

DRILL HOLE LOG

PROJECT UJV HOLE THIS LOCATION CORE SIZE BQ STARTED 11/03/79 FINISHED 15/09/79 PAGE 1 OF 6
 CLAIM GROUP TOMBSTONE LENGTH 392' DIP 50° AZIMUTH 250° COLLAR ELEVATION 4955' DRILLED BY CARDIN LOGGED BY EATON

GEOLOGICAL DESCRIPTION	SAMPLE NUMBER	RADIO-ACTIVITY IN CPS BGS-ISL	GEOCHEMISTRY AND ASSAY			% RECOV	GEOLOGY	STRUCTURE L to core	HOLE DEPTH (FEET)	MOUNT SOPRIS GAMMA PROBE LOG	
			(% U ₂ O ₈) ppm U	ppm Cu							
0-21.4': OVERBURDEN: tinguaitite and syenite boulders in glacial till and talus.											
21.4'-61.8': SHEARED TINGUAITE: well foliated pseudoleucite tinguaitite consisting of 25-30% light grey, flattened lenticular pl phenocrysts and 1% white-grey, subhedral, angular orthoclase phenocrysts in a medium grey groundmass. The foliation is at 50-65° to core axis. Most fractures are open and are coated with minor clay, orthoclase and/or limonite. The rock is weakly magnetic due to very finely disseminated pyrrhotite. The closed fractures are usually the 20-30° fractures; they are hairline fractures filled with pyrrhotite > pyrite > arsenopyrite and commonly exhibiting 1-2mm bleached alteration envelopes.	H37301		16.5								
	H37302		19.0								
	H37303		22.0								
	H37304		17.5								
45.5'-47.2': weak biotite alteration makes the pl phenocrysts a medium grey color.	H37305		17.5								
48.6': minor 1cm wide limonite flooding of pl phenocrysts adjacent to a 35° fracture.		BKGD				100					
	H37306		16.0								
60.4'-60.7': light grey-pale green to pink alteration around a pair of hairline shallow angle fractures filled with pyrite and chlorite. The pink may be due to hematite stain.							20° 30°	1/2"			
61.8'-68.6': SERICITIZED SHEARED TINGUAITE: sheared tinguaitite similar to that in the overlying interval has been moderately to strongly sericitized resulting in a mottled light grey to pale green rock. The alteration has attacked the pl phenocrysts and the groundmass leaving the orthoclase phenocrysts relatively untouched. The foliation is at 45-55°. The rock contains 0.1-1/4% disseminated pyrite > pyrrhotite. The fractures, if closed, contain pyrite and pyrrhotite and, if open, are strongly stained with limonite.	H37307		18.5				30° 40°	3-5/16"			
61.8'-63.0': a 7°, hairline to 2mm fracture has an irregular 1mm to 3cm pink orthoclase alteration envelope. It contains pyrite > purple fluorite > molybdenite. The fracture itself contains pyrite > purple fluorite.	H37308		10.0				70°	1/16"			
	H37309		23.5				0° 20°	5-8/16"			
68.6'-92.0': SHEARED TINGUAITE: again well foliated plt exhibiting a pronounced flattening of the pl phenocrysts to produce lenticular phenocrysts. Foliation is quite consistent at 50-55°. The modal distribution is the same as from 21.4-61.8'. The closed fractures are usually hairline cracks filled with pyrrhotite. The open fractures are weakly coated with clay & limonite. Disseminated pyrrhotite is less than 0.1% generally, however the rock is often weakly magnetic.	H37310		18.5				30° 45°	2-3/16"			
74.6'-76.2': a 6cm leucocratic syenite dyke composed almost completely of light grey orthoclase cuts the core axis at <10°. The dyke contains 2-3% pyrite and a trace of magnetite. Much of the dyke has a strong pink color due to hematite stains. Aside from local weak hematite staining of pl phenocrysts the dyke has little effect on the wall rocks.	H37311		25				0° 20° 30° 45° 70°	1/16" 2-3/16" 1-2/16"			

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			ppm U	ppm Cu						
154.3'-170.4': MODERATELY SERICITIZED TINGUAITE: consists of 20%, slightly to moderately sheared, 2-10mm, anhedral pale green-pinkish grey pl phenocrysts and 1%, 1-3mm subhedral light grey orthoclase phenocrysts in a medium grey to pale green aphanitic groundmass. The weak foliation is at 45-50° to core axis. Disseminated pyrite is a minor component of the rock. The open fractures are sericitized and may contain moderate limonite stains. Closed fractures are rare and are filled with white-pale green orthoclase.	H37327		8.0					155		
161.0'-162.8': relatively unaltered sheared tinguaitite with a moderate foliation at 55° to core axis. 164.5'-165.6': a 1-2mm, 5° fracture is filled with calcite and clays.	H37328	BKGD	11.5				0.3° 5-29/1'	160		
166.0'-167.0': a moderately radioactive chloritized fracture zone. 166.8': foliation in the rock becomes very intense, completely destroying pl phenocrysts. 167.2'-167.8': intense tan-pale green sericite alteration envelopes surround hairline shallow fractures.	H37329		22.0				30° 1-5/1'	165		
170.4'-174.3': INTENSELY SERICITIZED SHEARED TINGUAITE: strongly foliated tinguaitite has been highly fractured and altered to produce a pale green-olive green rock with a pronounced stockwork of cream dolomite filled hairline to 1mm fractures. The upper 3 feet is weakly to strongly radioactive and contains minor amounts of a black mineral (possibly uraninite) and purple fluorite in some of the fractures. Disseminated sulphides are a minor component of the rock.	H37330	60/BKGD	340				60° 1-5/1'	170		
174.3'-190.9': MODERATELY SERICITIZED SHEARED TINGUAITE: consists of strongly foliated medium grey-pale green often mottled tinguaitite. The pl phenocrysts have been destroyed by the foliation which is at 50° to core axis. The fracture density is generally lower than was seen in previous intervals. Where the fracture density increases so does alteration in the adjacent rocks. A few hairline fractures contain pyrite. Disseminated sulphides are about 0.1% of the rock.	H37331	100/BKGD	301				0.1° >100/1'	175		
182.0'-182.5': a 20°, 13mm wide fracture exhibits symmetric zonation beginning with a 4mm wide band of arsenopyrite, enclosed in 1-3mm of white quartz containing minor molybdenite and chalcocopyrite, then 1-2mm of cream dolomite containing minor black sphalerite or wolframite. Around this is a 17mm pale green sericite alteration envelope.	H37333		17.0				30° 1/1'	180		
183.3'-183.7': a group of hairline fractures contains orangy brown limonite.	H37334		12.0			100	16° 1/1'	185		
190.0'-198.0': INTENSELY SERICITIZED TINGUAITE: highly fractured, pale green tinguaitite is cored by a stockwork of cream dolomite and grey quartz veins and veinlets. The veins often contain sulphides, predominantly arsenopyrite. Disseminated and fracture pyrite comprise about 0.5% of the rock.	H37335		13.0				70° 1/1'	190		
195.0': a quartz vein contains blebs of a metallic black mineral which is very hard and non-radioactive (cassiterite?) as well as arsenopyrite. 196.5': a quartz stockwork contains arsenopyrite > sphalerite. 197.0'-197.4': a 2cm wide, 20° orthoclase > slightly smoky quartz vein also contains 5% sulphides: arsenopyrite > sphalerite < chalcocopyrite < molybdenite < pyrite.	H37336	BKGD	13.0				20° >100/1'	195		
198.0'-199.4': GRADATIONAL CONTACT: moderately sericitized tinguaitite. 199.4'-210.9': SHEARED TINGUAITE: brecciation dominates over foliation until the last 2' of the interval. The rock consists of 1-3mm white angular fragments of orthoclase and pl phenocrysts in a light-medium grey groundmass. The foliation where evident ranges from 60-90° to core axis. The rock contains only minor fine disseminated sulphides. Fractures are little more than hairline cracks filled with white orthoclase or calcite.	H37337		14.5				30° 2-4/1'	200		
205.8'-207.0': a 5cm wide leucocratic syenite dyke runs subparallel to the core axis. This dyke consists of 90% grey orthoclase and 10% black mafic with minor disseminated arsenopyrite and small patches of blue feldspathoids. The contacts are irregular possibly due to reaction with the wall rock.	H37338		22.0				30° 1-2/1'	205		
210.9'-236.5': INTENSELY SERICITIZED TINGUAITE: the rock is similar to the 190.7-198.0' sericitized tinguaitite in that it is predominantly pale green sericitized tinguaitite with an abundance of grey quartz and dolomite veins. In addition, this interval has a number of pale grey alteration envelopes which appear to be clay envelopes. Disseminated sulphides form <1/4% of the rock but fracture sulphides are common, especially pyrite and arsenopyrite. A few fractures are heavily coated with orange brown limonite. Most fractures are filled or coated with quartz dolomite, clays or sericite. Occasionally the quartz and orthoclase show graphic intergrowths.	H37339		23.0				60° 1/4'	210		
210.9'-211.3': a brecciated and altered fracture system contains 5% sulphides with pyrite > arsenopyrite. There are also minor limonite and a dark grey mineral with a dark grey streak (hardness ~4-5).	H37340		16.5				0° >100/1'	215		
217.0'-218.6': a series of 3-10mm quartz veins contain 5-10% arsenopyrite (2% of whole rock); 219.2': rock contains 1/2% disseminated sphalerite or wolframite as 1mm blebs.	H37341		23.5				0° 20'	220		
220.2'-220.6': fractures contain abundant arsenopyrite (2-3% of rock). Also 1/4-1/2% disseminated sphalerite or wolframite as above. 223.7': arsenopyrite again 2-3% of rock in fractures.	H37342		11.0					225		

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			15% U	15% Cu						
296.5'-338.1': MIXED TINGUAITE: weak clay altered or sericitized to fresh mixed tinguaitic consisting of plt lenses in sheared tinguaitic at a ratio of 1:2. The alteration is patchy and where present preferentially attacks the pl phenocrysts. The plt lenses are composed of 20-40% 2-15cm, light grey, anhedral pl phenocrysts which are partially white or pale green when altered, and 2%, 1-10mm, light grey, subhedral to euhedral, occasionally twinned, orthoclase phenocrysts in a medium grey aphanitic groundmass. The sheared tinguaitic is weak to moderately foliated usually at 50-70° to core axis. Although the foliation is not intense the pl phenocrysts are generally destroyed and because of this, the groundmass of the sheared tinguaitic is lighter than the plt groundmass. Finely disseminated pyrite comprises 1/4-1/2 of the rock. The open fractures are usually clean while the closed fractures are filled with white orthoclase and/or sulphides, predominantly pyrite and pyrrhotite. Fractures rarely exceed 1mm in width.	H37358							305		
	H37359							310		
	H37360							315		
315.4'-315.6': pl phenocrysts have a pinkish tint, possibly due to alteration or hematite stain.								320		
319.0' and 320.0': hairline fractures contain a trace of molybdenite with white orthoclase and pyrrhotite.	H37361							325		
323.5'-323.6': a 25mm medium grained mafic rich syenite dyke cutting the core at 45° is surrounded by foliated tinguaitic with pink tinted pl phenocrysts. The dyke is 25% hornblende or pyroxene and 75% feldspar.	H37362	BKGD						330		
335.0'-338.1': an alteration halo in the tinguaitic: between 335.0' and 336.7' the pl phenocrysts exhibit patchy white clay alteration which gives way to pale green sericitic alteration and pink hematite staining of the pl phenocrysts. Very near the contact there may have been minor recrystallization of the tinguaitic. There are a few shallow angle hairline fractures filled with magnetite and surrounded by red hematite stain.	H37363							335		
338.1': GRADATIONAL, IRREGULAR CONTACT: at about 20°.								340		
338.1'-344.5': SYENITE CHILL MARGIN: consists of a grey-green to pink aphanitic groundmass with 1/2-6mm black to dark green mafic phenocrysts which commonly aggregate into clusters. The grey-green is due to sericitization while the pink is hematite staining. The chill margin is frequently cut by shallow fractures filled with sulphides, cream dolomite and/or chlorite and exhibiting 1-2mm light grey secondary orthoclase alteration envelopes. Disseminated pyrrhotite forms 1/4-1/2 of the rock. The most common fracture sulphides are pyrite > pyrrhotite > arsenopyrite.	H37364							345		
341.2'-341.9': a moderately sericitized, sheared tinguaitic xenolith.								350		
342.1'-342.2': a pair of high angle fractures contain orange brown limonite.								355		
343.7': a 2cm wide pegmatite dyke cut by the core axis at 50° contains honey brown, smoky quartz crystals up to 2cm long interground with calcite and a subeuhedral, almost black, purple fluorite crystal 18mm across.	H37365							360		
343.7'-344.5': a strongly brecciated and sericitized pale green rock with some hematite staining of feldspars is very radioactive, especially near the pegmatite dyke. The zone also contains 5% smoky quartz, 1% pyrite, minor arsenopyrite, minor purple fluorite, weak limonite and blebs of chalcopyrite up to 1cm across totalling 1% of the rock. A 10°, 1mm wide tan dolomite filled fracture cuts across the zone.	H37366							365		
	H37367	380/BKGD	649					370		
344.5'-357.5': SYENITE DYKE: coarse grained slightly porphyritic syenite consisting of 90% light grey-pale green-pinkish grey, anhedral-euhedral, 2-30mm orthoclase crystals with 10% black interstitial mafics. Hairline, sulphide bearing (pyrrhotite > pyrite > arsenopyrite), chloritized fractures are common. Disseminated sulphides, basically pyrite, form 1/2-1% of the rock and are generally with the mafics.	H37368							375		
349.0'-347.6': the syenite exhibits pale green sericitic alteration around a series of both steep and shallow fractures containing chlorite > pyrite > purple fluorite < chalcopyrite < arsenopyrite.	H37369							380		
351.5'-352.5': weak sericitization around a network of chloritized pyrite > pyrrhotite bearing fractures.	H37370							385		
357.5'-368.5': SERICITIZED SYENITE DYKE: rock similar to that described above has undergone moderate, pale green sericitization related to an intensely fractures stockwork filled with sericite, cream dolomite, a variety of sulphides and minor purple fluorite. Sulphides comprise approximately 5% of the whole rock with pyrite > arsenopyrite > chalcopyrite > pyrrhotite.	H37371	BKGD	15.0					390		
368.5'-384.6': SYENITE DYKE: as previously described between 344.5'-357.5'.	H37372							395		
370.7'-372.7': a series of 1-3mm, 20-40° fractures are chloritized and contain pyrite > chalcopyrite < pyrrhotite < quartz. They are enclosed by irregular 4-7mm tan 2° secondary orthoclase alteration envelopes.								400		
373.8' and 374.6': 2 hairline, 70° chloritized fractures are filled with chalcopyrite.								405		
374.6'-375.0': a 20°, 18mm wide chloritized fracture contains 60% pyrrhotite, 1% pyrite and 1% chalcopyrite.	H37373							410		

