Aberfoyle Resources Limited
EXPLORATION DIVISION

DIAMOND DRILL LOG

PROJECT: MACKINTOSH
PROSPECT: MT CHARTER

HOLE NO: MAC 23
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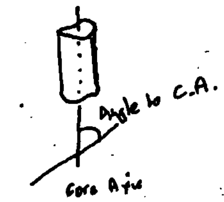

DEPTH	ROCK NAME	DESCRIPTION	ALTERATION	VEINING	MINERALISATION	STRUCTURE	REMARKS
0–19.9	Andesite lava breccia (A.1b.)	Very dark blue-grey homogenous fragmental rock. Fragments range in size from <1mm to ≈30cm. Some fragments show slight alignment of minor sericitised feldspars. Only weakly feldspar-phyric. —15.8 weathered leached and Fe stained version of above. White strongly altered fragments (to 10cm) stand-out from less altered matrix.	weak–moderate silicification sil (2). moderate sericitisation ser(2). common pyrite alteration visible as disseminated grains and small clusters throughout the matrix py(3). rare fuchsite spotting. traces of K feldspar-sphalerite "white" alteration. —15.8 Strongly leached + Fe stained —16.7 Fragments more strongly altered than matrix to ser(4) sil(2) py(2)	minor barite veining to ≈5mm every 1m. Some larger barite veins form a 'matrix' to andesitic lava fragments (eg 9.3m). pyrite veins not common. veins generally ~50° to CA. small barite vein with trace sphalerite and galena with pyrite at 7.2m. 15.8m remnant qz. veins visible in weathered core. 15.8 8cm qz vein; 16.2 30cm qz vein; 16.7 Ba + minor base vein (5mm) cuts 30° C.A. displaced by qz vein; 16.75 qz veins 1cm 65° CA	Pyrite forms up to 5% of rock as disseminated 'patches' throughout both matrix (more common) and fragments. Barite occurs with pyrite in veins and as small porphyroblasts within the rock. Barite forms ~1% of rock. Base metal sulphides only trace. As above	massive. minor fractures in rock at irregular angles every ~10-50cm. —15.8 Very broken to 16.3 (weathering) massive to 19.9	9.9m 515481 Petrology and Geochemistry
19.9m GRADATIONAL contact – 31.8m	Polymict fine ash to lapilli volcaniclastic. Y.av.-lv. Bedded in part	Distinctive yellow-green volcaniclastic rock with fragments of subrounded to subangular dacite lava, black cherty slate? Size ranges from fine ash to lapilli. Some of larger fragments show distinct flow banding. Some finer units distinctly bedded (65° to C.A). Whole unit generally fining towards base. —30.6 Very well bedded fine ash to fine lapilli units bedding 65° C.A.	mod–strong sil (2-3). fragments variably sericitised from mod–intense (2-5) matrix generally weak-mod (1-2). Pyrite altn generally only minor with rare disseminated pyrite spots py(1).	1-2mm pyrite + barite veins cut at irregular angles every ~50cm occasionally larger veins to 2cm. —23.25 1.5cm Ba + py vein ± very minor sph+gal. —28.20 4cm Ba + py vein 60° C.A. —28.90 + minor increase in barite veining to 31.8m	Pyrite ≤ 1% predominantly within matrix (not frags). Barite slightly more common than pyrite, occurring as small veins and patches between some fragments. Sphalerite roughly equiv. abundance to pyrite.	massive lv. to 30.1 fining to ash vc to 31.8.	26.10m 515482 (Pet. + Geochem) 31.40 515483 (Pet. + Geochem)
31.8m Sharp Contact –	Dacite lava breccia	light yellow-brown Dacitic lava breccia. Fragments to 50cm with some fine ash between frags down to 34.0m. Many fragments have dark flow bands. Fragments contain minor sericitised feldspar phenocrysts and occassionally qz phenocrysts.	Strongly to very strongly silica altered sil(4). mod–strong sericite (3-4). Fragments only weakly pyrite altered (2), with most pyrite occurring as veins and veinlets between fragments.	pyrite veins and veinlets quite common, especially from 37.0 to 45.0m. Barite veining only minor generally up to 1cm every ~ 37.1m gal+cpy rim qz vein (1cm). quartz veins to 5cm similar abundance to Barite (containing some minor sph+gal.)	pyrite upto 5% of rock predominantly as veinlets and veins between fragments (disseminated pyrite is v. minor). Barite less abundant than pyrite. disseminated sph+gal. 'spotting' relatively common, but less abundant than ba. sph+gn also occur in some qz+ba and pyrite veins.	massive 1b. no alignment of fracturing or banding	V. sharp contact of finely bedded ash to on larger fragmental Dacite lava breccia.

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44			Dacite lava Breccia D.1b.	As above	As above	As above 45.4 2 large quartz veins (3 and 4 cm) cut across all foliation and veining (Dev?)	As above	As above.				44
46												46
48												48
50			50.2m									50
52			Dacite lava D.1.	massive yellow-green dacite lava with common flow banding. Some alignment of sericitised feldspar (translucent yellow), with occassional unsericitised? white feldspars. Rare quartz phenocrysts Rock cut by occassional dark grey sericite + pyrite veins to give a weak fragmental appearance	Strongly silicified (4) strongly sericitic (4) visible esp. on joint surfaces weak to mod pyrite alteration (1) some large sericite? patches (v soft light green clay)	pyrite veining generally minor. quartz and barite veins 1-5mm every ~50cm. 55.95 Barite + lt green sericite? vein 2cm 60.3 10cm barite vein (50% ba, 40% py, 10% sp+gn) 62.65 large barite vein 2 py, sp, gn + ten. + trace cpy visible 68.8 Upto 20cm Barite veins	Down to 60.3m, massive lavas are only weakly mineralised 2 minor pyrite veins + veinlets and similar barite + qz veins, 2 tr. dissem sph. + gal. 60.3 below 60.3, rock is strongly min'd 2 py ~ 1% and barite ~ 5% of rock (upto 60%). large barite veins contain minor pyrite 30-40%, common barite 40-60%, and common sp. + gn 10-30%. ten. + cpy appear trace.	Massive lava 55.75 strong banding at 20° to CA 56.6 20° to CA 58.0 20° to CA Some veins follow banding			52
54												54
56												56
58												58
60					60.8 increase in sericite content							60
62			62.65 Barite vein 63.8									62
64					65.0							64
66			Dacite lava breccia D. 1b.	light brown Dacite lava breccia with angular to sub angular fragments to 50cm.	65.0 sl. diff in fragment alteration strong sil (4) mod ser (3) weak-mod py (2-3) common sericite 'spotting' 69.8 some chlorite patches + 'white' alteration	Common small quartz and barite veins (to ~5mm every 30cm). irregularly distributed pyrite veins	minor pyrite ~ 1% more comm barite ~ 1-5% only very trace base metal sulphides	massive rock. slight foliation defined by alignment of 'white' spots at ~ 40° to CA			66.45 slightly rounded D.1. fragments 66.8 in a leached Fe stained matrix. 72.0m 515481 Pet + geochem.	66
68												68
70												70
72			75.0m									72
74												74
76			Dacite lava.	light brown massive Dacite lava no obvious flow banding common to abundant sericite spotting after feldspar.	Sil (4) Ser (3) Py (2)	barite and quartz veins similar to above. ~ 5mm every 30cm 77.3m 40cm pyrite vein 2 two stages of pyrite 80.0 large quartz + albite vein with a pink "patch" 82.95 1 small zoned pyrite vein	pyrite ~ 1-5% of rock barite ~ 5%	massive				76
78												78
80												80
82												82
84				84.0 DK green lava sl. diff to above. contact 30° CA bottom								84

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86			Dacite lava	slightly green-yellow lava.	ser (3-4) sil (4) Py (2-3)	common small quartz veins to 5mm every ~10cm, some with minor sphalerite and galena pyrite veinlets less abundant than quartz only minor barite	Py ~1% of rock Barite < pyrite (< 1%) trace base metal sulphides					
88												
	89.4											
90			Fault Zone	Very broken core with fragments of ?dacite lava (max = 30cm) grey green colour to 95.0	moderate sil (3) moderate ser (3) pyrite (2-3) as small veinlet networks, not as dissemination.	common pyrite veinlets and veins every 20-30cm quite common quartz and barite veins some large quartz veins are brecciated	pyrite 1-5% barite ~1% very minor b.m.s's.	No visible foliation or movement indication			Some pyrite and barite wholly encloses (forms a matrix to) fragments within the fault breccia.	
92												
94												
96				95.0 weathered leached and iron stained								
98	98.0											
100				massive pale yellow lava with rare sericitised feldspars.	strongly silicified (4-5) " sericitic (4) weak py (2). some py-ser veins give dk veining through rock	Barite is quite common forming a matrix to lava fragments in larger veins quartz veins to 5mm every 30cm Pyrite veinlets within veins every 50cm	Barite 1-5% is more abundant than pyrite (~1%) some sphalerite + galena occurs barite and occasionally quartz	Massive				
102				102.0								
104			Dacite lava	as above but olive green-brown coloured	mod sil (3) strong ser (4) py (2-3) as disseminated 'dots'. 102.6 v strong sericite? development	common quartz veinlets and slightly less barite veining to 5mm every 30cm increasing in intensity to every 10cm near 108.2. only minor pyrite	py < 1% ba ≈ 1-5 % trace bms's in pyrite and barite veins only	occassional slightly sheared joints eg 102.6 40° c.A. common around 105.5m				
106												
108				108.2								
110				clay rich leached rock. pale green grey dacite lava?	strong ser (4-5) weak sil (2) mod py (3-4)	common v small pyrite veinlets. Veins to 1cm every 20cm. minor quartz and barite veining some 'Vuggy' quartz veins	pyrite ~5 % barite ≈ 1-5% trace bms in larger barite + pyrite veins	108.6 small folded? quartz vein. V broken. weakly sheared.				
112				111.75 very pyrite rich clay with some angular quartz fragments								
114				114.2 minor breccia unit								
	115.0											
116			Dacite lava	massive dark grey lava with sericitised feldspars common. Feldspars visible both as olive-green sericite pseudomorphs and as white 'primary?' flecks. Common dark 'flecks' of ?pyroxene or ?pyrite. Some small quartz phenocrysts. occassional cross cutting pyrite and sericite veins cut through the rock.	mod-strong sil (4) mod-strong ser (3-4) common pyrite (4) as abundant v small disseminated 'micro-euhedra' 116.8-117.7 common 'white' alteration	v. minor quartz veining rare barite veins 1-3mm every ~1m. minor pyrite veinlets ~50cm slight increase near 127.7m	Py ≤ 1% increasing to ~ ≈ 1% near 127.7 barite much less abundant than pyrite V. trace basemetal sulphides	Massive			Could this be Andesite? possible qz phenocrysts visible through 117.10m 515485 Pet + geoch.	
118												
120												
122												
124												
126												

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126												
127.8												
128			Y.lv. 128.6	Polymict lapilli volcaniclastic. packed angular frags ≤2 cm in fgr. grey matrix.	frags variably altered Sil (3-5) ser (3) py (3)	rare 'ruggy' small qz veins	py ~ 1% no barite some ten. & py on joints	No bedding				
130			Dacite lava	Similar to 115-127.0 but slightly more ser-py altered. Rock is slightly 'ruggy' 'leached'	Sericite (3-4) increasing ≤0 (4) from 134m Sil (3-4) decreasing from 134 Pyrite (3-4) Some 'white' alteration possible carbonate in qz veins	qz. veins to 5mm every 30cm minor barite veining slightly less abundant than quartz Pyrite veins + veinlets common to ~5mm every 20 cm. -133.9 large qz-albite vein (albite xtals ≤ 3-4 cm)	pyrite ~ 5% barite << pyrite some tennantite occurs with ruggy qz veins only ↑ trace b.m.s's	massive. joints have slight sericite sheen and occassional chlorite.			
132												
134				-134.9 rock is slightly ?brecciated. with chlorite common in the matrix	134.1 chlorite common							
136			Barite	Very intensely veined dacite lava fragments within large quartz + barite veins -137 Barite vein (3m) with ruggy quartz and pyrite within. Vein is slightly leached? and -140 v ruggy. V intensely veined dacite lava	Some dk fragments v siliceous sil (5), with some v sericitic up to (4). Some fragments are slightly chloritic	Barite vein (3m) with slight foliation parallel to core. common small quartz and pyrite veins	Barite up to 80% of rock pyrite 5-10% of rock some 'ruggy' qz + py patches contain tennantite + cpy. Sph + Ga are only minor	Massive irregular joints every 10-40cm				
138												
140												
142			Dacite lava	massive grey-brown homogenous lava. common sericite-pyrite veins with grey alteration 'zoning' extending into the rock give a slightly brecciated appearance. Occassional alignment of sericitised feldspar phenocrysts	Sil (3) Ser (3-4) Py (3-4)	barite + pyrite veins common. 1cm every 5-10cm only minor quartz veining	barite ~ 5% Pyrite 1-5% V. rare b.m.s	Massive. Irregular joints every 10-50cm				
144												
146												
148					-148.0 Sil (4) Ser (3-4) Py (2-3)	-148.0 v minor barite veins quartz in 5mm every 30cm Pyrite every ~60cm	-148.0 minor barite < 5% Pyrite ≤ 5% minor b.m.s.					
150					-151.5 Sil (3) Ser (4) Py (3) slightly chloritic	-152 minor barite ± orange Carb? minor pyrite (every ~40cm) " quartz	-152.7 barite ~ 5% pyrite < 1% minor b.m.s	-153 common joints core scale 30cm				
152					-153.8 Sil (5) Ser (3) Py 2 Very siliceous	-155 barite veining relatively common. containing pyrite and some b.m.s's. (every ~20cm) common pyrite to 5mm every 10cm minor quartz	-155 barite ~ 1% Py < 1% minor b.m.s	-155 Massive				
154					-156.8		-158 Pyrite ~ 1-5% to 5mm every 10cm barite 1-5% minor b.m.s's in barite + pyrite veins and disseminated					
156												
158												
160					Sil (3-4) Ser (3-4) Py (3) 'white' alt± common from 160.0 - 169.0 especially around 161m 163-169 & 165.3m							
162												
164											163.90m: 515486 Petrgraph.	
166												

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168			Dacite lava	as above	As above	as above	as above					
170	170	7			169 very sericitic			168.7 broken + jointed to 2-10 cm coarse sericite				
172			Dacite lava breccia	angular flowbanded fragments within a homogenous lava matrix fragments from <1cm to 40cm	strongly siliceous 4-5 mod-strong ser (3-4) py (2-3) minor chlorite on joints	minor 'vuggy' qz veins every ~50cm similar abundance barite 174.3 1-5cm barite + pyrobms vein	py ~1% ba <1% trace bms's associated with vuggy qz veins and in 'dirty' barite veins	sl. broken <5cm to 50cm 'frags'				
174	174	7										
176			Dacite lava	massive Dacite lava Pale brown-grey with common cross cutting pyrite-sericite veins (dark-grey). Sericite alteration extends in from the veins which commonly have pyrite in the centre.	sericite (4) sil (3) pyrite (3-4) 'white' alteration common	barite to 1cm every 20cm small qz veins common to 1cm every 20cm common v small pyrite (with sericite) veins.	py ~5% Barite upto 5% quite common Bms's occurring as large grains ± in quartz veins and as 'dirty' patches within barite veins. Also occur as v small disseminations	Massive.			Similar to MC-1 ~120m MC-3 ~200m.	
178												
180												
182												
184												
186												
188	188.2				187.2 Very sericitic							
190			Dacite lv? or lb?	subrounded flowbanded lava fragments to 4cm in homogenous matrix	ser (4) sil (3) py (2-3) minor chlorite	minor qz minor barite + pyrobms veins	py ~1% ba <1% V rare bms.	Jointed <5 to 20cm			WATER LOST	
192			Dacite lava	light yellow grey massive lava ± many dark grey py-ser veins some rounded 'exotic' frags at ~193.8m possibly minor V. lv.	V sil (5) ser (3-4) py (3) 193.8 / 194.2 large patches of 'white' alteration.	quartz to 3mm every 20-30cm barite veins every ~20-30cm common small py ser veins	py ~1% ba <1% minor bms	Massive				
194												
196												
198	198.3		Barite vein	large barite vein with occassional rock fragments within	—	pyrite rich seam at 196.7	Ba up to 60% at rock py ~10-20% bms common	weak fold ~ 30° CA			vein rich in B.M.S.	
200			Dacite lava	as for 190 – 194m but slightly green, slightly leached and vuggy from 199.3 to 200.3	ser (3-4) upto 5 near 208.5 sil (3) py (3) some chlorite alt'n visible esp near 208.5	common quartz veins to 5cm every 40cm (Occ. contains chlorite).	py ~1% ba <1% trace bms only 208.1 trace cpy. ± chlorite in qz veins	Massive				
202												
204												
206												
208	209.5		FAULT ZONE									

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209.5			FAULT ZONE	V. broken D.I frags no obvious shearing. some qz. vein rubble	ser, Py., qz as for previous interval	minor pyrite at 209.5	Py ~1% no Bq, tr Bms	no obvious orientn				
210			Dacite lava	massive pale olive green dacite lava. Common sericite altered feldspars aligned at ≈ 50°.	some fg spotting chl. alteration to 211m se 4 si 4 Py 3-4	com. – abn Py veins every 5-10cm	quite common pyrite Py ~ 5% of rock Bq ≤ 1% Bms only with Bq ∴ trace	generally massive but slightly sheared weak alignment of feldspars ≈ 50° c.A.				
212												
214					214-214.5 v. soft & crumbly, sericitic?	com. qz x 5mm every 20-30 cm abn. qz 217.6 - 218m						
216						217.6 minor to rare barite veins 218						
218					-218.3 extremely siliceous 218.6 Si 5	217m 5cm barite vein with common Sp Gn					218.80 SI5487 P.6 "Amygdaloidal dacite"	
220												
222					-222.6m se 5 si 2 Py 3							
224				massive homogenous lava with common X cutting ser-py veins to give 'crackle'. Some chlorite alteration gives dark green colour.	-223.6 Chl 2 se 3 si 3 Py 3 -224m Chl 4 se 3 si 2 Py 2	Py common, minor qz	Pyrite 1-5% minor Barite					
226					-226 typical 'crackle' Chl 3	minor Qz only						
228					-227.6 se 3 Chl 3 si 4 Py 1	minor Qz, com. se Py vns minor Ba vns						
230					-229.7 'crackle'	rare Py rare Qz						
232						Qz veins ≤ 5cm every 1m com barite vns @ Py ≈ 50cm Pyrite upto ≈ 5mm every ≈ 30cm	Py 1-5% Bq ~ 1% com. BMS ± Py + Bq				231.3 2 gen^ns of Py veins ie X cutting.	
234				235m very massive lava. very little veinlets or min.	Si 4-5 se 1 Py 2 some "white" altn around 245	-234.4 20cm Py Gn Sp vn.	233 abn. Py ± Bq + Bms					
236						v rare vns	235 Py 1-5% Bq < 1% tr Bms					
238												
240												
242				242 weakly flow banded								
244				243	244m Chl 2 se 3 si 2 Py 2	244 Qz2 vns minr Bq + Py vns	Py 1-5% Bq ~ 1% mod. com BMS ± Bq + Py.					
246												
248					-248.8m "white" altn ± cores							
250												

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252			Dacite lava	Pale yellow-green massive dacite lava. 'Crackle' texture with crosscutting sericite pyrite veins 251.8 slight foliation 40° c.A.	Mod sil (2-3) ser (3-4) weak chlorite (1-2) weak py (2)	rare quartz (2cm every ~2m) common barite 1cm every ~40cm pyrite slightly less abundant than barite barite veining increases down to ~269m.	barite 'up to 5% pyrite 1-5% common b.ms associated with barite and also disseminated	massive				
254												
256												
258												
260												
262												
264												
266												
268				massive dark green rock with common sericitised feldspars and black b.ms? flecks. Moderately chlorite altered to give a pervasive green colour.	mod chlorite (3) ser (3) sil (2) py (3)	267 Abundant barite ± b.ms+py. 269 rare quartz (containing abundant chlorite). common barite 3cm every 40 cm	py 1-5% common barite 5% common base metals					
270												
272												
274												
276												
278											277.70m 515+88 Pot + Coach	
280.0			E.O.H.									