify ft. or m.

HOLE NUMBER 089-236 SHEET 10 of 13

INTERVAL FROM	INTERVAL TO	RECOVERY	ROCK TYPE	DESCRIPTION	ALTERATION Qv	Q	S	K	Ca	SULPHIDES Py	Sp	Ga	Tet	Pyr	SAMPLE No.	FROM	TO	WIDTH	ASSAYS Au o/t	Ag o/t	MAP Ag o/t
152.20	157.65	5.45	QTZM	weak QUARTZ ZONE - It is fine grained, mostly equigranular, w occasional silica fragments, light bleached grey and mottled semicitic pale green, weakly to mod. silicified and semicitized; ghost like semicitic lapilli fragments are discernible still and can be large (3-4 cm long), w in a silicified matrix which has rather flooded the zone with actual V-letting being very minor. There are, however, several large fragments of a dull light grey QTZ material which itself has criss-crossing fine 0.1 cm wide micro-x-talline (Chalcedonic V-lets). These fragments, somehow, do not fit into the more or less typical ANLT hostrock, ie the unit does not feel like a breccia, yet, they are most likely responsible for the increase in silica. This unit hosts ≈ 5% Py in speckled massive blebs and healing some irregular V-letting. Note that this structure is occasionally healed by a fine greenish QUARTZ wisps. Minor Tet may be seen in a single veinlet system @ 56.20 - 56.36 m, @ ≈ 30° to C.A.	T	35AS	20	-	Tr	5	-	-	T	-	UD-9600	152.20	153.7	1.5m	.017	.26	.012 / .19
													↑		UD-9601	153.7	155.2	1.5m	.101	.41	
													/		UD-9602	155.2	156.7	1.5m	.047	1.87	
												w in minor veins			UD-9603	156.7	157.65	.95m	.026	.58	
				AIT^N CONTACT @ 60° TO C.A.																	
157.65	163.38	5.73	ANIT	ANDESITE TUFF - fine grained equigranular, Light greyish green to light dull green, weakly to moderately sericitized w intermittent weak silica alt^N. It shows minor fuint foliation @ ≈ 90° to C.A. ??. Hosts 3-4% Pyrite finely diss and in small massive blebs. QTZ V-letting is virtually non existent.	T	L25?	30	-	-	3-4	-	-	-	-							

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Specify ft. or m.

HOLE NUMBER 089-236 SHEET 11 of 17

INTERVAL FROM	INTERVAL TO	RECOVERY	ROCK TYPE	DESCRIPTION	ALTERATION Qv	Q	S	K	Ca	SULPHIDES Py	Sp	Ga	Tet	Pyr	SAMPLE No.	FROM	TO	WIDTH	ASSAYS Au o/t	ASSAYS Ag o/t	MAP Ag o/t
				CONTACT shallow @ ≈15° TO C.A.																	
163.38	173.15	9.79	AHLT	ANDESITE LAPILLI TUFF - med to dark grey to greenish grey, moderately foliated @ ≈ 40° TO 50° TO C.A., weakly to mod sericitized, ⓦ some silica alt'n. The MATRIX is grainy to ashy & dk. grey, it supports angular to subrounded Lapilli frags up to 2 cm long or more, they are more strongly sericitized and more evident, as their color is a pale sericitic green. It hosts up to 4% finely diss Py. Qtz veinletting is sporadic most @ ≈ 40° TO C.A. and no wider than .3 cm. Note that silicification increases as one goes down the hole.	<1	<10	1S	—	—	4	—	—	—	—							
				CONTACT gradational defined by silica alteration change.																	
173.15	189.30	11.15	QTZH	QUARTZ ZONE - fine grained, equigranular, faintly foliated @ ≈ 40° TO C.A., med to light bleached grey, ⓦ minor hints of remaining sericitization and strongly silicified. Note that although textures are being almost totally eradicated by silica alt'n, that minor ghost like Lapilli frags may be discernible in small portions of the unit. The country rock hosts only ≈ 3% pyrite finely diss, occassionally healing fine stringers. Quartz veinletting is beginning to increase, though it is still weak making up <4% of the unit. Their width varies from ≈1 cm ⓦ most being 1/4 cm or less. They are both sharply and irregularly injected into the host rock @ 30° TO 60°	<4	70	<4	—	<15	3	—	—	✓	—	UD-9604	173.15	174.65	1.5m	.061	.78	
							ⓦ	in Qtz								UD-9605	174.65	176.15	1.5m	.005	.24	
								V-lets.								UD-9606	176.15	177.65	1.5m	.008	.57	
																UD-9607	177.65	179.15	1.5m	.007	.38	
																UD-9608	179.15	180.65	1.5m	.010	.24	
																UD-9609	180.65	182.15	1.5m	0.008	0.30	
																UD-9610	182.15	183.65	1.5m	0.007	0.36	
																UD-9611	183.65	185.15	1.5m	0.009	0.37	

Specify ft. or m. INTERVAL FROM	TO	RECOVERY	ROCK TYPE	DESCRIPTION	ALTERATION Qv	Q	S	K	Ca	SULPHIDES Py	Sp	Ga	Tet	Pyr	SAMPLE No.	FROM	TO	WIDTH	ASSAYS Au o/t	Ag o/t	MAP Ag o/t
				TO C.A.. SOME MAY COMPRISE UP TO 15% INTERSTITIAL, PINKISH STAINED, CALCITE. AND SOME OF THE MOST POINT LOCAL MUCH VISIBLE SULPHIDE MINERALIZATION, W THE ODD V-LET HOSTING MINOR TET. — BELOW 182.40 m THE SILICIFICATION BEGINS TO DECREASE & LAPILLI TEXTURES ARE VISIBLE ONCE AGAIN, THOUGH NOT YET SHARPLY DEFINED.															
				GRADATIONAL ALTERATION CONTACT.																	
189.30	229.79	40.49	ANLT	ANDESITE LAPILLI TUFF - MED TO LIGHT, ALMOST BLEACHED GREENISH GREY, MODERATELY FOLIATED @ ≈ 50° TO C.A., PLUS. ALTERATION IS VARIABLE W MODERATE SERICITIZATION BEING DOMINANT ESPECIALLY ALTERING A DENSE POPULATION OF LAPILLI; SILICA ALTERATION IS WEAK TO MOD. AND MOSTLY EVIDENT W IN THE PREVIOUSLY ASHY MATRIX. THE MATRIX IS STAINY TO ASHY AND IT SUPPORTS SUB-ANGULAR TO SUBROUNDED LAPILLI STONES THAT CAN BE UP TO 3-4 cm LONG. THE UNIT HOSTS 2 TO UP TO 4% +, PYRITE FINELY DISSEMINATED AND OCCASSIONALLY IN SMALL SCATTERED MASSIVE BLEBS. QTZ V-LETTING IS RARE MOST OFTEN OCCURRING AS FINE < 1/2 cm WIDE IRREGULAR WISPS, OCCASSIONALLY SHARP AND HEALING < 1 cm WIDE JOINT FRACTURES. GENERALLY THEY ARE @ ≈ 40° TO 60° TO C.A. AND CAN BE MADE UP OF UP TO 15% INTERSTITIAL CALCITE OFTEN STAINED ORANGEY PINKISH COLOR. SULPHS W IN V-LETS ARE VIRTUALLY NON EXISTENT. — @ 196.17 m A FINE JOINT SLIP W CLAY GOUGE < 1 cm WIDE @ 55° TO C.A. — @ 197.16 m CLAY GOUGE W IN A 1 cm WIDE JOINT SLIP @ 60° TO C.A	Rare	<15	30	-	<15 ↑ W IN MINOR V-LETTING	4	—	-	—	-	UD-9612	185.15	186.65	1.5 m	0.007	0.36	
															UD-9613	186.65	188.15	1.5 m	0.005	0.19	
															UD-9614	188.15	189.65	1.5 m	0.007	0.14	
															UD-9615	189.65	191.15	1.5 m	0.006	0.15	
															UD-9616	189.15	192.65	1.5 m	0.005	0.13	
															UD-9617	192.65	194.15	1.5 m	0.005	0.11	
															UD-9618	194.15	195.65	1.5 m	0.006	0.19	
															UD-9619	195.65	197.15	1.5 m	<0.005	0.10	

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Specify ft. or m.

HOLE NUMBER 089-236 SHEET 13 of 17

INTERVAL FROM	INTERVAL TO	RECOVERY	ROCK TYPE	DESCRIPTION	ALTERATION Qv	Q	S	K	Ca	SULPHIDES Py	Sp	Ga	Tet	Pyr	SAMPLE No.	FROM	TO	WIDTH	ASSAYS Au o/t	Ag o/t	MAP Ag o/t
				below 197 m the core becomes bleached by more strong sericite alteration and perhaps by some clay alteration associated w a neighbouring fault system. The H = 4½ - 5. Qtz v-letting is now existent; the UNIT hosts up to 8% Py, seen in fine wispy massive stringers preferentially oriented in the direction of foliation @ ≈ 350° Fo 60° to C.A.. Silica alt'n is minor and mostly seen in matrix supporting frags.															
				199.5 m - 200.6 - strongly fractured zone w minor clay gouge along fracture surfaces. The fractures are @ 50°, 70° to C.A.				Arg.											
			ANTF/ANXT	below 205 the texture of the UNIT changes, w only minor, altered, Lapilli fragments being discernible; subunits of ANTF and ANXT are more prevalent. Moderate foliation is distint @ ≈ 70° to C.A.. The x-tal tuff sections are typified by strongly altered fine laths up to .15 mm long and .05 wide (completely altered), they follow foliation orientation. The overall alteration is made up of moderate argillic alteration w minor underlying sericitic alteration, and mod carbonatization. Silica alt'n is very weak. This UNIT hosts up to 6% Pyrite very finely diss. Qtz v-letting is rare <1% Mostly as fine wispy, irregularly intersected stringers. H = 4-5	<1	<5	<10	30	20+?	6%	-	-	-	-	UD-9629	203.15	204.65	1.5m	<0.005	0.06	
															UD-9625	204.65	206.15	1.5m	0.005	0.11	
															UD-9626	206.15	207.65	1.5m	<0.005	0.10	
															UD-9627	207.65	209.15	1.5m	<0.005	0.11	
															UD-9628	209.15	210.65	1.5m	<0.005	0.09	
															UD-9629	210.65	212.15	1.5m	<0.005	0.10	
															UD-9630	212.15	213.65	1.5m	<0.005	<0.05	
								Arg													
				214.8 m - 217.8 m An intensely fractured zone w moderate clay gouge along fracture surfaces. The fractures are @ 70° & 40° to C.A. most often. The country rock itself is a previously described though more strongly clay altered H = 4 - 4½; carbonatization is weak	<1	??	<3	35	10-20?	6	-	-	-	-	UD-9631	213.65	215.15	1.5m	<0.005	0.13	
															UD-9632	215.15	216.65	1.5m	0.005	0.14	
															UD-9633	216.65	218.15	1.5m	<0.005	0.20	

Specify ft. or m.

HOLE NUMBER 089-236 SHEET 14 of 17

INTERVAL FROM	INTERVAL TO	RECOVERY	ROCK TYPE	DESCRIPTION	ALTERATION Qv	Q	S	K	Ca	SULPHIDES Py	Sp	Ga	Tet	Pyr	SAMPLE No.	FROM	TO	WIDTH	ASSAYS Au o/t	Ag o/t	MAP Ag o/t
				TO mod. and sericite alt^N, is NOT PRESENT.				Arg													
			ANLT/ANXT	— below 218.2 m the UNIT, though still showing	<1	↑	~	ST.	mod	<2	—	—	—	—	UD-9634	218.15	219.65	1.5m	0.010	0.20	
				some strong clay gouging along some of											UD-9635	219.65	221.15	1.5m	<0.005	0.15	
				the fractured surfaces is NOT as fractured.											UD-9636	221.15	222.65	1.5m	<0.005	0.29	
				NOTE that foliation direction changes											UD-9637	222.65	224.15	1.5m	<0.005	0.16	
				to ≈ 30° to 40° to C.A. and is still quite																	
				distinct. Alteration has changed slightly,																	
				also, being still mod to strongly argillically																	
				altered and mod. carbonatized however,																	
				weak silicification is faintly and																	
				intermittently observed ☐ in the foliated																	
				ashy matrix. Qtz V-letting is still																	
				rare; though a small section @ 222.90 m																	
				has a re-coated V-letting section ≈ 4cm																	
				wide, cocking much visible sulph. MIN.																	
				— strong clay gouge joint slip ≈ 2cm wide																	
				@ 222cm @ 55° TOC.A.																	
			FAULT ZONE																		
224.74	227.06	2.20		FAULT ZONE - INTENSE clay gouging and	—	—	?	—	WK	TR	—	—	—	—	UD-9638	224.15	225.65	1.5m	<0.005	<0.005	
				fracturing @ TWO PRESENTIAL fracture											UD-9639	225.65	227.06	1.41m	0.005	0.29	
				direction ie @ 30° & 50° TO C.A.. The ROCK IS																	
				INTENSELY fractured and clay altered,																	
				WEAK CARBONATIZATION IS PRESENT.																	
				CONTACT defined by last appearance of clay																	
				gouge on fracture surface. @ ≈ 50° TO C.A.				Arg	Ca													
227.06	244.50	17.40	ANTF	ANDESITE TUFF - fine grained, moderately	<1	↑	—	M-ST.	WK	1-2	—	—	—	—	UD9640	227.06	228.56	1.5m	0.005	0.22	.002/.11
				foliated, mod-strong argillically		↗									UD-9641	228.56	230.06	1.5m	0.008	0.25	
				altered, weakly carbonatized, and											UD-9642	230.06	231.56	1.5m	<0.005	0.20	
				minor weak silica alte.. It is a dark	beginning to appear as weak stockwork										UD-9643	231.56	233.06	1.5m	<0.005	0.31	
				to medium grey in color. The foliation is	<4 cm wide sections										UD-9644	233.06	234.56	1.5m	<0.005	0.24	
				@ 50°-60° TO C.A. and possibly contains											UD-9645	234.56	236.06	1.5m	<0.005	0.42	
				some subunits of ANLT & ANXT though											UD-9646	236.06	237.56	1.5m	<0.005	0.35	
				textures are altered out. It hosts											UD-9647	237.56	239.06	1.5m	0.008	0.38	
				1-2% pyrite very finely disseminated.											UD-9648	239.06	240.56	1.5m	0.005	0.29	
				QTZ-V-letting is rare, though a few											UD-9649	240.56	242.06	1.5m	<0.005	0.36	

Specify ft. or m.

HOLE NUMBER 089-236 SHEET 15 of 19

INTERVAL FROM	INTERVAL TO	RECOVERY	ROCK TYPE	DESCRIPTION	ALTERATION Qv	Q	S	K	Ca	SULPHIDES Py	Sp	Ga	Tet	Pyr	SAMPLE No.	FROM	TO	WIDTH	ASSAYS Au o/t	ASSAYS Ag o/t	MAP Ag o/t
				mostly irregular wisps do occur sporadically. Also a couple of v-lets ≈ 1½ cm wide occur @ ≈30° to C.A. Thought bottom of sulphide min.												UD-9650	242.06	243.56	1.5 m	0.012	0.59	
				— @ 23.49 m a strong clay gouge slip or joint fracture ≈ 2 cm wide @ ≈30° to C.A.												UD-9651	243.56	244.50	.94 m	0.006	0.73	
				— below 240 m the alteration changes slightly, i.e. weakly increasing silica alt'n, accompanied by weak irregular Qtz v-letting that are beginning to increase in numbers. (<2%) these v-lets are usually fine wispy and irregular usually much less than ½ cm wide and discontinuous. Usually made up of up to 10% calcite but bottom of visible sulphides.																		
				— Note that the country rock, previously carbed., shows decreasing carb alt'n w/ increase in silicification.																		
249.50	250.85	6.35	QTZM	Contact gradational, defined by Alt'n change QUARTZ ZONE - fine grained, equigranular, w/ joint weak foliation @ ≈50° to C.A.?, strongly silicified, and a med to light bleached greyish in color. Weak to moderate QUARTZ veinletting is now evident, (WSW), injected both sharply and irregularly, up to 1½ cm in width, often criss-crossing each other @ 30° & 80° to C.A.. Some sporadic traces of Tet are observed but for the most part appear bottom of sulphides. The host country rock can host up to 3% Pyrite finely diss. and in small massive scattered blebs. Trace sericite may be observed.	<10	65+	Tr	-	-	3	Tr	-	Tr	-	UD-9652	244.50	246	1.5 m	0.038	3.73	
															UD-9653	246	247.5	1.5 m	0.084	4.06	
															UD-9654	247.5	249	1.5 m	0.022	1.11	
															UD-9655	249	249.93	.93	0.054	1.92	
															UD-9656	249.93	250.85	.92	0.370	2.31	
															UTZ	.095, 2.72					
																6.35 m					
																	of				
																.113, 2.40					
																9.85					

3/4/89

Tr = w/ in very few Qtz v-lets

Specify ft. or m.

HOLE NUMBER U89-236 SHEET 16 of 17

INTERVAL FROM	INTERVAL TO	RECOVERY	ROCK TYPE	DESCRIPTION	ALTERATION Qv	Q	S	K	Ca	SULPHIDES Py	Sp	Ga	Tet	Pyr	SAMPLE No.	FROM	TO	WIDTH	ASSAYS Au oz/t	Ag oz/t
?				Hole extended March 24 to 26/89 to further test U.T.C. Zone																
250.9	275.3		QTZN	Quartz zone in andesite tuff, generally f.g. w/ the occasional lapilli fragment mod. development of qtz veinlets w/ pervasive qtz flooding, andesite breccia in some of the larger qtz veinlets, very minor carbonate, PY dissem Tet, SP & GL along veinlets and fractures 264.6 - 264.7 Rubbly Core 267.6 - 267.7 SP blobs in a qtz veinlet 268.4 - GL & qtz vein (1cm) along fracture @ 68° to C.A. 269.6 - 269.7 - fractures w/ qtz xtals 271.8 - 275.3 increase in qtz 272.3 - 273.0 - PY & Tet dissem in qtz. 274.0 - 274.6 - ground core, 30 cm core loss	15-20	20	2	-	1	2-5	Tr	Tr	Tr	-	U4517	250.9	251.8	0.9	.031	.43
															U4518	251.8	252.8	1.0	.021	.75
															U4519	252.8	253.8	1.0	.017	.66
															U4520	253.8	254.8	1.0	.016	.51
															U4521	254.8	256.3	1.5	.038	.70
															U4522	256.3	257.8	1.5	.026	.50
															U4523	257.8	259.3	1.5	.022	1.03
															U4524	259.3	260.8	1.5	.013	1.03
															U4525	260.8	261.8	1.0	.033	.93
															U4526	261.8	262.7	0.9	.031	1.22
															U4527	262.7	263.6	0.9	.058	2.46
															U4528	263.6	264.6	1.0	.035	1.76
															U4529	264.6	265.6	1.0	.040	3.80
															U4530	265.6	266.6	1.0	.034	1.09
															U4531	266.6	267.6	1.0	.036	2.09
															U4532	267.6	268.6	1.0	.030	.82
															U4533	268.6	269.6	1.0	.033	3.59
															U4534	269.6	270.6	1.0	.024	2.10
															U4535	270.6	271.6	1.0	.021	1.02
															U4536	271.6	272.3	0.7	.027	1.21
															U4537	272.3	273.0	0.7	.333	10.29
											Au e = .347				U4538	273.0	273.8	0.8	.045	16.20
										UTC	.181	, 10.75			U4539	273.8	274.6	0.8	.100	18.48
												4.0m			U4540	274.6	275.3	0.7	.024	1.33
275.3	282.3		QTVN	Quartz Vein, qtz stwk. - white quartz, andesite fragments highly silicified, dissem PY w/ minor Tet, SP, gradational contacts	75	10	-	-	-	3	Tr	Tr	Tr		U4541	275.3	276.3	1.0	.360	7.14
															U4542	276.3	277.3	1.0	.017	1.52
															U4543	277.3	278.3	1.0	.018	1.92
															U4544	278.3	279.3	1.0	.072	4.97
											Au = .115				U4545	279.3	280.3	1.0	.019	3.52
										UTC	.051	, 4.16			U4546	280.3	281.3	1.0	.025	1.96
												5.5m			U4547	281.3	282.3	1.0	.058	5.56
															[illegible]			1.0	.071	4.58

Specify ft. or m.

HOLE NUMBER 489-236 SHEET 17 of 17

INTERVAL FROM	INTERVAL TO	RECOVERY	ROCK TYPE	DESCRIPTION	ALTERATION Qv	Q	S	K	Ca	SULPHIDES Py	Sp	Ga	Tet	Pyr	SAMPLE No.	FROM	TO	WIDTH	ASSAYS Au oz/t	Ag oz/t
282.3	289.9		HELT	Heterolithic Tuff - dark to mod. grey, f.g., w/ fragments of qtz & light grey lapilli, very irregular/swirling textural	7	10	5	—	1	8	Tr	Tr	Tr	—	45548	282.3	283.8	1.5	.071	4.58
	E.O.H.			fracture @ 282.8 w/ 15 cm of qtz @ 22° to C.A.											45549	283.8	285.3	1.5	.007	.60
				286.3 - 286.6 - weak silicification w/ minor Tet, PY & SP							Ave = .225				45550	285.3	286.9	1.6	.083	12.81
										UTC	.115, 7.14				45551	286.9	288.4	1.5	.032	3.64
				Hole stopped due to lack of drill rods							4.6m				45552	288.4	289.9	1.5	.212	4.60