2001 HAT Property Diamond Drill Log HT - 5				Hole #:	***HT-5***				
Date Started:		June 06, 2001		Date Finished:	June 11, 2001		Final Depth:		662 feet
Grid location:		L132+00N / 16+50W		Inclination:	-48		Azimuth:		270
Core Size:		NQ		Drill Rig:	Long Year 38		Logged By:		XD Jiang
Core Stored At:		200 Range Road, Whitehorse, YT Government core library.							
Drilling Contractor:		KLUANE DRILLING LTD., 14 MacDonald Road, Whitehorse, Y.T. Y1A 4L2							
Location:		On HAT 23 claim, about 1100 feet southeast of HAT 23 #2 post, and about 50 ft off the Whitehorse Traverse Line.							
Samples:		322548 - 322570							

Footage								
From (ft)	To (ft)	Width (ft)	Sample #	Description	Au ppb	Cu %	Ag ppm	Mo ppm	Bi ppm
0.0	**37.0**	**37.0**		Overburden - glacial deposits					
37.0	**92.8**	**55.8**		**GRANODIORITE,** medium grey to light greenish grey, medium to coarse grained, massive granular to local weak to moderately fractured, chloritized mafic 25-40%, minor secondary dark brown biotite, weakly to local moderately magnetic. Fairly homogeneous, but with some Ep alteration patches and along fractures. minor bleached silicious fractures normally associated with disseminated halos of Cpy, local Bor and Mal stain, from 50 to 58.3 ft, Cpy nearly 1%. Lower contact sharp @ 40CA.					
50.0	52.5	2.5	322548	1% disseminated Cpy in and near bleached fractures.	<5	0.16	<0.2	7	10
52.5	55.0	2.5	322549	0.5% disseminated Cpy	20	0.20	0.2	1	2
55.0	58.3	3.3	322550	1-1.5% disseminated Cpy	65	0.29	0.6	6	26
67.2	72.0	4.8	322551	1% Cpy, Mal, minor Cup along fractures.	30	0.14	0.4	3	14
92.8	**94.0**	**1.2**		**MAFIC DIKE,** dark green, fine grained, chloritic, minor disseminated light grey to white carbonate blebs, weakly calcareous. Lower contact sharp @ 48 CA.					
94.0	**101.7**	**7.7**		**GRANODIORITE,** same as 37 - 92.8 ft. Lower contact sharp @ 53 CA.					
94.0	99.0	5.0	322552	trace to 1% Cpy and trace Mal along fractures.	20	0.15	<0.2	3	8
101.7	**103.1**	**1.4**		**MAFIC DIKE,** same as 92.8 - 94 ft. Lower contact sharp @ 45 CA.					
103.1	**110.0**	**6.9**		**GRANODIORITE,** same as 37 - 92.8 ft, but 20-30% are Ep altered patches and along fractures at low core angles. Lower contact sharp but broken at about 60 CA.					
110.0	**110.8**	**0.8**		**MAFIC DIKE,** same as 92.8 - 94 ft. Lower contact sharp but broken at about 75 CA.					

Bor - bornite, Cc - chalcocite, Cpy - chalcopyrite, Mal - malachite, Mo - molybdenite, Po - pyrrhotite, Py - pyrite, Cal-calcite, Diop-diopside, Ep-epidote, Gar-garnet, Qz-quartz, Trem-tremolite, Wol-wollastonite. CA = (degrees to) core axis.

Footage									
From (ft)	To (ft)	Width (ft)	Sample #	Description	Au ppb	Cu %	Ag ppm	Mo ppm	Bi ppm
110.8	**121.0**	**10.2**		**GRANODIORITE,** same as 37 - 92.8 ft. From 115 to 123 ft is a fault zone, well fractured, and some decomposed granodiorite with minor local fault gouge. Lower contact broken.					
121.0	**124.4**	**3.4**		**MAFIC DIKE,** similar to that of 92.8 - 94 ft, upper half well fractured in fault zone, 3-5% fracture filling calcite veinlets, Chlorite-Ep altered (propylitic alteration). Lower contact sharp @ 42 CA.					
124.4	**158.6**	**34.2**		**GRANODIORITE,** same as 37 - 92.8 ft, top 2 ft skarnified with minor Gar and Qz veinlets, over all only occasional disseminated Cpy, lower contact sharp @ 40 CA.					
158.6	**162.2**	**3.6**		**MAFIC DIKE,** similar to that of 92.8 m- 94 ft, lower contact sharp @ 40 CA.					
162.2	**220.4**	**58.2**		**GRANODIORITE,** same as 37 - 92.8 ft, trace sulphides, occasional Cpy, lower contact 0.5 ft weakly silicified, contact sharp @ 42 CA.					
220.4	**230.8**	**10.4**		**LAMPROPHYRE DIKE,** dark grey, greenish grey to brown, medium to coarse grained, massive, biotitic, chlorite altered, weakly calcareous, moderately magnetic, minor Hem stained dark pinkish-red feldspars. Lower contact sharp at about 90 CA.					
230.8	**240.3**	**9.5**		**GRANODIORITE,** same as 37 - 92.8 ft, but weakly mineralized with 0.5 - 1% disseminated Cpy near bleached silicious fractures (mostly @ 60-75 CA).					
230.8	234.0	3.2	322553	0.5% Cpy.	15	0.06	<0.2	1	8
234.0	237.3	3.3	322554	1% Cpy.	15	0.11	<0.2	6	8
237.3	240.3	3.0	322555	<0.5% Cpy.	<5	0.11	<0.2	69	8
240.3	**242.5**	**2.2**		**MAFIC DIKE,** same as 92.8 - 94 ft, upper contact @ 40 CA, lower contact @ 55 CA.					
242.5	**272.3**	**29.8**		**GRANODIORITE,** same as 37 - 92.8 ft, disseminated Cpy common in upper half but over all less than 0.5%. At 244.9 ft is a 0.5 cm Bor-Cpy-Qz veinlet @ 40 CA, with 0.5 ft disseminated Cpy halo. Lower contact sharp @ 40 CA.					
242.5	246.5	4.0	322556	1% Cpy, trace Bor.	35	0.17	2.0	56	20
272.3	**275.0**	**2.7**		**MAFIC DIKE,** same as 92.8 - 94 ft, lower contact sharp @ 36 CA.					

Bor - bornite, Cc - chalcocite, Cpy - chalcopyrite, Mal - malachite, Mo - molybdenite, Po - pyrrhotite, Py - pyrite, Cal-calcite, Diop-diopside, Ep-epidote, Gar-garnet, Qz-quartz, Trem-tremolite, Wol-wollastonite. CA = (degrees to) core axis.

Footage									
From (ft)	To (ft)	Width (ft)	Sample #	Description	Au ppb	Cu %	Ag ppm	Mo ppm	Bi ppm
275.0	**326.0**	**51.0**		**GRANODIORITE,** same as 37 - 92.8 ft, weakly mineralized with Cpy and local Cpy-Bor veinlets and associated disseminated Cpy halos. Cpy up to 1%. At 285 ft there are two Bor-Cpy veinlets @ 20-25 CA. Lower contact gradational.					
298.2	301.0	2.8	322557	1 - 1.5% Cpy veinlets and disseminated Cpy, trace Mo.	10	0.29	<0.2	13	6
305.6	309.0	3.4	322558	1-2% Cpy, trace Bor. Including 7 Cpy-(Bor)-Qz(or siliceous) veinlets of several mm mostly @ 55 - 60 CA.	855	0.52	2.8	109	46
326.0	**330.5**	**4.5**	322559	**MINERALIZED GRANODIORITE,** same as 37 - 92.8 ft, but mineralized with about 30 veinlets, mostly less than 0.5 cm except one 3 cm, composed of siliceous material (Qz)-Cpy-(Bor)-(Mo), nearly parallel at about 70 CA. Over all about 2% Cpy, 1% Bor and trace Mo.	560	1.02	11.2	139	76
330.5	**395.0**	**64.5**		**ALTERED GRANODIORITE,** similar to that of 37 - 92.8 ft, but with 35 - 40% bleached and Ep altered patches and ghosty bands along fractures (most @ about 30 CA), occasional Qz-Cpy veinlets and disseminated specks, local some rusty fractures with trace Cup, Mal and native copper. Lower contact gradational.					
340.5	343.0	2.5	322560	0.5% Cpy, trace Mal and Cup.	65	0.29	1.4	5	18
395.0	**428.5**	**33.5**		**WEAKLY MINERALIZED GRANODIORITE,** similar to that of 37 - 92.8 ft, but with more Ep altered bleached patches, and more Qz-Cpy veinlets, on average about 2-3 veinlets per five feet, local 2-3 veinlets per foot, the veinlets are mostly few mm thick, some 1-3 cm thick, arranging from 35 - 70 CA, normaly associated with disseminated Cpy halos. Also minor calcite veinlets and chloritic fractures. Some of the Qz veinlets seems to be chalcedonic, easier to scratch with a carbide scratcher. Also found in one small vug are some white to clear adularia (?)					
404.1	406.8	2.7	322561	Including a 2 cm and a 1 cm Qz-Cpy, and a 2 mm Cal-Cpy veinlets. 1 - 1.5% Cpy, trace Bor and Mo.	20	0.26	0.2	6	8
416.9	420.4	3.5	322562	Including two fine Ep-Cpy stringers, two Qz-Cpy-(Mo) and one Mo-Cpy veinlets. 0.5 - 1% Cpy, trace Mo.	20	0.22	<0.2	173	4
424.0	426.0	2.0	322563	Including five fine Cpy stringers in the middle, one Qz-Cpy veinlet (1 cm) and disseminated Cpy halos. 2 - 3% Cpy.	25	0.52	0.2	4	6

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Footage									
From (ft)	To (ft)	Width (ft)	Sample #	Description	Au ppb	Cu %	Ag ppm	Mo ppm	Bi ppm
428.5	**467.0**	**38.5**		**WELL FRACTURED CHLORITIZED GRANODIORITE,** medium to dark green, local bleached, well fractured with fine chloritic - (calcitic) fillings, local moderately calcareous. Occasional					
445.0	449.5	4.5	322564	Trace disseminated Cpy.	25	0.28	0.6	5	10
467.0	**564.0**	**97.0**		**WEAKLY MINERALIZED GRANODIORITE,** similar to that of 395 - 428.5 ft, but the Qz-Cpy veinlets are bigger (thicker), normaly in cm scale, including a 8 cm one, and the Cpy content is higher, some with Bor and Cc (at 547), the veining intensity on average about 3-4 veinlets per five feet, to about one veinlet per foot locally. Lower contact gradational.					
478.8	482.0	3.2	322565	Including 3 Qz-Cpy-Bor veinlets @ 40 - 45 CA, and a few fine Cpy stringers, some Ep-Chl fractures but few with Cpy specks. Over all Cpy 1-1.5%, trace Bor and Mo.	1760	0.54	4.4	14	74
488.8	492.3	3.5	322566	Including 5 Qz-Cpy-(Bor) veinlets, minor silicification, over all 2-3% Cpy, trace Bor and Mo.	70	0.69	0.8	18	32
505.4	508.6	3.2	322567	One 8 cm Qz-Cpy-Bor-Mo vein @ 55 CA, with 5-7% sulphides in it. A few fine Qz-Cpy and one Cal-Cpy veinlets, over all 2% Cpy, Bor and trace Mo.	145	0.50	6.0	71	38
508.6	513.0	4.4	322568	A few mm scale Qz-Cal-Cpy veinlets, brecciated in the middle with bleached granodiorite breccia supported by dark green Chloritic and calcitic matrix, minor Cpy blebs, over all 0.5 - 1% Cpy.	<5	0.12	<0.2	6	14
513.0	517.0	4.0	322569	Moderately fractured with Chl-Cal fillings, local silicified, including 5 Qz-Cpy-(Cal) veinlets, over all 1-1.5% Cpy.	70	0.39	2.6	28	20
559.0	563.0	4.0	322570	Including 7 Qz-Cal-Cpy fine veinlets, with one 2cm thick @ 25 CA along fracture, minor native copper and Mal on fracture surface. Over all 1-2% Cpy, Bor and trace native copper and Mal and Mo.	10	0.38	1.4	149	10
564.0	**607.5**	**43.5**		**WEAKLY ALTERED GRANODIORITE,** similar to above, but with less veining and most of the veinlets do not carry as much Cpy or barren. Lower contact sharp @ 40 CA.					
607.5	**615.3**	**7.8**		**ALTERED MAFIC DIKE,** dark greenish grey, medium to coarse grained, massive, Ep - propylitic alteration, weakly calcareous, minro Cal stringers. Lower contact sharp @ 50 CA.					

Bor - bornite, Cc - chalcocite, Cpy - chalcopyrite, Mal - malachite, Mo - molybdenite, Po - pyrrhotite, Py - pyrite, Cal-calcite, Diop-diopside, Ep-epidote, Gar-garnet, Qz-quartz, Trem-tremolite, Wol-wollastonite. CA = (degrees to) core axis.

Footage									
From (ft)	To (ft)	Width (ft)	Sample #	Description	Au ppb	Cu %	Ag ppm	Mo ppm	Bi ppm
615.3	**662.0**	**46.7**		**GRANODIORITE,** similar to that of 37 - 92.8, weakly Ep altered, minor chloritic fractures, trace local disseminated Cpy and Cpy stringers. At 630.4 ft is a 5 cm banded Qz-Cal-Hem-(Cpy) vein @ 75 CA. OVER ALL THE ENTIRE HOLE IS IN THE SAME INTRUSIVE WHICH IS MOSTLY WEAKLY MINERALIZED WITH SCATTERED QZ-CPY VEINLETS AND MINOR DISSEMINATED CPY.					
662.0				END OF HOLE.					

Bor - bornite, Cc - chalcocite, Cpy - chalcopyrite, Mal - malachite, Mo - molybdenite, Po - pyrrhotite, Py - pyrite, Cal-calcite, Diop-diopside, Ep-epidote, Gar-garnet, Qz-quartz, Trem-tremolite, Wol-wollastonite. CA = (degrees to) core axis.