GLY 4310 LAB 7

INTRUSIVE IGNEOUS ROCKS, PART 2

GRANITE, ALKALI FELDSRAR GRANITE, GRANODIORITE, QUARTZ MONZONITE, AND MONZONITE

LEUCOCRATIC (0-30% MAFIC) **PHANERITIC**

ROCK	FELSICS				MAFICS			NOTES
	Plagioclase	Quartz	K-Spar	Muscovite	Biotite	Amphibole	Pyroxene	
#1 Biotite Granite	20% Anh-sbh 1 → 5 mm	35-40% Anh 1 → 5 mm	30% Anh 1 → 5 mm	< 5% Anh 1 → 2 mm	5-10% Anh 1 → 3 mm			Moderately granitoid. Differentiation of k-spar and plagioclase is difficult here. Occasional crystal of sphene. Trace of epidote.
#2 Muscovite-Biotite Granite	5-10% Sbh 1 → 3 mm	30-40% Anh 1 → 5 mm	45-50% Anh-sbh 3 → 8 mm Pink	5-10% Anh	5% Anh			Moderately granitoid. Limonite staining and trace of hematite.
#3 Biotite-Hornblende Granite	20% Anh 2 → 6 mm	20% Anh 1 → 5 mm	40% Sbh 3 → 8 mm Pink		10% Anh-sbh 2 → 3 mm	10% Sbh 2 → 4 mm Hornblende		Coarsely granitoid
#4 Alkali feldspar granite		30% Anh 1 → 5 mm	50% Anh 1 → 5 mm Gray to gray-green			15% Sbh 3 → 7 mm	5% Sbh 3 → 5 mm	Moderately granitoid. Amphibole is probably riebeckite.

LEUCOCRATIC (0-30% MAFIC) **PHANERITIC**

ROCK	FELSICS				MAFICS			NOTES
	Plagioclase	Quartz	K-Spar	Muscovite	Biotite	Amphibole	Pyroxene	
#5 Aplite	30-35% Anh-sbh 1 → 2 mm	15-20% Anh 1 → 5 mm	30% Anh <1 → 2 mm	5% from conversion of biotite with chlorite	5% Anh <1 → 2 mm			Finely to Moderately granitoid. Limonite staining on weathered surfaces. Hematite staining on grain boundaries.
#7 Granodiorite	25% Anh-sbh 1 → 6 mm	40% Anh 1 → 5 mm	5-10% (varies) Anh 1 → 3 mm Pink		5% Anh 2 → 3 mm	15-20% Anh 1 → 4 mm Hornblende		Moderately granitoid. Limonite staining on weathered surfaces. Hematite stains on edges of feldspar crystals.
#22 Monzonite	30% Anh → 3 mm		25% Anh → 6 mm White/pink		2% Anh 1 mm	20% Anh → 6 mm Green Hornblende		Medium-grained phenocrysts in a finer matrix. Alkali feldspar is orthoclase. Trace minerals: magnetite and epidote. Rock is very hard, crystals tightly interlocking and hard to differentiate. Crystal shape varies widely.
#342 Quartz Monzonite	45% Anh 1 → 4 mm	10% Anh 1 → 2 mm	20% Anh 3 → 9 mm Pink		< 5% Anh 1 → 5 mm	10-15% Sbh 1 →5 mm Hornblende		Moderately granitoid. Pyrite <1 → 2 mm Anh-euh 5%

LEUCOCRATIC (0-30% MAFIC) **PORPHYRITIC**

ROCK	FELSICS				MAFICS			NOTES
	Plagioclase	Quartz	K-Spar	Muscovite	Biotite	Amphibole	Pyroxene	
#6 Quartz Monzonite Porphyry	35-40% Anh 2 → 8 mm	15% Anh 1 → 2 mm	30% Anh-sbh → 2 cm		5% Anh-sbh 1 → 3 mm	10% Sbh 1 → 5 mm Hornblende		Occasional epidote