MOUNT MYE PHASE N.T.S. 105-K-05

Station	Foliated	Porphyritic	Grain Size	Mafics
1928	Y	Y	fine	bio, musc
1929	Y?	Y	coarse	bio
1930	Y	Y	-	bio
1931	Y	Y	-	bio
1933	Y	-	fine	bio, musc
1945	N	N	fine	bio
1947	N	N	fine	bio
1948	N	Y	coarse	bio
1949	N	Y	coarse	bio
1950	N	Y	coarse	bio
1954	-	N	medium	bio
1955	Y	Y	coarse	bio
1956	Y	Y	coarse	bio
1957	Y	Y	coarse	bio
1958	Y	Y	coarse	bio
1959	Y	Y	coarse	bio
1960	N	Y	coarse	bio
1961	-	Y	medium	bio, musc
1962	N	-	-	bio
1964	-	Y	coarse	bio
1965	-	Y	coarse	bio
1966	-	Y	coarse	bio
1967	-	Y	coarse	bio
1968	-	Y	coarse	bio
1969	-	Y	coarse	bio, musc
1970	-	Y	coarse	bio
1971	-	Y	coarse	bio
1972	-	N	coarse	bio
1973	-	N	coarse	bio
2456	-	N	medium	bio, musc
2727	Y	Y	-	bio
AR06	N	Y	medium	bio, musc

CG 13 Jun 77

1927) 10A: o.f. xblue, siltstone
(1928) muse = tuff ~~of~~ more of f.B
Float only. Fol^n weak
w/ minor detrl. of plag.
phenos. Formalentation
of minerals in grnd mass weak
folw e.f. flow fol^n Sample
6

1931) 10B: Early felsic 10B w/
(1929) K-spar megacrysts, defined
flow fol^n ≡ 040° ∠ 75°E.
K-spar megacrysts have
weak preferred orientation
in plane of flow fol^n of
133, 68°SW. Textures of mineral
ations ~~seen~~ this predom.

1933) 10C: fol^n 150, 60°SW
(1930) Poss. preferred orient. of
megacrysts of 250, 45°SW.
2nd xbg fol^n 160, 50°SW
Lineation 185, 30S, Porphyr

orientation ⟹ flow direction of x mush ??
∴ foln = flow foln ??

~~1935~~) 1933) 10B: foln 180, 63°W
lineation (megacrysts) 190, 32S

~~1934~~) 1932 10C: banded, gneissoid
⇉ S_2 165, 59°W
Reasonable lattice structure
defining S_1/S_2 relations
No attitude possible on
S_1, S_4(?) seen cutting
S_2 gently Z symmetry
F_4. Attitude of S_4(?)
not certain approx
165, 65°SW. Sample

~~1936~~) 1933) 10A interbanded in 10B. 1937
= "scab" of 11C on AB. 10A
@ 1939 finely xline, muse
+ bio ± ms mong w/ weakly
fam orient. micas giving
weak, unmeasurable foln

CC 12 flows F.F.

1929 10A = of flow, schistosis
1928 muse = lec of more of AB
Float only, Fol" weak
w/ much devel of phenos. Form alentation
of minerals in parts weak
Fol" in flow Fol" Sample

1931 10B = Early flow, 10B a-
1929 K-spar megacrysts, deform
flow Fol" 220 Δ 75°
K-spar megacrysts, shear
weak Fol" in flow direction
ex. plane of Fol" Fol" of
133 68°SW Structures often
alone, Thin foredom.

1933 10B = Fol" 150, 60°SW
1930 Poss preferred orient to
megacrysts of 250 45°SW
2nd ndc Fol" 160, 50°SW
Lineation 185, 30°, Perhaps

orientation ⇒ flow direction of xl mush ??
∴ foln = flow foln ??

~~1935~~) 10B: foln 180, 63°W
(1931) lineation (megacrysts) 190, 32S

~~1934~~) 1CC: bandcal, gneissose/c
1932 ≡ S_2 165, 57°SW
Reasonable lation, struct. defining S_1/S_2 orientations
No attitude possibilities
S_1, S_4(?) seen cutting S_2 giving Z symmetry
Foln. Attitude of S_4(?) not certain approx 165, 65°SW. Sample

~~1939~~) 10A interbands in 10B. 1937
(1933) = "scab" of 1C on AB. 10A
@ 1939 finely xlline, musc < bio ~~gtz~~ monz. w/ weakly form orient. micas giving weak, unmeasurable foln

~~1967~~ 1947 10B?: finely xlline bio
qtz. mons → qtz. sericite,
No Col 4 or form orientation,
no K-spar megacrysts
Sample only - no fabric

~~1959~~ 3D: "pit Ø"
1943 S_2 100, 50°SW
S_4 165, 10°SW
$F_4 \equiv S$ symmetry

~~1961~~ 3F: ~~silicified~~ marble
1944 showing strong PS2 devel.
S_2 114, 27°SW
Vague mineral streaking
c.f. comp. layering on S_2
Prob. $S_0 \wedge S_2$ = 167, 24SE
If $S_0 = S_1$ this lineation = L_2

~~1965~~ Finely xlline, unfoliated, ~~gtz~~
(1945) bio gtz monz w/ no Kspar
megacrysts. No struct, mass
occ.

~~1966~~ 3G w/ minor 3D interbands
1946 c.f. area albar Rich
S_2 136, 50°SW
$F_2 \approx 163, 9°$ ~~SE~~
F_2 locally $\equiv Z$ symmetry
as observed
$S_4 \approx 90°$ 20°S
F_4 159 12°SE $F_4 = S$ symmetry

June 13 - Lower Anvil Creek.
-even nos - 1928.

10A musc > bio granodiorite to qtz monzonitic.
10B - porph. bio - qtz monzonite.
measure S surfaces.

1) ~~1928~~ 1948 - 10 B.
15% K-spar phenos to 4" - randomly oriented.
<10-% bio. ≈10% qtz. remainder of groundmass is feld - GM. is coarse grained.
generally unaltered.
orange-red lichens on surface.
- minor qtz-feld. pegmatite dykes with tourmaline crystal clots.

joint set 076/56 N

2) ~~1930~~ 1949 outcrop?
10 B. as 1928

3) ~~1932~~ 1950
10 B as 1928 + 1930

4) ~~1934~~ 1951 - 3G? - no calc sil. bands.
garnet - bio - musc. schist.
large garnet porphyroblasts.

- S_2? = 149/63 W
- sample.

June 13

5) ~~1956~~ 1952 - 10G?
magnetic - dark green-black.
pyroxenite? - foliated. 137/61E

6) ~~1958~~ 1953 - 36
- bio musc schist with
interbanded calc-silicate?
S_2? = 114/51 E.

7) ~~1960~~ 1954 - 10D?
equigranular med grained
bio. diorite
~5% bio (scattered & clotted)

C-6 15 June

[illegible]

Samples only — no [illegible]

C-6

15 June

1955

~~1969~~) 10B : w/ cse Kspar mega-crysts up to 8" long. Lude fol" formed by plan orient. of Kspar + bio

Σ 8° Δ 80° E

No strong preferred orientation to Kspar megacrysts in fol" plane

1950

~~971~~) 10B :

fol" 0, 84° W

Kspar lin 205, 74° W

PRIMARY FOL"?

Good preferred orientation of Kspar megacrysts. Excellent pervasive foliation. Numerous 3G(?) xenoliths 1.5-2.5" in map length in 10B

1957
~~1973~~) 10B: good coely x-lam
of w/ k-spar megacrysts
PRIMARY FOLN? foln: 030°, 80° SE
kspar lin: 037°, 62° NE
lineation: weakly developed

1958
~~1975~~) 10B: w/ kspar megacrysts
foln 0°, 85° E
kspar lin 120°, 75° SE
PRIMARY FOLN? 1 to 2 preferred orientations
to kspar lin ??? 3??

1959
~~1977~~) 10B } kspar megacrysts
foln 005, ⊥
No preferred orientation
to kspar

1960
~~1979~~) 10B: w/ moderate devel.
of kspar megacrysts, No
foliation developed here
3 pt sets only
① 002°, 80° E (same as foln 1969, 1971, 1975 sets)
② 70, ⊥
③ 75, 140 SE
N.B. 1st pt may ≡ foln

(1961 ~~1961~~) 10B?: more silicocres, muscovite ↓ of AB. May be 10A but some kspar megacrysts still present. Rk. is med. brown weathering, gray-br. fresh, med. xline w/ minor kspar megacrysts. Weathers to rubbly, sandy debris. This may be 10B ↓ of phase of ~~Batholith~~. Sample

1962 ~~1961~~) 10B: unfoliated, no fabric ↓, qtz mons → granodiorite Sample

June 14 - C6 Map Sheet

1) 1963 - 10 B
- large K-spar megacrysts to 4" - randomly oriented
~10% clotted & diss. mafics (mainly bio)
~10% qtz.
- coarse grained
15-20% megacrysts.
70-80% ground mass.
<1% musc.

2) 1964 - 10 B.
- large frost heaved boulders.
- as outcrop #1.

3) 1965 10 B
- large frost heaved boulders
- as outcrops 1 & 2.

4) 1966 - 10 B
<5% K spar megas (<2")
- otherwise as 1, 2, & 3
- joint set 189/51 W

5) 1967 - 10 B
as #4.

6) 1968 - 10 B.
~10% K-spar megas. to 4"
weakly aligned
- minor schist xenoliths aligned in same direction.

6) cont'd - poor outcrop - mainly large boulders.
- fantastic tourmaline radiating groups with crystals to 6" long
*- picture #27 ASA 25

7) (1969) 10B
<5% Kspar megas.
~10% mafics (mainly bio)
- minor musc.

8) (1970) 10B.
- <5% K-felds megas - generally <1" long.
- minor xenoliths - of 3G? to 4"
- coarse grained g.m!

9) (1971) 10B.
- <5% K-felds megas generally <1"
- coarse grained g.m.

10) 1972 10B outcrop?
- coarse grained.
- megacrysts generally absent.

11) 1973 10B outcrop?
as #10.

12) 1974 3C outcrop?
- large frost heaved boulders beneath tree.
- weakly foliated - attitude not obtainable.

13) 1975 3G
- frost boulders
- good C.S. banding.

14) 1976 3G
- out crop.
- good calc. sil. banding.
$S_2 = 124/21$ NE.

△ 2454 3D
- little or no $CO_3^=$
- 10-20% bio phy bands
- 80-90% calc. sil. bands.
S_2 = 112/16 SW.

△ 2455 3F
- massive → weakly foliated. silicated marble
- dirty green in colour
- fine grained reddish mineral (garnet?)
- sample ≈ 20" thick.
- S_2 = 111/33 SW.

△ 2456 10A
med. grained - equigranular.
- musc bio granodiorite ?
~15% q/z.
~15% mafics (bio)
~3% musc.
remainder = feldspars + acc.

△ 2457 3D.
- minor $CO_3^=$
- 20% bio phy.
- 80% calc. sil.

△ 2458 3G? schistose
- non calcareous bio. schist.
± staurolite.
- "no andalusite visible.

2725) Massive med xllne, dk grn metabasalt; part of meta-vole. pkg overlying CS; contains v.f xllne, non-porph massive, fabricless grey brown flows c.f. 2695. Sequence interbanded med xllne meta-basalts & v.f. flows. No struct. poss. 200' to E CS interbands w/

S_2 125 80SW

CS = dk. purp br. & med. green "blotchy" variant between CS & metavols

2726) Black, graph. EG slates

S_1(?) 115, 54SW

L_2(?) 130 22SE

S_1 looks OK no xllne struct

2727) 10 B: good megacysts

fo Gn. 82 62°N

Foliation defined by strong preferred orientation of kspar + micas

MOUNT MYE PHASE N.T.S. 105-K-06

Station	Foliated	Porphyritic	Grain Size	Mafics
0037	-	-	-	-
0038	-	-	-	-
0039	-	-	-	hbl
0040	-	-	-	-
0041	-	-	-	-
0042	-	-	fine	bio
0043	-	Y	-	-
0044	-	-	fine	bio, hbl
0048	-	Y	-	-
0049	-	Y	-	-
0050	-	Y	-	-
0051	-	Y	-	-
0052	Y	Y	-	-
0053	Y	Y	-	-
0054	-	-	fine	bio
0065	Y	Y	-	-
0081	-	Y	-	-
0105	Y	Y	-	bio
0109	Y	Y	-	bio
0110	Y	Y	-	-
0111	Y	Y	-	-
0112	Y	Y	-	-
0113	Y	Y	-	-
0446	Y	Y	-	bio
0447	Y	Y	-	-
0448	N	Y	coarse	-
0449	N	Y	-	-
0450	Y	Y	-	-
0463	Y	Y	-	-

MOUNT MYE PHASE N.T.S. 105-K-06

Station	Foliated	Porphyritic	Grain Size	Mafics
0566	N	N	medium	bio, hbl
0567	N	N	medium	bio, hbl
0620	Y	-	fine	bio
0621	Y	-	fine	bio
0622	Y	-	fine	bio
0623	-	-	-	-
0625	Y	-	fine	bio
0628	Y	-	fine	bio
0633	Y	-	-	bio
0636	Y	-	-	-
0708	-	-	coarse	-
0709	Y	-	medium	musc
0714	N	-	medium	bio
0719	-	-	medium	-
0720	Y	Y	medium	-
0856	Y	Y	medium	-
0857	Y	Y	-	-
0858	Y	Y	-	-
0859	Y	Y	-	-
0860	Y	N	-	-
0861	Y	-	-	-
0862	Y	-	-	bio, musc
0864	Y	-	medium	bio, musc
0865	Y	-	medium	bio, musc
0866	Y	-	medium	bio, musc
0867	Y	-	medium	bio, musc
0875A	-	-	-	-
0876	Y	-	-	musc
0878	Y	-	medium	-
0879	-	-	-	-
0880	Y	-	medium	-

MOUNT MYE PHASE N.T.S. 105-K-06

Station	Foliated	Porphyritic	Grain Size	Mafics
0883A	-	-	-	-
0884	Y	-	-	-
0896	Y	N	coarse	musc, bio
0897	Y	-	coarse	musc, bio
0898	Y	-	-	-
0899	Y	-	-	-
0900	Y	Y	-	-
0915	Y	-	medium	bio, musc
0916	Y	Y	-	bio, musc
0917	Y	-	-	-
0918	Y	-	-	-
0919	Y	-	-	-
0935	Y	-	-	bio, musc
0974A	-	-	-	-
1003	Y	-	-	hbl, bio
1004	N	Y	-	-
1921	-	-	-	-
2537	-	Y	-	bio
2851	-	N	medium	bio
2852	-	-	-	musc, bio
2868	-	-	medium	musc
3108	Y	-	fine	bio, musc
3109	Y	-	-	-
3110	Y	-	-	-
3230	Y	Y	medium	bio, musc
L041	-	-	-	-
L042	-	-	-	-
L043	-	-	-	-
L044	-	-	-	-
L100	-	-	-	-
L103	-	-	-	-

MOUNT MYE PHASE N.T.S. 105-K-06

Station	Foliated	Porphyritic	Grain Size	Mafics
8585	N	N	medium	bio, musc
8586	N	Y	-	bio, musc
8587	N	Y	-	bio, musc
8588/AR13	N	N	-	bio, musc
8589	N	N	-	bio, musc
8590	N	N	-	bio, musc
8594	Y	Y	-	bio, musc
8595	-	Y	-	bio
8596	Y	Y	-	bio, musc
8597	Y	Y	-	bio, musc
8598	Y	N	-	bio
8599	Y	N	-	bio, musc
9080	N	N	-	bio, musc
9081	N	Y	fine	bio, musc
9082	dyke			
9083	Y	Y	coarse	bio, musc
9084	Y	Y	coarse	bio, musc
9086	Y	N	fine	bio, musc
9087	Y	N	-	bio, musc
9088	Y	N	-	bio, musc
9089	Y	N	-	bio, musc
9090	Y	N	fine	musc, bio
9091	N	N	-	musc, bio
9092	hbl dyke			
9093	Y	N	-	bio, musc
9094	Y	-	pegmatite	musc
9095	Y	N	-	bio, musc
9096	Y	Y	-	bio, musc
9097	Y	Y	-	bio, musc

MOUNT MYE PHASE N.T.S. 105-K-06

Station	Foliated	Porphyritic	Grain Size	Mafics
9400	N	Y	-	bio
9401	Y	N	fine	bio
9404	Y	-	-	-
9405	dyke			
9406	N	N	coarse	hbl
9408	-	-	pegmatite	-
9409	-	Y	-	bio
9410	Y	N	fine	bio, musc
9411	Y	-	fine	-
9412	Y	-	fine	bio, musc
9413	Y	N	medium	musc
9414	smoky quartz porphyry			
9415	Y	N	medium	bio
9416	Y	-	medium	bio, musc
9417	-	-	medium	bio, musc
9418	Y	N	medium	bio, musc
9419	Y	-	fine	bio, musc
9420	N	N	medium	bio, musc
9421	Y	Y	medium	bio, musc
9422	Y	Y	medium	bio, musc
9423	Y	N	coarse	bio, musc
9424	Y	N	fine	bio, musc
9425	Y	Y	medium	bio, musc
9426	Y	N	medium	bio, musc
9427	Y	Y	medium	musc, bio
9428	Y	N	medium	bio
9429	Y	N	fine	bio, musc
9430	N	Y	fine	bio, musc

MOUNT MYE PHASE N.T.S. 105-K-06

Station	Foliated	Porphyritic	Grain Size	Mafics
9431	Y	N	medium	bio
9343/AR11	Y	N	medium	musc, bio
9433	-	-	medium	bio, musc
9434	Y	-	fine	musc, bio
9435	Y	Y	medium	musc, bio
9436	Y	-	medium	musc, bio
9437	Y	Y	coarse	bio, musc
9438	N	Y	coarse	bio
9439	N	-	fine	bio, musc
9441	Y	Y	medium	bio, musc
9442	Y	Y	coarse	bio, musc
9443	Y	Y	fine	bio
9444	Y	-	fine	bio
9445	Y	-	fine	bio, musc
9500	Y	N	-	musc, bio
9501	Y	N	coarse, fine	bio, musc
9502	Y	Y	-	bio, musc
9503	Y	N	-	musc, bio
9504	Y	dyke	-	-
9505	Y	Y	-	bio, musc
9506	N	Y	-	bio
9507	Y	Y	-	bio
9508	Y	N	-	bio, musc
9509	Y	Y	coarse	bio, musc
AR09	Y	Y	medium	bio, musc
AR10	N	Y	medium	bio, musc
AR12	Y	Y	-	bio, musc

37/ Anvil Batholith
quartz diorite

38/ joint - 130°, 80° NE
- 42°, 87° SE

Batholith - as above.

39/ Qtz hornblende diorite

joint - 155, 70° NE

40/ as above - 155, 62° SW
- 49, 54° SE
- 165°, 90°

41/ as above.

joints - 132, 82° NE
- 15°, 88° NW
90°, 70° W

42/ joints { −163°, 90°; −25°, 90°; −110°, 75° NE } fine-grained biotite qtz-diorite

(−141° to T.T)

44/ joints { −70°, 90°; −16°, 90°; −175°, 75° W; −105°, 90° }

Batholith – fine grained biotite – hornbl. diorite

45/ S_2 − 145°, 28° SW

Biotite schist

43/ Porphyritic granite

46/ Calc-silicate hornfels

- joint - 145°, 74° NE

- no S_2 available

- 50' W of L112 otcp 10' long - narrow

{- bearing to Tit - 142°
- " to Lst - 108°
on L120W}

47/ S_2 - 150°, 40° SW

Biotite schist or gneiss

on line L12. 125' S of station (112W, 64N)

48/ Anvil Batholith - granite porphyry.

- joints - {110°, 85° NE
158°, 85° NE

53/ Porphyrytic Granite

fol. - 160°, 12° SW

- phenocrysts flattened in this plane

- joints { - 175°, 80° E
- 75°, 82° NE

- numerous phenocrysts - in some places hardly any other minerals but K-spar up to 4" long.

54/ Fine-grained biotite-qtz diorite

joints { - 25°, 83° NW
- 170°, 90°

49/ Granite Porphyry

- joints { - 25°, 90°
  - 85°, 90°

50/ Granite Porphyry

joints { - 10, 67° NW
  - 90°, 40° N

51/ Porphy. Granite

joints { - 68°, 75° SE
  - 148, - 75° SW

52/ a.s. above

fol. — 160°, 30° SW
Kspar phenocrysts flattened in plane of fol.
— no data on orientation in this plane.
joint — 25°, 90°

62/ axis { = 125°, 10° SE plunge
plane { - 140°, 40° SW

$F_2 \approx 125°, 80$ SW Forget

- Axial plane is a foliation
- Biotite schist.

63/ $S_2 - 10, 35°$ W

Biotite schist

64/ Biotite gneiss, scroungy outcrop $S_2 - 100, 47S$

65) Coarsely porphyritic, foliated granodiorite w/ prominant Kspar megacysts up to 4". Foliation 160, 33SW

66) Calc-silicate gneiss $S_2 - 150, 55SW$ $L_3 - 150, 22NE$ plunge

67) Biotite gneiss $S_2 - 135, 65SW$

68) Calc-silicate gneiss $S_2 - 150, 62SW$

69) " " " $S_2 - 155, 50SW$

79/ Calc-silicate schist

S_2 - 160°, 43° NE

80/ S_2 - 15°, 6° SE
- so close to horizontal hard to get good reading.

Biotite schist.

81/ Porphyritic Granite

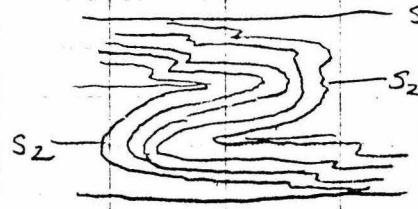
82/ S_2 - 145°, 65° SW

Siliceous Marble - very small outcrops on bank - may be boulder covered with rocks - however trend matches that of some rock on 80W, =SIN.

104) Calc-silicate gneiss : S_2 135, 15SW
L_4 95, 5°E
F_2 folds : axis 130, 10° SE plunge
axial plane = S_2
Jt. 15, ⊥
Fine grained leucocratic monzonite sill cutting thru ocp.

105) P phase brecc biotite gtz monz. Fol^n Σ 127 Δ 36SW Kspar phenos have long axes in plane of fol^n.

106) Calc silicate gneiss showing well developed F_2 folds. Unit shot thru w/ leucocratic monzonite stringers ∥ S_2 forming extensive migmatite. Ave. S_2 – 145, 5°SW F_2 axis 100, 5°SE S_2 = axial plane Jts : ① 50, 85SE ② 165, 80NE



Scale : 1" = 2"

107) Migmatized calc-silicate gneiss:
S_2 – 145, 50SW
145, 50
F_2 folds axes 145, 3°NW plunge
S_2 = axial plane
Vts: ① 035, ⊥ ② 55, 80NW

108) Fg. bio qtz diorite border ϕ of Anvil
Vts ① 76, 70NW
② 5°, ⊥
③ 40, 70SE
④ 120, 26SW = ? Fol" ??

109) Cscly ϕ bio qtz monzonite
Fol". 160, 50SW

110) As above Fol" 140, 25SW

111) As above Fol" 135, 80SW

112) " " " 160, 65SW

113) " " " 145, 80SW

1446) Porphyritic biotite granodiorite of Anvil Batholith: fol^n 127, 63SW K-spar megacrysts definite fol^n, & are randomly aligned in it. Fol^n prob. igneous flow fol^n because if meta., megacrysts would be restricted to finer grained ??? K-spar ??? Check obliquity to see if mono or triclinic. If mono, they would probably be hi T igneous

1447) As above: fol^n 110, 18SW

1448) As above but massive, pegmatitic ↳ fol^n available. K-spar phenos. randomly oriented, bio. randomly oriented

1449) As above, massive, no fol^n

1450) As above: fol^n 110, 27 NE

1451) Calc silicate gneiss: Sm. oop. S_2: 130, 57 NE

462) Bio-gneiss ± S_2 horizontal S_1 145, 25SW Jts: ① 77 80SE ② 145, 67SW ③ 115, ⊥ S_1 reading probably on limb of F_2 fold

463) Coarse porphyritic ϕ of Anvil Fm 115, 27SW Jts ① 60, 45NW ② 100, 85SW

464) Calc silicate gneiss outcrop to subcrop: very poor S_2 155, 15SW

465) Calc-silicate gneiss bxia: Rk is brown generally medium (4-10") blocks of calc silicate in 2 matrices a) a f.g. pink monzonite and b) a hb diorite c.f. those seen elsewhere on grid. Minor galena in calc-sil. fragg. Fragg. hornfelsed - Age of brxiation post-D_3 as L_3 seen in fragg.

466) Bio schist: S_2 145, 55SW L_3 160, 20SE. May be slightly frost heaved but pretty good

Hb

2566) Med. gr. Bio ± Hb QM, no kspar megacrysts, no foln., rk. homogeneous & massive

2567) As 566

2568) Interbanded calc silicate & bio schist: S_2 ≈ 50, 21 NW

2569) Calc Silicate Phyllite: S_2 165, 18 W; Z symm. @ 5699

2570) As above S_2 112, 26SW

2571) BMS: S_2 127, 42SW

2572) Calc silicate phyllite/schist: S_2 130, 20SW L_3 145, 0 Rk. heavily banded w/ schistose & phyllitic partings

2573) As 572: S_2 120, 40SW

2574) " " : S_2 130, 25SW

7 June 1972

Vangorder Turn / Myc Lake Area

320 LX Pacific Kaufpreis

(620) F.g. 4m QM : Fol^n (67, 30 SW)
Jts ① 80, ⊥ ② 20, 60 SE
Rk breaks ⊥ fol^n as well

(621) As above w/ less kno : fol^n ∞
115, 25 SW. Jts ① 115, 65 NE
② 40, ⊥

(622) As (621) : fol^n 120, 33 SW
Jts ① 78, ⊥ ② 165, 80 SW
③ 14, ⊥

(623) Interbanded silicated marbles & calc silicates
173, 35 SW
tangentially brecciated QMS cmimed above QM of Aneil Batholith
S_2 173, 36 W. Check for scheelite

(624) Calc-silicate above batholith
S_2 170, 25 W. Check for scheelite

v625) Fg. bio QM : foln $\Sigma \approx 160$ Δ 25SW

v626) Calc silicate unit above QM of batholith : S_2 150, 34SW

150 34

v627) Calc-silicate phyllite : S_2 159, 30SW
Rk. v. similar to that on Ladue creek. More fissile, calcareous & punky than calc-sil. of Faro grid

0,32 v628) Fg., well foliated bio-musc. QM : foln 0°, 32°W

v629) Silicated marble w/ minor pelitic interbands. Unit @ least 20' true thickness. S_2 3°, 35°W

June 7/72

✓630' Calc-silicate overlying 4' thick sill of Anvil Batholithic rxs. w/ calc. silicate below this.
S_2 - 140°, 30°SW
Impossible to get good fresh sample - rock hornfelsed.

✓631 Hornfelsed calc-silicate gneiss overlying batholithic rxs.
S_2 - 165°, 23°SW

✓632 Calc-silicate S_2 - 125°, 15°SW

✓633 Anvil Batholith
biotite foliation - 173°, 50°
joints { 55°, 82° SE
{ 160°, 65° NE

✓634 Extremely well-banded pit ⌀ calc-silicate gneiss
S_2 - 175°, 18°SW(W).

V635 ✓ Good biotite schist. Excellent otcp - sharp contact between pit Ø calc-silicate + biotite schist. Qtz-monzonite intrudes // S_2 at contact.
S_2 - 185°, 14° NW

V636 ✓ Qtz monzonite - has fol // S_2.

V637 ✓ Biotite schist S_2 - 10°, 12° NW

V638 ✓ Fine lam biotite schist w/ odd calcareous zone 1-2" thick. Tends to be almost qtzitic in places
S_2 - 7°, 15° NW

V639 ✓ Interlayering of Batholithic rxs and pelitic schist. Small vertical section

Over cast, ocp., BMS >> CSS

708) C.g., musc-gar-tour pegmatite Sample only

709) Med-f.g. musc qtz monz w/ weak foln.. Xenoliths of musc-bio. schist common Attitude of S_2 in xenos. (110, 32 NE) little changed from attitudes seen in overlying meta. capping. D_2 fabric of xenoliths not destroyed

710) BMS: S_2 25 15 SE No F_2 no symm. pos.

711) BMS in contact w/ QM. Ocp to frost heaved fr ridge

712) Calc-silicate & laminated BMS brxia. Brxiation caused by QM & f. cse. hull qtz veins from AB. No ridge

713) Calc-silicate schist transitional to BMS: S_2 141, 15SW

714) M.g. Bio QM of AB. Ocp. rubbly, no for. Sample only

715) Calc-silicate gneiss: S_2 = horiz.

716) CS schist: S_2 150, 20SW

June 9/72

UPPER LEDU CREEK AREA

V719 / Med. to cs. -grained batholithic rxs - no good otcps due to heavy snow cover on N facing slopes - plenty of subotcp - unable to get good foliation readings because only frost heave blocks.

V720 / Anvil Batholith - medium gr. - no large Kspar phenocrysts.

foliation — 160°, 43° SW

V721 Batholith / Calc-silicate contact w/ calc-silicate overlying. Otcp of " " rather poor - possibly slumped — attitudes??

S_2 — 115°, 15° SW

June 16/72

1856/ Med-cs grained Anvil Batholith w/ a few large K-spar phenocrysts.
foliation shallow ≈ 130°, 15°SW

1857/ As above ≈ foliation 180°, 10°W

1858/ " " - extremely well foliated. 165°, 22°W

1859/ As above foliation 170°, 25°W
Otp contains # of coarser grained veins + segregations that contain tourmaline crystals.

1860/ As above - well foliated - no large phenocrysts. 30°, 26° NW

1861/ As above 170, 40W

320 LX Pacific Hampcool

Vangorda Turn — 16, June

2862) Musc-bio granodiorite - QM of AB Foln: 13°, 33° NW. Thin veneer of calc-silicate schists in contact w/ AB very py rich

2863) Rubbly ocp. of siliceous, py rich calc-silicate schists. Sample only

2864) Med. gr. bio-musc QM of AB Foln: 175, 48° W

2865) As above + foln 167, 25 SW

2866) As above, poorly foliated Jts ① 90, 75° W ② 160, ⊥ ③ 10°, 75 NW

2867) As above: foln 145° 30 SW Jts ① 90, ⊥ ② 165, ⊥ ③ 138 62 NE ④ 110, ⊥

320 LX Pacific Rainproof

~881/ Calc silicate S_2 - 100°, 7°S
phyllite/gneiss w/ pyrite.

~882/ Good calc-silicate gneiss w/ pyrite
S_2 - 25°, 12° SE

~883/ Well banded S_1 - 105°, 20° SW
Calc. silicate phyllite

~884/ Well foliated batholithic Rx.
fol = 90°, 25°S

~885/ Small badly altered otcp of
calc-silicate w/ phyllitic
partings - otcp contains
several small folds - attitudes
impossible. S_2 - ??

~886/ Altered non-calcareous phyllite
w/ hematite stain - attitudes ??

~887/ As above - S_2 - 22°, 53° SE

~888/3e - calcareous phyllite S_2 - 160°, 7° (NW)
L_2 - 145°, 5° SE

June 19/72

896/ Cs gr Anual Batholithic rx - musc-kspar-biot-qtz - 1% large kspar phenocrysts visible
foliation - 110°, 34° SW.

897/ Extremely well foliated rk.
As above foliation - 120°, 46° SW
lineation - 178°, 45° S
Lineation possibly small dicks?

898/ As above - fol - 112°, 42° SW
- lin - 174°, 43° S

899/ Well foliated batholithic rx as above. Mineral lineation best developed only on certain foliation surfaces.
5 fol - 108°, 32° SW
ℓ lin - 170°, 26° S

900/ As above fol - 95°, 36° S
Same ⌀ of batholithic rx occur all along hillside.

v 876) Area of strongly foliated, muscovite rich monzonitic intrusive rks. & splintery, hard, contact metamorphosed, chlor. rich calc-silicate rks c.f. contact skarn. Since AB cuts calc-silicate unit, this area more likely a contact metamorphic aureole w/ minor metasomatism. Folx. in monz. rks 110, 20 SW

v 877) Mod. green, musc-chlor phyllites S_2 175, 12 S. F_2 axis 140, 5° NW. L_2 = F_2 axis Unit calcareous

FIRTH AREA June 17/72

V878/ Med-cs gr. Anvil Batholith. Cs gr segregations of qtz + kspar + odd large kspar pheno cryst. fol – 90, 14°S Cs gr musc in places.

V879/ Calc-silicate gneiss – contact w/ Anvil Batholithic rx's.

$S_2 \simeq 80°, 80°N$ S_2 surface extensively folded into F_3/F_4 folds overturned to the south – these do not appear to be F_2 folds. Previous S_2 reading meaningless!

Block possibly slumped slightly →

{ fold axis – 138°, 20°SE
{ axial plane – 168°, 20°NE

Rk calc silicate w/ numerous calcareous bands approaching marble quality.

V880/ Med gr Anvil Batholithic rx's fol. ≃ 70°, 32°SE

320 LX Pacific Rainproof

Summary

0 - ≈100' BMS & GBMS

≈100 ≈ 293 Calc-silicate

293-525 BMS & SGBMS w/ minor CS (possibly phyllite)

V 999) Calc-silicate schist : S_2 36° 11°NW

V 1000) GBMS : S_2 40, 20SE Unit dips under calc-silicate to SE in sm. syncline

V 1001) Calc-silicate schist above BMS : S_2 94, 34S . Unit well banded typical calc-silicate

V 1002) BMS : S_2 77, 9 SE

V 1003) Weakly to poorly foln, leucocratic hb-bio qtz diorite to diorite

V 1004) Sample only
Slightly foln mons-granodiorite no mafics, no foln, sample only

June 13/77
cloudy - cool

✓△ 2537 10B
- 10% Kspar megacrysts to 6" long.
- ~15% bio
- ~10% qtz

✓△ 2538 3D
S_2 = 133/42 SW
~90% calc sil
~10% bio-phy interlaminated
~0% CO_3

✓△ 2539 3D
S_2 - 129/55 SW
D_2 S sym.
F_2 - 296°/04
~60% calc sil
~40% bio phy interbands
~0% CO_3.

✓△ 2540 3D.
S_2 = 121/42 SW.
as △ 2538.

AIR PHOTO NW 71074-10-120
SHEET D6 (1 OF 5)
JULY 17/74
JAC
SUNNY

2851
Δ1 070/47 65/005 JOINTS.
✓ HEAD OF CIRQUE
- INTRUSIVE : MED. GRAINED — EQUIGRANULAR 2-3 MM.
10% BLACK BIOTITE FLAKES.
20% QTZ.
70% WH FELD. 10B
SOME PORPH → 3 CM. WHITE FELD. (CARLSBAD?) → 20%
- IN FROST HEAVE FLINTY TALUS SLOPE
DOES CM. FELD PORPH → 10 CM
FINE GRADES S FROM ? TECTONIC? IGNEOUS?
Δ1 → Δ2 INTRUSIVE PHASES
MUCH OF THE PHASES FROM Δ2 ½ WAY DOWN BETWEEN STATIONS IS
2852 DISTINCT FROM Δ1. 10A
✓ - SUGARY TEXTURE
- GRAIN SIZE 1-2 mm
- 20-30% QTZ
- MUSC INCREASING AT EXPENSE OF BIOTITE.

2853 3D
Δ3 34/146 45/152
✓ ± 60' SECT. LIGHT GREEN CALC SILICATE WITH BROWN BIO LAM - BANDS. ± MAFIC BANDS.

Δ4 42/070
2854 72/155
✓ L. BROWN WEATHERING ULTRAMAFIC FORMS RESISTANT KNOB.
D. GREEN BLACK — SOME CALC FLAKES. PYROXENITE?
10C

MR PHOTO NW 71874-10-18

(1) OF (4)

JULY 18/77
JPF OVERCAST
RAW
SUN

Δ2868

INGLEMAR BLOCKS — FROST HEAVE

INTRUSIVE — NO ALTERIC.
GENERALLY EUHEDRAL F.G. WHITE FELDSPAR (2-5mm)
WITH 1mm QTZ GRAINS THROUGHOUT.

35% QTZ
15% MUSC.
50% FELD.

ALASKITE?

SAMPLE 2868.

— QTZ - FELD TEND TO GRAPHIC INTERGROWTHS IN PLACES. MUSC & QTZ OCCUR TOGETHER.

10A

Δ2869 INGLEMAR BLOCKS — FROST HEAVE

200' LONG EXPOSURE.

65% INTRUSIVE RUBBLE
35% CALC SILICATE — SOME LARGE METAL BLOCKS.

INTRUSIVE — P.GREY F.G. SILICIFIED
GROUNDMASS — SOME QTZ EYES (M.C)
& ACICULAR AMPH. 10%.
DIKE? ROOF SHINGLE

10A & 3D

Δ2870 ——→ 118° TO ⊙

TOP OF RIDGE

CALC SILICATE o/c 60' RADIUS.

44 114

3D

Δ2871 AS AT 2869 RUBBLE

ROOF SHINGLE — DIKE?

10A & 3D

CALC SILICATE

Δ2872 74 131

3D

AIR PHOTO 8390 B) 166-175 JULY 25/74
TOK SUNNY OVERCAST.

Δ3108 (1) of (9) ITALY RIDGE

INTRUSIVE FROST HEAVED RUBBLE TO SUB O/C.
-2 LITHOLOGIES.

(1) BLEACHED, LEUCOCRATIC, EQUIGRANULAR, F.G. (1MM) QUARTZ QTZ 30% MICAC 10% WHITE FELD 60% INTRUSIVE. SAMPLE.

(2) F.G. (1MM) WEAKLY FOLIATED PINKISH GREY ANHEDRAL INTRUSIVE, BIOTITE FLAKES 5% DEFINE WEAK FOLIATION
QTZ 20%
PINK FELD 75%.
-ARKOSIC RIND IS COMMONLY DEVELOPED 3-10MM FROM CONTACT SURF
-SOME COARSER GRAINED VARIETIES (2-3MM) ALSO EVIDENT SAMPLE

Δ3109
200' UP RIDGE FROM 3108
SOME LOCAL RUBBLE — SUB VX DIKES?. ADAMANTIC, L. GREEN, NON SILICEOUS WITH 10% 1-2MM ANGULAR → SUB ROUNDED → ROUNDED QTZ EYES. STRUCT.
FRACT. 60 / 069 . 30 / 076
UNIT 3108-1
UNDETERMINED
FOLIATION. (CORRUGATED)

AIR PHOTO 8390 B) 66-125 (2) OF (9)

JULY 25/77 JOE O'REGAN.

Δ3110

270 — 11 35 — 090

AS INTRUSIVE — NEAR CT AS APPROACHED — FOLIATION IN INTRUSIVE IS BECOMING INCREASINGLY STRONGER — A HERD OF CARIBOU JUST GALLOPED BY.

080/85 59/001

TIGHT JOINT SET.

Δ3111 — 11 22 — 097

— 30' SECTION

— DOMINANTLY A "COARSE" LOOKING MED. GRAINED FELD BIO PARAGNT SCH. NON CALC. RATHER QTZ LENSES ¼ — ½" THICK 1-5" LONG ARE COMMON IN 90% THE SCH HORIZONS. SAMPLE

PSAMMITIC TO QUARTZOSE SAMPLE HORIZONS 1" — 6" THICK MAKE UP ≥30% OF THE SECT. BIO & GARNETS MAY BE PRESENT BUT <5% IN THIS LITHOLOGY. SAMPLE

— RARE CALC SILICATE BANDS.
— NO STAUROLITE

IC

— DISTINCTLY MORE SKIEROKOS THAN IC SEEN ON COPPER HOP JULY 22/77. IC HAS BLEACHED FELDSPATHIC BANDS — GEOCHEMISTRY. NOT ENOUGH IN THESE ROCKS.

1976 NORTHWEST AIR PHOTO 23L-2

AUG 1/77 JPF OVERCAST

Δ2226 — 16 / 124 — (6) OF (7)

INTERBANDED CALC SILICATE (L. GREEN & L. GRAY LAMINATIONS) & MARBLE

Δ3227 — 22 / 147

SHATT RUSTY WEATHERING SILICATED MARBLE AS AT 3225.

Δ3228 — 37 / 106 — 60' SECTION

INTERBD CALC SILICATE 60 & MARBL 40

Δ3229 — 016 / 40

RUSTY WEATHERING BLUE GRAY SILICEOUS PHYLLITE. — NON CALC. — ALTERNATING QTZ & PHYLLITIC LAMINATIONS.

3230 — 57 / 063 — S1 FOLIATION

INTRUSIVE
M.G. BIOTITE SPECKLED
10% QTZ
5% MUSC.
<5% LARGE K SPAR PORPH.

August 29th, '79

LCP

Anvil Range Batholith

Cold with clear skies

8585 Medium-grained biotite-muscovite quartz monzonite. Non foliated. Equigranular. Mainly biotite as mafic mineral

8586 Biotite-musc. Qtz Monzonite. Very scattered feldspar phenocrysts up to 0.8 inches long. Phenocrysts full of mica inclusions

phenocrysts maybe up to 5% of rock

Rock well jointed — unfoliated.

- Also have a hbl-plag dionite dike. Hbl as large unoriented phenocrysts. Plag as smaller euhedral grains. All in a fine-grained greenish matrix. Dyke has cloudy texture - large rounded clouds of dyke material - similar but with fewer hbl phenocrysts

Hbl dionite shows chill margin next to qtz monzonite. Hbl phenocrysts are smaller - Plag smaller & less abundant

Diorite looks bleached next to margin
Biotite less obvious
Contact 65/70 SE

8587. Porphyritic biotite-musc. QM-
Nonfoliated.
phenocrysts of feldspar up to 20%
size 0.5 inches

8588. Qtz monzonite Bt-Musc.
Nonfoliated.
Nonporphyritic here.
Walk to here — mildly porphyritic
Feldspr phenocrysts few & not large.

8589. Starting down hillslope
Bt-Msc Qtz Monz
Unfoliated
Equigranular. Start to pick up ~
few small feldspr phenocrysts
Very slightly porphyritic
phenos < 20%

Hbl dionite porphyritic like trends N40E downslope

8590. Bt-Msc Qtz Monzonite.
Unfoliated - equigranular.
Locally - few fldspr phenocrysts — generally non-porphyritic.
Unfoliated.

8591. Metasediments
flth 115/11W 295

Msc-bt-qtz-grt schist. Qtz boudins

8592. flth in dikes 160/17E
flth schist 70/23NW 250
pegmatitic qtz-fldspr-musc. equigranular intrusive. Probably granite or QM

8594

Biotite-Musc Qtz Monz.
Strongly jointed 095/90
Less strongly jointed 170/90

Scattered fldspr phenocrysts ~5%
up to 1.5 inches long
Phenocrysts contain biotite & muscovite

May be slightly foliated 200 20/20W
very indistinct & irregular
Contains small clots with abt biotite

Also plag-hbl porphyritic diorite.
Randomly oriented hbl phenocrysts in a
fine-grained matrix - also randomly oriented.
Plag occurs as smaller subhedral phenocrysts.
Hbl partly altered to chlorite.
Plag looks fresh
Fine-grained greenish matrix

8595: Porphyritic bt Qtz Monz
Large fldspr phenocrysts 2" long 5-10%
Phenocrysts are crudely aligned 15/38E

8596. Porphyritic Bt-musc Qtz Monz.
Fldspr phenocrysts up to 2" long. Phenocrysts contain micas.

Rock either vaguely foliated or closely jointed. Phenocrysts may cut across the fabric (i.e. not aligned in it)

190 10/50 W - cuts through phenocrysts.

Micas in phenocrysts are arranged in concentric zone — marks more than 1 stage of growth

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8597. Bt-Musc Qtz Monz. Biot >> Musc.
Porphyritic large fldspar phenocrysts up to 4" - generally only up to 1½-2"
Vaguely oriented in planes — phenocrysts define a planar orientation fabric.
Qtz appears slightly elongate along the fabric. Yet biotite grains are not oriented in the fabric.

May represent original flying — along with a superimposed close jointing

A few small screens of biotite-rich inclusions.

No hbl diorite noted in this section

lyring – flttn? 130/20NE

Minor qtz-flespar pegmatite present

8598. Gradually into a different rock type in ARB.

Bt- qtz monzonite.
Slightly finer grained
Non porphyritic
lyered – band – aspect of biotite. – forms wispy grainsize pattern.
Definitely foliated.

Transition to this rock type seems as go uphill to this knob.
Go through region with much more abundant small flespar phenocrysts. then into wispy lyred material.
Looks like an up-batholith section

lyring 0/25E
fltn lyring 38/14N
this fltn is folded into a minor fld

No well developed axial plane schistosity with fld.

axi plane 115/34S

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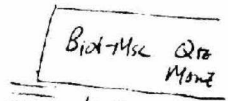
new traverse location

8599. flln 65/15 SE

Musc-biot qtz monz.
biot → chlorite
Musc in greater amts
definitely foliated
Non porphyritic

9500 flln 105/15 S

looking back at cliff to east & N



Anvil Battolith

9080) bm QM (f); bio = musc
gtz. monzonite which gen.
is not foliated. Musc
much more early xlline
than bio. Finely xline,
equigranular
musc bearing unfol'd.
phase

9081) bm QMp; bio > musc
weakly Porfic QM, un-
foliated. Kspar megacrysts
to 2 cm in length form
1-3% of rk. Matr finely
to med.
xline not good early xline
Porfic phase. Got feeling
this is transition from
more finely xline musc rtic
"border phase" at last stop
to "coarse megacrystic phase"
AM Felsenmeer

9082) V. finely xlline, equigranular pyrx. (?) granodiorite (?) dike (?). Get feeling dike runs // to ridge (trend 017) possibly X cutting main megacrystic ◎ as seen in float — not certain this is dike. Along ridge to S 200' see typical porph. hb. diorite in ocp. Poss. above is border to porph. diorite — good bulk comp sample

9083) Cocky xlline 6 m QM (f) w/ mod well devel. kspar megacrysts i.e. main megacrystic phase. Get feeling there's a crude jnm orientation — flow fol"?? — too bio & kspar in float. Both to define in locales covered shitty heavy ocps. Megacrysts ≈ 2% by vol.

9084) Early xllline bm QMS w/ kspar megacrysts —— main megacryptic ℚ (5% kspar)

Fol^n. 145 15-20 NE

Fol^n defined by form orient of bio & to cruder & lesser extent by kspar megacrysts Cannot good fol^n surface but crude pts ≈ // to fol^n show preferred orient. of kspar long axes trend 122° plunge 10° SE

9085) "Roof shingle" of 3G/3D schists

S 1/2	004	75W
S 2/4	005	30W
F 2/4	005	19S
L 2/4	005	19S

3G enclosed by mussx, white, mud xllne, graphic?? pegs

~~(0E0)~~ No samples — no time

9086) bm QMfe ; finely x-bine equigran bio >>> musc QM w/ strong bio foliation. or fol^{n}. 085 16 S

9087) ?K. bio-rich, fol^{d} equigran bm QMfe. Good sample for Rb/Sr$_{T}$ variation
fol^{n} 135 18 SW
Good tectonite fabric

9088) b≈m QMfe to p. gt fabric this is close to transition of fol^{d} equigran, & P phase
fol^{n} 1 103 15 S
Two cut by a second fol^{n}, or very close spaced jointing
fol^{n} 2 093 43 S

2nd fol^{n} is a set of closely spaced (1mm to 10cm) micro-shears or slickenslides that are pervasive on scale of outcrop. slickenslides trend 178 plunge 40S

9089) V. strongly foliated & comp. banded bio≈m QMfe. No K-spar megacrysts. Numerous anastomozed "screens" of 2 mica schist & comp. banding in

intrusive ⟹ this is a schist eating granite i.e. some assimilation

fol" 095 12-20S
Schist screens & banding in intrusive // to this fol". which really looks like S_2
Very diverse compositionally
No S_1 microlithons seen

9090) mb QM fc, v.f. xline musc >> bio fol^d QM w/ lg. musc porphs/phenos. Typical marginal phase near Grasmere

Fol". 080 10S

9091.) m > b QMc ; non-fol.^{d} musc > bio QM. Musc dual. local, concurrently bm QMc. No Kspar megacrysts. Small screen of schists here 1C, no pelvolite seen, all ghost banded

S_2 084 52S in 1C
Questionable exp. may be heaved

9092) Massive, porphyritic (hb-plag) hb diorite like intrusive into mbQMc
dike trend 050

9093) bm QMfe dominant
fol^n 097 35N (poor)
Also leucocratic flaser gneiss in local area of assim. nr. IC schist screen Same as 9087

9094) Beige to off white, highly foliated meuse granite to pegmatite c.f. peg. @ 9087
fol^n 130 20SW
Unit has nearly a foliated graphic granite texture w/ common "sunbursts" of schorlitic tourmaline! No garnets seen. Assoc^d w/ v dk br. biotitic IC seems ≈ // to fol^n Can't see contact rel^{ns} w/ other intrusive units

9094. flhw 160/34W

Pale white qtz-fldspr-musc ≫ biot granite.

Wispy micaceous bands in equigranular qtz-fldspr matrix

Sharp

On one side.

Contact relations unclear — See an 8m QMz then into this fldspr-rich, wispy biotite lyer phase

Xenolith of qtz monzonite in the graphic granite.

IC as seen in the graphic granite

9095) bm QM fc, pinkish gray, highly foliated. No sample. fol^n. 050 36 SE

9096 bm QM pf; foliated, porphyritic QM w/ K-spar phenos 1-2 cm. in length, — not coe megacrystic phase but related to it. Can't measure fol^n — all frost heaved.
fol^n 077 10SE 100° along ocp to SE

9097) bm QM pf, K-spars 1-2 cm as 9096, no "augen" or flaser texture to rk. Bio defines prom. fol^n.
fol^n ≈ 050 10-20 SE
Badly heaved — shitty rk.

29/8/79 BYH

A 9400
Porph bt Qtz Monzonite.
Large K spar phenos
up to 6 cm long
by 2 cm wide.
bt appears to have ~
preferred orientation.

A 9401
Fine grained foliated.
aplitic Qtz diorite.
bt main matic mineral
foliation 0/67 W
minor secondary Qtz
veining.
bearing to point A 49°

A 9402
bearing to point A 44°
Metasediments
~ low section of
metachents(?)

with calcareous bands, alternating bands of diopside and garnet.

underlain by a bt - Mus schist, qvit unit originally some large qtz clasts.

bedding / foliation 114/15 S.

9403 missing, not used

9404

outcrop area 200' from 9402 (327)

foliated qtz Diorite, abundant qtz pegmatite float, large mus flakes minor garnet, minor diopside / Tremolite?

9405

outcrop area on ridge bearing to #B 310°

aphanitic Dyke rock, similar to the chill rocks on Dixon Ck Dykes (DY) minor amygdules minor diss py (Qtz Monzonite? in compl.

zone approx 200' wide
long axis trending E-WW

9406
W side of ridge bearing
to # B 309°
coarse grained equigranular
Qtz Monzonite.
mafic hb altered to chl.
unfoliated.
- metasediments surrounding
Bt-sill-qtz-Garnet Schist

Δ 9407
W side of ridge ~ 300'
down from the top 296° to # B
mainly metasediments (Calc-sil,
bt-qtz-sill schists) from
9406
med grained equigranular
Qtz Monzonite faintly
foliated (bt)

bt = mafic mineral.
similar in texture to 9406
minor qtz pegmatite.

9408
600' E of ridge top
281° to # B
Qtz pegmatite.
very coarse grained.
mus flakes

49409
on ridge top 279° to # B
Porph Qtz Monzonite.
phenos smaller than
49400
- K spar comprise the
phenos,
- bt dominant mafic.

Δ 9410
foliated fine grained
granite
mafic = bt minor mus
bearing to #C 264°
foliation 240 60/24 NW
small peg veins,
qtz - feld - mus,
mus flakes up to 2cm square
contains more tespar than
Δ9401 - tour-qtz veins.

Δ 9411
bearing #C 270° on ridge.
foliated fine-grained
granite. similar to Δ9410

Δ 9412.
bearing to #C 272° on ridge.
fine grained faintly
foliated granite,
slightly coarser grained
than 49411
bt, mus bearing

Δ 9413

bearing to # C 290° on ridge
med grained Mus-Granite,
faintly foliated,
coarser grained than 9412,
no bt

Δ 9414

bearing to #C 296° on ridge
amygdaloidal rhyolite, Smokey Qtz Feldspar Porphyry
qtz in amygdules, originally
a flow, caps the intrusive.
approx 8' thick
intrusive consists of a
med grained foliated
granite

Δ 9415.

bearing to #D 272°, on ridge.
med grained equigranular
granite.
faintly foliated.
bt no muscovite,
appears to contain less K spar
than Δ 9413

29/8/79

minor qtz peg veins along the fractures.
foliation 177/82 W

Δ 9416
bearing to # D 275°, on ridge
bt - mus med grained
folided granite.

Δ 9417
bearing to #D 282°, on ridge.
mus - bt med grained
granite,
mus >> bt

Δ 9418
bearing to #D 285°, on ridge.
foliated med grained
bt - mus - Qtz Diorite,
no visible fespar.
foliation 140/53 W

Δ 9419

bearing to # D 296°, on ridge.
bt-mus-fine grained
foliated granite,
foliation 11/65°E.
bt >> mus

Δ 9420

bearing to # D 309°, on ridge
bt-mus med grained
granite, equigranular
unfoliated mus ≥ bt.

Δ 9421

bearing to # E 25°, on ridge.
This sample tells it all!
faintly foliated bt-mus
med grained, porphyritic
granite, some large
K-spar phenocrysts,
bt >> mus

Δ 9422

bearing to E side of Dual Lake, 224 on ridge. med-grained foliated porphyritic mus-bt granite.

mus = bt.

Kspar phenocrysts ~ 1.0 x 0.4 cm generally smaller than Δ 9400. and are aligned into the plane of foliation.

Δ 9423

approx 600' on bearing 225° fr. Δ 9422.

fine grained foliated qtz Diorite which has been intruded by a coarse grained foliated bt-mus granite

bt > mus.

A 9424

See map.
bearing to W side of Deal Lake. 226°
Fine grained foliated granite,
bt > mus.
grain size decreases dramatically within 100'.

A 9425

See map
bearing to W side of Deal Lake 236
med grained foliated porphyritic bt-mus granite,
bt >> mus,
Large K-spar phenocrysts up to 2 cm long.

29/8/29

Δ 9426

seemap

bearing to W side of Deal Lake. 226°

foliated - med-grained, bt-musc granite

no kspar phenocrysts.

Δ 9427.

see map

bearing to W side of Deal Lake. 229°

med-grained foliated, slightly porphyritic granitic mass > bt.

Small kspar phenocrysts which are preferentially aligned in the plane of foliation.

30/8/79 Depressing.

Δ 9429
fine grained foliated
Qtz Monzonite,
bt = mus,
non porphyritic
possible relict Hb grains,
which are now chloritized.
(rare). appears localized
along fractures, may be
bt → chl.

Δ 9430
fine grained Qtz Monzonite
bt > mus.
appears faintly unfoliated
possible chloritized Hb.
slightly porphyritic
patchy KT spar distribution.
phenocrysts isolated, not common.

30/8/79

Δ 9428
med grained foliated
Qtz Diorite,
coarser than previous
Qtz Diorite outcrops (Δ9401)
bt only,
distinct lack of pink kspar.

Δ 9431
med-grained bt Qtz Monzonite,
well foliated. 13/37 E
bt preferentially aligned.

Δ 9432.
med-grained m-b-Qtz Monzonite
small phenocrysts up to 1.0 cm
long,
- faintly foliated

Δ 9433
med-grained Qtz Monzonite?
contains distinctly less kspar
than type rock, however still
enough so that it could be

30/8/79

considered to be a Monzonite, slightly porphyritic, foliated.

∴ bt = mus, mus flakes are distinctly large up to 2 cm across.

Δ9434

med-fine-grained Qtz Monzonite, well foliated 165/26 W mus > bt, some large flakes of mus & bt up to 1.0 cm wide.

Δ9435

med-grained Qt Monzonite, foliated 174/27 W small kspar phenocrysts up to 1.0 cm, scattered. mus = bt

30/8/79.

Δ 9436

med to coarse-grained Qtz Monzonite
mus > bt.
mus forms large flakes up to 1.0 cm across.
foliated 106/22 S

Δ 9437.

coarse grained Qtz Monzonite,
bt > mus.
porphyritic, phenocrysts up to 1.0 cm across. (Kspar)
foliated 124/26 SE
Ep patches.
dominant fractures 103/90
5/90

Δ 9438

coarse grained Qtz Monzonite
-bt only.
phenocrysts up to 7 cm long x 3 cm wide.
orbicular textures present. faint foliation

30/8/79.

intruding the Qtz Monzonite is a hb Diorite Dyke, approx 1-2 m wide, emplaced along pre-existing fractures.

Dyke trends ~ 68/90°

within the Qtz Monzonite numerous xenoliths of metasediment are present, (Bt schist).

Δ 9439

fine grained bt-mus Qtz Monzonite

- no apparent foliation
- bt = mus
- mus generally forms larger grains.
- feldspar have an elongated direction (foliation ??)

30/8/79

Δ 9440

metasediment.

green cherty - calc silicate

bedding / foliation 75/10 S

minor pelitic bands

und veloin by a bt-mus-sill

schist

Δ 9441

med-grained Qtz-Monzonite

foliated.

- small phenocrysts of ksper, which are generally orientated in the direction of foliation. bt > mus.

Δ 9442

coarse grained Qtz Monzonite, strongly foliated

bt > mus.

med sized phenocrysts up to 2 cm long.

foliation 110/30S

30/8/79

Δ 9443.
fine grained Qtz Monzonite
small scattered phenocrysts
bt only
foliation present

Δ 9444
fine grained Qtz Monzonite
(Qtz Diorite ?).
foliation 153/20 SW
bt only

Δ 9445.
fine grained Qtz Monzonite.
(Qtz Diorite)
well foliated.
bt > mus.

No well developed axial plane schistosity with fld.

xti plane 115/345

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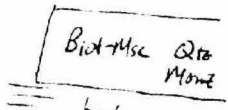
new traverse location

8599. flln 65/15 SE

Musc-biot qtz monz.
biot → chlorite
Musc in greater amts
Definitely foliated
Non porphyritic

9500 flln 105/15 S

looking back at cliff to east & N



9500 cont

See 8599

have a thin band of well foliated biot-musc schist below cliff step of intrusion

Musc - biot Qtz Monz Musc >> Biot

foliated

generally non-porphyritic — only occasionally see feldspar phenocrysts

Igneous contact of intrusion & schist so eventually all ftn

Slightly further along ridge - small bit of schist in intrus — definite fold like

ftn 33/50SE

9501 Gully freshly cleared of snow. A few snow flakes spitting out of sky

foliated 10/22E

Banded — interbanded coarse fine-grained biot-musc qtz monz

No phenocrysts here

Passed a few steps with phenocrysts on way from last stop.

Sharp contacts between the 2 rock types.
Contacts are not // fltn
See streaky variations in biotite content of the rock.

Talus contains porphyritic qtz monz.
Abundant small fldspr phenocrysts —
also foliated
South side of gully porphyritic

9502. Porphyritic biot-musc Qtz Monz
Poorly foliated. Fldspr phenocrysts generally in plane of fltn. Micas both wrap around & abut against phenocrysts.

Coarse fldspr-qtz-musc pegmatite in cross-cutting veins.
fltn 175/31W

9503. fltn 115/28S
Streaky Musc ?? biot qtz monzonite.
Micas form discontinuous streaks in fltn.

A few cases of flaser phenocrysts – these are not common

9504. Small dyke in interbanded calc-silicate & marble.

Similar mineralogy to main intrusives

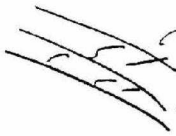
Dyke contains 2 fabrics

dyke-rock fabric S1 55/17N

crenulation cleavage S2 90/40S

lineation 165/35 (on S2

looking E



August 30 '75

LCP

Anvil Range Batholith

9505. Porphyritic biotite-musc qtz monzonite

Crude flty — mainly alignment of phenocrysts 140/70S

Phenocrysts up to 2" long

9506. Bt Qtz Monzonite

Porphyritic - fldspr phenocrysts up to 2". Make up 30% of rock. Musc. not noted.

Well developed jointing — rock looks faintly foliate

9507. Po foliated qtz monzonite

flty 165/17E

bt - Qtz monz

9508. Non-porphyritic - equigranular
bt-musc gtz monzonite
No phenocrysts

Poor vague flttn 160/64E
Pyrite as small grains which weather with
brown stain
Micas not readily aligned along the
vague pattern (lyring ? — jointing ?)
noted in rock

9509. Coarse-grained bt-musc gtz monz.
Slightly porphyritic — in that
feldspar phenocrysts are slightly larger
than matrix.
Fltn ~~not~~ readily visible. but
not enough time to find strip in the rubble

RESEARCH SAMPLE LOG

PROJECT: Rb/Sr ANVIL BATHOLITH

STATION: AR 6

DDH: _____

ANVIL BATHOLITH / MT. MYE PHASE

Muscovite-Biotite quartz monzonite

DEPTH: _____

LATITUDE: 62° 27.4' N LONGITUDE: 133° 38.8' W

HAND SAMPLE: Medium grained, unfoliated quartz monzonite. Biotite is locally altered to chlorite. K-feldspar occurs as large anhedral to subhedral phenocrysts with abundant inclusions of quartz and plagioclase. Plagioclase occurs as subhedral to euhedral matrix grains.

Plagioclase / K-feldspar ≈ 1/2

THIN SECTION: ✓ reject slab stained for K-feldspar

POLISHED SECTION:

POLISHED THIN SECTION:

ANALYSIS: ✓ XRF - whole rock for total Rb and Sr

PROBE:

XRD:

ISOTOPE:

FOSSIL:

STAINED: ✓ slab stained for K-feldspar

OTHER:

COMMENTS:

Rb - 237.02 ppm

Sr - 162.8 ppm

Rb/Sr = 1.456

RESEARCH SAMPLE LOG

PROJECT: Rb/Sr Anvil Batholith — Anvil Batholith/Mt. Mye Phase

STATION: AR 9 — Biotite-muscovite quartz monzonite

DDH: _____ DEPTH: _____

LATITUDE: 62° 27.1' N LONGITUDE: 133° 26.3' W

HAND SAMPLE: Medium-grained, poorly foliated, biotite > muscovite quartz monzonite. Subhedral K-feldspar phenocrysts with plagioclase inclusions. Plagioclase is generally subhedral.

Plagioclase/K-feldspar ~ 1.5/1

THIN SECTION: ✓ reject block stained for K-feldspar

POLISHED SECTION:

POLISHED THIN SECTION:

ANALYSIS: ✓ XRF — whole rock for Rb and Sr

PROBE:

XRD:

ISOTOPE:

FOSSIL:

STAINED:

OTHER:

COMMENTS:

Rb = 219.52 ppm

Sr = 225.44 ppm

Rb/Sr = 0.974

RESEARCH SAMPLE LOG

PROJECT: Rb/Sr ANVIL BATHOLITH / ANVIL BATHOLITH

UNIT: MT. MYE PHASE

STATION: AR 10A

ROCK NAME: Biotite-muscovite quartz monzonite

DDH:

DEPTH:

LATITUDE: 62°23.5'N

LONGITUDE: 133°18.4'N

HAND SAMPLE: Coarse to medium grained, unfoliated, porphyritic biotite quartz monzonite. Large K-feldspar phenocrysts contain inclusions of quartz, plagioclase, mica. Locally phenocrysts are partly enclosed by plagioclase. Plagioclase occurs as small subhedral to anhedral grains.

Plagioclase/K-feldspar ~ 1/2

Minor chloritic alteration of biotite along fractures

THIN SECTION: ✓ reject block stained for K-feldspar

POLISHED SECTION:

POLISHED THIN SECTION:

ANALYSIS: ✓ XRF – whole rock for Rb and Sr

PROBE:

XRD:

ISOTOPE: ✓ $^{87}Sr/^{86}Sr$ for whole rock

FOSSIL:

STAINED: ✓ slab stained for K-feldspar

OTHER:

COMMENTS:

Rb = 95.50 ppm

Sr = 192.02 ppm

Rb/Sr = 0.497

$^{87}Sr/^{86}Sr$ = 0.7429

$^{87}Rb/^{86}Sr$

RESEARCH SAMPLE LOG

PROJECT: Rb/Sr Anvil Batholith

UNIT: Hornblende diorite dyke in Anvil Batholith

STATION: AR 10B

ROCK NAME:

DDH:

DEPTH:

LATITUDE: 62°23.5'N LONGITUDE: 133°18.4' W

HAND SAMPLE: Fine-grained, porphyritic hornblende diorite. Large hornblende phenocrysts in a fine-grained pale green matrix. Small subhedral plagioclase in matrix. Strong chloritic alteration. May be minor interstitial K-feldspar in matrix and along fractures

THIN SECTION: ✓ reject block stained for K-feldspar

POLISHED SECTION:

POLISHED THIN SECTION:

ANALYSIS: ✓ XRF — whole rock for Rb and Sr

PROBE:

XRD:

ISOTOPE:

FOSSIL:

STAINED: ✓ slab stained for K-feldspar

OTHER:

COMMENTS:

Rb = 95.53 ppm

Sr = 365.69 ppm

Rb/Sr = 0.261

RESEARCH SAMPLE LOG

PROJECT: Rb/Sr ANVIL BATHOLITH
UNIT: ANVIL BATHOLITH / MT. MYE PHASE
STATION: AR 11
ROCK NAME: Biotik - muscovite granodiorite
DDH:
DEPTH:
LATITUDE: 62° 20.2'N
LONGITUDE: 133° 15.2'W

HAND SAMPLE: Medium-grained, poorly foliated biotik ± muscovite granodiorite. Subhedral K-feldspar phenocrysts with plagioclase inclusions. Also anhedral interstitial K-feldspar in matrix. Subhedral to anhedral plagioclase.

Plagioclase / K-feldspar ~ 2/1

THIN SECTION: ✓ reject block stained for K-feldspar
POLISHED SECTION:
POLISHED THIN SECTION:

ANALYSIS: ✓ XRF — whole rock for Rb and Sr
PROBE:
XRD:
ISOTOPE: ~~✓ $^{87}Sr/^{86}Sr$ whole rock~~

FOSSIL:
STAINED: ✓ slab stained for K-feldspar

OTHER:

COMMENTS:

Rb = 222.24 ppm
Sr = 193.30 ppm
Rb/Sr = 1.150

RESEARCH SAMPLE LOG

PROJECT: Rb/Sr ANVIL BATHOLITH

UNIT: ANVIL BATHOLITH/ MT. MYE PHASE

STATION: AR 12

ROCK NAME: Biotite-muscovite quartz monzonite

DDH:

DEPTH:

LATITUDE: 62° 16.5' W LONGITUDE: 133° 10.9' W

HAND SAMPLE: Medium-grained, biotite > muscovite, foliated quartz monzonite. K-feldspar phenocrysts/augen contain numerous plagioclase inclusions. Plagioclase forms irregular rims around K-feldspar. Plag. also in matrix. Quartz has elongate texture.

Plagioclase/K-feldspar ~ 1/1.5

THIN SECTION: ✓ reject block stained for K-feldspar

POLISHED SECTION:

POLISHED THIN SECTION:

ANALYSIS: ✓ XRF – whole rock for Rb and Sr

PROBE:

XRD:

ISOTOPE:

FOSSIL:

STAINED: ✓ slab stained for K-feldspar

OTHER:

COMMENTS:

Rb = 247.35 ppm

Sr = 219.03 ppm

Rb/Sr = 1.129

RESEARCH SAMPLE LOG

PROJECT: Rb/Sr Anvil Batholith / Anvil Batholith

UNIT: Mt. Mye Phase

STATION: AR 13

ROCK NAME: Biotite-muscovite quartz monzonite

DDH:

DEPTH:

LATITUDE: 62° 22.4' N

LONGITUDE: 133° 08.3' W

HAND SAMPLE: Medium grained, poorly foliated quartz monzonite. Both K-feldspar and plagioclase ~~occurs~~ occur as anhedral to subhedral grains. K-feldspar contains abundant plagioclase and quartz inclusions.

Plagioclase / K-feldspar ~ 1/1

THIN SECTION: ✓ reject block stained for K-feldspar

POLISHED SECTION:

POLISHED THIN SECTION:

ANALYSIS: ✓ XRF — whole rock for Rb and Sr

PROBE:

XRD:

ISOTOPE:

FOSSIL:

STAINED: ✓ slab stained for K-feldspar

OTHER:

COMMENTS:

Rb = 247.76 ppm

Sr = 164.28 ppm

Rb/Sr = 1.508

RESEARCH SAMPLE LOG

PROJECT: Rb/Sr ANVIL BATHOLITH

UNIT: ANVIL BATHOLITH / Hornblende diorite dyke

STATION: 8586A

ROCK NAME:

DDH:

DEPTH:

LATITUDE: 62° 22.0'N LONGITUDE: 133° 08.6'W

HAND SAMPLE: Large hornblende phenocrysts in a ~~pt~~ pale green, fine-grained matrix. Matrix is crowded with small feldspar phenocrysts. Unfoliated.

THIN SECTION: ✓ reject block stained for K-feldspar

POLISHED SECTION:

POLISHED THIN SECTION:

ANALYSIS: ✓ XRF – whole rock for Rb and Sr

PROBE:

XRD:

ISOTOPE:

FOSSIL:

STAINED: ✓ slab stained for K-feldspar

OTHER:

COMMENTS:

Rb = 74.50 ppm

Sr = 374.04 ppm

Rb/Sr = 0.1992

RESEARCH SAMPLE LOG

PROJECT: Rb/Sr ANVIL BATHOLITH UNIT:

STATION: 8586B ROCK NAME:

DDH: DEPTH:

LATITUDE: 62° 22.0'N LONGITUDE: 133° 08.6'W

HAND SAMPLE: Fine-grained, unfoliated granodiorite. Irregular to subhedral plagioclase and K-feldspar. Locally K-feldspar forms slightly larger phenocrysts with abundant inclusions.

Plagioclase / K-feldspar ~ 1/2

THIN SECTION: ✓ reject block stained for K-feldspar

POLISHED SECTION:

POLISHED THIN SECTION:

ANALYSIS: ✓ XRF — whole rock for Rb and Sr

PROBE:

XRD:

ISOTOPE: ✓ $^{87}Sr/^{86}Sr$ — whole rock

FOSSIL:

STAINED: ✓ slab stained for K-feldspar

OTHER:

COMMENTS:

Rb = 254.42 ppm
Sr = 166.08 ppm

Rb/Sr = 1.520

$^{87}Sr/^{86}Sr$ = 0.7506

$^{87}Rb/^{86}Sr$ =

RESEARCH SAMPLE LOG

ANVIL BATHOLITH/

PROJECT: Rb/Sr ANVIL BATHOLITH
UNIT: MT. MYE PHASE
STATION: 9087A
ROCK NAME: Biotite quartz monzonite
DDH:
DEPTH:
LATITUDE: 62° 19.2'N
LONGITUDE: 133° 13.0'W

HAND SAMPLE: Fine-grained, poorly foliated, dark coloured quartz monzonite. Subhedral plagioclase and interstitial K-feldspar. Locally K-feldspar occurs to form phenocrysts with numerous inclusions. Foliation most noticeable in quartz.

Plagioclase / K-feldspar ~ 2.5/1

THIN SECTION: ✓ reject block stained for K-feldspar
POLISHED SECTION:
POLISHED THIN SECTION:

ANALYSIS: ✓ XRF — whole rock for Rb and Sr
PROBE:
XRD:
ISOTOPE:

FOSSIL:
STAINED: ✓ slab stained for K-feldspar

OTHER:

COMMENTS:

Rb = 194.00 ppm
Sr = 343.34 ppm
Rb/Sr = 0.565

RESEARCH SAMPLE LOG

PROJECT: Rb/Sr ANVIL BATHOLITH
UNIT: ANVIL BATHOLITH/ MT MYE PHASE
STATION: 9087B
ROCK NAME: Muscovite - biotite quartz monzonite
DDH:
DEPTH:
LATITUDE: 62° 19.2'N LONGITUDE: 133° 13.0'W

HAND SAMPLE: Medium-grained, unfoliated quartz monzonite. Subhedral to anhedral plagioclase and K-feldspar. Both feldspars have abundant quartz inclusions. Only minor mafics. Minor garnet. Looks to be an aplitic phase.

THIN SECTION: ✓ reject block stained for K-feldspar
POLISHED SECTION:
POLISHED THIN SECTION:

ANALYSIS: ✓ XRF - whole rock for Rb and Sr
PROBE:
XRD:
ISOTOPE: ✓ $^{87}Sr/^{86}Sr$

FOSSIL:
STAINED: ✓ slab stained for K-feldspar

OTHER:

COMMENTS:

Rb = 285.47 ppm
Sr = 66.23 ppm
Rb/Sr = 4.3102

$^{87}Sr/^{86}Sr$ = 0.7583
$^{87}Rb/^{86}Sr$ = 12.54

RESEARCH SAMPLE LOG

PROJECT: Rb/Sr Anvil Batholith
UNIT: Anvil Batholith/ Mt Mye Phase
STATION: 9088
ROCK NAME: Biotite-muscovite quartz monzonite
DDH:
DEPTH:
LATITUDE: 62°18.5'N LONGITUDE: 133°11.5'W

HAND SAMPLE: Poorly foliated, medium grained quartz monzonite. Subhedral plagioclase with anhedral, interstitial K-feldspar. Locally K-feldspar coarsens to form phenocryst with abundant inclusions. Two foliations visible.
Plagioclase / K-feldspar ~ 1/1

THIN SECTION: ✓ reject block stained for K-feldspar
POLISHED SECTION:
POLISHED THIN SECTION:

ANALYSIS: ✓ XRF - whole rock + mineral separates for Rb and Sr :
PROBE:
XRD:
ISOTOPE: ✓ $^{87}Sr/^{86}Sr$ for whole rock + mineral separates

FOSSIL:
STAINED:

OTHER:

COMMENTS:

whole rock Rb = 214.61 ppm
Sr = 219.59 ppm
Rb/Sr = 0.977
$^{87}Sr/^{86}Sr$ = 0.7446

Mineral + whole rock isochron = 100 ± 2 Ma w/ initial $^{87}Sr/^{86}Sr$ =

RESEARCH SAMPLE LOG

PROJECT: Rb/Sr ANVIL BATHOLITH
UNIT: ANVIL BATHOLITH/ MT. MYE PHASE
STATION: 9089A
ROCK NAME: Biotik-muscovite quartz monzonite
DDH:
DEPTH:
LATITUDE: 62° 18.6'N LONGITUDE: 133° 09.7'W

HAND SAMPLE: Poorly foliated, medium-grained quartz monzonite. Intergrown anhedral plagioclase and K-feldspar. Plagioclase/K-feldspar ~ 1/1
Light grey color

THIN SECTION: ✓ reject block stained for K-feldspar
POLISHED SECTION:
POLISHED THIN SECTION:

ANALYSIS: ✓ XRF – whole rock for Rb and Sr
PROBE:
XRD:
ISOTOPE:

FOSSIL:
STAINED: ✓ slab stained for K-feldspar

OTHER:

COMMENTS:
Rb = 294.27 ppm
Sr = 163.22 ppm
Rb/Sr = 1.803

RESEARCH SAMPLE LOG

PROJECT: Rb/Sr ANVIL BATHOLITH

UNIT: ANVIL BATHOLITH / MT. MYE PHASE

STATION: 9089 B

ROCK NAME: Biotite-muscovite quartz monzonite

DDH:

DEPTH:

LATITUDE: 62° 18.6'N LONGITUDE: 133° 09.7'W

HAND SAMPLE: Medium-grained, poorly foliated quartz monzonite. Anhedral K-feldspar and plagioclase. Plagioclase/K-feldspar ~ 2.5/1. More mafics and less K-feldspar than sample 9089A. Medium to dark grey color.

THIN SECTION: ✓ reject block stained for K-feldspar

POLISHED SECTION:

POLISHED THIN SECTION:

ANALYSIS: ✓ XRF – whole rock for Rb and Sr

PROBE:

XRD:

ISOTOPE:

FOSSIL:

STAINED: ✓ slab stained for K-feldspar

OTHER:

COMMENTS:

Rb = 242.14 ppm

Sr = 247.26 ppm

Rb/Sr = 0.9793

RESEARCH SAMPLE LOG

PROJECT: Rb/Sr ANVIL BATHOLITH

UNIT: ANVIL BATHOLITH/ MT. MYE PHASE

STATION: 9090

ROCK NAME: Muscovite-biotite quartz monzonite

DDH:

DEPTH:

LATITUDE 62° 18.5'N LONGITUDE 133° 08.4'W

HAND SAMPLE: Medium grained, poorly foliated, muscovite > biotite quartz monzonite. Minor mafics. Intergrowth of plagioclase and K-feldspar. Variation in grain size and K-feldspar content by layers (possible vein?)

Plagioclase/K-feldspar ~ 1/1.5

THIN SECTION: ✓ reject block stained for K-feldspar

POLISHED SECTION:

POLISHED THIN SECTION:

ANALYSIS: ✓ XRF - whole rock - for Rb and Sr

PROBE:

XRD:

ISOTOPE:

FOSSIL:

STAINED: ✓ slab stained for K-feldspar

OTHER:

COMMENTS:

Rb = 256.65 ppm

Sr = 110.97 ppm

Rb/Sr = 2.313

RESEARCH SAMPLE LOG

PROJECT: Rb/Sr ANVIL BATHOLITH

UNIT: ANVIL BATHOLITH/ MT. MYE PHASE

STATION: 9094

ROCK NAME: Pegmatite

DDH:

DEPTH:

LATITUDE 62° 19.7'N LONGITUDE 133°05.9'W

HAND SAMPLE: Medium-grained, poorly foliated to unfoliated "granite". Only minor mafics. Subhedral plagioclase and K-feldspar. Irregular quartz aggregates.

Plagioclase/K-feldspar ~1.5/1

THIN SECTION: ✓ reject block stained for K-feldspar

POLISHED SECTION:

POLISHED THIN SECTION:

ANALYSIS: ✓ XRF — whole rock for Rb and Sr

PROBE:

XRD:

ISOTOPE:

FOSSIL:

STAINED: ✓ slab stained for K-feldspar

OTHER:

COMMENTS:

Rb = 154.60 ppm

Sr = 93.70 ppm

Rb/Sr = 1.650

THIN SECTION LOG

Plag partly → sericite
Biotite partly → chlorite

PROJECT: _____

STATION: AR-6 DESCRIBED BY: LCP

DDH: _____ DEPTH: _____ DATE: Nov. 5/1981

UNIT: _____

ROCK NAME: Muscovite-biotite quartz monzonite

HAND SAMPLE: Medium-grained, unfoliated quartz monzonite. K-feldspar as slightly larger anhedral to subhedral phenocrysts w/ inclusions of plagioclase + quartz.

PURPOSE: Rb/Sr

Biotite pleochroism
tan
reddish brown
Chlorite anomalous blue interference colors
Plag ⊥a $\alpha < 010$
An28 10-10 relict x quartz
An26 8-9

	EST.	POINT CT.
QUARTZ	30	
K-FELDSPAR	35	
PLAGIOCLASE	20	
MUSCOVITE	10	
BIOTITE	5	
CHLORITE	Tr	
OPAQUES	Tr	
ZIRCON	Tr	

COMMENTS: Large subhedral K-feldspar grains with numerous inclusions of small euhedral plagioclase. Minor quartz and mica inclusions. Perthitic texture. Coarse twins — in one grains have poorly developed microcline grid twinning

Smaller euhedral plag. Commonly finely twinned. Abundant sericitic alteration — sericite heaviest in cores. Concentric zoning.

Quartz as irregular interstitial grains.

Muscovite as coarse plates and fine sericite. Micas have very irregular outlines. Muscovite typically associated w/ sericitic plag or chloritic biotite.

THIN SECTION LOG

PROJECT: _____

STATION: AR-9 DESCRIBED BY: KCP

DDH: _____ DEPTH: _____ DATE: Nov 5/81

UNIT: _____

ROCK NAME: Biotite–muscovite quartz monzonite

HAND SAMPLE: Medium-fine grained biotite > muscovite granodiorite. Poorly foliated. Subhedral K-feldspar phenocrysts w/ small plagioclase inclusions. Plag. generally subhedral.

PURPOSE:

Biotite pleochroism
pale tan
red brown

Blue interference colors for chlorite.

Plag ⊥ a α ∠ 010

6-2	An_{25}
2-4	An_{22}
3-4	An_{23}
13-5	

	EST.	POINT CT.
QUARTZ	25	
K-FELDSPAR (ORTHOCLASE)	20	
PLAGIOCLASE	30	
BIOTITE	15	
MUSCOVITE	10	
CHLORITE	Tr	
ZIRCON	Tr	
OPAQUES	Tr	

COMMENTS:

Euhedral to subhedral plag. Concentric zoning — more calcic ins cores. Often they have a small irregular outer growth margin. Abundantly twinned. Minor myrmekite along margins.

Larger subhedral to anhedral orthoclase. Perthitic texture. Numerous unoriented inclusions of quartz, micas, plag. Coarse twinning — no grid twins.

Quartz and micas interstitial / anhedral. No foliation observed. Biotite locally partially altered to chlorite. Muscovite as coarse flakes + sericite. Strong radioactive damage halo around zircons ins biotite.

Plag. locally has well developed sericite.

THIN SECTION LOG

Plag → sericite
Biotite → chlorite

PROJECT: _____

STATION: AR-10 A DESCRIBED BY: LCP

DDH: _____ DEPTH: _____ DATE: Nov 5/81

UNIT: _____

ROCK NAME: Biotite-muscovite quartz monzonite

HAND SAMPLE: Medium- to coarse-grained biotite qtz monzonite w/ large K-feldspar phenocrysts. Phenocrysts have inclusions of quartz, plagioclase, biotite

PURPOSE:

from hand sample

biotite pleochroism tan red brown

	EST.	POINT CT.
QUARTZ	35	
K-FELDSPAR (ORTHOCLASE)	25	
PLAGIOCLASE	25	
BIOTITE	10	
MUSCOVITE	5	
CHLORITE	Tr	
ZIRCON	Tr	
OPAQUES	Tr	
SILLIMANITE	Tr	

COMMENTS:

Euhedral to subhedral plag Abundant twinning. Concentric oscillatory zoning. Fresh to heavy sericitic alteration. Minor myrmekite on some margins.

Large subhedral to anhedral orthoclase. Coarse twinning. Abundant inclusions of euhedral plag, some biotite and quartz. Perthitic texture.

Interstitial biotite. Narrow, shreddy muscovite associated with biotite. Often muscovite does not look primary. Heavy damage halo around zircons in biotite. Muscovite along grain margins. Very locally muscovite has associated sillimanite. Associated with plag, biotite, muscovite, quartz.
Minor chlorite alteration of biotite

Large anhedral quartz grains. Strong undulatory extinction.

THIN SECTION LOG

Overall quite fresh
biotite → chlorite
plag → sericite

PROJECT: _____

STATION: AR-11 DESCRIBED BY: LCP

DDH: _____ DEPTH: _____ DATE: Nov 5/81

UNIT: _____

ROCK NAME: Biotite-muscovite granodiorite

HAND SAMPLE: Medium-grained, poorly foliated biotite > muscovite granodiorite. Some subhedral K-feldspar phenocrysts w/ plag inclusions.

PURPOSE:

partly from hand sample

Biotite pleochroism tan → red brown

	EST.	POINT CT.
QUARTZ	25	
K-FELDSPAR (ORTHOCLASE)	20	
PLAGIOCLASE	40	
BIOTITE	10	
MUSCOVITE	5	
ZIRCON	Tr	

COMMENTS:

Subhedral to anhedral plag. Sericitic cores. Concentric zoning pattern. Euhedral plag as small inclusions within K-spar. Minor myrmekitic texture.

Large anhedral K-spar. Inclusions of plag (euhedral), quartz, biotite. Locally almost develops a microcline twinning. Also looks like a concentric zoning pattern.

Quartz as small interstitial grains. Irregular sutured borders + undulatory extinction.

Poorly developed foliation defined by micas + sutured appearance of quartz grains.

Muscovite as large flakes – looks primary.

Biotite has extensive damage haloes around zircons. Only very minor chlorite.

Overall rock looks quite fresh.

THIN SECTION LOG

minor biotite → chlorite

PROJECT: _____

STATION: AR-12 DESCRIBED BY: LCP

DDH: _____ DEPTH: _____ DATE: Nov 9/81

UNIT: _____

ROCK NAME: Biotite-muscovite quartz monzonite

HAND SAMPLE: Poorly foliated biotite-muscovite quartz monzonite. K-feldspar phenocrystic augen w/ small plag. inclusions.

PURPOSE: Rb/Sr

partly from hand sample

Biotite pleochroism
tan
red brown

	EST.	POINT CT.
QUARTZ	20	
K-FELDSPAR (ORTHOCLASE)	35	
PLAGIOCLASE	25	
BIOTITE	10	
MUSCOVITE	10	
ZIRCON	Tr	
CHLORITE	Tr	

COMMENTS: Similar to other AR rocks. Large K-spar - anhedral to subhedral with abundant inclusions of euhedral plag, quartz, biotite. Minimal to absent muscovite inclusions. Coarse twinning. Incipiently developed microcline twinning. Perthitic texture.

Strong foliation marked by micas + extreme sutuning texture in quartz. Grains elongate in S_1. Micas and feldspar locally form augen in the foliation. Most of strain looks related to quartz.

Minor myrmekite developed in plag.

Strong damage halos in biotite around zircons.

Minor chlorite alteration of biotite. Feldspars have a light sericite dusting.

THIN SECTION LOG

Minor alteration: biotite → chlorite, plag → sericite

PROJECT: _____

STATION: AR-13 DESCRIBED BY: LCP

DDH: _____ DEPTH: _____ DATE: Nov 9/81

UNIT: _____

ROCK NAME: Biotite - muscovite quartz monzonite

HAND SAMPLE: Medium-grained, poorly foliated gtz monzonite. Both K-feldspar and plag. occur as anhedral to subhedral grains. K-feldspar contains plag + quartz inclusions.

PURPOSE: Rb/Sr

Biotite pleochroism: tan, red brown

Chlorite interference colors deep blue

	EST.	POINT CT.
QUARTZ	20	
K-FELDSPAR (ORTHOCLASE-MICROCLINE)	30	
PLAGIOCLASE	25	
BIOTITE	15	
MUSCOVITE	10	
ZIRCON	Tr	
CHLORITE	Tr	
SILLIMANITE	Tr	

COMMENTS:

Subhedral to anhedral K-spar contains abundant plagioclase, quartz, biotite. Coarse twinning. Some of the grains have incipiently developed microcline twinning.

Plag. subhedral to anhedral. Concentric zoning. Sericite locally - more commonly in core. Traces of myrmekite along some margins.

Clots of coarse muscovite + biotite. In one clot muscovite has sprays of fibrolitic sillimanite.

Very poorly developed fabric defined by micas. Quartz undulatory but does not have strongly developed sutures.

Minor alterations:
- Partial alteration of biotite to chlorite locally.
- Sericite dusting of plag.

THIN SECTION LOG

good sample for Rb/Sr

PROJECT: _____

STATION: 8586 B

DESCRIBED BY: LCP

DDH: _____ DEPTH: _____ DATE: Nov 13/81

UNIT: _____

Biotite-muscovite quartz-monzonite

HAND SAMPLE: Fine-grained, unfoliated biotite > muscovite granodiorite. Irregular to subhedral plag and K-feldspar

PURPOSE: Rb/Sr

partly from hand sample

Biotite pleochroism tan red brown

Plag La $\alpha \angle 010$
17-14 An_{32}
8-12 An_{28}

	EST.	POINT CT.
QUARTZ	30	
K-FELDSPAR (ORTHOCLASE)	30	
PLAGIOCLASE	25	
BIOTITE	10	
MUSCOVITE	5	
ZIRCON	Tr	
OPAQUES	Tr	

COMMENTS:

All grains subhedral to anhedral. Inner core of plag. grains are twinned — large growth rim of untwinned. Only minor sericite dusting in core of plag. Locally get minor myrmekite

K-spar untwinned. Minor perthite texture. Inclusions of plag, quartz, biotite.

Coarse muscovite and biotite. No foliation. Zircon in biotite has extensive radiation damage halo. Muscovite small grains intergrown w/ biotite or a few scattered large grains.

Locally K-spar has incipient grid twinning.

Undulatory extinction for quartz - no suture borders.

THIN SECTION LOG

PROJECT: _____

STATION: 90877A

DDH: _____ DEPTH: _____

UNIT: _____

DESCRIBED BY: LCP

DATE: Nov 13/81

Biotite qtz-monzonite

HAND SAMPLE: Fine-grained poorly foliated qtz monzonite. Subhedral plag with interstitial K-feldspar. Locally K-feldspar coarsens to form phenocrysts with abundant inclusions.

PURPOSE: Rb/Sr partly hand-sample

Biotite pleochroism
tan
red brown

Chlorite - deep blue interference colors

Plag ⊥a $\alpha < 010$
15-16 AN32
7-3
5-3 AN22
18-19 AN37
11-14
AN30

	EST.	POINT CT.
QUARTZ	25	
K-FELDSPAR (ORTHOCLASE)	20	
PLAGIOCLASE	35	
BIOTITE	20	
MUSCOVITE	Tr	
CHLORITE	Tr	
ZIRCON	Tr	
OPAQUES	Tr	

COMMENTS:

Trace of muscovite as small flakes intergrown with biotite.
Strong radiation damage halo around zircons in biotite.

Subhedral to anhedral plag. - abundant twinning. Grains generally slightly elongate in S, clusters.

K-spar untwinned - locally get incipient grid pattern. Abundant inclusions of quartz, plag, biotite.

Anhedral Minor perthitic texture.

Minor myrmekite.

Biotite defines S, fltn. Quartz grains undulatory extinction + sutured borders. Minor augen in quartz + plagioclase.

Minor sericite in plag. locally minor alteration of biotite to chlorite.

THIN SECTION LOG

looks to be altered

PROJECT: _____

STATION: 90878 DESCRIBED BY: LCP

DDH: _____ DEPTH: _____ DATE: Nov 13/81

UNIT: _____

Muscovite-biotite quartz monzonite

HAND SAMPLE: Medium-grained, unfoliated quartz monzonite. Minor mafics + garnet. Looks aplitic

PURPOSE: Rb/Sr

Biotite pleochroism
tan
red brown

Chlorite interference colors pale blue

	EST.	POINT CT.
QUARTZ	30	
K-FELDSPAR	35	
PLAGIOCLASE	25	
BIOTITE	2	
MUSCOVITE	8	
OPAQUES	Tr	
ZIRCON	Tr	
GARNET	Tr	
CHLORITE	Tr	
TOURMALINE	Tr	

COMMENTS:

No readily observed foliation.
Plag has heavy sericite coating.
Biotite locally partly altered to chlorite
Zircon has heavy radiation damage halo
Quartz - extensive undulatory extinction + some sutured borders
Minor perthite with K-spar
All grains anhedral — aplitic texture.
Tourmaline concentrated in one small area. Euhedral/anhedral grains.

Fairly heavy sericite in plag.
Biotite looks oxidized/altered.

THIN SECTION LOG

minor alt. of biotite

PROJECT: _____

STATION: 9088 DESCRIBED BY: ICP

DDH: _____ DEPTH: _____ DATE: NOV 13/81

UNIT: _____

Biotite-muscovite quartz monzonite

HAND SAMPLE: Foliated, medium-grained qtz monzonite. Subhedral plag. w/ anhedral, interstitial K-feldspar.

PURPOSE: Rb/Sr

Partly hand sample

Biotite pleochroism
tan
red brown

Chlorite has deep blue interference colors.

Plag ⊥a $\alpha < \alpha_{010}$
11-10 AN28

	EST.	POINT CT.
QUARTZ	25	
K-FELDSPAR (orthoclase microcline)	25	
PLAGIOCLASE	35	
BIOTITE	10	
MUSCOVITE	5	
ZIRCON	Tr	
CHLORITE	Tr	
OPAQUES	Tr	
APATITE	Tr	

COMMENTS:

Well developed S_1 fabric defined by micas + quartz subgrains. Qtz has undulatory extinction.

Biotite zircons have strong damage halo. Biotite locally partly altered to chlorite - not extensive.

K-spar has coarse twinning. Incipiently developed grid twinning. Large anhedral phenocrysts - also interstitial in matrix. Inclusions of quartz, biotite, plagioclase. Perthitic texture.

Minor myrmekite. Plag locally finely twinned. Subhedral to anhedral.

THIN SECTION LOG

PROJECT: _____

STATION: 9089A

DESCRIBED BY: LCP

DDH: _____ DEPTH: _____ DATE: Nov 13/81

UNIT: _____

Biotite-muscovite quartz monzonite.

HAND SAMPLE: Poorly foliated quartz monzonite. Medium-grained. Intergrown anhedral plag + K-feldspar

PURPOSE: Rb/Sr

Partly hand sample

Biotite pleochroism
tans
red brown

Chlorite has deep blue interference colors

	EST.	POINT CT.
QUARTZ	30	
K-FELDSPAR	35	
PLAGIOCLASE	25	
BIOTITE	5	
MUSCOVITE	5	
ZIRCON	Tr	
CHLORITE	Tr	

COMMENTS:

Poorly defined S, cluge - micas + quartz suturing pattern.

Biotite locally partly altered to chlorite. Strong radiation damage halo around zircons.

K-spar anhedral. Quartz inclusions. Plag typically myrmekitic near K-spar grains.

All grains subhedral to anhedral Very minor sericite in plag.

Abundant subgrains developed in quartz - rock definitely strained

Plag only locally twinned

K-spar untwinned. Rounded inclusions of qtz in K-spar

THIN SECTION LOG

PROJECT: _____

STATION: 9089 B

DDH: _____ DEPTH: _____ DESCRIBED BY: LCP

UNIT: _____ DATE: Nov 13/81

Biotite-muscovite quartz monzonite

HAND SAMPLE: Medium grained, foliated qtz monzonite Anhedral K-feldspar + plagioclase
More mafics and less K-feldspar than 9089A

PURPOSE:

partly hand sample

Biotite pleochroism
pale tan
red brown

Chlorite has deep blue interference colors

Plag ⊥a $\alpha < 010$
9-10 An_{28}
12-8 An_{28}
13-26

	EST.	POINT CT.
QUARTZ	25	
K-FELDSPAR	25	
PLAGIOCLASE	40	
BIOTITE	8	
MUSCOVITE	2	
CHLORITE	Tr	
ZIRCON	Tr	

COMMENTS:

S, cluge poorly defined by micas + quartz subtuning. Micas anastamosing around feldspars. Extensive subgrain development in quartz

Biotite has strong zircon radiation damage halo

Plag subhedral. locally twinned. Irregular growth margin

Muscovite has coarse flakes - + grown w/ biotite.

Minor chlorite alteration of biotite. Plag has muscovite/sericite - especially in cores

Minor myrmekite in plag. - especially when in contact w/ K-spar

K-spar interstitial. Rounded qtz grains + small plag. inclusions. Perthitic locally

THIN SECTION LOG

Plag has heavy sericite & partly altered to chlorite

PROJECT: _____

STATION: 9090 DESCRIBED BY: LCP

DDH: _____ DEPTH: _____ DATE: Nov 13/81

UNIT: _____

Muscovite - biotite quartz monzonite

HAND SAMPLE: Poorly foliated, medium- to fine-grained quartz monzonite. Intergrown K-feldspar + plagioclase.

PURPOSE: Rb/Sr

Partly hand sample

Biotite pleochroism
pale tan
red brown

Chlorite interference colors deep blue

	EST.	POINT CT.
QUARTZ	30	
K-FELDSPAR	35	
PLAGIOCLASE	20	
BIOTITE	2	
MUSCOVITE	10	
CHLORITE	3	
CALCITE	Tr	
Garnet	Tr	

COMMENTS:

S, defined by micas + quartz subgrains. Feldspars are partly rounded "augens" in strained quartz matrix.

Biotite partly to completely altered to chlorite. Plag has extensive sericite dusting. Minor myrmekite

All grains essentially anhedral

Perthite texture for K-spar.

THIN SECTION LOG

PROJECT: _____

STATION: 9094

DDH: _____ DEPTH: _____ DATE: Nov 13/81

UNIT: _____

Plag has heavy sericite dusting. Biot looks oxidized/altered

DESCRIBED BY: LCP

Pegmatite (Quartz monzonite)

HAND SAMPLE: Poorly foliated to unfoliated. Only minor mafics. Irregular quartz aggregates.

PURPOSE: Rb/Sr.

Partly hand sample

Biotite ploechroism pale tan to red brown

	EST.	POINT CT.
QUARTZ	30	
K-FELDSPAR	30	
PLAGIOCLASE	40	
MUSCOVITE	Tr	
BIOTITE	Tr	
OPAQUES	Tr	
ZIRCON	Tr	
FIBROLITE	Tr	

COMMENTS:

Micas sparse except for one area. This area has minor fibrolite intergrown w/ biotite & muscovite. Possible screen of schist in granitic rock.

No foliation.

Grains anhedral to subhedral. Large subhedral plag has rounded quartz inclusions + small muscovite flakes.

Plag locally has heavy sericite dusting.

Minor biotite. Commonly looks oxidized—partly altered.

K-spar untwinned or coarsely twinned. Perthitic texture.

Quartz undulatory extinction with good subgrain development.

Minor myrmekite.

THIN SECTION LOG

heavily sericitized plag
biot → chlorite

PROJECT: _____

STATION: 9438 DESCRIBED BY: LCP

DDH: _____ DEPTH: _____ DATE: NOV 13/81

UNIT: _____

Biotite-muscovite quartz monzonite

HAND SAMPLE: Coarse-grained, unfoliated qtz monzonite. Large subhedral K-feldspar phenocrysts w/ abundant inclusions.

PURPOSE: Rb/Sr

partly hand sample

Biotite pleochroism
pale tan
red. brown

Plag ⊥a α ∠ 010
12-20

Chlorite has deep blue interference colors
plane light if-is pale green

	EST.	POINT CT.
QUARTZ	35	
ORTHOCLASE	30	
PLAGIOCLASE	25	
BIOTITE	8	
MUSCOVITE	2	
OPAQUES	Tr	
ZIRCON	Tr	
EPIDOTE	Tr	
CHLORITE	Tr	
APATITE	Tr	

COMMENTS:

Biotite partly to completely altered to chlorite.

K-spar as large phenocrysts. Inclusions of plag, quartz, biotite. Perthitic texture. Coarse twins.

Plag commonly subhedral. Not commonly twinned. Heavily sericitized. Chlorite locally has epidote correlated with it.

Minor myrmekite associated w/ plag.-qtz-K-spar.

Strong subgrain development w/ large quartz grains — also suture borders.

Muscovite intergrown with biotite — also as sericitic alteration of plagioclase.

Narrow growth rim on plag. Plag generally subhedral.

THIN SECTION LOG

PROJECT: _____

STATION: 9501 A

DESCRIBED BY: LCP

DDH: _____ DEPTH: _____ DATE: Nov 16/81

UNIT: _____

Muscovite - biotite quartz monzonite

HAND SAMPLE: Poorly foliated, medium-grained quartz monzonite. Subhedral to anhedral plag + K-feldspar. No phenocrysts.

PURPOSE: Rb/Sr

Partly hand sample

Biotite pleochroism
pale tan
red brown

	EST.	POINT CT.
QUARTZ	25	
K-FELDSPAR	25	
PLAGIOCLASE	30	
BIOTITE	5	
MUSCOVITE	15	
ZIRCON	Tr	
TOURMALINE	Tr	
CHLORITE	Tr	
APATITE	Tr	

COMMENTS:

Poorly defined foliation — mica orientation + suture quartz.

Qtz has strong subgrain development, undulatory extinction, strong suture borders.

Muscovite is main mica — large coarse flakes. Subsidiary biotite — generally more narrow, elongate flakes.

K-spar no anhedral grains enclosing other minerals. Incipient grid twinning. Minor perthitic texture.

Plag fresh - generally not strongly twinned. Minor myrmekite

Chlorite alt. of biotite very rare.

THIN SECTION LOG

PROJECT: _____

STATION: 9501 B DESCRIBED BY: LCP

DDH: _____ DEPTH: _____ DATE: Nov 16/81

UNIT: _____

Muscovite - biotite quartz monzonite.

HAND SAMPLE: Fine-grained, foliated qtz monzonite. Minor mafics. Irregular plag + K-spar grains. More felsic than 9501A

PURPOSE: Rb/Sr

Partly hand sample

Biotite pleochroism
pale tan
red brown

Chlorite - pale blue interference colors

	EST.	POINT CT.
QUARTZ	30	
K-FELDSPAR	30	
PLAGIOCLASE	25	
BIOTITE	5	
MUSCOVITE	10	
ZIRCON	Tr	
CHLORITE	Tr	
APATITE	Tr	
OPAQUES	Tr	

COMMENTS:

Locally grid twinning with K-feldspar. Perthitic texture. Coarse twinning.

Poorly defined S, cluge — micas + quartz sutturing. Undulatory extinction, subgrain development, strong suture borders for quartz grains.

Plag. poorly twinned. Subhedral to anhedral. Locally contain muscovite (sericite). Minor myrmekitic texture. Plag has qtz + biotite inclusions.

Graphic intergrowth of K-spar + quartz.

Strong damage halo around zircon in biotite.

Rock very fresh — minimal alteration.

Muscovite coarser grained than biotite - large primary flakes

THIN SECTION LOG

PROJECT: Anvil Rb/Sr

STATION: AR10b

DESCRIBED BY: LCP

DDH: _____ DEPTH: _____ DATE: May 27/82

UNIT: Hornblende diorite dyke

ROCK NAME: _____

HAND SAMPLE: Medium-fine grained diorite. Large-euhedral hornblende phenocrysts. Sawn surface shows abundant subhedral plagioclase. Irregular rims of K-feldspar. No quartz visible.

PURPOSE:

Plag. ⊥ a

27-33 An54

Chlorite has anomalous blue interference colors.

	EST.	POINT CT.
PLAGIOCLASE	50	
QUARTZ	Tr	
EPIDOTE	10	
CHLORITE	15	
OPAQUES	5	
CARBONATE	Tr	
K-FELDSPAR (?)	20	

COMMENTS:

Heavily saussentized plag. phenocrysts in a fine-grained, anhedral matrix.

Plag typically surrounded by large rim of K-feldspar (?) K-feldspar appears to show graphic intergrowth texture — possibly with minor quartz

Hbl. totally altered to randomly oriented epidote + chlorite Also acicular chlorite in matrix. Fine-grained matrix w/ feldspars, chlorite, opaques, minor (trace) quartz, epidote

THIN SECTION LOG

PROJECT: ANVIL Rb/Sr

STATION: 8586 A

DESCRIBED BY: LCP

DDH: _____ DEPTH: _____ DATE: May 27/82

UNIT: Hornblende diorite dyke

ROCK NAME: _____

HAND SAMPLE: Poikilitic hornblende phenocrysts in light grey matrix. Subhedral plag phenocrysts in matrix. Only trace of quartz K-feldspar as very small interstitial aggregates - dominantly partly rimming plag. phenocrysts.

PURPOSE:

	EST.	POINT CT.
PLAGIOCLASE		
K-FELDSPAR		
QUARTZ		
OPAQUES		
EPIDOTE		
CHLORITE		
ZIRCON	Tr	

COMMENTS: Euhedral to anhedral chlorite-epidote clots in matrix of subhedral plagioclase. Mafic clots formerly hornblende. Plag. heavily saussentized. Contains extensive rim of graphic intergrowth of quartz + feldspar (possibly K-feldspar). Plag locally could be altered to albite.

One large quartz grain — anhedral-angular. Also rimmed by extensive graphic intergrowth margins of quartz + feldspar.