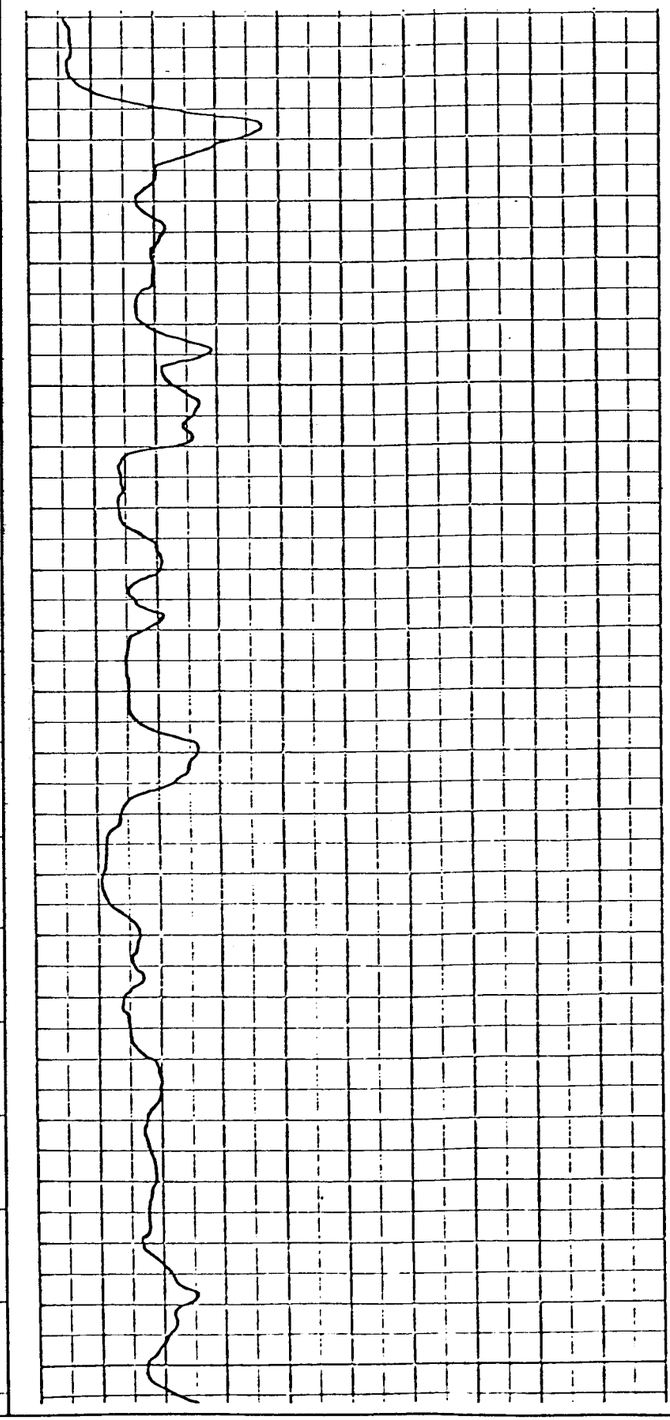
DRILL HOLE LOG

PROJECT UJV HOLE TH 7 LOCATION Zone 53 CORE SIZE BQ STARTED 10/08/79 FINISHED 11/08/79

CLAIM GROUP TOMBSTONE LENGTH 297' DIP -50° AZIMUTH 000° COLLAR ELEVATION 5090' DRILLED BY CARON LOGGED BY EATON

GEOLOGICAL DESCRIPTION	SAMPLE NUMBER	RADIO-ACTIVITY IN CPS BGS-ISL	GEOCHEMISTRY AND ASSAY (%U_3O_8) ppm U	ppm Cu	% RECOV	GEOLOGY	STRUCTURE ∠ to core		HOLE DEPTH (FEET)
OVERBURDEN: syenite and tinguaite boulders mixed with soil; both glacial and talus material present.		20/BKGD			15				5
MIXED TINGUAITE: lenses of normal pseudoleucite tinguaite are cut by sheared zones of foliated, brecciated and/or altered tinguaite, described in detail below. HIGHLY FRACTURED, ALTERED AND LIMONITE STAINED MIXED TINGUAITE: fracture density 5-30/ft, most at 5-20° to core axis. The pl phenocrysts have been more affected by alteration than the groundmass as a rule. The phenocrysts are typically tan or brown due to limonite flooding or pale green to milky white due to sericite alteration. The groundmass is medium grey except where fracture density is greatest; there it is tan to brown due to limonite and soft, suggesting clay or sericite alteration. The strongest fractures have ∠1/2 to 2mm coats of yellow brown limonite (goethite > jarosite). Traces of residual pyrite or pyrrhotite are found both in the groundmass and on fractures. Sericite is common on stronger fractures. The fractured and altered rocks are weakly radioactive. Alteration appears to be hypogene although it may be supergene in part.	H46245		97		100		20°	1/1'	
9.2'-13.0': MIXED TINGUAITE: lenses of normal plt are surrounded by sheared tinguaite. The plt to sheared tinguaite ratio is ~3:1. The shears occur at irregular intervals, average ~10 cm between shears and have ambiguous orientations to the core axis although there is a suggestion that a 30° orientation dominates. The normal plt contains white, euhedral to subhedral, 2mm-15mm (6mm average), pl phenocrysts comprising 25-45% of the rock, and white, stubby to prismatic, subhedral to euhedral, 1mm-10mm (3mm average) orthoclase phenocrysts, comprising <5% of the rock, in a medium grey, aphanitic groundmass. The large pl phenocrysts are commonly cracked. The sheared tinguaite is generally weakly foliated. It consists of 1-4mm fragments altered to biotite. Sulphides are rare in both normal and sheared tinguaites. The fracture density is low for both rock types. Most fractures are open with weak chlorite and limonite coatings; a few 20° fractures are filled with white calcite.	H46246		41		95		5° to 20°	5-30/1'	10
ALTERED MIXED TINGUAITE: starts as 3 cm wide, tan, limonite flooded and pale green sericitized alteration envelopes around chloritized open fractures (to ~31.0'). Alteration principally affects phenocrysts, then grades into pervasive pale green to olive sericite alteration affecting both the groundmass and phenocrysts. (31.0'-41.7'). Traces of pyrite disseminated through rock. Moderate to strong limonite staining and coating on closed fractures with 5mm limonite flooding of adjacent wall rock. Chlorite > sericite on open fractures. Phenocrysts still highly visible despite alteration.	H46247		25				20° and 50°	2-3/1'	15
							20° to 30° and 50° to 70°	1-2/1'	20
	H46248		62						
	H46249		17				25-50° and 50° to 70°	1-3/1'	25
	H46250		22				20°	3-9/1'	30
							50°	1-9/1'	
	H46251	BKGD	19		100		75°	1-4/1'	35
41.7' SHARP 50° CONTACT: altered mixed tinguaite to MAFIC RICH SYENITE DYKE: 41.7'-44.5': chill margin (?) fine grained, slightly porphyritic, grey-green syenite. Mafic very fine grained, mostly interstitial to coarser grained, grey feldspar crystals. Feldspar phenocrysts up to 1 cm long show greenish tint, sericite alteration. Pyrrhotite, disseminated, in blebs, and on fractures, comprises 1-2% of the rock. Sulphides closely related to biotite and calcite. Calcite estimated at 2% of whole rock and commonly fills <1mm irregular fractures running subparallel to the core axis.	H37571		43				20° to 40°	1-2/1'	40
44.5'-51.8': fine to medium grained, porphyritic, mafic rich syenite with prismatic, grey orthoclase phenocrysts 7-15mm long and chloritized dark green pyroxene phenocrysts 1-4mm long in a finer grey-green groundmass. Mafics comprise 20-30% of the rock. Fractures are commonly chloritized, limonite is rare. Calcite occurs in minor cracks and is disseminated through the groundmass, still 2-4% of the rock. No chill margin on the lower dyke contact.	H37572		16.5				20° to 30°	1-2/1'	45
51.8': SHARP 50° CONTACT: 51.8'-68.3': MIXED TINGUAITE: as before with lenses of normal plt between shear zones of brecciated, foliated and/or altered tinguaite. Shear orientation at ~30° to core axis. Ratio of normal pseudoleucite tinguaite to foliated tinguaite is 1:1. Most pseudoleucite phenocrysts in "normal" pl tinguaite have a distinctive pinkish tint, possibly signifying zoesite alteration. Biotite is the most prevalent alteration product in the sheared tinguaite. Minor green sericitic alteration occurs as an envelope around a calcite filled fracture between 52.5 and 53.0'. 5-20°, <1mm calcite filled fractures are common. Traces of pyrite occur locally in the tinguaite groundmass. Between 54.8-55.1' a dark grey, banded mylonite zone cuts through brecciated tinguaite at 30° to core axis.	H37573		14.5				75°	1/8'	50
	H37574		15.5				20°	1/2-2'	55
	H37575		31				50°	1/2'	60
	H37576		26						65
68.3'-69.3': SHARP CONTACT: MAFIC RICH DYKE: as above. 69.3'-77.2': MIXED TINGUAITE: as before; below this section biotite alteration is relatively uncommon.	H37577		34				70° to 80°	1-3/1'	70
									75

MOUNT SOPRIS
GAMMA PROBE LOG



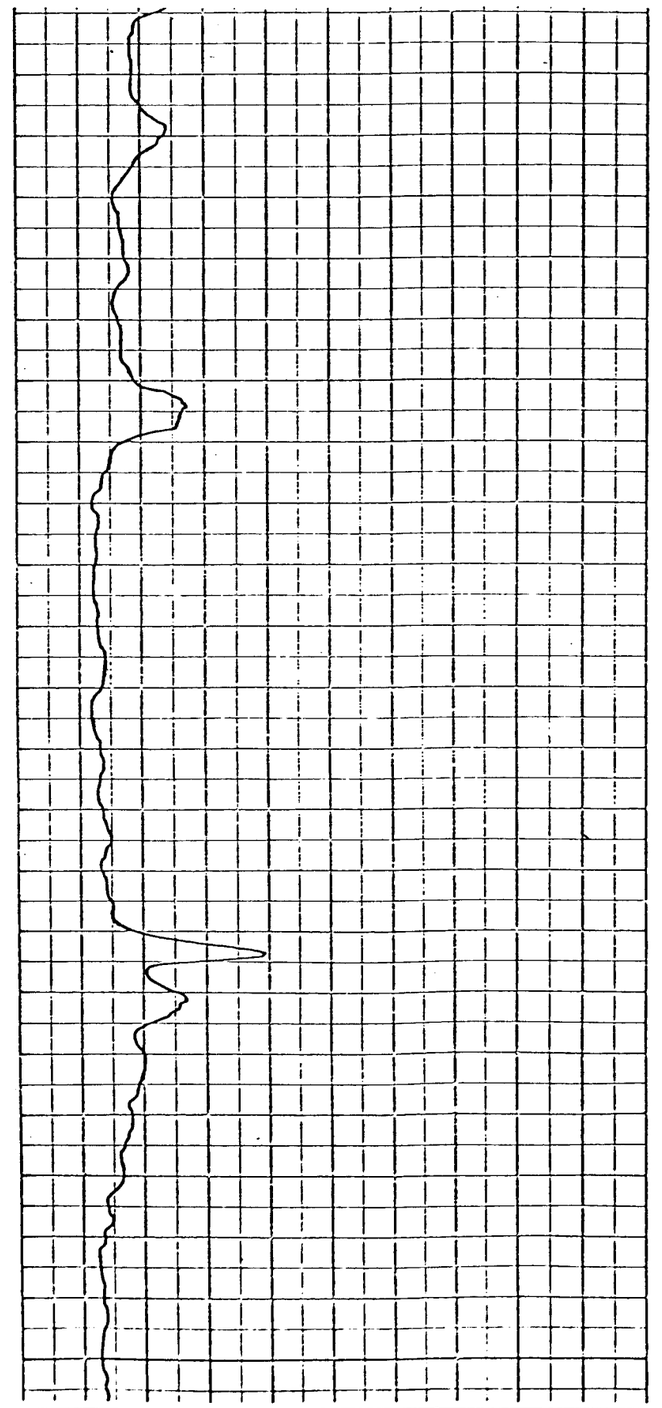
DRILL HOLE LOG

PROJECT UJV HOLE TH7 LOCATION Zone 53 CORE SIZE BQ STARTED 10/08/79 FINISHED 11/08/79 PAGE 2 OF 4

CLAIM GROUP TOMBSTONE LENGTH 297' DIP -50° AZIMUTH 000° COLLAR ELEVATION 5090' DRILLED BY CARON LOGGED BY EATON

GEOLOGICAL DESCRIPTION	SAMPLE NUMBER	RADIO-ACTIVITY IN CPS BGS-ISL	GEOCHEMISTRY AND ASSAY ($\%U_3O_8$) ppm U	ppm Cu			% RECOV	GEOLOGY	STRUCTURE ∠ to core		HOLE DEPTH (FEET)
77.2'-78.2': MAFIC RICH DYKE: a microcrystalline chill zone surrounds a coarse grained mafic rich dyke as described previously. The chill zone is 9 cm thick on either side of the coarser material. It is microcrystalliine, dark grey in color and contains several 1-3 cm in diameter coarse mafic rich fragments. The contact between the chill zone and the tinguaite is somewhat irregular but cuts the core axis at 60°. The chill margin is calcareous like the coarser part of the dyke and in this way differs from the surrounding tinguaite. MIXED TINGUAITE: similar to earlier mixed tinguaite. Shearing, although somewhat erratic, is generally at 20-40° to core axis. The dominant alteration is the pinkish alteration both in the normal and sheared plt; biotite alteration is minor. The major difference between this rock and earlier mixed tinguaite is that the plt to sheared tinguaite ratio is now 1:4. Calcite commonly coats fractures, no limonite.	H37578		28								80
	H37579		25								85
	H37580		5.0						50° to 70°	1/1-2'	90
	H37581		17.0								95
98.0'-114.5': mixed tinguaite with a plt: altered tinguaite ratio of 1:4. Shearing is less important than in previous section but still ~30° to core axis. Some pink alteration and weak biotite alteration, but dominant change in pl phenocrysts in the altered and brecciated zones is their change from white to a dull, medium grey color, which nearly blends into the groundmass. Calcite common on fractures. Traces of blue cancrinite or sodalite in a few phenocrysts.	H37582		18.5								100
	H37583		14.5						50° to 75°	1/1'	105
	H37584	BKGD	1.5				100				110
	H37585		5.0						20° 75°	1/1' 1/3'	115
114.5'-119.0': brecciation is the dominant feature of these rocks. Fragments in breccia rarely exceed 4mm in length. Rocks are weakly altered as before. Breccia like all breccia in mixed tinguaite is very tight with a mottled, slightly lighter than usual groundmass.	H37586		3.5								120
119.0'-130.0': brecciated and normal plt interspersed at approximately 15 cm intervals. In brecciated tinguaite pl phenocrysts and fragments vary from medium grey to dark grey. Biotite alteration is limited. At 126.6', a 3 cm x 1.5 cm area contains abundant 1-3mm prismatic orthoclase crystals; could be a void in the tinguaite which was filled by these crystals.	H37587		7.0						40°	1/5'	125
	H46252		31								130
130.0'-162.0': foliation dominant texture, both mafic and phenocrysts are orientated in sheared portion of rock. Plt to sheared tinguaite ratio 1:3. Little alteration of any sort. Appears to be plastic deformation. Calcite coats the few fractures which exist.	H37588		31						35°	1/6'	135
	H37589		19.5						70°	1/4'	140
	H37590		12.5								145
	H37591		4.5								150

MOUNT SOPRIS GAMMA PROBE LOG



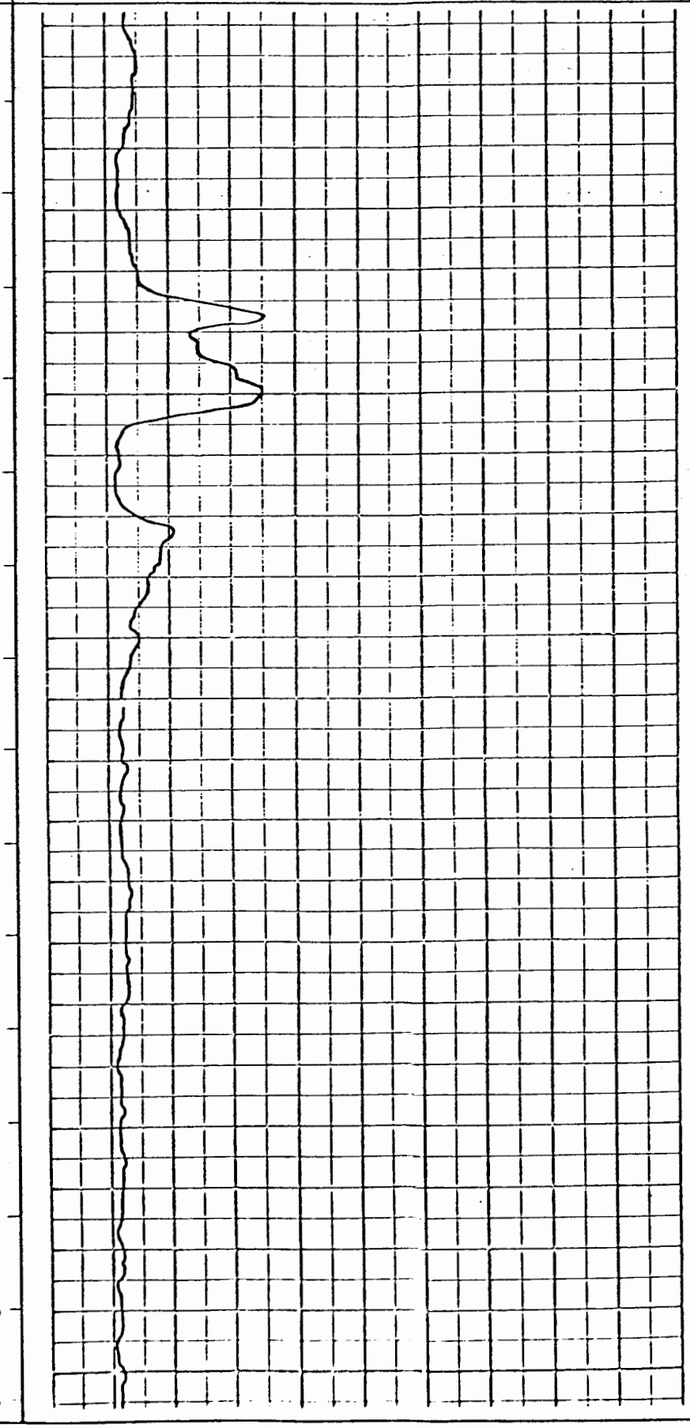
DRILL HOLE LOG

PROJECT UJV HOLE TH7 LOCATION Zone 53 CORE SIZE BQ STARTED 10/08/79 FINISHED 11/09/79

CLAIM GROUP TOMBSTONE LENGTH 297' DIP -50° AZIMUTH 000° COLLAR ELEVATION 5090' DRILLED BY CABON LOGGED BY EATON

GEOLOGICAL DESCRIPTION	SAMPLE NUMBER	RADIO-ACTIVITY IN CPS BGS-ISL	GEOCHEMISTRY AND ASSAY (U_3O_8) ppm U	ppm Cu			% RECOV	GEOLOGY	STRUCTURE ∠ to core		HOLE DEPTH (FEET)
152.2': traces of blue feldspathoid in pl phenocrysts.	H37592		4.5						35°	1/6'	155
Shearing prevalent and consistent at 30-35°; little or no alteration.	H37593		5.0						70°	1/4'	
162.0'-165.7': brecciation again dominates over foliation although rocks are still moderately foliated. Fragments 1-4mm across. No normal plt in this interval.	H37594		4.0								160
165.7'-183.0': normal plt dominates sheared tinguaite at a ratio of 4:1! The pl:orthoclase ratio is lower than usual at 3:2. The pl phenocrysts exhibit weak, pale green, sericitic(?) alteration locally and approximately 50% of the rock is comprised of phenocrysts. The rock is massive.	H37595		5.5								165
	H46253		28								
	H37596		96						50° to 70°	1/2'	170
	H37597		7.5								175
182.6'-183.0': a small fracture zone (6/1') is coated with calcite. 183.0'-232.5': Biotite alteration and brecciation are common. Plt to sheared tinguaite ratio 1:4. The groundmass of brecciated rock is mottled often with a light grey color; locally it has a drab green-grey color. Calcite on most fractures. A 1mm fracture at 188.1' is filled with sodalite. Aside from the altered and brecciated zones the rocks are typical plt.	H37598	BKGD	17.0				100				180
	H37599		8.0								185
	H37600		3.5								190
	H37601		3.0						20°	1/5'	195
	H37602		2.0						70°	1/4'	200
Still normal plt mixed with biotite altered plt. The altered rocks are only slightly stressed in this section. Fracture density is extremely low.	H37603		1.5								205
	H37604		2.0								210
217.6'-218.5': 2mm wide, medium grained orthoclase, sodalite, biotite dykelet runs subparallel to the core axis.	H37605		2.5								215
											220
222.0': Biotite alteration gives way to foliation as the dominant characteristic of the rock, still at 30° to core axis. Plt to sheared tinguaite ratio 1:1.	H37606		1.0								
											225

MOUNT SOPRIS
GAMMA PROBE LOG



DRILL HOLE LOG

PROJECT UJV HOLE TH 7 LOCATION Zone 53 CORE SIZE BQ STARTED 10/08/79 FINISHED 11/08/79 PAGE 4 OF 4

CLAIM GROUP TOMBSTONE LENGTH 297' DIP -50° AZIMUTH 000° COLLAR ELEVATION 5090' DRILLED BY CARON LOGGED BY EATON

GEOLOGICAL DESCRIPTION	SAMPLE NUMBER	RADIO-ACTIVITY IN CPS BGS-ISL	GEOCHEMISTRY AND ASSAY (U_3O_8) ppm U	ppm Cu	% RECOV	GEOLOGY	STRUCTURE ∠ to core	HOLE DEPTH (FEET)
	H37607		1.5					
232.5': GRADATIONAL CONTACT: somewhat arbitrary PSEUDOLEUCITE TINGUAITE: since the ratio of plt to sheared tinguaite exceeds 5:1, the rock is termed plt. It consists of 3-15mm white, anhedral to subhedral, pseudoleucite phenocrysts comprising 30-40% of the rock and 1-4mm, white, subhedral, stubby orthoclase phenocrysts comprising <3% of the rock, in a medium grey, aphanitic groundmass. The rock is massive. The plt is cut at irregular intervals by <10 cm wide bands of foliated, brecciated and/or altered tinguaite. Biotite destruction of the pl phenocrysts is the most common alteration however local, weak chloritization of the groundmass occurs. Most of the 50° fractures are coated with calcite.	H37608		1.0					230
	H37609		1.5					235
	H37610		1.0					240
	H37611		1.5					245
	H37612	BKGD	1.0		100			250
254.1'-254.2': a 1mm, 50° fracture is filled with sodalite. 254.7'-260.0': biotite alteration of pl phenocrysts is extensive over this interval, in all, 60% of the pl phenocrysts are wholly or partially altered to biotite.	H37613		2.0					255
							50°	1/5' 260
260.0'-278.0': normal pseudoleucite tinguaite dominant.	H37614		1.5					265
	H37615		1.5					270
	H37616		1.5					275
277.3'-277.7': a 2mm fracture filled with orthoclase, pyroxene and minor pyrrhotite. 278.0'-279.0': small band of biotite altered plt. 279.0-end of hole: normal plt with very minor <5 cm wide altered or sheared zones. Calcite fills fractures.	H37617		1.5					280
	H37618		1.5					285
	H37619		1.5				25° to 35°	1/3' 290
	H37620		3.0					295
								297

MOUNT SOPRIS GAMMA PROBE LOG