d=dark
m=medium
l=light

vfg=very fine grained
fg=fine grained
fmg=fine to medium grained
mg=medium grained
mcg=medium to course grained
cg= course grained

CA=core axis
DTCA=degrees to core axis
EOH=end of hole

v wk=very weak
wk=weak
wk mod=weak to moderate
mod=moderate
mod str=moderate to strong
str=strong
v str= very strong

vcb=carbonate vein
vqc=quartz carbonate vein
vqz=quartz vein
vlt=veinlet
vst=stringer

DDH	From_m	To_m	Interval_m	Lithology	Hue	Colour	Grain Size	Texture	Lithology, Colour, Grain size, Texture, Structure, Alteration, Mineralization, Veining, Lower contact.	Structure	Alteration1	Alteration1_Intensity	Alteration2	Alteration2_Intensity	Alteration3	Alteration3_Intensity	Mineral1	Mineral1_%	Mineral2	Mineral2_%	Mineral3	Mineral3_%	Vein1	Vein1_%	Vein2	Vein2_%
MTL19001	0	4.6	4.6	Oou overburden general					hole begins at 4.6m measured back from the 6m block. Block at 4.3m reads '3m casing'																	
MTL19001	4.6	16.15	11.55	Vvm mafic volcanic	d	grey black	vfg	foliated	Mafic volcanics. Dark grey to black. Very fine grained to aphanitic. Variably moderate to weakly foliated with alternating dark brown to purple bands of possible intercalated sediments which increase in occurrence towards bottom margin. Unit is hard and competent with few natural fractures. Weak pervasive chlorite alteration strongest in dark green to black bands. Strong orange stain along walls of quartz carbonate veins. Minor disseminated pyrite in groundmass and few small mm scale discontinuous stringers throughout unit often confined to more chloritic sections. Two vein sets. one grey blue altered quartz vein which is often foliation parallel or irregular and undulating. Quartz carbonate vein set which is variably orange altered or white with highly variable quartz or carbonate percentages being more quartz rich when larger and carbonate rich when smaller veinlet sized. Lower contact is intercalated with cherty sediments and foliation parallel.	foliated	chlorite alteration	wk	hematite alteration	wk			pyrite	0.1					vqc	1	vqz	0.1
MTL19001	16.15	56.93	40.78	Sct chert	d	purple black	vfg	foliated	Cherty metasediments. Dark purple to green/black with lighter purple grey sections. Very fine grained. Very well high angle laminated on the cm to mm scale and at times alternating with a Dark green to black probable argillite component. Unit is very hard and siliceous with softer chloritic argillite laminae within. Few natural fractures mostly along foliation/lamination trend. Possible weak intercalation with mafics towards upper margin. dark purple hue from likely iron alteration. Few localities with red medium to course grained garnets forming in weak bands. Green hue from chloritic altered argillites. Patchy disseminated pyrite in groundmass mostly confined to small foliation cutting stringers. Two vein sets. One more quartz dominant foliation parallel vein. One foliation cutting carbonate rich quartz carb vein set. Lower contact along a bedding plane is sharp at 65DTCA.	foliated	hematite alteration	wk					pyrite	0.1					vqc	1	vqz	0.1
MTL19001	56.93	57.52	0.6	Sag argillite	d	black	vfg	laminated	Argillite. Black, very fine grained, laminated with heavy micro folded throughout. Soft but competent unit. Weakly chlorite altered. Rich in foliation parallel blebby pyrite and pyrite stringers which fold with unit. Weak carbonate veining at upper and lower contacts. Sharp lower contact is a bedding plane at 75DTCA.	fracture/in fractures	chlorite alteration	wk					pyrite	3					vst	1	vcb	0.1
MTL19001	57.52	64.16	6.64	Vvm mafic volcanic	d	green black	vfg	foliated	Altered and deformed mafic volcanics. Colour is variable, alternating from dark green-black to purple-brown/orange hued. Unit is fine grained to aphanitic with medium grained black spots in sections reminiscent of a more course grained flow texture. Weak chlorite alteration. Weakly mineralized with trace pyrite and sphalerite mostly confined to carbonate veining. One main vein set is a white grey carbonate vein with a weak orange stain and often with a green chloritic selvage. Veins are often small <1cm in width with few larger occurrences. One large 15cm wide vein at 59.6m. Lower contact is sharp at 50DTCA.	fracture/in fractures	chlorite alteration	wk					pyrite	0.1	sphalerite	0.01			vcb	2		
MTL19001	64.16	65.1	0.94	Fault	d	black	vfg	fragmental or as fragments	Fault. Healed fault breccia from 64.16-64.4m followed by a small 10cm wide un brecciated piece of laminated chert before broken rubble and fault gauge to end of unit. Colour is black and unit is mostly faulted graphite altered argillite. Weak disseminated pyrite in faulted argillite. Lower contact is poorly defined but sharply increases in competency at contact.	fracture/in fractures	chlorite alteration	wk					pyrite	0.1					vcb	0.1		
MTL19001	65.1	67.8	2.7	Vvm mafic volcanic	d	green black	vfg	foliated	Mafic volcanics. Medium green to dark green/black. Fine to very fine grained. Weak to moderate high angle foliation. Intercalated with argillite or chert at both upper and lower contacts. Moderately soft and partially broken unit. Sharp brittle deformation throughout related to proximal fault. Moderate pervasive chlorite alteration. Trace disseminated pyrite. Two vein sets: an older quartz rich vein and one pink manganese-carbonate vein which cuts the quartz vein and foliation of unit. Lower contact to dyke is sharp at 70DTCA.	fracture/in fractures	chlorite alteration	mod					pyrite	0.1					vqz	1	vcb	0.1
MTL19001	67.8	69.8	2	Gft felsite	l	grey brown	fg	massive ("but not bedding: see "bds")	Feldspar dyke. Cryptic unit appears to be composed entirely of gray brown hued feldspar with small cl eyes throughout. Very fine grained to aphanitic groundmass with mm scale fine grained cl eyes. Unit is moderately hard and broken throughout. Heavily cut and brittle deformed by pink manganese-carbonate fracture infill veins. Chlorite alteration with cl eyes and a weak iron alteration likely giving to orange brown hue. Non-magnetic and no significant mineralization. Lower contact is sharp at 70DTCA.	fracture/in fractures	chlorite alteration	wk mod	hematite alteration	wk									vcb	2		
MTL19001	69.8	71.4	1.61	Sag argillite	d	black	vfg	foliated	Argillite. Same as previous at 56.93 with <5% pyrite and less folded until lower contact. Sharp undulating lower contact at around 80DTCA.	fracture/in fractures		wk					pyrite	1					vst	1	vcb	0.1
MTL19001	71.4	73.2	1.8	Vvm mafic volcanic	d	green black	vfg	foliated	Mafic volcanics, altered and deformed. Same as previous at 57.52m. Sharp lower contact at 65DTCA.	fracture/in fractures	chlorite alteration	wk					pyrite	0.1	sphalerite	0.01			vcb	2		
MTL19001	73.2	74	0.8	Gfu felsic rock (undifferentiated)	m	orange grey	vfg	foliated	Foliated felsic dyke. Alternating orange to dark grey bands. Well high angle foliated. Hard and siliceous but moderately fractured. Orange hue from possible iron alteration. Minor disseminated pyrite. Few pyrite stringers found in cl fracture infill veins cutting unit. High occurrence of pink Manganese carbonate veins sporadically cutting unit along steps and brittly deforming it. Lower contact is sharp and high angle around 80DTCA.	fracture/in fractures	hematite alteration	wk mod					pyrite	0.1					vst	1	vcb	0.1
MTL19001	74	74.7	0.71	Sag argillite	d	black	vfg	foliated	Argillite. Same as previous argillite units with <5% pyrite but this argillite is unconsolidated throughout. Sharp lower contact at 60DTCA.	fracture/in fractures		wk					pyrite	0.1					vst	1	vcb	0.1
MTL19001	74.7	74.85	0.15	quartz veined	l	white	vfg	foliated	Quartz vein. White clean quartz vein is foliation parallel and bound between two sediment beds. The vein is heavily cut by dark green chlorite veins rich in pyrite. Few smaller Manganese carbonate veins also found cutting quartz vein. 5% pyrite. Sharp contacts at 60DTCA.	foliated/foliation	chlorite alteration	wk mod					pyrite	5					vqz	100		
MTL19001	74.85	75.6	0.75	Gfu felsic rock (undifferentiated)	m	orange grey	vfg	foliated	Felsic dyke, same as previous at 73.2 but with a large 10cm clean quartz veins at sharp lower contact at 65DTCA.	fracture/in fractures	hematite alteration	wk mod					pyrite	0.1					vqz	3	vcb	0.1
MTL19001	75.6	77.1	1.5	Gft felsite	l	orange grey	fg	massive ("but not bedding: see "bds")	Same as previous cryptic feldspar dyke at 67.8m but much more orange hued from possible iron staining, and with less pink manganese-carbonate veins cutting it. Few possible cl altered xenoliths of unidentified lithology towards lower contact. Finer grained cl eyes/specs in this portion. Sharp lower contact to felsic intrusive at 75DTCA.	fracture/in fractures	chlorite alteration	wk mod	hematite alteration	wk mod									vcb	0.1		
MTL19001	77.1	77.6	0.5	Gfu felsic rock (undifferentiated)	m	orange grey	vfg	foliated	Foliated felsic dyke. Alternating orange to dark grey bands. Well high angle foliated. Hard and siliceous but moderately fractured. Orange hue from possible iron alteration. Minor disseminated pyrite. Few pyrite stringers found in cl fracture infill veins cutting unit. High occurrence of pink Manganese carbonate veins sporadically cutting unit along steps and brittle deforming it. Lower contact is sharp and high angle around 80DTCA.	fracture/in fractures	hematite alteration	wk mod					pyrite	0.1					vst	1	vcb	0.1
MTL19001	77.6	77.8	0.21	carbonate veined	l	pink	vfg	weakly foliated	Weakly pink manganese-carbonate vein acid only reacts to vein when scratched. Vein is opaque white to weak pink. Cut by an abundance of small wriggly cl veinlets which run perpendicular to core axis and host minor pyrite. Vein has sharp high angle contacts roughly 80 DTCA.	fracture/in fractures	chlorite alteration	wk					pyrite	0.1					vcb	100		
MTL19001	77.8	78.3	0.5	Fault	d	grey purple	vfg	fragmental or as fragments	Faulted metasediments and felsic dyke. Cut by manganese-carbonate veins which are faulted with unit. Most pieces are <5cm width with a section of course sand to gravel sized rubble weakly cover in gauge in first 30cm at upper contact. Lower contact is poorly defined and gradationally increases in competency.	fracture/in fractures	chlorite alteration	wk					pyrite	0.01					vcb	1		
MTL19001	78.3	79.4	1.11	Sct chert	d	purple black	vfg	foliated	Cherty metasediments similar to previous cherts with cm to mm scale laminations alternating with dark green cl altered argillite's. Intercalated lower contact with mafics at 75 DTCA. No significant mineralization.	foliated	hematite alteration	wk					pyrite	0.1					vqc	1	vqz	0.1
MTL19001	79.4	83.3	3.9	Vvm mafic volcanic	d	grey green	vfg	weakly foliated	Mafic volcanics. Weak to moderate cl alteration throughout, medium to dark green grey. Weakly intercalated with sediments at contacts. No significant mineralization. Sharp lower contact at 55 DTCA.	fracture/in fractures	chlorite alteration	wk mod					pyrite	0.1					vqc	1	vqc	1
MTL19001	83.3	90	6.7	Sct chert	d	grey purple	vfg	weakly foliated	Cataclasite made up of Cherty metasediments interbedded with a greywacke. Dark grey to purple. Very fine grained with fine grained sections and greywacke. Heavily fractures and unconsolidated with no unbroken piece larger than 40cm and most being less then 10cm. Weak orange iron staining in veinlets that cut unit. Patchy cl alteration confined to darker green bands. Minor pyrite mostly confined to foliation parallel stringers <1%. Unit is cut by manganese-carbonate carbonate veinlets throughout.	foliated	hematite alteration	wk	hematite alteration	wk			pyrite	0.1					vcb	3	vqz	0.1
MTL19001	90	94.26	4.27	Sag argillite	d	black	vfg	foliated	Argillite. Black, very fine grained and weakly foliated with brecciated upper and lower contacts. Unit is soft and competent. Weak chlorite alteration. Rich in foliation parallel blebby pyrite and trace disseminated galena, both associated with quartz vein. Cm-scale manganese carbonate (rhodochrosite) veining at upper (1cm) and lower contact (12cm). Qtz veining proximal to manganese carbonate vein at ~94.17m is hematite stained and drusy. Qtz vein also occurs with an absence of hematite staining and with multiple offsets proximal to upper contact. Sharp lower contact at 45 DTCA.	fracture/in fractures	chlorite alteration	wk	hematite alteration	wk			pyrite	3	ga	0.1			vqz	3	vcb	2

MTL19001	94.26	117.9	23.64	Vvm mafic volcanic	d	grey green	vfg	weakly foliated	Mafic Volcanic. Dark grey-green, very fine grained. Weak foliation defined by alternating dark grey green to black-green sub-cm bands. Hard and competent with several natural fractures at high angle to core axis. Weak to moderate pervasive chlorite alteration strongest in black-green bands. Minor offsets in discontinuous, planar to undulatory cm-scale quartz veins. Foliation parallel, cm-scale hematite stained quartz-carb breccia veins at ~98.1m and at lower contact. Breccia vein at ~98.1m hosts foliation parallel blebby pyrite. Pyrite also occurs on fracture faces. Four vein sets: one grey green altered and deformed quartz vein which is often foliation parallel or irregular and undulatory; quartz carbonate breccia vein set which is variably hematite stained; white quartz-carbonate vein and pink rhodochrosite vein. Brecciated lower contact at 75DTCA.	fracture/in fractures	chlorite alteration	wk mod	hematite alteration	wk	pyrite	2			vqz	2	vqc	2
MTL19001	117.9	120.7	2.8	Sgw greywacke	l	grey	fg	weakly foliated	Greywacke. Light grey, fine grained with gradational coarsening towards lower contact. Weakly foliated and altered (chlorite). Cross cut by foliation parallel carbonate veins with minor brecciated section at 120m. Sharp lower contact at ~60DTCA.	fracture/in fractures											vcb	1		
MTL19001	120.7	143	22.3	Vvm mafic volcanic	d	grey green	vfg	weakly foliated	Mafic volcanic same as previous at 94.26m.	fracture/in fractures	chlorite alteration	wk mod	hematite alteration	wk	pyrite	2			vqc	2	vqc	2		
MTL19001	143	143.48	0.48	Sag argillite	d	black	vfg	foliated	Argillite. Same as previous unit at 90m with cm-scale brecciated vein, foliation parallel semi-massive sulphides (po, pyrite, chalcopyrite) and an absence of rhodochrosite veining.	fracture/in fractures	chlorite alteration	v wk			pyrrhotite	3	pyrite	2	vqz	0.1				
MTL19001	143.48	144.14	0.66	Vvm mafic volcanic	d	grey green	vfg	weakly foliated	Same as previous with foliation parallel blebby pyrite.	fracture/in fractures	chlorite alteration	wk mod	hematite alteration	wk	pyrite	2			vqz	2	vqc	2		
MTL19001	144.14	144.22	0.09	Sag argillite	d	black	vfg	foliated	Argillite. Same as previous with only pyrite mineralization.	fracture/in fractures	chlorite alteration	v wk			pyrite	3								
MTL19001	144.22	145.9	1.69	Vvm mafic volcanic	d	grey green	vfg	weakly foliated	Mafic volcanic same as previous with brecciated and folded upper contact. Cm-scale rhodochrosite vein at high angle to core axis hosts foliation parallel sphalerite.	fracture/in fractures	chlorite alteration	wk mod	hematite alteration	wk	pyrite	2	sphalerite	0.1	vqc	2	vcb	1		
MTL19001	145.9	147.2	1.3	Sgw greywacke	l	grey	fg	weakly foliated	Greywacke, same as previous with hematite stained veinlets.	fracture/in fractures	hematite alteration	wk			pyrite	0.1			vlt	1				
MTL19001	147.2	148.03	0.84	Sag argillite	d	black	vfg	foliated	Argillite, same as previous with foliation parallel pyrite and coarse grained sphalerite associated with quartz-carb vein at ~147.4m	fracture/in fractures	chlorite alteration	v wk			pyrite	1	sphalerite	1	vqc	1				
MTL19001	148.03	149.85	1.82	Vvm mafic volcanic	d	grey green	fg	weakly foliated	Mafic volcanic. Same as previous unit at 94.26 with intercalated metasediments. Coarsening of grain size towards lower contact. Sharp lower contact at 35 DTCA	fracture/in fractures	chlorite alteration	wk mod	hematite alteration	wk	pyrite	2			vqz	2	vqc	2		
MTL19001	149.85	150.72	0.88	Gmu mafic rock (undifferentiated)	m	grey	mg	massive ("but not bedding: see "bds")	Mafic dyke. Med grey, med gr, similar to porphyritic dyke without distinctive looking phenocrysts. Hematite stained quartz-carb vein at 150.15m is at high angle to core axis. Sharp lower contact at 80 DTCA.	fracture/in fractures	hematite alteration	v wk							vqc	0.1			
MTL19001	150.72	151.34	0.63	Vvm mafic volcanic	d	grey green	vfg	weakly foliated	Mafic Volcanic, same as previous unit. Sharp lower contact at 40 DTCA.	fracture/in fractures	chlorite alteration	wk mod	hematite alteration	wk	pyrite	2			vqz	2	vqc	2		
MTL19001	151.34	152.15	0.82	Gmu mafic rock (undifferentiated)	m	grey	mg	massive ("but not bedding: see "bds")	Mafic Dyke, same as previous unit at 149.85m. Pyrite forms on fracture surfaces. Sharp lower contact at 40DTCA.	fracture/in fractures	hematite alteration	v wk			pyrite	0.1			vqc	0.1				
MTL19001	152.15	152.4	0.25	Vvm mafic volcanic	d	grey green	vfg	weakly foliated	Mafic volcanic. Same as previous unit. Sharp lower contact at 60 DTCA.	fracture/in fractures	chlorite alteration	wk mod	hematite alteration	wk	pyrite	2			vqz	2	vqc	2		
MTL19001	152.4	152.95	0.55	Gmu mafic rock (undifferentiated)	m	grey	mg	massive ("but not bedding: see "bds")	mafic dyke. Same as previous units. Sharp lower contact at 50DTCA.	fracture/in fractures	hematite alteration	v wk			pyrite	0.1			vqc	0.1				
MTL19001	152.95	180.12	27.17	Vvm mafic volcanic	d	grey green	vfg	weakly foliated	Mafic Volcanic. Same as previous units, gradational coarsening of grain size towards lower contact. Interbedded with argillite sections rich in foliation parallel po and pyrite at 153.52m and 154.1m and cross cut by a few mafic dykes. Sharp lower contact at 55DTCA.	fracture/in fractures	chlorite alteration	wk mod			pyrrhotite	3	pyrite	2	vqc	2	vcb	1		
MTL19001	180.12	181.11	1	Gpp porphyry	m	grey	mg	massive ("but not bedding: see "bds")	Porphyry dyke. Med grey with med grained plagioclace phenocrysts. Massive and crosscut by chlorite stringers. Sharp lower contact at 70DTCA.	fracture/in fractures	chlorite alteration	v wk							vlt	1				
MTL19001	181.11	181.46	0.35	quartz veined	l	white	vfg	massive ("but not bedding: see "bds")	White quartz vein at high angle to core axis. Chlorite altered and pyrite hosting.	fracture/in fractures	chlorite alteration	wk mod			pyrite	1			vqz	100				
MTL19001	181.46	184	2.54	Gpp porphyry	m	grey	mg	massive ("but not bedding: see "bds")	Same as previous porphyry dyke cross cut by sub-m quartz dyke.	fracture/in fractures	chlorite alteration	v wk							vlt	1	vlt	1		
MTL19001	184	196.58	12.58	Vvm mafic volcanic	d	grey green	vfg	weakly foliated	Mafic volcanic. Same as previous unit with a higher percentage of coarser grain size and interbedded with a sub-m section of intercalated seds at ~190.5-191m.	fracture/in fractures	chlorite alteration	wk mod	hematite alteration	wk	pyrite	2			vqz	2	vqc	2		
MTL19001	196.58	196.66	0.08	quartz veined	l	white	vfg	massive ("but not bedding: see "bds")	Same as previous white quartz vein.	fracture/in fractures	chlorite alteration	wk mod			pyrite	1			vqz	100				
MTL19001	196.66	207.92	11.26	Vvm mafic volcanic	d	grey green	vfg	weakly foliated	Mafic volcanic. Same as previous with massive diabase dyke at ~ 206.64-207.47m	fracture/in fractures	chlorite alteration	wk mod	hematite alteration	wk	pyrite	2			vqz	2	vqc	2		
MTL19001	207.92	210.23	2.31	Gdl dolerite	m	grey	fg	massive ("but not bedding: see "bds")	Diabase, meg grey, fine gr, non-magnetic, massive, hard and competent , cross cut by brecciated quartz-carb vein at high angle to core axis at 209.25m. Sharp lower contact.	fracture/in fractures									vqc	1				
MTL19001	210.23	210.54	0.32	Gpp porphyry	m	grey	mg	massive ("but not bedding: see "bds")	Porphyry dyke. Same as previous porphyry dyke.	fracture/in fractures	chlorite alteration	v wk							vlt	1				
MTL19001	210.54	219.95	9.41	Vvm mafic volcanic	d	grey green	fg	weakly foliated	Mafic Volcanic. Same as previous fine-med gr mafic volcanics.	fracture/in fractures	chlorite alteration	wk mod	hematite alteration	wk	pyrite	2			vqz	2	vqc	2		
MTL19001	219.95	222.45	2.5	Gmu mafic rock (undifferentiated)	m	grey	mg	massive ("but not bedding: see "bds")	Mafic dyke. Similar to previous units.	fracture/in fractures	hematite alteration	v wk			pyrite	0.1			vqc	0.1				
MTL19001	222.45	224.45	2	Gpp porphyry	m	grey	mg	massive ("but not bedding: see "bds")	Porphyry dyke, same as previous.	fracture/in fractures	chlorite alteration	v wk							vlt	1				
MTL19001	224.45	229.92	5.47	Vvm mafic volcanic	d	grey brown	vfg	weakly foliated	Mafic volcanic. Same as previous unit with interbedding of sub-m greywacke sections. Altered quartz veins are consistently offset by possible fault.	fracture/in fractures	chlorite alteration	wk mod	hematite alteration	wk	pyrite	2			vqz	2	vqc	2		
MTL19001	229.92	232.66	2.75	Gpp porphyry	m	grey	mg	massive ("but not bedding: see "bds")	Porphyry dyke, same as previous.	fracture/in fractures	chlorite alteration	v wk							vlt	1				
MTL19001	232.66	243	10.34	Vvm mafic volcanic	d	grey green	vfg	weakly foliated	Mafic volcanic. Same as previous unit at 224.45m	fracture/in fractures	chlorite alteration	wk mod	hematite alteration	wk	pyrite	2			vqz	2	vqc	2		
MTL19001	243	246.65	3.66	Gpp porphyry	m	grey	mg	massive ("but not bedding: see "bds")	Porphyry dyke, same as previous with epidote altered quartz vein @ 246m.	fracture/in fractures	chlorite alteration	v wk			ep	0.1			vlt	1	vqz	0.1		
MTL19001	246.65	269.3	22.65	Vvm mafic volcanic	d	grey brown	vfg	weakly foliated	Mafic volcanic. Same as previous units with brecciated texture at upper contact and interbedded with pyrite rich greywacke towards bottom contact.	fracture/in fractures	chlorite alteration	wk mod	hematite alteration	wk	pyrite	2			vqz	2	vqc	2		
MTL19001	269.3	269.54	0.25	quartz veined	l	white	vfg	massive ("but not bedding: see "bds")	Quartz Vein: white aphanitic 25 cm massive quartz vein with very minor carbonate fracture fill component, trace amounts of pyrite associated with carbonate fracture fills. Sharp upper and lower contacts at 85 and 70 DTCA respectively.	massive	chlorite alteration	v wk			pyrite	0.1			vqz	99	vcb	1		
MTL19001	269.54	270	0.46	Vvm mafic volcanic	d	grey green	vfg	weakly foliated	Mafic Volcanic: same as previous units	fracture/in fractures	chlorite alteration	wk mod	hematite alteration	wk	pyrite	2			vqz	2	vqc	2		
MTL19002	0	4.2	4.2	Oou overburden general					No casing block. Hole starts at 4.2m measured back from 6m.															
MTL19002	4.2	14.26	10.06	Sct chert	D	grey purple	vfg	laminated	Cherty metasediments interbedded with mafic tuff: grey purple chert banded with grey green mafic volcanics/tuff. aphanitic (chert) to medium grained (mafic tuff). Both are well laminated on the mm- to cm-scale. Unit is hard and competent with a few natural fractures. Weak chlorite alteration apparent in dark green bands, weak possible iron alteration on chert beds. Quartz and carbonate veins are sometimes chlorite and hematite altered are generally at a high angle to core axis. Minor fine grained disseminated pyrite, often foliation parallel or found in stringers/veinlets i.e. at 10.5m. Lower contact is intercalated with underlying mafic volcanics but sharply disappears at 14.25 at 70 DTCA..	fracture/in fractures	chlorite alteration	wk	hematite alteration	v wk	pyrite	1			vqz	2	vcb	1		
MTL19002	14.26	27.32	13.06	Vvm mafic volcanic	D	green black	vfg	foliated	Mafic Volcanic: medium to dark green black, very fine grained, weakly to moderately foliated in sections, hard and competent with few natural fractures. Weak pervasive chlorite alteration, trace disseminated pyrite and carbonate vein associated pyrite. Two main vein sets, one more prominent mostly foliation parallel chlorite altered quartz-carbonate veins, one larger vein (5 cm)within this vein set with significant epidote alteration, second vein set is a trace clean white quartz vein at 26.85 m. Lower contact is gradational and intercalated with underlying metasediments.	fracture/in fractures	chlorite alteration	wk			pyrite	1			vqc	2	vqz	1		

MTL19002	27.32	94.83	67.51	Sct chert	D	grey purple	vfg	laminated	Cherty metasediments interbedded with argillite and intercalated with foliated mafic volcanics at upper and lower contact: grey purple chert with dark green to black argillite and black green mafic volcanics. Units are very fine grained with coarse grained garnetiferous bands within chloritic argillite beds. Chert is often very well laminated at high angle to core axis, argillite is generally well laminated but has layers where foliation is less well developed. Unit is mostly hard and competent with few brittle and/or broken sections and has undergone both brittle and ductile deformation, ductile deformation can be observed in boudinaged veins and some weak brittle deformation observed in weakly offset veins. Moderate chlorite alteration of argillite beds also corresponds with garnetiferous bands, weak hematite alteration of chert beds. Minor pyrite mostly found in foliation parallel pyrite stringers. One semi-massive, chlorite altered, pyrite argillite bed at 89.34 m (~ 1%). Lower contact is sharp to irregular and undulating at 40 DTCA with underlying porphyritic dyke.	fracture/in fractures	chlorite alteration	wk mod	hematite alteration	v wk			pyrite	1	garnet	0.1		vqz	2	vcb	1
MTL19002	94.83	95.14	0.32	Gpp porphyry	D	purple brown	mg	massive ("but not bedding: see "bds")	Feldspar Porphyry Dyke: dark purple brown, with light white feldspar phenocrysts. Massive dyke with aphanitic groundmass with fine to medium grained phenocrysts of plagioclase and chlorite eyes. Hard and competent with a couple fractures at the top and bottom contact, possible hematite alteration giving purple hue and hematite dusting of plagioclase grains. Minor very fine grained euhedral pyrite. Dyke is cut by one quartz-carbonate fracture fill vein set. Lower contact is sharp at 50 DTCA.	massive	hematite alteration	wk					pyrite	0.1				vqc	0.1		
MTL19002	95.14	99.75	4.61	Vvm mafic volcanic	D	green black	vfg	foliated	Mafic volcanic heavily interbedded with siliceous metasediments: medium to dark greenish black mafic volcanics with light to medium grey siliceous sediments, both units are aphanitic to very fine grained and well laminated with bands/beds in the mm- to cm-scale. Minor local coarsening of mafic volcanic bands. Minor irregular micro-folding of foliation. Units are both hard and competent with very minor fractures at a low angle to core axis. minor pervasive chlorite alteration in mafic volcanics and possible hematite alteration giving chert an orangey red colour. Primary veins set consists of foliation parallel carbonate veins, green altered quartz veins or carbonate veins rimmed with green altered quartz with localized iron staining. One large 14 cm carbonate vein at 95.52 m. Trace amounts of fracture fill related pyrite. Lower contact is sharp at 60 DTCA and intercalated with underlying altered metasediments.	fracture/in fractures	chlorite alteration	wk	hematite alteration	wk			pyrite	1				vcb	3	vqz	1
MTL19002	99.75	100.2	0.46	Sgw greywacke	D	grey	vfg	laminated	Altered greywacke: medium grey brown with a yellow tint, very fine grained and very well laminated on the mm-scale with significant micro folding. Yellowish hue from possible sericite or ankerite alteration? Minor foliation parallel pyrite confined to foliation parallel stringers. two veins sets, first foliation parallel quartz vein with chlorite selvage, one pink manganese carbonate vein. Lower contact is a bedding contact to argillite at 65 DTCA.	folded/folds	chlorite alteration	wk	carbonate alteration	wk	sericite alteration	wk	pyrite	0.5				vqz	0.5	vcb	0.25
MTL19002	100.2	100.38	0.18	Fault	D	grey black	vfg	massive ("but not bedding: see "bds")	Faulted Argillite: black, very fine grained with fine grained sandy clasts, massive, soft and brittle, moderate to heavily graphite altered. About 2% pyrite either disseminated or found within pyrite stringers. Weakly cut by manganese carbonate veins (rhodochrosite). Lower contact is brecciated at 60 DTCA.	fracture/in fractures	Graphitic alteration	str	carbonate alteration	wk			pyrite	2				vcb	0.5		
MTL19002	100.38	103.69	3.31	Gft felsite	M	grey	fg	massive ("but not bedding: see "bds")	Feldspar Dyke: medium grey, fine to medium grained, massive, medium hardness, brittle and broken through out due to brittle/faulting. Weak to moderate chloritization seen as chlorite eyes in groundmass and chlorite veinlets. Trace chalcopyrite occurs in carbonate veinlets; trace finely disseminated pyrite. Unit is cut by one main quartz-carbonate vein set which is variably rich in rhodochrosite with blebby quartz intrusions. Lower contact to fault is sharp at 80 DTCA.	faulted/fault	chlorite alteration	wk mod	carbonate alteration	wk			chalcopyrite	0.1	pyrite	0.5		vqc	1		
MTL19002	103.69	104.55	0.86	Fault Breccia	M	green grey	fg	brecciated	Fault breccia: healed fault breccia bound by two lenses of gouge at upper and lower contact, dark to medium green coarse grained angular clasts of chert and argillite. Unit is mostly healed but still brittle, moderate to heavily chloritized. Minor blebby pyrite associated with chlorite veinlets; fracture-filling galena (1-2%) and chalcopyrite occur throughout, angular, vuggy sporadic manganese carbonate veins. Lower contact is sharp at 60 DTCA.	faulted/fault	chlorite alteration	wk mod	carbonate alteration	wk mod			garnet	1.5	pyrite	0.5		vcb	0.2		
MTL19002	104.55	110.36	5.81	Vvm mafic volcanic	M	grey green	fg	foliated	Fault Zone Mafic Volcanics: medium to dark green, aphanitic to very fine grained, moderately foliated, brittle and faulted throughout with minor gouge (1cm) @ 107.7m. Pervasive moderate to strong chlorite alteration. Unit is cut by one carbonate vein set variable amounts of manganese and localized iron stained quartz. Very minor pyrite found on foliation parallel stringers associated with chlorite rich sections. Lower contact is gradational.	faulted/fault	chlorite alteration	mod str	carbonate alteration	wk mod	hematite alteration	wk mod	pyrite	0.2				vcb	0.25		
MTL19002	110.36	110.83	0.47	Sag argillite	D	grey black	vfg	massive ("but not bedding: see "bds")	Fault Zone Argillite: black, aphanitic, partially brecciated/faulted and is brittle and broken. Moderate to strong graphite and chlorite alteration. 5% pyrite found in high angle stringers and coarse blebs. Unit is cut by one small manganese carbonate fracture infill vein set. Lower contact is sharp at 45 DTCA.	faulted/fault	Graphitic alteration	mod str	chlorite alteration	wk mod			pyrite	5				vst	5	vqc	0.2
MTL19002	110.83	115	4.17	Gft felsite	M	brown orang	fg	massive ("but not bedding: see "bds")	Fault Zone; Cross Cutting Dykes Composed of a siliceous felsic dyke and a feldspar dyke in equal proportions. Feldspar dyke is the same as dyke at 100.38 but more orange hued due to possible iron alteration. Felsic dyke is brown orange, very fine grained and foliated. Both units are brittle and faulted cataclasite. Minor pyrite found in cl veinlets in both units. Both units are cut by chlorite veinlets and by one main quartz carbonate vein set which is slightly pink hued from Manganese carbonate. Lower contact is fault gauze and sharply ends at roughly 55-60 DTCA.	cataclastic	chlorite alteration	wk mod	hematite alteration	mod			pyrite	0.2				vqc	0.25	vlt	0.1
MTL19002	115	126.84	11.84	Vvm mafic volcanic	M	grey green	fg	foliated	Mafic Volcanics: same as previous 104.55 m to 110.36 m. Epidote alteration of carbonate veins. Second vein set of later stage rhodochrosite veins which display ductile and brittle deformation. Lower contact is gradational with underlying sediments.	brecciated	chlorite alteration	wk mod	carbonate alteration	wk	epidote alteration	wk	pyrite	0.1				vqc	0.75	vcb	1
MTL19002	126.84	129.12	2.28	Sag argillite	D	green black	vfg	foliated	Argillite: green black, very fine grained, variably massive to well foliated with cherty sediments. Heavily fractured and faulted with a 2 cm gouge lens at 127.2 m. Strong graphite and chlorite alteration within unit also common red orange iron staining found in quartz-carbonate veins, some argillite lenses rich with foliation parallel pyrite stringers (up to 5%). one main vein set, variably quartz to carbonate rich which are parallel to foliation when larger but cut foliation when smaller. Large 10 cm manganese carbonate vein at 127.12 m which contains brecciated wall rock as well as gouge lens, also sub-euhedral quartz crystals as well as blebby pyrite. Lower contact is defined by a gradational increase in faulting.	faulted/fault	Graphitic alteration	str	chlorite alteration	str	hematite alteration	wk mod	pyrite	3				vqc	2		
MTL19002	129.12	130.15	1.03	Fault	D	green black	vfg	foliated	Fault Zone: Unconsolidated pieces of faulted argillite with no unbroken piece being larger then 10cm with most rubble being sand sized and covered in chlorite rich gouge.	cataclastic	Graphitic alteration	str	chlorite alteration	str	hematite alteration	wk mod	pyrite	2				vqc	1		
MTL19002	130.15	130.64	0.49	Sag argillite	D	green black	vfg	foliated	Argillite: same as previous at 126.84 m to 129.12, no manganese carbonate veins, less brittle deformation, 3-5% pyrite with < 1% chalcopyrite. Sharp lower contact at 80 DTCA.	fracture/in fractures	Graphitic alteration	str	chlorite alteration	str	hematite alteration	wk mod	chalcopyrite	0.1	pyrite	3		vcb	0.2		
MTL19002	130.64	155.62	24.98	Vvm mafic volcanic	D	grey green	fg	foliated	Mafic Volcanics: dark green, aphanitic very fine grained, mostly well foliated with a cryptic to massive section between 144 m to 147 m. Unit is hard and competent with few natural fractures, signs of ductile deformation with boudined veins and weakly undulating foliation, slight faulting displacing veins on the mm-scale with faults running around 45 DTCA. Weak to moderate pervasive chlorite alteration, minor disseminated pyrite in groundmass but predominantly confined to veins. Two main vein sets, an older often altered green, foliation parallel quartz-carbonate (carbonate poor) sometimes with a mottled texture, second is calcite rich quartz-carbonate which cuts the altered veins and foliation and at times larger veins brecciate mafic volcanics. Lower contact is sharp at 70 DTCA.	massive	chlorite alteration	wk mod	carbonate alteration	wk			pyrite	0.1				vqc	0.25		
MTL19002	155.62	156.41	0.79	Gpp porphyry	D	grey green	mg	massive ("but not bedding: see "bds")	Feldspar Porphyry Dyke: grey green, fine grained groundmass with medium grained subhedral feldspar grains, cryptic background texture with medium to coarse grained with a light faint round mineral (poossibly altered feldspar). Trace fine grained disseminated pyrite in groundmass, dyke is cut by one quartz-carbonate vein set. Lower contact is sharp at 40 DTCA.	massive	chlorite alteration	wk	carbonate alteration	wk			pyrite	0.1				vqc	0.1		
MTL19002	156.41	158.06	1.66	Vvm mafic volcanic	D	grey green	fg	foliated	Mafic Volcanics: same as previous 130.64 m to 155.62 m. Sharp lower contact at 30 DTCA.	massive	chlorite alteration	wk mod	carbonate alteration	wk			pyrite	0.1				vqc	1		
MTL19002	158.06	158.3	0.25	Gpp porphyry	D	grey green	mg	massive ("but not bedding: see "bds")	Feldspar Porphyry Dyke: same as previous 155.62 m to 156.41 m but with large quartz-carbonate vein at lower contact brecciating unit. Lower contact is undulating and brecciated at 10 DTCA.	brecciated	chlorite alteration	wk	carbonate alteration	wk			pyrite	0.1				vqc	0.75		
MTL19002	158.3	158.95	0.65	Vvm mafic volcanic	D	grey green	fg	foliated	Mafic Volcanics: same as previous 130.64 m to 155.62 m. Sharp undulating lower contact at 20 DTCA.	massive	chlorite alteration	wk mod	carbonate alteration	wk			pyrite	0.1				vqc	1		
MTL19002	158.95	160.05	1.11	Gpp porphyry	D	grey green	mg	massive ("but not bedding: see "bds")	Feldspar Porphyry Dyke: same as previous 155.62 m 156.41 but at 159.45 m there is a 25 cm pocket/lens of mafic volcanics. Sharp lower contact at 30 DTCA.	massive	chlorite alteration	wk	carbonate alteration	wk			pyrite	0.1				vqc	0.25		
MTL19002	160.05	161.12	1.07	Vvm mafic volcanic	D	grey green	fg	foliated	Mafic Volcanics: same as previous 130.64 m to 155.62 m with a 7 cm wide brecciated vein at 160.53 m running 20 DTCA. Sharp lower contact at 35 DTCA.	brecciated	chlorite alteration	wk mod	carbonate alteration	wk			pyrite	0.1				vqc	0.75		
MTL19002	161.12	161.59	0.47	Gpp porphyry	D	grey green	mg	massive ("but not bedding: see "bds")	Feldspar Porphyry Dyke: same as previous 155.62 m to 156.41 m. Sharp undulatory contact at 30 DTCA.	massive	chlorite alteration	wk	carbonate alteration	wk			pyrite	0.1				vqc	0.1		
MTL19002	161.59	162.96	1.37	Vvm mafic volcanic	D	grey green	fg	foliated	Mafic Volcanics: same as previous 130.64 m to 155.62 m with sharp lower contact at 60 DTCA.	massive	chlorite alteration	wk mod	carbonate alteration	wk			pyrite	0.1				vqc	0.75		
MTL19002	162.96	164.56	1.6	Gpp porphyry	D	grey green	mg	massive ("but not bedding: see "bds")	Feldspar Porphyry Dyke: same as previous 155.62 m to 156.41 m with sharp lower contact at 40 DTCA.	massive	chlorite alteration	wk	carbonate alteration	wk			pyrite	0.1				vqc	0.1		
MTL19002	164.56	175.17	10.61	Vvm mafic volcanic	D	grey green	fg	foliated	Mafic Volcanics: same as previous 130.64 m to 155.62 m with sharp lower contact which has a 10 cm wide rhodochrosite vein which contains mafic breccia clasts at 60 DTCA.	brecciated	chlorite alteration	wk mod	carbonate alteration	wk			pyrite	0.1				vqc	0.5	vqz	0.75
MTL19002	175.17	176.7	1.53	Sag argillite	D	grey black	vfg	laminated	Argillite: black, very fine grained, well laminated and folded, competent with few natural fractures. Moderate to strong graphite alteration, roughly 5 % foliation parallel stratiform pyrrhotite, 2% pyrite mostly in laminations cutting stringers. Sharp lower contact at 70 DTCA.	fracture/in fractures	Graphitic alteration	mod str					pyrrhotite	5	pyrite	2		vqc	0.1		

MTL19002	176.7	182.56	5.87	Vvm mafic volcanic	D	grey green	fg	foliated	Mafic Volcanics: same as previous 130.64 m to 155.62 m with sharp lower contact at 70 DTCA.	massive	chlorite alteration	wk mod	carbonate alteration	wk		pyrite	1			vqc	0.75	vqz	0.75
MTL19002	182.56	184.36	1.81	Sct chert	D	green grey	vfg	laminated	Chert intercalated with mafic volcanics: grey green to brown, very fine grained, mostly well laminated on the cm- to mm-scale with alternating green or brown laminations. Hard and competent, siliceous throughout, weak chlorite alteration defined by green hued laminations, brown hued laminations due to possible iron staining. Localities with up to 5-10% pyrite in 10 cm sections mostly as foliation parallel blebs and stringers, 2% pyrite overall. Two vein sets, first clean quartz vein set with trace carbonate possibly related to second vein set which is more carbonate rich containing rhodochrosite. Lower contact is a sharp bedding contact at 65 DTCA.	fracture/in fractures	chlorite alteration	wk	hematite alteration	wk		pyrite	2			vqc	0.25	vqz	0.2
MTL19002	184.36	185.17	0.81	Sag argillite	D	grey black	vfg	laminated	Argillite: similar to previous 175.17 m to 176.7 m but without stratiform pyrrhotite and higher levels of pyrite. Sharp lower bedding contact at 60 DTCA.	fracture/in fractures	Graphitic alteration	mod str				pyrite	4			vqc	0.5		
MTL19002	185.17	185.56	0.4	Sct chert	D	green grey	vfg	laminated	Chert: same as previous 182.56 m to 184.36 with sharp lower contact at 60 DTCA.	fracture/in fractures	chlorite alteration	wk	hematite alteration	wk		chalcopyrite	0.1	pyrite	1	vqc	0.25		
MTL19002	185.56	187.83	2.28	Gpp porphyry	D	grey green	mg	massive ("but not bedding: see "bds")	Feldspar Porphyry Dyke: same as previous 155.62 m to 156.41 m but with orange stained feldspar phenocrysts due to hematite dusting. Sharp lower contact at 25 DTCA.	massive	chlorite alteration	wk	carbonate alteration	wk		pyrite	0.1			vqc	0.1		
MTL19002	187.83	205.2	17.37	Vvm mafic volcanic	D	grey green	fg	foliated	Mafic Volcanics: similar to previous 130.64 m to 155.62 m but with heightened occurrence of the foliation parallel green altered vein set, nearly 5% of unit along with an increase in pyrite associated with low angle secondary vein set up to 2% of unit. Also increase of intercalated sediment beds of purple brown cherty material or green chloritic beds. Sharp low angle lower contact containing quartz-carbonate which is rhodochrosite and calcite.	massive	chlorite alteration	wk mod	carbonate alteration	wk		pyrite	0.1			vqc	0.5	vqz	1
MTL19002	205.2	206.86	1.67	Fault	D	grey green	mg	massive ("but not bedding: see "bds")	Fault Zone: faulted porphyry dyke, unconsolidated rubble composed of broken porphyry mostly sand to gravel sized porphyry dyke material. Sharp lower contact defined by stoppage of unconsolidated rubble at 80 DTCA.	faulted/fault	chlorite alteration	wk	carbonate alteration	wk		pyrite	0.1			vqc	5		
MTL19002	206.86	214.05	7.19	Gpp porphyry	D	grey green	mg	massive ("but not bedding: see "bds")	Feldspar Porphyry Dyke: same as previous 185.56 m to 187.83 with sharp lower contact at 8 DTCA.	massive	chlorite alteration	wk	carbonate alteration	wk		pyrite	0.1			vqc	0.1		
MTL19002	214.05	239.2	25.15	Vvm mafic volcanic	D	grey green	fg	foliated	Mafic Volcanics: same as previous 130.64 m to 155.62 m but with increase in clean vitreous quartz veins. Sharp lower contact at 70 DTCA.	massive	chlorite alteration	wk mod	carbonate alteration	wk		pyrite	0.1	pyrrhotite	0.2	vqc	0.75		
MTL19002	239.2	241.1	1.91	Gpp porphyry	D	grey green	mg	massive ("but not bedding: see "bds")	Feldspar Porphyry Dyke: same as previous 155.62 m to 156.41 m but with lighter purple brown hued groundmass, more consistent spread of feldspar phenocrysts and cut by one large quartz vein with trace chalcopyrite and pyrrhotite at 243 m. Lower contact is sharp at 65 DTCA.	massive	chlorite alteration	wk	carbonate alteration	wk		pyrite	0.1			vqc	0.2		
MTL19002	241.1	251.06	9.97	Vvm mafic volcanic	D	grey green	fg	foliated	Mafic volcanics: same as previous 214.05 m to 242.2 m with narrow Porphyry dyke intrusion @ 241.7-241.85m and a sharp lower contact at 25 DTCA.	massive	chlorite alteration	wk mod	carbonate alteration	wk		pyrite	0.1			vqc	0.5		
MTL19002	251.06	251.5	0.44	Gpp porphyry	D	grey green	mg	massive ("but not bedding: see "bds")	Feldspar Porphyry Dyke: similar to previous 155.62 m to 156.41 m, absent of clear feldspar phenocrysts with large alteration halos surrounding the light grains. Sharp lower contact at 30 DTCA.	massive	chlorite alteration	wk	carbonate alteration	wk		pyrite	0.1			vqc	0.1		
MTL19002	251.5	252	0.5	Vvm mafic volcanic	D	grey green	fg	foliated	Mafic Volcanics: same as previous 244.1 m to 254.06 m. EOH.	massive	chlorite alteration	wk mod	carbonate alteration	wk		pyrite	0.1			vqc	0.75		
MTL19003	0	4.12	4.12	Oou overburden general					Oou overburden general														
MTL19003	4.12	17	12.88	Tti intermediate tuff	D	purple grey	fg	laminated	Intermediate Lapilli Tuff interbedded with Cherty Metasediments: the tuff strongly resembles a strongly foliated version of the porphyry dyke but determined as tuff due to the foliation parallel bedding. Dark purple grey to black, very fine grained groundmass with medium grained lapilli feldspar clasts wrapped by foliation, chert beds have a weak presence of dark green argillites often garnetiferous. Both units are well laminated/foliated on the cm- to mm-scale and are both hard and competent with few natural fractures. Weak ductile deformation with a slightly undulating foliation with minor faulting seen in sharp displacement of laminations. Weak hematite alteration seen dusting lapilli clasts orange, weak chloritization of argillites which is also related to garnetiferous bands. Minor disseminated pyrite in groundmass of both units with few lamination parallel pyrite stringers predominantly found within the cherty beds. Primary vein set is variably pure quartz to pure carbonate often foliation parallel at the cm-scale, secondary vein set is a mm-scale quartz-carbonate set which crosscuts primary vein set and foliation related to faulting event often running 50-60 DTCA. Lower contact is gradational and foliation parallel at 70 DTCA.	foliated/foliation	hematite alteration	wk	chlorite alteration	wk		pyrite	0.1			vcb	0.2		
MTL19003	17	31.75	14.75	Vvm mafic volcanic	D	green black	fg	foliated	Mafic Volcanic intercalated with Metasediments: dark green to black, fine grained to aphanitic, variably well foliated to near massive, hard and competent with few natural fractures. Section of semi-massive magnetite occurs between 19.35-20.50m. Weak pervasive chlorite alteration with trace disseminated pyrite within groundmass as well as blebby pyrite found in quartz-carbonate veinlets cutting unit. Two main vein sets, older green altered quartz-carbonate foliation parallel, undulating and mottled, secondary vein set cross cutting foliation is lighter white hued carbonate rich quartz-carbonate associated with weak epidote alteration in cm-scale veins. Lower contact is intercalated and foliation parallel at 65 DTCA.	massive	chlorite alteration	wk	carbonate alteration	wk		pyrite	0.1	mt	0.25	vcb	0.5	vqc	0.25
MTL19003	31.75	46.34	14.59	Sct chert	D	purple grey	vfg	laminated	Cherty Metasediments Interbedded with Argillite: dark to medium purple grey and green, mostly very fine grained with occasional medium grained tuff towards upper contact. Units are well laminated and interbedded also intercalated with mafic volcanics towards lower contact, hard and mostly competent with few brittle sections near middle of unit. Both brittle and ductile deformation seen in undulating foliations and sharp displacement of laminations. Weak hematite alteration defining cherty beds, weak chlorite alteration defining argillite beds and garnetiferous lenses found in both units. Abundance of fine grained disseminated pyrite and locally foliation parallel and cross cutting pyrite stringers with trace pyrrhotite and chalcopyrite stringers; increased sulphide toward lower contact (up to 2% locally). One vein set is variably quartz to carbonate dominant mostly found in lamination cutting small mm-scale veinlets occasionally found in larger cm-scale carbonate veins with brecciated wall rock, veins have trace iron staining, large vein found at 44.08-44.22 m. Lower contact is intercalated, foliation parallel at 70 DTCA.	foliated/foliation	chlorite alteration	wk	hematite alteration	wk		chalcopyrite	0.1	pyrrhotite	0.1	pyrite	0.75	vcb	0.15	vqc	0.25
MTL19003	46.34	52.2	5.86	Vvm mafic volcanic	D	green black	fg	foliated	Mafic Volcanics: same as previous 16.48 m to 31.75 m but with higher percentage of intercalated sediments. Minor banded-stringer pyrrhotite (<1%) occurs within intercalated sediments. Large quartz vein with minor carbonate found at 47.87-47.92 m. Lower contact is intercalated foliation parallel at 70 DTCA.	massive	chlorite alteration	wk	carbonate alteration	wk		pyrite	0.2	mt	0.25	pyrrhotite	0.1	vcb	0.1	vqc	0.25
MTL19003	52.2	93.31	41.11	Sct chert	D	purple grey	vfg	laminated	Cherty Metasediments: same as previous 31.75 m to 46.34 m but with addition of secondary vein set, quartz-rich carbonate poor, overall decrease in disseminated pyrite (< 1%), generally more siliceous. Lower contact is sharp at 60 DTCA.	foliated/foliation	chlorite alteration	wk	hematite alteration	wk		pyrite	0.25	pyrrhotite	0.1	vcb	0.25	vqz	0.2
MTL19003	93.31	100.14	6.83	Vvm mafic volcanic	M	green brown	fg	foliated	Mafic Volcanics Heavily Intercalated with Metasediments: medium green to brown, fine grained, very well foliated with alternating dark and light bands. Unit is hard and competent with minor fractures and breaks. Very weak chlorite alteration, prominent pervasive carbonate alteration specifically from 95.14 m to 96 m. Trace amounts of fine grained disseminated pyrite confined to carbonate veins. Two main vein sets, primary set is mm- to cm-scale, foliation parallel quartz carbonate vein set, the quartz is altered green and rims carbonate which is locally stained an orangey red, secondary vein set cross cuts foliation and primary vein set and consists of mm-scale quartz carbonate veins and are barren. Lower contact is sharp at 45 DTCA.	foliated/foliation	chlorite alteration	mod	carbonate alteration	mod		pyrite	0.1			vcb	5		
MTL19003	100.14	101.7	1.56	Fault Breccia	M	brown green	fg	fragmental or as fragments	Fault Breccia: heavily faulted and healed angular mafic volcanics, medium browny green to grey, unconsolidated chlorite rich fault gouge from 101.46 m to 101.65 m. Heavily chloritized, trace amounts of very fine grained disseminated euhedral pyrite. Two main vein sets, first is large breccia infill calcite veins one large calcite vein 100.14-100.4 m, second vein set is cm-scale quartz and rhodochrosite veins which occur towards lower contact. Lower contact is undulating, brecciated and graphitic at approximately 80 DTCA.	faulted/fault	chlorite alteration	str	carbonate alteration	mod		pyrite	1			vcb	8		
MTL19003	101.7	106.55	4.85	Fault	L	brown orang	fg	fragmental or as fragments	Fault Zone: faulted/unconsolidated cataclasite comprised of felsic dyke. Light brownish orange, very fine grained to aphanitic, well foliated. Unit is heavily fractured with no pieces larger than 20 cm. Pervasive chlorite alteration, blebby pyrite seen as stringers. Pink rhodochrosite veins/veinlets as well as chlorite to graphite veins. Lower contact cross cuts argillite unit twice before sharply ending at 35 DTCA.	faulted/fault	chlorite alteration	mod str	hematite alteration	mod	Graphitic alteration	wk	pyrite	0.75			vcb	3		
MTL19003	106.55	109.7	3.16	Fault	D	black	vfg	fragmental or as fragments	Fault Zone: faulted argillite, black, aphanitic, brecciated/faulted and broken cataclasite. Heavily graphite altered, roughly 5% stratiform pyrite. Vuggy quartz vein set. Lower contact is sharp but broken and unconsolidated.	faulted/fault	Graphitic alteration	str				pyrite	5			vcb	0.2		
MTL19003	109.7	117.8	8.1	Vvm mafic volcanic	D	green	fg	foliated	Fault Zone Mafic Volcanics: medium to dark green, aphanitic to very fine grained, moderately foliated, brittle and faulted throughout. Pervasive moderate to strong chlorite alteration. Unit is cut by two veins sets, first is pink carbonate vein set variable amounts of manganese and localized iron stained quartz, second set is epidote altered quartz veins. Very minor pyrite found on foliation parallel stringers associated with chlorite rich sections. Lower contact is sharp at 45 DTCA.	faulted/fault	chlorite alteration	mod str	carbonate alteration	mod	hematite alteration	wk	pyrite	0.1			vcb	2		
MTL19003	117.8	122.1	4.3	Gft felsite	D	brown orang	fg	massive ("but not bedding: see "bds")	Feldspar Dyke: dark brown to orange, fine grained, massive with weakly foliated localities. Unit is brittle and moderately broken due to faulting. Weak to moderate chlorite and iron alteration with trace disseminated pyrite in groundmass, local strong pyrite found in foliation parallel stringers 121 m for 10 cm in area which resembles the felsic intrusive dyke. Cut by one quartz-rhodochrosite vein set. Lower contact is sharp at 70 DTCA.	faulted/fault	chlorite alteration	wk mod	hematite alteration	wk mod		pyrite	0.2			vcb	0.25	vqz	0.15

MTL19003	122.1	146.74	24.64	Vvm mafic volcanic	D	green grey	fg	foliated	Mafic Volcanics: dark greenish grey, very fine grained to fine grained coarsening towards lower contact, weak to moderately foliated, generally hard and competent with broken rubbly zone from 128.5 m to 130.5 m (possible fault) where unit is highly graphitic. Weak pervasive chlorite alteration in both groundmass and green altered quartz-carbonate veins, minor localized epidote alteration, localized strong graphitic alteration associated with broken rubbly zones, minor localized pinkish red staining of quartz-carbonate veins. Minor vein hosted pyrite or foliation parallel pyrite stringers, one large 8 cm quartz-carbonate vein at 123.45 m with significant pinkish red staining, as well as minor blebby chalcopyrite and disseminated sphalerite. At least wo generations of variable quartz-carbonate veins accounting for 3-5% overall, first vein set are numerous green altered foliation parallel quartz-carbonate veins/veinlets at the mm- to cm-scale, second major vein set consists of more carbonate-rich quartz-carbonate veins which cross cut the foliation and primary vein set and are at a lower angle to core axis, several brecciated quartz-carbonate veins and larger (up to 10 cm) carbonate-rich veins. Lower contact is sharp and brecciated at 50 DTCA.	fracture/in fractures	chlorite alteration	wk	carbonate alteration	wk	epidote alteration	wk	sphalerite	0.1	chalcopyrite	0.1	pyrite	0.25	vcb	0.2	vqc	0.75
MTL19003	146.74	150.29	3.55	Gpp porphyry	M	pink grey	mg	foliated	Feldspar Porphyry Dyke: medium grey with a pinkish red background hue, fine to medium grained groundmass and weakly porphyritic with pinkish subrounded or stretched feldspar grains, unit if weakly foliated, hard and competent with few natural fractures. Possible cm-scale fault gouge at 149.2 m. Weak pinkish red alteration likely hematite staining of both groundmass, phenocrysts and quartz-carbonate stringers. Very trace amounts of vein hosted pyrite, minor sub-cm scale quartz-carbonate veins locally hematite stained, towards lower contact several foliation parallel green altered quartz-carbonate veins. Lower contact is gradational transition back to mafic volcanics.	weakly foliated	hematite alteration	wk	carbonate alteration	wk	chlorite alteration	wk	pyrite	0.1					vcb	0.1		
MTL19003	150.29	162.72	12.43	Vvm mafic volcanic	D	green grey	fg	foliated	Mafic Volcanics: same as previous 122.1 m to 146.74 m, consistently fine grained and significantly less veining (<= 1%). Lower contact is sharp at 70 DTCA.	fracture/in fractures	chlorite alteration	wk	carbonate alteration	wk	epidote alteration	wk	pyrite	0.2					vcb	0.2	vqc	0.75
MTL19003	162.72	162.82	0.1	Breccia (undifferentiated)	M	white grey	fg	fragmental or as fragments	Brecciated Quartz-Carbonate Vein: 9 cm matrix supported quartz-carbonate vein with medium to coarse grained angular clasts of highly chloritized wall rock with minor disseminated pyrite with pyrite stringers along margins of vein. Lower contact is sharp at 80 DTCA.	brecciated	carbonate alteration	str	silica alteration	mod	chlorite alteration	wk	chalcopyrite	0.1	pyrite	0.2			vqc	90		
MTL19003	162.82	226.9	64.08	Vvm mafic volcanic	D	green grey	fg	foliated	Mafic Volcanics: same as previous 122.1 m to 146.74 m, with higher percent intercalated sulphide rich argillites, locally semi-massive pyrrhotite at 163.5 m to 163.9 m. Unit displays variable grain size ranging from fine grained to local patches of medium to coarse grained mafics. Galena and chalcopyrite bearing quartz-carbonate vein within graphitic argillite unit at 172.1 m, galena more predominant on slip surfaces. Heavily altered zone from 177.7 m to 178.4 m exhibit significant epidote and hematite alteration associated with pervasive carbonate veining and brecciation and minor galena, chalcopyrite +/- sphalerite. Lower contact is sharp at 40 DTCA.	fracture/in fractures	chlorite alteration	wk mod	carbonate alteration	wk	epidote alteration	v wk	garnet	0.1	chalcopyrite	0.1	sphalerite	0.1	vcb	2	vqc	0.25
MTL19003	226.9	227.35	0.45	Gpp porphyry	D	purple grey	mg	massive ("but not bedding: see "bds")	Feldspar Porphyry Dyke: fine grained dark purply grey groundmass with medium grained subhedral pink feldspar phenocrysts. Unit is massive, hard and competent with minor carbonate fracture fills. Lower contact is sharp and undulating at 80 DTCA.	massive	chlorite alteration	wk mod	hematite alteration	wk mod			pyrite	0.1					vcb	0.25		
MTL19003	227.35	252	24.65	Vvm mafic volcanic	D	green grey	mg	foliated	Mafic Volcanics: similar to previous 162.82 m to 226.9 m but consistently medium grained and appears to have weak pervasive epidote and/or sericite alteration. Significant decrease in concentration of veining (<1%). EOH	fracture/in fractures	chlorite alteration	wk	sericite alteration	wk	epidote alteration	wk	pyrite	0.1					vcb	0.5		
MTL19004	0	6.32	6.32	Oou overburden general					Overburden: not in box																		
MTL19004	6.32	26.45	20.13	Gdl dolerite	D	grey green	mg	massive ("but not bedding: see "bds")	Diabase: medium grey to dark grey green, medium grained and equigranular, massive to very weakly foliated, very weakly magnetic. Unit is hard and competent with only several natural fractures nearer to surface with iron oxidation on slip planes. Weak to moderate pervasive chlorite overall with patches of very strong chloritization, weak local epidote alteration and minor iron and/or potassic oxidation down hole. Trace amounts of fine grained disseminated pyrite hosted in quartz-carbonate veins or found on slip surfaces, very trace chalcopyrite associated with green altered quartz-carbonate veins. Two main vein sets, one sub-cm scale green altered quartz-carbonate veins appear to be foliation parallel, second vein set are on the cm-scale and are a clean carbonate-rich quartz-carbonate vein set which cross cut original vein set and are at a lower angle to core axis, this second vein set occasionally brecciates rock. Lower contact is semi-sharp at 55 DTCA.	weakly foliated	chlorite alteration	wk mod	epidote alteration	wk	hematite alteration	wk mod	chalcopyrite	0.05	pyrite	0.1			vqz	0.5	vqc	0.5
MTL19004	26.45	59.33	32.88	Vvm mafic volcanic	D	green grey	fg	foliated	Mafic Volcanics with Interbedded Metasediments: mafics are dark greenish grey, fine grained and interbedded with sub-meter light to medium grey, aphanitic to very fine grained cherty sediments and darker grey to greenish black argillites which are associated with garnetiferous bands. All units are hard and competent and weak to moderately foliated. Variable pervasive chloritization of both units, significant but localized patches of pink to orangey red staining of quartz-carbonate veins often associated with brecciation of wall rock, staining does not appear to be related to any particular vein set, one zone at 48 m of significant epidote alteration/veining also partly stained. Minor disseminated, fine grained, subhedral or foliation parallel pyrite stringers mostly associated with the metasediments or found along fracture faces, also minor vein hosted pyrite. Several different vein sets, highly green altered foliation parallel mm-scale carbonate to quartz-carbonate veins, mm- to cm-scale clean carbonate-rich quartz-carbonate veins often stained orangey red and sometimes brecciating host rock, localized zones of highly sporadic/stock work style mm-scale stained quartz-carbonate veins, large 15 cm epidote vein cross cutting foliation also generating a stock work style off shoot. Lower contact is gradational at 50 DTCA.	weakly foliated	chlorite alteration	wk mod	epidote alteration	wk	hematite alteration	wk mod	pyrite	0.1					vqz	0.1	vqc	1
MTL19004	59.33	71.86	12.53	Tti intermediate tuff	M	purple grey	fg	laminated	Intermediate Lapilli Tuff with Interbedded Metasediments: tuff is light to medium grey with minor purplish hued very fine grained groundmass with medium grained pink hematite dusted feldspar grains, cherty interbeds are aphanitic and light to medium grey with a pink background hue, argillites are dark grey to black, aphanitic and predominantly garnetiferous. Very minor pervasive chlorite alteration, both chert and tuff units display a background pinkish red hue likely due hematite alteration? which is also prevalent within carbonate-rich quartz-carbonate veins. Pyrite commonly vein hosted, found along fracture planes or as blebby pyrite stringers, trace chalcopyrite within quartz-carbonate vein +/- pyrrhotite. Two primary vein sets, highly green altered foliation parallel mm-scale carbonate to quartz-carbonate veins, mm- to cm-scale clean carbonate-rich quartz-carbonate veins often stained that orangy red and sometimes brecciating host rock. Lower contact is gradational at 65 DTCA.	weakly foliated	chlorite alteration	v wk	hematite alteration	wk	carbonate alteration	wk	chalcopyrite	0.1	pyrrhotite	0.1	pyrite	0.2	vqc	0.25	vcb	0.25
MTL19004	71.86	78.9	7.05	Vvm mafic volcanic	D	green grey	fg	foliated	Mafic Volcanics with Interbedded Cherty Metasediments: mafics are medium greenish grey, fine grained, weak to moderately foliated, hard and competent. Chert is a buff to medium grey and aphanitic to very fine grained. Weak pervasive chloritization and minor localized orangey red staining of quartz-carbonate veins. Minor pyrite occurring along fracture planes or associated with quartz-carbonate veins +/- chalcopyrite. Two primary vein sets, green altered quartz-carbonate veins more abundant near upper contact, cleaner carbonate-rich quartz-carbonate veins often exhibit orangey red to pink staining and brecciate host rock (see description of breccia below), these highly altered breccias occur within the cherty beds. Lower contact is undulatory and sharp at 20 DTCA.	weakly foliated	chlorite alteration	wk	hematite alteration	wk	carbonate alteration	wk	chalcopyrite	0.1	pyrite	0.1			vqc	0.25	vcb	0.1
MTL19004	78.9	79.28	0.38	Breccia (undifferentiated)	M	orange red	fg	brecciated	Breccia: orangey red matrix supported quartz-carbonate breccia, clasts are angular and range from mm- to cm-scale. Galena, molybdenite, chalcopyrite +/- sphalerite found as fracture fill or replacing wall rock clasts and as disseminated flecks within carbonate. Two similar orangey red altered breccia veins occur within previous unit at 77.51 m and 77.87 m. Lower contact is undulatory and sharp at 25 DTCA.	brecciated	carbonate alteration	str	silica alteration	str	hematite alteration	mod	garnet	0.2	mo	0.1	chalcopyrite	0.1	vqc	50		
MTL19004	79.28	86.95	7.67	Vvm mafic volcanic	D	green grey	fg	foliated	Mafic Volcanics: similar to previous at 71.86 m to 78.9 m, but less cherty intervals and no large orangey red breccia veins. Lower is brecciated.	weakly foliated	chlorite alteration	wk	hematite alteration	wk	carbonate alteration	wk	chalcopyrite	0.1	pyrite	0.1			vqc	0.1	vqz	0.1
MTL19004	86.95	87.71	0.76	Gpp porphyry	D	brown purpl	mg	massive ("but not bedding: see "bds")	Feldspar Porphyry Dyke: browny purple, fine grained groundmass with medium grained subhedral feldspar phenocrysts. Unit is hard and competent with no natural fractures. Feldspar phenocrysts are pink likely due to hematite dusting? No observed mineralization, cm to sub cm-scale carbonate-rich quartz-carbonate veins and orangey red stained mm-scale quartz-carbonate veinlets. Lower contact is sharp at 45 DTCA.	massive	chlorite alteration	wk	hematite alteration	wk	carbonate alteration	wk							vqc	0.15		
MTL19004	87.71	115.48	27.77	Sct chert	M	grey	vfg	laminated	Chert with Intercalated Mafic Volcanics: chert is light to medium grey or buff often with a reddish pink hue, aphanitic to very fine grained, mafics are dark grey green and fine grained. Chert is very well laminated with mm- to cm-scale laminations, mafics are weak to moderately foliated. Both units are hard and competent with few natural fractures. Patchy carbonate alteration of chert with pervasive minor hematite staining which is also observed in veins, mafics exhibit minor chloritization. Minor pyrite occurs predominantly as foliation parallel stringers, along fracture planes or hosted within quartz-carbonate veins/veinlets, very trace vein hosted arsenopyrite towards upper contact. Several vein sets, altered foliation parallel quartz-carbonate veins at the cm-scale often with associated blebby pyrite, cleaner carbonate-rich quartz-carbonate veins at lower angle to core axis often brecciating host rock and exhibit hematite staining. Lower contact is sharp at 65 DTCA.	foliated	chlorite alteration	wk	hematite alteration	wk	carbonate alteration	wk	pyrite	0.1					vqz	0.1	vqc	0.5
MTL19004	115.48	116.04	0.57	Breccia (undifferentiated)	M	red grey	vfg	brecciated	Breccia: similar to previous at 78.9 m to 79.28 but with no observed mineralization. Lower contact is undulatory and sharp at 20 DTCA.	brecciated	carbonate alteration	str	silica alteration	str	hematite alteration	mod	pyrite	0.1					vqc	25		
MTL19004	116.04	136.64	20.6	Sct chert	M	grey	vfg	laminated	Chert: similar as previous at 87.71 m to 115.48 m but with far less intercalated mafics. Pale pink chert beds with minor foliation parallel chalcopyrite association at 129.3 m. Lower contact is undulatory and sharp roughly perpendicular to core axis.	foliated	chlorite alteration	wk	hematite alteration	wk	carbonate alteration	wk	pyrite	0.1					vqz	0.1	vqc	0.5

MTL19004	136.67	138.42	1.75	Gdl dolerite	M	pink grey	mg	massive ("but not bedding: see "bds")	Diabase: medium grey pink, medium grained, massive and equigranular, very weakly magnetic. Unit is hard and competent, pink hue may be a result of hematite alteration which is also observed in veins/veinlets. Very fine grained trace disseminated pyrite and mm-scale orangey red stained carbonate-rich quartz-carbonate veins. Lower contact is sharp at 75 DTCA.	weakly foliated	chlorite alteration	wk mod	epidote alteration	wk	hematite alteration	wk mod	pyrite	0.01				vqc	0.1		
MTL19004	138.42	141.73	3.31	Sct chert	M	grey	vfg	laminated	Chert: similar to 116.04-136.64 m. First 0.5m of unit is hematised breccia. Lower contact is sharp ~60 DTCA.	foliated	chlorite alteration	wk	hematite alteration	wk	carbonate alteration	wk	pyrite	0.1				vqc	0.1		
MTL19004	141.73	154.26	12.53	Vvm mafic volcanic	D	green grey	fg	foliated	Mafic volcanic, dark green grey, fine grained, well developed foliation, contains healed fault breccia sections @147.23-147.77m and 151.24-152.03m, moderate, pervasive chlorite and carbonate alteration with weak hematite, pyrite occurs disseminated and as semi-massive foliation-parallel bands (<1%), green, deformed quartz veins and quartz-carbonate veins cut unit; veining is strongest within upper portion of unit (141.73-144.5m) ~3-5%, lower contact is sharp ~70 DTCA.	brecciated	chlorite alteration	mod	carbonate alteration	mod	hematite alteration	wk	pyrite	0.5				vqz	0.25	vqc	3
MTL19004	154.26	154.31	0.06	Fault	D	black	vfg	fragmental or as fragments	Graphitic fault gouge (3.5cm), black, very fine grained, dominantly clay gouge with pebble-sized, angular rock fragments, trace pyrite within gouge, no veining, lower contact is sharp ~70 DTCA.	faulted/fault	Graphitic alteration	str					pyrite	0.01							
MTL19004	154.31	157.78	3.47	Fault Breccia	M	red grey	fg	brecciated	Brecciated mafic volcanic (with minor chert or silicification), medium grey green, fine grained, pervasively fractured and often rubbly (RQD <50), 2 cm wide graphitic fault gouge occurs @155.85m, weak-moderate, pervasive chlorite, weak, pervasive carbonate, and weak-moderate graphite, disseminated to fracture-fill pyrite with trace chalcopyrite, mm-scale to cm-scale carbonate veins cut unit and often contain wall rock fragments; veining occurs strongest directly adjacent fault plane, lower contact is sharp ~40 DTCA.	faulted/fault	Graphitic alteration						chalcopyrite	0.01	pyrite	0.2		vcb	1		
MTL19004	157.78	169.89	12.11	Vvm mafic volcanic	M	green grey	fg	weakly foliated	Mafic volcanic, medium green grey, fine grained, weakly developed foliation. Unit is rubbly (most pieces <10cm) from 159-160m, increasing in competency downhole. Moderate, pervasive chlorite alteration with weak hematite primarily associated with quartz veining. Pyrite occurs disseminated. Green, deformed quartz veins and quartz-carbonate veins cut unit. Lower contact is sharp ~70 DTCA.	massive	chlorite alteration	mod	hematite alteration	wk			pyrite	0.01				vqz	1	vqc	0.1
MTL19004	169.89	170.01	0.13	Gpp porphyry	L	green grey	fg	massive ("but not bedding: see "bds")	Porphyry dyke: light to medium green grey. Fine grained, with <1mm, anhedral, beige phenocrysts. Massive, with slightly bleached chilled margins. Weak pervasive chlorite and trace carbonate alteration. Trace chalcopyrite associated with fractures. Mm-scale quartz veins cut core at low angles. Lower contact sharp 75DTCA.	massive	chlorite alteration	wk	carbonate alteration	tr			chalcopyrite	0.01				vqz	0.01		
MTL19004	170.01	170.05	0.05	Vvm mafic volcanic	M	green grey	fg	weakly foliated	Altered Mafic Volcanic. Medium green grey, fine grained, massive to weakly foliated. Moderately pervasive graphitic and silica alteration; moderate pervasive carbonate alteration occurs with graphitic alteration. Pyrite and chalcopyrite mineralization occur along foliations within the graphitically altered areas; trace disseminated pyrite and chalcopyrite throughout. Quartz carbonate veins occur, up to 0.5mm. Lower contact sharp at 75 DTCA.	massive	Graphitic alteration	mod	silica alteration	mod	carbonate alteration	wk mod	pyrite	0.1	chalcopyrite	0.05		vqc	0.1	vqz	0.01
MTL19004	170.05	170.82	0.77	Fault	D	grey black	fg	brecciated	Fault. Dark grey black. Fine to medium grained fault gouge. Strong graphitic alteration and moderately pervasive carbonate alteration. Pyrite and chalcopyrite disseminated. Cm-scale brecciated carbonate vein. Lower contact gradational.	faulted/fault	Graphitic alteration	str	carbonate alteration	mod	str		pyrite	0.1	chalcopyrite	0.05		vcb	0.01		
MTL19004	170.82	172.95	2.13	Vvm mafic volcanic	M	green grey	fg	weakly foliated	Altered Mafic Volcanic. Medium green grey, fine grained, massive to weakly foliated. Moderately pervasive silica and chlorite alteration; hematite alteration associated with stronger silica alteration; trace to weak carbonate alteration. Pyrite and chalcopyrite mineralization occur within quartz veins. mm-scale quartz carbonate vein and sub-cm scale quartz vein. Lower contact sharp at 70 DTCA.	massive	Graphitic alteration	mod	silica alteration	mod	hematite alteration	wk	pyrite	0.1	chalcopyrite	0.05		vqc	0.1	vqz	0.01
MTL19004	172.95	175.92	2.97	Guu igneous rock (undifferentiated)	M	green grey	fg	massive ("but not bedding: see "bds")	Olive' green dyke. Medium green grey, fine grained, with 1-2mm chlorite eyes. Massive; contacts have ~0.5-1cm wide bleached chilled margins. Unit is fairly rubbly with most pieces less than 20cm. Moderate pervasive chlorite alteration and weak pervasive carbonate alteration. Trace disseminated blebby pyrite. Mm-scale quartz carbonate veins cut core. Lower contact sharp at 60 DTCA.	massive	chlorite alteration	mod					pyrite	0.01				vqc	0.01		
MTL19004	175.92	177.8	1.89	Fault Breccia	M	grey	fg	weakly foliated	Fault breccia- variably altered. Medium to dark grey. Fine grained. Massive to weakly foliated; rubbly with fault gouge located at 176.75m. Patches of strong graphitic alteration and silica alteration (orangey pink patches); moderate carbonate alteration associated with fault gouge; weak to moderate pervasive chlorite alteration. Blebby pyrite and chalcopyrite occur close to the fault along foliations; trace finely disseminated pyrite throughout unit. mm-scale quartz veinlets. Lower contact is lost due to brecciation, depth approximated.	brecciated	chlorite alteration	wk mod	Graphitic alteration	wk mod	silica alteration	wk mod	pyrite	0.1	chalcopyrite	0.01		vqz	0.01		
MTL19004	177.8	190.19	12.39	Guu igneous rock (undifferentiated)	M	green grey	fg	massive ("but not bedding: see "bds")	Olive' green dyke. Medium green grey, fine grained, with 1-2mm chlorite eyes. Massive; lower contact as a ~2cm wide bleached chilled margin. Weakly magnetic. Moderate pervasive chlorite alteration and weak pervasive carbonate alteration. Trace disseminated blebby pyrite. Mm-scale quartz carbonate veins cut core at low angles <20DTCA. Lower contact sharp at 77DTCA.	massive	chlorite alteration	mod					pyrite	0.01				vqc	0.01		
MTL19004	190.19	192.35	2.16	Sct chert	M	brown grey	fg	foliated	Interbedded argillite and chert. Argillite is dark grey black and chert is grey brown. Fine grained. Well developed foliation. Weak to moderate graphitic and carbonate alteration of argillite; weakly pervasive chlorite alteration; hematite (pink) alteration occurs mainly associated with cherty beds. Pyrite and chalcopyrite occur primarily associated with veining, fractures and foliation planes, but also finely disseminated; trace galena and sphalerite in argillite units. 3cm wide carbonate vein occurs within argillite at 190.35m; 2cm wide quartz carbonate vein with pink alteration occurs within chert at 192.17m. Lower contact is sharp at 70 DTCA.	foliated	chlorite alteration	wk mod	Graphitic alteration	wk mod	carbonate alteration	wk	pyrite	0.25	chalcopyrite	0.1	pyrrhotite	0.01	vcb	0.01	vqc	0.01
MTL19004	192.35	240.9	48.55	Vvm mafic volcanic	M	green grey	fg	weakly foliated	Mafic volcanics. Medium green grey, fine grained, weakly developed foliation. Unit has one rubbly area (most pieces <10cm) from 196.9-197.2m; Minor sub-m to m scale interbeds of tuff looking units from 210-216m. Moderate, pervasive chlorite alteration and weak sericite (fine tan grains). Pyrite occurs finely disseminated. Green, deformed quartz veins common throughout; large carbonate vein from 193.13-193.45m contains euhedral pyrite. Lower contact is sharp ~55 DTCA.	massive	chlorite alteration	mod	sericite alteration	wk			pyrite	0.1	sphalerite	0.01		vqz	1	vqc	0.1
MTL19004	240.9	241.11	0.22	Gpp porphyry	L	pink grey	fg	massive ("but not bedding: see "bds")	Porphyry dyke: light to medium pink grey. Fine grained, with <1mm, anhedral, beige phenocrysts. Massive, with no observed chilled margins. Moderate silica alteration. Finely disseminated pyrite. Mm-scale fracture filling carbonate. Lower contact sharp 50 DTCA.	massive	silica alteration	mod					pyrite	0.01				vcb	0.01		
MTL19004	241.11	246	4.89	Vvm mafic volcanic	M	green grey	fg	weakly foliated	Mafic volcanics. Medium green grey, fine grained, weakly developed foliation. Moderate, pervasive chlorite alteration and weak sericite (fine tan grains). Pyrite occurs finely disseminated. Green, deformed quartz veins common throughout; 3cm wide carbonate breccia vein at 244.22m. Lower contact is sharp ~30 DTCA.	massive	chlorite alteration	mod	sericite alteration	wk			pyrite	0.01				vqz	1	vqc	0.1
MTL19004	246	246.6	0.6	Gpp porphyry	L	pink grey	fg	massive ("but not bedding: see "bds")	Porphyry dyke: light to medium pink grey. Fine grained, with 1-3mm, anhedral, beige phenocrysts. Massive, with no observed chilled margins. Weak silica alteration; weak to moderate hematite (pink) alteration throughout an concentrated along quartz veins. Finely disseminated pyrite. Mm-scale carbonate veins; 1-4mm wide quartz and quartz-carbonate veins show some brecciation. Lower contact faint, 35 DTCA.	massive	hematite alteration	wk mod	silica alteration	wk			pyrite	0.1				vqz	0.1	vcb	0.01
MTL19004	246.6	252	5.41	Vvm mafic volcanic	M	green grey	fg	weakly foliated	Mafic volcanics. Medium green grey, fine grained, weakly developed foliation. Moderate, pervasive chlorite alteration and weak sericite (fine tan grains). Pyrite occurs finely disseminated. Green, deformed quartz veins common throughout; large brecciated carbonate veins from 246.76 and 250.78-251.05m.	brecciated	chlorite alteration	mod	sericite alteration	wk			pyrite	0.1				vqz	1	vcb	0.1
MTL19005	0	4	4	Oou overburden general					Overburden																			
MTL19005	4	50.7	46.7	Vvm mafic volcanic	D	green grey	fg	interbedded	Mafic volcanic with minor intercalated mafic lapilli-tuff and sub-m patches of laminated chert, dark green grey, fine grained, massive to well foliated, patches of well developed foliation occur coincident with patches of brecciation (i.e., 33-35.5m), weak-moderate, pervasive chlorite, weak-moderate patchy sericite and carbonate alteration; patchy silicification, disseminated to foliation-parallel banded pyrite, trace cm-scale green deformed quartz veins, minor cm-scale clean quartz veins, and cm-scale quartz-carbonate veins with variable amount of carbonate and orange mineral, likely K-feldspar, unit becomes more altered toward lower contact, which is sharp ~20 DTCA.	foliated	chlorite alteration	wk mod	carbonate alteration	wk mod	sericite alteration	wk mod	pyrite	0.1				vcb	0.3	vqz	0.1
MTL19005	50.7	53.1	2.4	Gpp porphyry	M	orange grey	fg	massive ("but not bedding: see "bds")	Feldspar porphyry dyke, medium orange grey, fine grained, massive, weak-moderate pink alteration (likely potassic) with weak pervasive chlorite and trace, patchy carbonate alteration, trace finely disseminated pyrite, trace mm-scale carbonate veinlets, lower contact is sharp ~24 DTCA.	massive	chlorite alteration	wk mod	potassic	wk	carbonate alteration	wk mod	pyrite	0.01				vcb	0.1		
MTL19005	53.1	92.48	39.38	Vvm mafic volcanic	D	green grey	fg	interbedded	Mafic volcanic. Similar as described from 4-50.7m (Lacking intercalated lapilli-tuff). Unit continuously alternates between massive and well foliated. Trace bands of graphite occur sporadically (i.e., 88.20m). Mottled quartz-carbonate vein (3-4cm wide) occurs ~81 m with minor pyrite. Lower contact is sharp ~65 DTCA.	foliated	chlorite alteration	wk mod	carbonate alteration	wk mod	sericite alteration	wk mod	pyrite	0.1				vcb	0.5	vqz	0.2
MTL19005	92.48	94	1.52	Gpp porphyry	M	orange grey	fg	massive ("but not bedding: see "bds")	Same as described from 50.7-53.1m. Lower contact is sharp ~70 DTCA.	massive	chlorite alteration	wk mod	potassic	wk	carbonate alteration	wk mod	pyrite	0.01				vcb	0.1		
MTL19005	94	101.85	7.85	Vvm mafic volcanic	D	green grey	fg	interbedded	Mafic volcanic. Similar as described from 4-50.7m (Lacking intercalated lapilli-tuff). Unit continuously alternates between massive and well foliated. Lower contact is sharp ~75 DTCA.	foliated	chlorite alteration	mod	carbonate alteration	mod	sericite alteration	wk mod	pyrite	0.1				vcb	0.5	vqz	0.2
MTL19005	101.85	106.25	4.41	Fault Breccia	D	green grey	fg	fragmental or as fragments	Fault breccia; mafic volcanic with fault gouge @101.86m (2 cm) ~75 DTCA, dark green grey, fine grained, rubbly interval with RQD<50%, chlorite is moderate and pervasive, carbonate is weak-moderate, pervasive, and weak-moderate graphite, disseminated to semi-massive pyrite occurs within rubbly mafic, minor cm-scale quartz-carbonate and carbonate veins occur throughout; 13cm wide quartz-carbonate vein occurs @102.90m. lower contact is sharp ~70 DTCA.	faulted/fault	chlorite alteration	mod	carbonate alteration	wk mod	Graphitic alteration	wk mod	pyrite	0.25				vcb	0.5	vqc	0.25

MTL19005	106.25	119	12.75	Vvm mafic volcanic	D	green grey	fg	interbedded	Mafic volcanic. Similar as described from 4-50.7m (Lacking intercalated lapilli-tuff). Unit continuously alternates between massive and well foliated. Higher concentration of veining in this interval. Lower contact is sharp ~45 DTCA.	foliated	chlorite alteration	mod	carbonate alteration	mod	sericite alteration	wk mod	pyrite	0.1					vcb	0.5	vqz	0.2
MTL19005	119	121.85	2.85	Fault Breccia	D	green grey	fg	fragmental or as fragments	Similar as described from 101.85-106.25m. Narrow zones of silicification host 2-3 % disseminated pyrite locally. Lower contact is sharp ~75 DTCA.	faulted/fault	chlorite alteration	mod	carbonate alteration	wk mod	Graphitic alteration	wk mod	pyrite	0.5					vqz	1	vqc	1
MTL19005	121.85	124.37	2.53	Vvm mafic volcanic	D	green grey	fg	brecciated	Mafic volcanic. Similar as described from 4-50.7m (Lacking intercalated lapilli-tuff). Unit continuously alternates between massive and well foliated. Silicification is moderate and pervasive with disseminated pyrite ~1-2%. Lower contact is sharp ~45 DTCA, bound by a healed silicified, graphitic fault breccia.	foliated	chlorite alteration	mod	silica alteration	mod	Graphitic alteration	wk mod	pyrite	0.1					vcb	0.5	vqz	0.2
MTL19005	124.37	144.5	20.13	Guu igneous rock (undifferentiated)	D	grey green	mg	massive ("but not bedding: see "bds")	Mafic dyke (appears to be chloritized diabase), medium grained, massive, aphanitic, bleached chilled margins, cut by many chloritic slips and fractures, chlorite is moderate-strong and pervasive, weak-moderate, patchy carbonate, and weak, patchy epidote alteration, trace disseminated pyrite, minor cm-scale carbonate-chlorite veins and mm-scale fracture-filling chlorite, lower contact is sharp ~70 DTCA.	fracture/in fractures	chlorite alteration	mod str	carbonate alteration	wk mod	epidote alteration	wk	pyrite	0.1					vcb	0.25	vlt	0.75
MTL19005	144.5	194.75	50.25	Vvm mafic volcanic	D	green grey	fg	interbedded	Mafic volcanic. Similar as described from 4-50.7m (Lacking intercalated lapilli-tuff). Unit continuously alternates between massive and well foliated. Upper 3 m of unit are cherty with abundant disseminated pyrite ~2-3% locally. Quartz-carbonate veins host minor galena and molybdenite; large quartz-carbonate vein occurs from 178.77-179.2m with minor pyrite along fractures and orangey-pink alteration. Lower contact is sharp ~ 80 DTCA.	foliated	chlorite alteration	mod	carbonate alteration	mod	sericite alteration	wk mod	garnet	0.05	mo	0.1	pyrite	0.5	vcb	0.5	vqz	0.2
MTL19005	194.75	196.4	1.66	Gpp porphyry	M	orange grey	fg	massive ("but not bedding: see "bds")	Same as described from 50.7-53.1m. Lower contact is sharp ~30 DTCA.	massive	chlorite alteration	wk mod	potassic	wk	carbonate alteration	wk mod	pyrite	0.01					vcb	0.1		
MTL19005	196.4	201	4.6	Vvm mafic volcanic	D	green grey	fg	interbedded	Mafic volcanic with sub-m intercalated graphitic argillite. Argillite occurs with abundant banded to semi-massive pyrite (3-5% locally). Similar as described from 4-50.7m (Lacking intercalated lapilli-tuff).	foliated	chlorite alteration	mod	carbonate alteration	mod	sericite alteration	wk mod	pyrite	1					vcb	0.5	vqz	0.2