

UTM East: 534498

UTM North: 5409065

Grid East: -108+00

Grid North: 01+36

Elevation : 198m

Dip : -57 deg

Azimuth : 126 deg

Total Depth : 470.73m

Claim Number: AND Charter

Core Size: NQ

Remarks: Hole is capped and lined with small PVC pipe (ID=40mm, OD=48mm)

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dodge**

Corporation of Canada, Limited

DIAMOND DRILL CORE LOG

Project No: 294

Hole No. MM-294-17

Property: Mary March

NTS: 12A/15 Grid Name: MM 1999

Date Started: 21/06/2000 Completed: 28/06/2000

Contractor: Petro

Logged by: JG Thurlow

Depth (m)		Major Rock Description			Minor Rock Description			Assays								
From	To	Code	Lithology	Comments	From	To	Code	Comments	From	To	Sample	Cu %	Pb %	Zn %	Ag ppm	Au ppb
0.00	2.10	OB	Overburden	Dacitic flows and hyaloclastic breccias with some possible related intrusive phases; flow lithologies are weakly (locally moderately) altered and pyritized while potential intrusives are not. Typical of uppermost felsic lithology but this is somewhat more mineralized and altered than normal. Plagioclase phenocrysts generally not easily visible - these are locally altered to sericite. Common leucoxene specks, often associated with darkish chloritic specks. Mottled colours locally associated with small silica-filled voids; elsewhere with indistinct perlitic cracks. Generally weakly sericitized or with zones of dull, pinkish-brownish hard (silicic?) alteration which is preferentially associated with zones of pyritic veining. Common disseminated pyrite and local stringers and veinlets of dull, low-temperature pyrite - no alteration selvages. Local flow banding highlighted by weak alteration. Generally somewhat broken core - brittle fracture generally without shears or fault gouge. Local traces of epidote and hematitic alteration. K = 0.0.	8.80	12.00	D2	Common 1 cm wide massive medium-grained pyrite boxwork veins forming in brittle fractures. Distal, dull, low-temperature pyrite. No alteration selvages. These are moderately conductive and would yield some EM response.								
2.10	155.90	D2	Dacitic flows		14.60	15.60	D2	Massive pyritic veinlets occur in brittle fractures, as 8.8m-12.0m.								
					27.70	30.30	D2	Mimor pyrite veining, as previous sub-intervals								
					37.80	57.50	D2	Minor pyrite veining, as sub-units above. 1% pyrite overall. Silicic alteration. From 51.8m - 52.0m minor fault gouge. At 57.5m a minor shear at 30 degrees to core marks the end of pyritic fractures and a change to more sericitic alteration below.								
					61.90	63.10	D2	Moderate brittle shearing 45 degrees to core, some gouge.								
					63.10	73.50		Massive, medium-dark green, unaltered and unmineralized dacitic (intrusive?)								
					73.50	77.00	M	Fairly strong Brittle shear within diabasic host rock. Broken core, calcite veining, some fault gouge; shearing seems to be approx. 40 degrees to core. Lower contact is chilled 40 degrees to core.								
					95.40	101.40	D2	Massive, medium-dark green, essentially unaltered and unmineralized dacitic (intrusive?)								
					116.70	120.10	D2	Massive, medium-dark green dacitic intrusive, unaltered and unmineralized. Sharp contacts with wallrocks.								
					137.00	138.40	D2	Medium - dark green dacitic intrusive(?) rock. Upper contact is sharp and appears to be intrusive - it post-dates the weak to moderate alteration and mineralization of the felsic volcanic host.								

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Depth (m)		Major Rock Description			Minor Rock Description				Assays							
From	To	Code	Lithology	Comments	From	To	Code	Comments	From	To	Sample	Cu %	Pb %	Zn %	Ag ppm	Au ppb
					189.90	222.30		Nebulous mafic-intermediate volcanoclastic rocks, generally with silica-filled amygdules and having experienced moderate fluid flux. Clast-like entities include (1) various amygdular and porphyritic basalts, (2) diabasic textured rocks, (3) brownish, weakly hematitic, siliceous, amygdular and (4) irregular chloritic, melanocratic entities. Somewhat colourful rocks in a muted way. These rocks do not carry the pervasive calcite effervescence seen in units below 253m. Shearing at basal contact.								
					222.30	231.40		Massive intermediate intrusive characterized by elongate calcite amygdules. Some brownish, siliceous alteration. Trace pyrite. Abundant fine leucoxene dust. Broken core at basal contact.								
					231.40	253.00		Heterogeneous mafic volcanoclastic rocks, identical to 189.9m-222.3m. Shearing and fault gouge from 252.7m to 253.0m; shearing at 60 degrees to core axis. Does not appear to be a significant fault but there is a lithological contrast across it.								
					253.00	274.40		Basaltic volcanoclastic rocks, more mafic and lithologically more homogeneous than units above 253.0m. In general, much more calcite in amygdules, matrix and veinlets than in units above producing a pervasive calcite effervescence. Weak chloritic alteration of the matrix. Moderate shear from 264.9m-265.2m at 40 degrees to core. Below this, the unit is somewhat less calcite-rich.								
					274.40	281.90		Massive intermediate intrusive, abundant fine leucoxene. Localized calcite amygdules. Lower contact chilled at 55 degrees to core axis.								

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From	To	Code	Lithology	Comments	From	To	Code	Comments	From	To	Sample	Cu %	Pb %	Zn %	Ag ppm	Au ppb
					281.90	295.10		Basaltic volcanoclastics, as above 295.1m. Some scoriaceous clasts are weakly bleached and have sericitized plagioclase and traces pyrite-chalcopryrite.								
					295.10	297.90		Intermediate intrusive, locally weakly altered and containing disseminated and fracture-fill pyrite with traces Zn-Pb-Cu. Moderate shearing at 45-50 degrees to core at both upper and lower contacts.								
					297.90	340.60		Basaltic volcanoclastic rocks, generally similar to those above the intrusive except that these contain more interesting alteration than those above (weak chloritization here; still with moderate pervasive calcite effervescence). Plagioclase phenocrysts in some bleached clasts have weakly anomalous green colour.								
					340.60	345.40		Dark green, late, magnetic diabase with chilled, bleached margins. K = 1.5 - 2.0, less near margins. Several screens of basaltic host rocks. Chilled contacts 25 to 45 degrees to core axis.								
					345.40	403.35		Mafic volcanoclastics as above the dykes but generally with more evidence of brittle-ductile deformation. Common late silica-calcite veinlets, local strain on amygdules. Below 360m, deformation, foliation, veining, bleaching and localized shears increase. Some shears are at 5 to 15 degrees to core axis. A few centimetres of non-conductive graphitic looking material in a shear at the basal contact.								

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From	To	Code	Lithology	Comments	From	To	Code	Comments	From	To	Sample	Cu %	Pb %	Zn %	Ag ppm	Au ppb						
403.35	405.03	VMS		Sheared zone containing bands of massive pyritic sulphide, mafic and felsic volcanic rocks.	403.35	403.55	VMS	Massive sulphide. Fine to medium grained pyrite with noticeable fine grained chalcopyrite and minor sphalerite. Ohm-meter shows strong conductivity. Foliated/banded at 55 to 60 degrees to core axis. Well sheared and undoubtedly entirely recrystallized. K = 0.0	403.35	403.83	294169	0.40	0.03	0.16	6.0	194						
									403.83	405.18	294170	0.01	0.00	0.02	0.7	18						
					403.55	403.77		Sheared, pyritized, veined (silica) rocks of both mafic and felsic volcanic affinity. Foliation 55-60 degrees to core axis. 2% disseminated pyrite. No base metals.														
					403.77	403.83	VMS	Massive sulphide, similar to previous band. Pyrite-dominant but with bands of good grade Cu. Trace sphalerite. k = 0.0														
					403.83	405.03		Moderately foliated and sheared mafic volcanics, similar to those above 403.55m. Spotty bleaching alteration with anomalous green plagioclase. Only minor pyrite. Strong ductile shearing over bottom 30 cm involving both mafic and felsic protoliths and containing 1% disseminated pyrite with specks chalcopyrite.														
405.03	470.73	Df	Felsic flow	Strongly altered (sericite-silica-pyrite) felsic flows with minor veinlet pyrite-sphalerite	405.03	408.77	D	Greenish to brownish, sheared, strongly sericitized felsic lithology (resembles the strongly pyritized unit in other holes). Somewhat broken and friable core. 1%-2% disseminated pyrite. Moderately strong shear at base.	405.18	406.98	294171	0.04	0.00	0.11	2.4	32						
									406.98	408.77	294172	0.04	0.01	0.19	2.0	35						
									412.65	414.39	294173	0.00	0.02	0.03	1.2	22						
									414.39	416.66	294174	0.00	0.02	0.04	1.3	20						
							408.77	419.59	Df	Greenish strongly sericitized felsic flow. Highly variegated appearance caused by alteration. 1% disseminated pyrite. Common specks disseminated sphalerite, especially in voids. Locally well developed perlitic cracks. Fairly solid core, as opposed to units above. Some vermiform silica veining. Gradational basal contact.	416.66	418.12	294175	0.00	0.01	0.01	0.9	17				
											418.12	419.59	294176	0.00	0.01	0.03	0.9	16				
											419.59	421.29	294177	0.05	0.03	0.07	3.0	34				
											421.29	423.00	294178	0.01	0.03	0.03	2.4	27				
											423.00	424.71	294179	0.01	0.05	0.13	0.7	10				
											424.71	426.42	294180	0.01	0.15	0.18	0.9	11				
											426.42	428.13	294181	0.01	0.13	0.21	1.0	6				
	428.13	429.84	294182	0.00	0.03	0.05				0.0	11											

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From	To	Code	Lithology	Comments	From	To	Code	Comments	From	To	Sample	Cu %	Pb %	Zn %	Ag ppm	Au ppb
					419.59	423.00	Df	Strongly sericitized felsic volcanics; pseudofragmental textures. Well foliated, weakly sheared. Less silicic and more pyritic than previous sub-unit. 2% disseminated pyrite, common disseminated sphalerite. Foliated 55 degrees to core axis. Good solid core. Gradational basal contact.	429.84	431.55	294183	0.00	0.01	0.02	0.6	12
									441.09	443.03	294184	0.00	0.04	0.08	1.1	19
									453.36	454.76	294185	0.01	0.07	0.14	8.3	86
					423.00	431.55	Df	Light to medium green, strongly sericitized (and silicified) felsic flow. Heterogeneous alteration. Lithologically similar to 408.77m-419.59m. Primary textures locally visible (voids, perlitic cracks, flow banding). 1% disseminated pyrite, very common specks disseminated sphalerite. Good solid core. Gradational basal contact.								
					431.55	444.21	Df	Strongly altered felsic flow characterized by well developed perlitic cracks. Medium grey. Strong silica-sericite alteration. 1%-2% disseminated pyrite. Specks of sphalerite are generally not as common as in previous sub-unit. Light greenish cores of perlite in dark grey silicified matrix which contains all of the pyrite. Good solid core. Gradational basal contact.								
					444.21	451.07	Df	Medium greenish heterogeneously altered felsic flow resembling unit from 423.0m to 431.55m. Strong sericite-silica alteration. 2% disseminated pyrite, common specks disseminated sphalerite. Some silica-pyrite-filled voids and veinlets. A few pyritic stringers and one good grade 1cm stringer at 449.7m. Contains some darker perlitic=cracked sections, similar to subunits above and below. Good solid core. Gradational basal contact.								

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From	To	Code	Lithology	Comments	From	To	Code	Comments	From	To	Sample	Cu %	Pb %	Zn %	Ag ppm	Au ppb
470.73	470.73	EOH		End of Hole	451.07	467.80	Df	Very strongly altered felsic flow characterized by well developed perlitic cracks (very similar to 431.55m - 444.21m). 2% - 3% disseminated pyrite, common specks sphalerite. Common silica-pyrite-(sphalerite) stringers containing dull colliform pyrite. conformable basal contact.								
					467.80	470.73	Df	Medium grey green sericitized felsic flow - moderate alteration (i.e., less than strongly altered units above). 1% disseminated and fracture-fill pyrite; specks sphalerite (bottom-most 1.5 metres is arbitrarily assayed as an indicator of minimum base metal contents within the entire felsic flow succession).								
					470.73	470.73		End of Hole								