

DRILL HOLE LOG

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From	To	Description	Sample	From	To	Length	Pb	Zn	Ag	Sr	Au	As
228.96	268.85	<u>Andesitic Lapilli - Ash Tuff</u> : Lt green to lt. greenish grey. Massive, competent. Lapilli are rounded to angular, sl. darker than matrix. 259 - 262 Irregular blk calcareous replacement zones, from approx 30% of interval. Bituminous?										
268.85	277.00	<u>Andesite Ash Tuff</u> : Lt-med grey, sl. greenish. Massive thk bedded ash tuff with thin lt. grey volc mudstone partings approx 0.1 m thk. Occasional minor lapilli development. Contains a few dk grey carbonaceous streaks.										
277.00	282.00	<u>Amygdaloidal Flow</u> : Pale green, Andesitic, slightly calcareous. Dk grey amygdules to 1 mm locally well developed. Unit is brecciated towards base with a calcareous slightly carbonaceous matrix.										
282.00	287.70	<u>Andesitic Ash Tuff</u> : Massive; med gy, calcareous. Similar to matrix material in lower part of overlying unit Calcite clots in lower part Dk grey zones of f.g. dissem py to 0.15 m thk. Approx 10% py.										
287.70	300.00	<u>Massive Andesite Ash Tuff</u> : Hornblendes to 1 mm often present. Massive, unbedded. Sparse white ash specks throughout. Locally bleached eg/296 m. Minor calcite veining. Py stringers from 293.4 - 293.6										
300.00	305.40	<u>Sheared Andesite Ash Tuff</u> : Fg - mg massive ash tuff. Sl. carbonate flooded matrix in lower part. Strong shear zones developed throughout @ 30-40° to core axis. Shears from 1 mm to 0.3 m thk with contorted shear fabric. eg/ 301.97 - 302.75 and 303.35 to 303.95. Shears dk grey due to dissem py min and carbonaceous impurities. Up to 35% calcite veining in larger shears.	31251	301.97	202.75	0.78	20	107	0.4	1174	10	35
			31252	302.75	303.35	0.60	14	122	0.4	1161	5	20
			31253	303.35	303.95	0.60	8	93	0.2	935	<5	25
			31254	303.95	305.40	1.45	8	96	0.4	610	10	30
305.40	307.25	<u>Calcareous Mudstone</u> : Med. gy. strongly calcareous, fg tuffaceous mudstone: Banded over lower 0.3 m with contorted	31255	305.40	306.65	1.25	10	36	0.2	1749	15	50
			31256	306.65	307.25	0.60	44	631	0.8	1737	10	125

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From	To	Description	Sample	From	To	Length	Pb	Zn	Ag	Sr	Au	As
		py. lams. Upper part is strongly brecciated, sheared, and calcite veined. (30% irreg. white calcite veins) Thin grey mud seam at 305.7 m										
307.25	307.80	<u>Cherty Ash Tuff</u> : Lt grey fg to mg ash tuff. Approx 3% py clots, dissems.	31257	307.25	307.80	0.55	28	708	0.4	1062	<5	110
307.80	313.80	<u>Andesite Ash Tuff</u> : Very similar to 300.0 - 305.4 Fg - mg uniform massive ash. lt green. Contains approx. 15% dk grey replacement zones consisting of f.g. dissem py laminating from fractures. These resemble crackle breccias, and are similar to h.w. py zones in K-88-5. Best developed in 307.8 - 309.42 Py repl zones offset by later calcite filled fractures. Several 0.1 - 0.2 m zones of white calcite 313.6 - 313.8, Gouge, Fault	31258 31259 31243 31244	307.80 309.42 310.59 312.25 313.80	309.42 310.59 312.25 313.80	1.62 1.15 1.66 1.55	30 20 20 8	116 105 126 100	0.6 0.4 0.4 0.4	982 930 357 2080	15 10 5 15	230 65 10 10
313.80	317.27	<u>Thin Bedded to Laminated Carbonate</u> : Lt-med. grey slightly tuffaceous 1st/inudst. Contains bands of dk gy. carbonaceous 1st. eg/317.1 m Numerous high angle fractures truncate lam'n. Ave 5-7% py, locally up to 30% py as in 315.4 - 315.9 Locally contorted. Bdg. often disrupted into ovoid shaped zones up to 3 cm long. 3-5% white calcite vein, locally to 50%. 314.5 - 314.7 pale gn andesite lapilli-ash tuff.	31245 31246 31247 31248	313.80 314.78 316.28 316.69	314.78 316.28 316.69 317.27	0.98 1.50 0.41 0.58	34 104 148 186	317 1115 917 1808	0.6 1.0 0.8 2.0	2388 2347 957 2362	10 5 15 5	15 490 250 260
317.27	319.80	<u>Calcareous Sanov Epiclastic Ash Tuff (Diamictite)</u> : Lt gy. Well sorted blk calcareous mudstone frags. grains. Graded from 0.05 cm frags @ base to fg sand at top. Med. gr. tuffaceous matrix with 5% dissem py, tr. sphal	31249 31250	317.27 318.20 319.80	318.20 319.80	0.93 1.60	728 158	1.30% 2238	0.8 1.2	2336 2359	5 <5	220 125
319.80	320.50	<u>Laminated to Contorted Carbonate</u> : Banded blk carbonate and lt. grey calcareous ash tuff. Contains irreg. diamictity zones which crosscut carbonate lam'n. Minor discontinuous blk chert bands at top. To 5% lam'd-dissem py.	31260	319.80	320.50	0.70	32	257	1.2	1197	15	200

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320.50	321.40	<u>Diamictite</u> : Same as bottom part of 317.27 - 319.8 Dk carbonate and lt. grey f.g. tuff frags comprise 70% of unit. 1-2 mm size. Lt gy tuffaceous matrix. 1-2% dissem py.	31261	320.50	321.40	0.90	32	1414	1.0	1164	<5	140
321.40	324.10	<u>Cherty Calcareous Mudstone</u> : Lt-med gy banded 1st., locally very cherty. Contorted. Soft sed slumping? Occ. blk carbonate bands. Locally up to 10% white calcite vein stockwork. 0.2 m of non-calcareous cherty mudst. @ base. Gouge zones @ 321.4 - 321.6 and 322.75 - 322.9	31262	321.40	322.78	1.38	352	1649	1.0	1145	5	205
			31263	322.78	324.10	1.32	222	2938	2.4	1172	10	160
324.10	325.82	<u>Carbonate - Sulfate - Sulfide Laminate</u> : Disrupted laminae of lt gy sulfate (barite), lt gy to blk carbonate, and minor py - sphal. 325.28 - 325.80 Sphal. laminae confined to thin section, 1st 15% sphal in 325.6 - 325.8 325.5 - 325.6 Lt grey-tan pyritic tuff. Euhedral vfg dissem py <3% 324.1 - 324.8 White calcite veining approx. 50% Core-bdg angle 80° @ 325.7 m	31264	324.10	325.24	1.14	62	322	0.6	1050	15	100
			31265	325.24	325.82	0.58	174	1.02%	2.0	1137	10	100
325.82	326.72	<u>Diamictite</u> : Blk, carbonaceous ash matrix, non-calcareous. Frags of blk 1st, lt gy f.g. ash tuff, and minor massive py. Massive. Ungraded.	31266	325.82	326.72	0.90	112	1808	0.4	1225	<5	730
326.75	327.56	<u>Laminated Carbonate</u> : Blk-dk gy 1st. Disrupted laminae. Lossenge shaped ash tuff fragments. Lt grey, tuffaceous in lower part. Up to 10% contorted py lams tr. sphal.	31267	326.72	327.56	0.84	74	1251	1.8	1094	<5	680
327.56	328.24	<u>Diamictite</u> : same as 325.8 - 326.72 Approx 3% dissem py, mainly as repl. of clasts.	31268	327.56	328.24	0.68	20	1106	0.6	700	10	675
328.24	330.95	<u>Carbonate - Sulfate - Sulfide Laminate</u> : Predominantly lam'd lt-med grey 1st. Planar to contorted lam'n, 80-85° to c.a. Py lams from 1 to 15%, nul approx 2%. Up to 30% sulfate. Weakly lam'd pale vfg sphal @ 330.6 - 330.8	31269	328.24	239.25	1.01	66	1208	0.5	910	<5	120
			31270	329.25	330.10	0.85	186	3392	3.4	1039	10	115
			31271	330.10	330.95	0.85	326	1.12%	2.4	810	10	250

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From	To	Description	Sample	From	To	Length	Pb	Zn	Ag	Sr	Au	As
		Massive beds of lt gy fg non-calcareous ash tuff @ 328.7 - 223.88 and 329.1 - 329.27										
330.95	333.45	<u>Laminated Black Tuffaceous Mudstone:</u> Dk gy-blk. Carbonaceous. Delicate lam'n @ 75° to c.a. Contains lt gy ash tuff lams to 0.5 cm. Local c.g. ash particles in blk mudst. Calcareous in upper part. Ave 3-5% py as lams. Locally 15% py. White calcite veining approx 5% Crush zones @ 331.5, 332.35 (minor Flts?) 330.95 - 331.75 approx 10% py lams.	31272	330.95	331.75	0.80	596	1.93%	2.6	1201	15	630
			31273	331.75	332.35	0.60	268	3582	0.4	1123	10	835
			31274	332.35	333.10	0.75	432	4862	1.8	1226	5	360
			31275	333.10	333.50	0.40	282	2746	1.4	571	<5	145
333.345	333.73	<u>Black Carbonate:</u> Numerous lt. grey calcareous ash tuff clasts. Weakly banded @ 80° to c.a. Vfg dissem py. sphal throughout. Approx 2% sphal avc. 133.1 - 133.5 lt gy m.g. ash tuff.	31276	333.50	334.18	0.68	3784	4.18%	113.0 alt	573	25	1365
333.73	335.05	<u>White/Lt Grey Sulfidic Diamictite (Lapillistone):</u> Dk grey cherty frags throughout. Same as 342.91 - 344.20 in K-89-6 Ext. 333.73 - 333.90 Est. 70% sphal as matrix. 333.90 - 334.18 Est 30-50% py matrix. 334.18 - 335.05 pale yellow grey ash tuff matrix. 5% py as replacement of clasts.	31277	334.18	335.05	0.87	2590	9985	55.3 alt	429	5	245
335.05	337.00	<u>Dk. Grey Ash Tuff:</u> m.g. - c.g. ash. Massive. Unbedded. Carbonaceous. Non-calcareous. Locally quite cherty. Locally resembles a fg. diamictite 335.05 - 335.20 Diamictite with blk carbonate frags.	31278	335.05	335.87	0.82	1208	5860	9.2	262	15	610
			31279	335.87	337.00	1.13	558	844	2.4	538	<5	380
337.00	366.20	<u>Lapilli - Ash Tuff:</u> Med gy, sl. greenish. Massive. A few beds of mg-cg ash tuff. Strongly feld-phyric in sections, esp 355-359. Andesitic. 345.5 - 350.0 Contains several beds of lt. gy vfg ash tuff. Upper section (to 345 m) is altered with a brown-grey platy	31280	337.00	338.50	1.50	162	150	1.8	595	40	260
			31281	338.50	340.00	1.50	172	130	0.8	660	10	425
			31282	340.00	341.50	1.50	84	155	0.6	570	<5	710
			31283	341.50	343.00	1.50	158	155	0.8	450	10	475
			31284	343.00	344.50	1.50	220	396	1.8	419	20	410

