

TABLE 3.—CHEMISTRY OF SELECTED IGNEOUS UNITS, WICHITA MOUNTAINS, OKLAHOMA

Wt. %	(All Fe as Fe <sub>2</sub> O <sub>3</sub> )			
	(Pre-granite)	(Post-granite)	(Early-granite)	(Late-granite)
	<u>Roosevelt Gabbros</u>	<u>Late Diabase</u>	<u>Mt. Scott Granite</u>	<u>Quanah Granite</u>
SiO <sub>2</sub>	47.3	46.6	72.3	76.2
TiO <sub>2</sub>	3.0	3.6	.44	.16
Al <sub>2</sub> O <sub>3</sub>	15.0	13.5	12.3	11.8
Fe <sub>2</sub> O <sub>3</sub>	13.5	16.4	3.9	2.4
MnO	.21	.21	.08	.02
MgO	8.2	5.4	.31	.03
CaO	8.8	8.7	1.2	.23
Na <sub>2</sub> O	1.99	2.3	3.8	4.0
K <sub>2</sub> O	.36	.75	4.3	4.75
P <sub>2</sub> O <sub>5</sub>	.22	.61	.08	.01
Sr ppm	406	371	91	9
Rb ppm	6	22	127	169

granite types is the Quanah, which all workers agree has alkaline characteristics. Whereas other rocks can be found that range between these extreme mafic and silicic compositions, in most cases they can be shown to be products of hybridization or contamination, and (or) of only local distribution. No compelling data or arguments exist for primary (and large-volume) intermediate igneous rock, at least from the surface exposures.

### Raggedy Mountain Gabbro Group

Figure 7 shows the distribution of formations and members of the group. This presentation incorporates results of the latest mapping and revisions in nomenclature. The older part of the group consists of the Glen Mountains Layered Complex, whose age is problematic, with estimates ranging between 0.5 and 1.4 b.y. [see Powell and others (1980) for a complete discussion, and also Roggenthen and others (1981)]. The younger part consists of the Roosevelt Gabbros, one member of which has been definitively dated at 550 m.y. (see Bowring and Hoppe, this guidebook, for data on the Mount Sheridan Gabbro).

### Glen Mountains Layered Complex

Useful field and petrographic data are given in Powell and Fischer (1976). The lithostratigraphy is codified in Powell and others (1980). Stockton and

Giddens (this guidebook) introduce the new unit, N Zone, as a stratigraphic member above the M Zone in the Cooperton Quadrangle. Provisionally, this nomenclature is extended farther east on the basis of reconnaissance mapping and data compilation. In this way, a somewhat consistent pattern emerges wherein the belts of outcrop trend at lower angles (~ N. 60° W.) than the regional structure and igneous-outcrop distribution (~ N. 70–80° W.).

Members of this formation are designated as zones. The G Zone is anomalous owing to its limited outcrop, somewhat different modal proportions, and phase chemistry (Spencer, 1961; Powell and others, 1980). The K Zone may be taken as the lowest unit of the normally exposed sequence cropping out as a belt along the southern margins of the Glen Mountains. The overlying L Zone is generally distributed about the K Zone belt, but it has a somewhat more extensive outcrop in the area where the northwest-trending fold axis crosses U.S. Highway 183 south of Roosevelt. The unit seems to thin to the east. The M Zone overlies the L Zone and dips consistently to the north-northeast. The newly recognized N Zone has a gradational contact with the underlying M Zone. Eastward, the N Zone passes under the Mount Scott Granite sheet, reemerging in the Central Lowland and west of Meers. Because of limited mapping, data generated on rocks of the layered complex in the east could not readily be correlated with the type sections