



Figure 9.—Distribution of Springs According to Rock Type

areas where it is confined above by the less permeable rocks of the Whitehorse Group. When it reaches an unconfined spot as shown, it emerges as an artesian spring.

Figure 15b illustrates the situation in the Marble Falls and Ellenburger-San Saba Limestones. Partly because of faulting, these limestones are hydrologically interconnected in many areas and function as a common aquifer. Through faulting also, the Smithwick Shale and Strawn Formation are so situated as to form a dam against the limestone reservoir. The ground water escapes through faults as artesian springs. Figure 17 shows Barnett Springs (San Saba County), an example of this type of situation.

Figure 15c shows a complex arrangement. Recharge water passes downward through the

Carrizo-Wilcox sands, being confined above by the Reklaw Clay. Where the Reklaw is absent the ground water escapes into an alluvial terrace, from which it eventually flows out as springs above the less permeable silty clay of the flood-plain alluvium.

Figure 15d shows a spring resulting from the structure of a salt dome, as in the case of Smith Springs (Galveston County). Here a rising salt plug has raised the overlying Gulf Coast aquifer into a dome shape. A layer of clay prevents local recharge water from moving straight down into the deeper sands. Instead, the water is retained in the near-surface sand and flows out to the edge of the dome, where it emerges as springs.

These are only a few of the many structural relationships which can cause springs to flow in Texas.