



Figure 7. Surface outcrops of Raggedy Mountain Gabbro Group.

in the Glen Mountains. With the recognition of an additional member by Stockton and Giddens, it should be possible to pull this information together. Estes (1980) provided an interesting set of phase-chemistry data from a traverse west of Meers. Rates of change in the cryptic layering are more rapid than in the Glen Mountains area. This section, here taken to be in the N Zone, is probably one of the highest stratigraphically in all the exposures.

Roosevelt Gabbros

Powell discusses this unit in detail in an accompanying article. Stockton and Giddens, also in an accompanying article, recognize a new, fourth member of the unit, the Mount Baker hornblende gabbro. This latter pluton crops out on the western flank of Mount Baker in the Cooperon Quadrangle (secs. 18–19, T. 4 N., R. 15 W.) and is distinctive, in part, owing to cm-size, poikilitic hornblende crystals not otherwise seen in the Wichitas. Bowring and Hoppe present data documenting a 550-m.y. age for the Mount Sheridan Gabbro. The Mount Sheridan is the largest of the exposed members, having a diameter of at least 8 km.

Carlton Rhyolite Group

Ham and others (1964) were the first to show the extent of this group across the southern Oklahoma basement. By surface and subsurface correlation, they pulled together the widespread but limited surface outcrops of rhyolite into the Carlton unit. Four principal areas are now recognized: (1) the East and West Timbered Hills of the Arbuckle Mountains in

southern Oklahoma (Colbert porphyry); (2) the Bally Mountain section (T. 6 N., R. 14 W.) on the far northern and eastern sides of the Wichitas, which they took to be a type section; (3) the Blue Creek Canyon section along Stumbling Bear Pass, on State Highway 58 (T. 4 N., R. 12–13 W.); and (4) the Fort Sill section, basis for the designation "Carlton," underlying most of the original military reservation (T. 2–3 N., R. 12–13 W.). This latter section is the largest of the four, and one of the first areas to be recognized as containing extrusive volcanic rocks (Schoonover, 1948). Figure 2 shows the three outcrop areas of the Carlton in the Wichitas.

An erosional interval separates the Carlton from the underlying Raggedy Mountain Gabbro Group and from the overlying sedimentary Timbered Hills Group (basal Reagan Sandstone and Honey Creek Formation; see table 1). However, Ham and others (1964) chose Bally Mountain as a type section because 3,600 ft of an apparently continuous sequence could be measured to the upper unconformity. The Blue Creek Canyon sequence is similar in that the unconformable relationship with the overlying Timbered Hills Group is well displayed; however, the section is truncated on the west by thrusting so that less section is exposed.¹ Thus, these two sections are probably relatively high in the stratigraphic se-

¹ The name of this section needs a brief explanation. Taff (1904) and early workers called the creek-heading in the surrounding hills Blue Creek, and the ravine to the south Blue Creek Canyon. Presumably by an accident of map-making, Blue Creek was omitted, because maps now show this stream as Canyon Creek. Further difficulty arises because the State Highway Department, after improving Oklahoma 58 in the early 1960's, renamed