DRILL HOLE LOG

PROJECT UJV HOLE JH 13 LOCATION syenite contact CORE SIZE BQ STARTED 05/09/79 FINISHED 07/09/79 PAGE 1 OF 5

CLAIM GROUP JOHNSTONE LENGTH 312' DIP -50° AZIMUTH 030° COLLAR ELEVATION 5000' DRILLED BY CARON LOGGED BY EATON

GEOLOGICAL DESCRIPTION	SAMPLE NUMBER	RADIO-ACTIVITY IN CPS BGS-ISL	GEOCHEMISTRY AND ASSAY (%U_3O_8 / ppm U)	GEOCHEMISTRY AND ASSAY (ppm Cu)	% RECOV	GEOLOGY	STRUCTURE ∠ to core	HOLE DEPTH (FEET)
0'-28.0': OVERBURDEN AND HIGHLY WEATHERED SHEARED TINGUAITE					0			5, 10, 15, 20, 25
28.0'-67.2': SHEARED PSEUDOLEUCITE TINGUAITE: strongly foliated salt and pepper pseudoleucite tinguaite. The tinguaite groundmass and pl phenocrysts have been recrystallized into sugary, fine grained crystals of light grey orthoclase, feldspathoids and black mafics (hornblende and biotite). The orthoclase phenocrysts from the original tinguaite are essentially unchanged but are aligned subparallel to the foliation. The pl phenocrysts have been flattened into lenses or bands paralleling the foliation. Phenocrysts comprise 15-20% of the rock with pl phenocrysts >>orthoclase phenocrysts. A white chalky color to the rock suggests weak argillic alteration. Where the mafic phenocrysts are largest they exhibit a pronounced poikilitic texture. The foliation is at 45° to core axis. Sulphides are rare. All fractures are open; most contain a dusting of clay minerals, but only a few have weak limonite stain. Traces of disseminated purple fluorite are common.	H46593	BKGD	10.5		100		0°-10° 1/1-2'; 40°-50° 2-4/1'	30, 35, 40, 45, 50, 55, 60, 65, 70, 75
47.0'-47.4': purple fluorite is slightly more abundant, up tol/2% of rock.	H46594		11.5					
52.8'-53.3': a hairline, 5° fracture has been cut and offset by a hairline 45° fracture. Both fractures are filled with abundant purple fluorite, pyrrhotite, and biotite. The fractures are enclosed by 1-2mm white orthoclase envelopes.	H46595		12					
55.5'-56.8': more purple fluorite and pyrrhotite bearing hairline fractures as above; most parallel foliation although a few cut the core axis at a shallow angle.								
60.2'-67.2': sheared plt as before except there is a slightly higher percentage of orthoclase phenocrysts (2% of rock) and the pl phenocrysts less distinct.								
67.2'-86.9': SHEARED TINGUAITE: the pl phenocrysts are again distinct although they are very drawn out. Orthoclase phenocrysts are up to 1% of the rock. The foliation is now at 30-40° to core axis. The sugary texture of the recrystallized rocks is not so evident due primarily to lack of surface weathering which removes much of the interstitial material.	H46596		16					
74.5'-74.9': a 7mm wide leucocratic syenite dykelet parallels the foliation at 30° to core axis.	H46597		9.5					

MOUNT SOPRIS GAMMA PROBE LOG

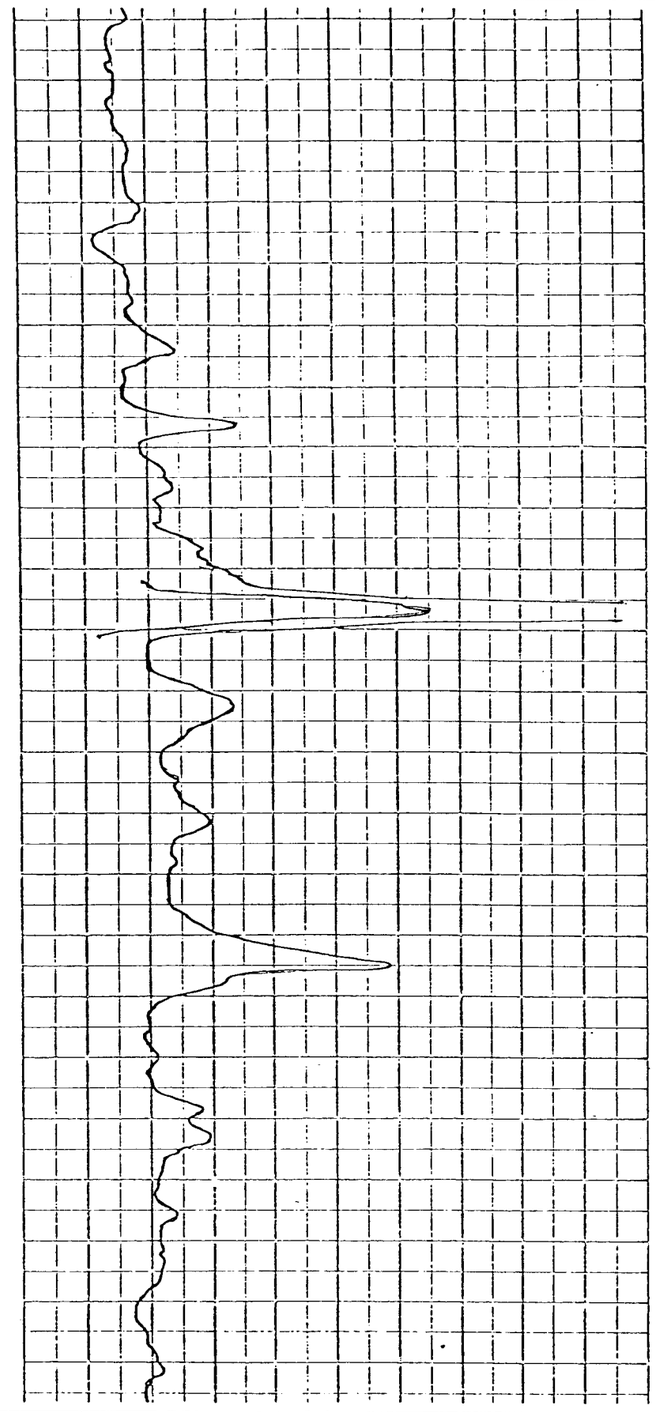
DRILL HOLE LOG

PROJECT MV HOLE TH-13 LOCATION specific sample CORE SIZE BQ STARTED 05/04/81 FINISHED 05/06/81 PAGE 2 OF 5

CLAIM GROUP TOMBSTONE LENGTH 812' DIP -52° AZIMUTH 330° COLLAR ELEVATION 5000' DRILLED BY Cabot LOGGED BY Eaton

GEOLOGICAL DESCRIPTION	SAMPLE NUMBER	RADIO-ACTIVITY IN CPS BGS-ISL	GEOCHEMISTRY AND ASSAY (%U3O8 / ppm U)	GEOCHEMISTRY AND ASSAY (ppm Cu)	% RECOV	GEOLOGY	STRUCTURE ∠ to core	HOLE DEPTH (FEET)
87.7'-109.0': INTRUDED SHEARED PSEUDOLEUCITE: the tinguaite has been strongly foliated to the point where most pl phenocrysts have been destroyed, leaving a fine grained, medium grey tinguaite gneiss. This gneiss has then undergone either extensive intrusion by dykes composed of white orthoclase and black mafic (hornblende). These intrusives generally parallel the foliation although they do locally crosscut it. In addition to orthoclase and mafics the dykes commonly contain minor purple fluorite, pyrrhotite and an unidentified light brown mineral. Outside of these dykes the rocks rarely contain sulphides. The foliation is at 35-45° to core axis. Most fractures are open with a weak to moderate clay coating.	H46598	BKGD	11					80
	H46599		23				25° to 30° 1/10'	85
104.9'-105.6': an 11cm wide, fine grained, orthoclase-mafic syenite dyke similar to the smaller dykes mentioned above, parallels the foliation at 40° to core axis.							45°+ 1-5/1'	90
107.0-107.1': an irregular 1.5-2cm pegmatite dyke cutting the core axis at 70° contains pink and grey orthoclase, a black mafic, 2% magnetite and a trace of molybdenite. 107.8'-109.0': a 20cm wide band of sericitic and argillic sheared tinguaite is moderately stained with hematite and yellow U oxides. It also contains a 3mmwide vein of white calcite. The upper part of the band is moderately radioactive at 160/background.	H37101	20/BKGD	55					95
109.0'-132.0': INTRUDED SHEARED TINGUAITE: as before except that the foliation varies from subparallel to 10° to the core axis and the syenite dykes are highly irregular, both paralleling and crosscutting the core axis. The mafic in the syenite is hornblende with the distinctive poikilitic textures. Occasional blebs of pyrrhotite occur in the dykes but otherwise sulphides are rare. The sheared tinguaite contains minor hematite stains. Most fractures are open with a moderate coating of calcite.	H37102	40-240/ BKGD	197		100		45° to 50° 1/2'	100
	H37103	20/BKGD	52					105
	H37104	10/BKGD	28					110
	H37105	BKGD	27					115
126.0'-127.0': moderately radioactive sheared tinguaite similar to the surrounding tinguaite except that there is a higher density of syenite dykelets and a trace of hematite on one fracture.	H37106	60/BKGD	360					120
	H37107	30/BKGD	27					125
132.0'-146.3': INTRUDED SHEARED TINGUAITE: the tinguaite is lighter grey than usual but is still strongly foliated and recrystallized. It is intruded by syenite dykes. The foliation is between 10-20° to core axis. This interval is distinguished from the surrounding intervals by the width and abundance of the orthoclase and hornblende dykes and by the size of the poikilitic hornblende crystals in the dyke. Approximately 25% of the interval is syenite dyke material. These dykes generally cut the tinguaite at a shallow angle and the core axis at 30-40°. They vary in width from 5mm-15cm. The hornblende crystals tend to form aggregates. Individual crystals up to 8mm across are present. The dykes also contain minor pyrrhotite with mafics and a trace of disseminated molybdenite.	H37108	10/BKGD	17.5				80° to 90° 1-2/1'	130
	H37109	20/BKGD	40				10° to 20° 1/3'	135
	H37110		28				50° to 70° 1/2'	140
146.3'-159.0': the syenite dykes are less common (1% of the rock) but otherwise the rock is unchanged. The foliation varies from 15-30° to core axis. Fractures are open and coated with white dolomite. 146.7'-147.6': 2 hairline, 20° bands of pyrrhotite parallel the foliation.	H37111	BKGD	12.5				80° to 90° 1/1-2'	145
								150

MOUNT SOPRIS
GAMMA PROBE LOG



DRILL HOLE LOG

PROJECT _ UJV __ HOLE TH 13_ LOCATION [illegible] CORE SIZE _BQ___ STARTED 25/09/79 FINISHED 03/10/79

CLAIM GROUP _TOMBSTONE__ LENGTH _232'__ DIP -50° AZIMUTH 033° COLLAR ELEVATION 5000' DRILLED BY CARON LOGGED BY ERSON

159.0'-196.0': CHILL MARGIN SYENITE: a salt and pepper, fine grained, moderately foliated syenite. Although it is tempting to suggest that this syenite represents recrystallized tinguaite, a 10cm xenolith of stressed tinguaite at 164.0' hurts this argument. The fine grained syenite has been extensively intruded by the same white and black orthoclase--poikilitic hornblende dykelets that intrude the surrounding tinguaites. Over this interval the orthoclase-hornblende dykes comprise 15-25% of the total rock. The dykes cut the core axis at 25-40° while the foliation is generally 10-20°. Traces of pyrrhotite occur throughout the interval. Much of the hornblende has gone to chlorite. Between 159.0' and 160.0' the fine grained syenite is strongly radioactive--2CO/background and contains 1% purple fluorite, 1/4% pyrrhotite , 3% a pink-tan mineral, possibly pink mica, and 3% olive mineral, probably sericite.

171.5'-172.0': a 2cm wide dyke or band within an orthoclase-hornblende dyke contains approximately 25% chloritized non-poikilitic hornblende as compared to the 5-10% found in the normal dykes.. This band cuts the core axis at 20°.

196.0'-232.5': ORTHOCLASE-HORNBLENDE SYENITE: over this interval the orthoclase-hornblende dykes are the predominant rock while the intervening fine grained syenites comprise less than 30% of the rock and do not exceed 10cm in width. The orthoclase-hornblende syenite appears to cut the core axis at 25-35°. The orthoclase-hornblende syenite is 85-95% light grey fine-medium grained orthoclase and 5-15% black to green-brown hornblende and chlorite(?) after hornblende. Approximately 70% of the hornblende appears to have gone to chlorite. The hornblende phenocrysts dominate the rock, ranging from 2-12mm in length and exhibiting striking poikilitic texture. The rock is weakly magnetic probably due to magnetite liberated by the destruction of hornblende. Sulphides are rare. The fine grained syenites are as previously described. Their mineralogy is generally similar to the coarser dykes. The fractures are open and coated with white dolomite.

218.0'-218.3': a 10cm long xenolith(?) of more mafic and coarser syenite containing 25% non-poikilitic hornblende and chlorite. This is similar to broad dykes found lower in the hole.

SAMPLE NUMBER	RADIO-ACTIVITY IN CPS BGS-ISL	GEOCHEMISTRY AND ASSAY (%eU3O8 ppm U)	(ppm Cu)	% RECOV
H37112	20/BKGD	13		
H37113		27		
H37114	40-200/BKGD	636		
H37115	25/BKGD	40		
H37116	15/BKGD	22		
H37117		20		
H37118		18.5		
H37119		15.5		
H37120		16.5		
H37121		14.0		
H37122	BKGD	14.5		
H37123		15		
H37124		16.5		
H37125		20.5		
H37126		25		
H37127		16		

GEOLOGY

STRUCTURE (∠ to core)

60° to 90°	1/1-2'	
70° to 80°	1/5'	
70° to 80°	1-2/1'	
75° to 85°	1-3/1'	

HOLE DEPTH (FEET): 155, 160, 165, 170, 175, 180, 185, 190, 195, 200, 205, 210, 215, 220, 225

MOUNT SOPRIS GAMMA PROBE LOG

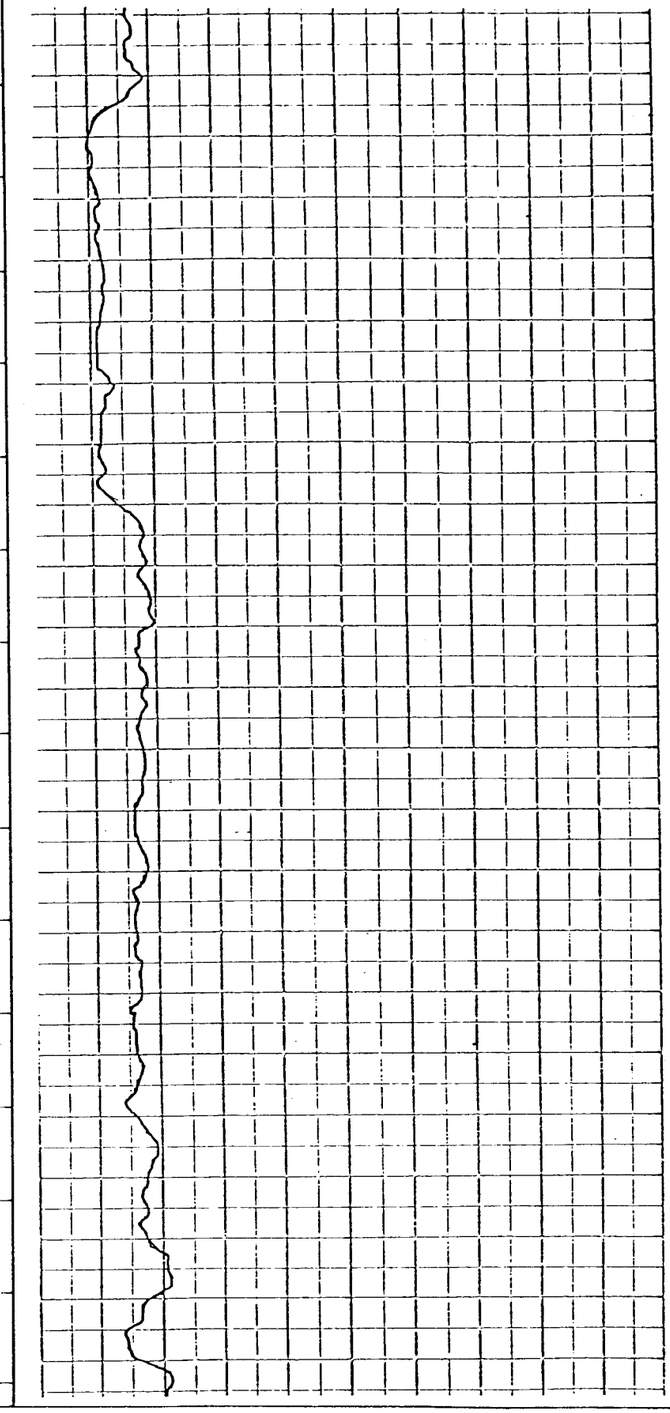
DRILL HOLE LOG

PROJECT DV1 HOLE JH 13 LOCATION 2 feet S of L 1+00E CORE SIZE BQ STARTED 05/07/83 FINISHED 05/07/83

CLAIM GROUP JOKERS 1-16 LENGTH 312' DIP -50° AZIMUTH 222° COLLAR ELEVATION 5020' DRILLED BY Falcon LOGGED BY LATOU

GEOLOGICAL DESCRIPTION	SAMPLE NUMBER	RADIO-ACTIVITY IN CPS BGS-ISL	GEOCHEMISTRY AND ASSAY (%U3O8) ppm U	ppm Cu			% RECOV	GEOLOGY	STRUCTURE ∠ to core		HOLE DEPTH (FEET)
232.5': SHARP 55° CONTACT 232.5'-253.6': MAFIC RICH SYENITE: medium to coarse grained, slightly porphyritic, well foliated syenite composed of 75-80% light grey orthoclase, generally as ground-ass but less commonly as anhedral phenocrysts ranging from 5-12mm across, 5-10% black hornblende or pyroxene and 10-15% green chlorite after the principal mafic. The feldspars often exhibit a chalky white color suggesting weak argillic alteration. Sulphides are rare. Fractures are open and coated with dolomite.	H37128		19					+			230
	H37129		13					+			
	H37130		10.5					×	50° to 70°	1/2'	235
	H37131		11					×			240
	H37132		11.5					×			245
	H37133		11					×			250
253.6': SHARP 45° CONTACT: with a 7mm green chlorite rich chill margin. 253.6'-278.5': ORTHOCLASE-HORNBLENDE SYENITE: as before. 256.1'-256.5': an irregular 8-14mm mafic rich syenite dyke cuts the core axis at 20°.	H37134		20					+			255
	H37135	BKGD	18				100	+	55° to 70°	1/4'	260
	H37136		20.5					+			265
	H37137		19					+			270
	H37138		18					+			275
278.5'-292.7': FINE GRAINED SYENITE: the orthoclase-hornblende syenite is still abundant however it now forms only 25-35% of the rock while the fine grained syenite makes up the remainder. Near the top of the interval the fine grained syenite is very weakly foliated, but as one goes down the interval the foliation becomes more pronounced. The orthoclase syenite dykes cut the core axis at 40-50° which is subparallel to the 30-45° angle of the foliation. The dykes vary in width from 1-10cm. Both the fine grained syenite and the orthoclase-hornblende syenite are mineralogically and texturally similar to their previous description. Fractures are very rare and open. Sulphides are rare.	H37139		18					+	50° to 60°	1/5-10'	280
	H37140		21.5					+			285
292.6': SHARP 25° CONTACT 292.6'-293.0': MAFIC RICH DYKE: slightly more porphyritic than previously described with orthoclase phenocrysts up to 1.5cm long. Still contain 25% mafics.	H37141		22.5					×			290
293.0'-End of Hole: INTRUDED AND SHEARED PSEUDOLEUCITE TINGUAITE: typical sheared tinguaite, with lenticular pl phenocrysts highlighting the foliation, has been intruded by numerous 3mm-30cm orthoclase hornblende dykes. Although the dykes cut the core axis at angles ranging from 20-60° most are aligned parallel or subparallel to the 35° foliation of the plt. The dykes comprise approximately 1/2 of the rock by volume. The best preserved sheared plt is between 299.5 and 301.8'. Over most of the interval the tinguaite is largely recrystallized so that the pl phenocrysts are only weakly recognizable. Sulphides are rare. Fractures are open and weakly coated with white dolomite.	H37142		23.5					×	50° to 60°	1-2 1/2'	295
											300

MOUNT SOPRIS GAMMA PROBE LOG



DRILL HOLE LOG

PROJECT [illegible] HOLE IH 13 LOCATION [illegible] CORE SIZE BQ STARTED [illegible] FINISHED [illegible] PAGE 5 OF 5

CLAIM GROUP [illegible] LENGTH 312' DIP [illegible] AZIMUTH 230° COLLAR ELEVATION 5022 DRILLED BY [illegible] LOGGED BY [illegible]

GEOLOGICAL DESCRIPTION	SAMPLE NUMBER	RADIO-ACTIVITY IN CPS BGS-ISL	GEOCHEMISTRY AND ASSAY (%U_3O_8 ppm U)	GEOCHEMISTRY AND ASSAY (ppm Cu)	% RECOV	GEOLOGY	STRUCTURE ∠ to core	HOLE DEPTH (FEET)	MOUNT SOPRIS GAMMA PROBE LOG
	H37143	BKGD	27		100		50° to 60° 1-3/4"	305	
	H37144		25					310	