

Altius Resources Inc.

MM-19-40

Project:	B-MM	Easting (NAD 27):	534189	Azimuth:	132	Core Size:	NQ	Date Started:	5-Feb-19
Drill Hole:	MM-19-40	Northing (NAD 27):	5408771	Dip:	-45	Logged by:	Bob Patey	Date Finished:	14-Feb-19
Location:		Elevation (masl):	201.35	Depth (m):	523	Drill Contractor:	Petro		

Downhole Tests: Flexit			
Depth	Dip	Azimuth	Magnetic Field
0	-57	120	
16	-55	122.7	51980
67	-53.7	124.8	51370
106	-51.2	122.9	51730
169	-49.9	124.4	51640
220	-49.1	130	51630
271	-49	130.4	51620
322	-48.8	132.5	52180
373	-47.5	132.6	52250
422	-45.5	136.6	51270
472	-44.2	134.5	51720
520	-42.1	140.7	51680

Comments: Water line freeze up in first evening while sinking casing. Loc moved back 30m due to boggy ground

Hole_ID	From_m	To_m	Lithology	Lithocode	Description	Alteration	Mineralization	Sulphide%
MM-19-40	0	6.45	OB	OB				
MM-19-40	6.45	32.00	Int flows	I	Intermediate flows with variable texture. pseudoclastic textured with dark chloritized fragments in a grey green silicic matrix, foliated flows with a pervasive weak ser-sil alt and chloritized amphiboles, moderately sericitized zones with cc amygdules displaying some shear, similar moderately chloritized zones, from 24m on some strong shear zones and more late calcite veins sericite alt gets strong and there are some hairline fault gouge zones. trace py in mm qtz veins	weak ser-chl carb		
MM-19-40	32.00	32.70	Fault	flt	fault zone: milled rock with some fault gouge @45TCA			
MM-19-40	32.70	41.25	Basalt VC	B	volcaniclastic Basalt large 10cm+ pale green grey amygdaloidal clasts with cc and chl amygdules (some cc with chl rims, some pure cc or chl)			
MM-19-40	41.25	45.35	Fault	flt	fault zone increasing shear to a cm of fault gouge 30TCA			
MM-19-40	45.35	55.20	Basalt VC	B	basalt clastic with hyaloclastic / pseudoclastic alt. Clasts include green grey amygdaloidal (cc) clasts, distinctive grey clasts which are fine grained display banding in places and have up to 10% py.			
MM-19-40	55.20	58.83	Basalt VC	B	increasing shear towards fault expressed as stronger foliation in matrix of clastic and orientation and flattening of smaller clasts.			
MM-19-40	58.83	58.88		flt	Fault zone with 5mm qv, sericite slip surfaces and milled rock			
MM-19-40	58.88	63.30	Basalt VC	B	coarse volcaniclastic with grey-green amygdaloidal clasts with alt rims & matrix of moderate chloritized fine material			
MM-19-40	63.30	73.15	Int flows	B	mafic-int flows. 1+m thick flows of amygdaloidal (cc, chl, cc+chl) some porphyritic pl. With consistent amys and porphyry content + colour in each flow, minor chl alt and hyaloclastic alt between flows.			
MM-19-40	73.15	74.80		B	grey layer with apparent clastic texture thin layers of strong sericite alt. Minor py locally up to 5%, no base metal sulphides.			
MM-19-40	74.80	122.90		B	basalt volcaniclastic similar to that above. Fracture with graphite 107.35 and qtz-cc vein with graphite at 112-113 @ 15 TCA.			
MM-19-40	122.90	124.50		M	amygdaloidal basalt sill. UC sharp @ 50 TCA LC sharp @ 65TCA. Good chill margins on both.			
MM-19-40	124.50	130.00		B	volcaniclastic basalt with grey and hematized clasts. Variable amt of chl alt in matrix.			
MM-19-40	130.00	131.45		M	amygdaloidal (cc) sill with chill margins. UC irregular but good chill, LC sharp at 60 TCA. Both margins have thin white lines (cc) parallel to contact for 2 cm. Margins are softer (carb altered)			
MM-19-40	131.45	140.50		B	volcaniclastic basalt with grey and hematized clasts. Variable amt of chl alt in matrix. Hematized clasts end after 135.5.			
MM-19-40	140.50	144.50		B	black massive rock with pseudofragmental alteration by dark brown "matrix", weakly magnetic KP-9 reads 0.67. late tension gashes with calcite. LC is in broken core with graphite seams.			
MM-19-40	144.50	151.00	basalt	B	dk grey amygdaloidal sill			
MM-19-40	151.00	155.00	Basalt VC	B	coarse volcaniclastic with grey-green amygdaloidal clasts with alt rims & matrix of moderate chloritized fine material L gradation			
MM-19-40	155.00	162.70	basalt	B	grades into matrix dominated volcaniclastic with cc in matrix. And light porphyritic clasts (2-10cm) (qtz, cc, green sericitized pl)			
MM-19-40	162.70	165.4	basalt	B	coarse volcaniclastic with minor chlorite in matrix, amygdular clasts,			
MM-19-40	165.4	167.25	basalt	B	light grey strongly foliated clastic (foliation is folded) some galena			
MM-19-40	167.25	167.9	mafic sill	M	sill amygdaloidal			
MM-19-40	167.9	168.6	basalt	B	Volcaniclastic basalt trace galena cp			
MM-19-40	168.6	169.28	mafic sill	M	sill amygdaloidal			
MM-19-40	169.28	170.4	basalt	B	Volcaniclastic basalt trace galena			
MM-19-40	170.4	179.8	basalt	B	Volcaniclastic basalt hematized clasts 170.4-174. grey clasts for remainder.			
MM-19-40	179.8	181.2	fault	flt	fault zone, shear zone with qz vein at top, broken core to 181.2 where a mud seam occurs.			

Hole_ID	From_m	To_m	Lithology	Lithocode	Description	Alteration	Mineralization	Sulphide%
MM-19-40	181.2	235	basalt	B	volcaniclastic basalt. Mostly grey green amygdaloidal clasts with a mod chloritized matrix. Occasional cc tension veins. Mostly unfoliated, some sheared areas mentioned in structural log			
MM-19-40	235	243	basalt	B	Green salt and pepper matrix volcaniclastic basalt.			
MM-19-40	243	246.05	basalt	B	VC basalt with carbonte in the matrix. Carb increases to sheared LC with sill			
MM-19-40	246.05	247.55	mafic sill	M	sill amygdaloidal			
MM-19-40	247.55	258.5	basalt	B	green VC basalt grey clasts with atl rims 251-251.35m graphitic qv			
MM-19-40	258.5	262.2	basalt	B	basalt VC with chloritic matrix			
MM-19-40	262.2	266.6	basalt	B	grey VC basalt carbonate rich matrix.			
MM-19-40	266.6	280.5	basalt	B	VC with chloritized matrix with carbonate			
MM-19-40	280.5	302.65	basalt	B	VC with chloritized matrix with carbonate			
MM-19-40	302.65	303.3	basalt	B	light green rock with strong ser & carb alt, shearing at 35 TCA			
MM-19-40	303.3	307.63	basalt	B	VC with chloritized matrix with carbonate			
MM-19-40	307.63	310.25	Sill	M	green mafic sill wit sharp contacts and a20cm screen of host rock (irregular contacts on thes creen UC & LC are at 40TCA			
MM-19-40	310.25	311.4		B	strongly foliated chlorite matrix with light felsic looking fragemtns			
MM-19-40	311.4	313.6		M	massive int flow with foliation chloritic shears and a 5mm fault gouge			
MM-19-40	313.6	316.15		D	transition zone with increasing felsic content, possible vc seds			
MM-19-40	316.15	320	Rhyolite, Cherty	Dch	Cherty rhyolite with mod foliation. Uncommon black qtz-chl fractures. 2% py, locally up to 10%		2% py	2.0
	320	327.08		Dch	cherty rhyolite with weak foliation pelitic textures in places, some massive sill like sections. Black qtz chl hairline fractures and patches trace py.			
MM-19-40	327.08	327.3		flt	3cm of grainy fault gouge then a dark shear on the contact of grey cherty rhyolite with strong sericite altered felsic. Shear has CS fabirc.			
MM-19-40	327.3			D	strongly sericitized rock, yellow green waxy sericite some dark bands of ser-chl alt with more pyrite locally 5%+ goes to hard cream coloured (wk ser, strong sil alt, little fol'n) near base bottom 40 cm is dark ser-chl rock with 2% py (contact between light and dark bands is at 20 TCA		1% py	1.0
MM-19-40	329.6	337	Rhyolite, Cherty	Dch	dark cherty looking rhyolite in a cohesive fault zone, about 40% fault breccia with partial washing of matrix. Protolith is dark grey rhyolite with apparent flow banding in places. (XRF @ 331.8m)		5% py	5.0
MM-19-40	337	341.8		flt	Fault rubble, broken to gravel arger pieces show that protolith is a dark grey rhyolite which is brecciated with a grey matrix and bleached fragment rims. Minor pyrite in matrix mainly. Most of section in <5cm rubble		2% py	2.0
MM-19-40	341.8	346		D	spherulitic sercitic felsic rock with 5% py diss and in stringers. A few spots with sp and gn, on late fractures. Creamy beige and yellow colour		5% py	5.0
MM-19-40	346	354.1	Rhyolite, Cherty	Dch	creamy beige and grey rhyolite, consistient foliation at 60TCA some black hairline qtz-chl veins. possible flow banding but fol'n looks mainly tectonic. Py diss and in wispy stringers some with considerable cp sp or gn, 1% cp+sp. 1cm barite vein at 353m (XRF 29ppm Au+9% Ba) . 353.2m a 4mm puggy fault gouge, with 2cm qtz py vein above (XRF IDs Ba 1%, Pb 600, Cu 1800, Zn, 1400)		5% py+ cp,sp, gn	5.0
MM-19-40	354.1	354.6		M	sill or dyke with light coloured chill margin			
MM-19-40	354.6	356.4	Rhyolite, Cherty	Dch	creamy beige and grey rhyolite as above sill		5.0	5.0
MM-19-40	356.4	356.69		M	sill or dyke with light coloured chill margin			
MM-19-40	356.69	358.3	Rhyolite, Cherty	Dch	creamy beige and grey rhyolite as above sill, large stringers with cp near fault zone below, locally 20% py, 5% cp over 30cm.		15.0	15.0
MM-19-40	358.3	359.2		flt	cohesive cataclasite with milled rock and slightly washed matrix			
MM-19-40	359.2	360.15	Rhyolite, Cherty	Dch	beige and grey rhyolite with minor py and BM sulphides. Very weak foliation		3.0	3.0
MM-19-40	360.15	360.87		M	sill or dyke with light coloured chill margin			

Hole_ID	From_m	To_m	Lithology	Lithocode	Description	Alteration	Mineralization	Sulphide%
MM-19-40	360.87	364.5	Rhyolite, Cherty	Dch	beige and grey rhyolite with minor py and BM sulphides. Very weak foliation		3.0	3.0
	364.5	366.62	Rhyolite, Cherty	Dch	Cherty rhyolite as above with frequent black qtz-chl veins and more py and BM sulphides est 8% py. LG gradational		8.0	8.0
MM-19-40	366.62	367.68		Dch	pale greenish porphyritic rock LC is a tiny fault gouge and cc vein.			
MM-19-40	367.68	379.4		Dch	grey rhyolite with consistent moderate foliation @ 40-50 TCA py stringers and diss. Sp diss and stringers, trace cp. vc breccia appearance at 374.8-375m. 5cm section at 376m is a polyolithic breccia with <cm clasts of various coloured rhyolite and a fg matrix where euhedral py has formed.	sil py	py +sp 3%	3.0
MM-19-40	379.4			Dch	Pale green and beige patchily sericitized rhyolite, some sections granular (spherulitic) hairline black qtz-chl veins some base metal stringers	ser	4% py + sp, cp	4.0
		396.6						
MM-19-40	396.6	398.5		Dch	rhyolite goes darker green with weak to mod foliation, minor stringer sulphides		3% py + sp, cp	3.0
MM-19-40	398.5	399.05		Dch	early brecciation, may be autoclastic, light grey green fragments and matrix with cm scale qtz infill			
MM-19-40	399.05	403.6		Dch	pale and med green flow banded rhyolite with pseudoclastic brecciation. Pale green "clasts" in a darker green sericitic matrix. All hard from silicification. Many dark spots of galena bearing sulphide		5% py, +gn,sp	5.0
MM-19-40	403.6	411.3		Dch	mostly pale green rhyolite with wispy sericite alt and minor py stringers. One section below a cataclaste with no foliation and a hyaloclastic texture cantelope skin like.		2% py	2.0
MM-19-40	411.3	413		Dch	stronger foliation goes from green to grey in colour some sulphide-barite stringers disseminated sphalerite		8% py, sp,	8.0
MM-19-40	413	423.85		Dch	un to weakly foliated grey to pale pinkish grey rhyolite with some flow banding and pseudoclastic texture a few bm stringers		3% py, sp	3.0
MM-19-40	423.85	425.6		Dch	green rhyolite with mod fol'n minor py		2% py	2.0
MM-19-40	425.6	439.5		Dch	cherty rhyolite with grey cherty rhyolite with many black qtz-chl fractures and l green sericitized versions	ser	3% py sp	3.0
MM-19-40	439.5	441.1		Dch	fractured core green sericitized rhyolite with fractures (approaching fault)	ser		1.0
MM-19-40	441.1	455.5		Dch	volcaniclastic. Lt green and grey with mod ser, mostly small fragments and xtls <1cm some larger blocks are jigsaw fit brecciated. Some flow banded fragments Some very soft white pseudomorphs of fsp, From 150.5m Includes large blocks pink or grey cherty rhyolite with black q-cl veins. mostly un to weak fol'n, local stronger, all at 45-80 TCA. some py stringers, no BM noted similar to bottom of MM-294-9 & 14	ser	2%py	2.0
MM-19-40	455.5	456.5		Dch	dyke with good chill margins		0.0	0.0
MM-19-40	456.5			Dch	volcaniclastic similar to above dyke		2%py	2.0
MM-19-40	461.1	461.75		Dch	dark green and dark grey rock flow or sill. UC sharp at 70 TCA basal contact shrp at 80 TCA. Grey sill with green alt on fractures		1%py	1.0
MM-19-40	461.75	465.3		Dch	dark green volcaniclastic mostly <1cm lithic frags and crystals some large (10cm) blocks of grey cherty rhyolite. Consistent weak foliation at 60-80 TCA. LC is fault gouge and rubble @40TCA		2%py	2.0
MM-19-40	465.3	468.45		Dch	creamy pale rhyolite with pseudoclastic- jigsaw fit alteration, some sericite. Goes to more sil (less ser) at base where it is massive with some black q-chl veins. LC is 1cm qtz vein @ 30TCA with mm of fg on edge.	mod ser, sil	1%py	1.0
MM-19-40	468.45	471.7		Dch	grey rhyolite with spherulitic texture		2.0	2.0
MM-19-40	471.7	476.08		Dch	light green rhyolite with mod ser and sil alt.		2.0	2.0
MM-19-40	476.08	486.3		Dch	massive grey rhyolite with some areas of intense py stringers locally up to 30% py		10% py stringers	10.0
MM-19-40	486.3	523		Dch	rhyolite with pseudoclastic textures (2 phase in places) and varying green to grey alteration overprint ser, sil		3% py	3.0
MM-19-40	523			EOH	EOH			