



Figure 7.—Major Aquifers

Trinity, Carrizo-Wilcox, Gulf Coast, Woodbine, Queen City, or Sparta. However, some are "gravity" springs which flow from Alluvium or Ogallala sands or gravels. The water is carried in the pore spaces between the sand and gravel particles. Figure 11 illustrates a typical gravel alluvial bed.

Other rocks from which major springs issue are located primarily in the western part of the State. They include such sandstone aquifers as the Santa Rosa and Hickory, the Blaine Gypsum, siltstones, volcanic tuff and breccias, marbles, and schists. Some of the sandstones and siltstones carry much of their ground water in joints and cracks. Gypsum, being much more soluble than limestone, is often thoroughly riddled with large underground caverns. Figure 12 illustrates a spring in interbedded siltstone and gypsum, and Figure 13

shows an example of well-developed caverns in gypsum.

Typical Geologic Settings of Springs

Any of a number of geologic structural settings can give rise to springs. Some of the more common situations found in Texas are illustrated in a simplified manner in Figures 14 and 15. Figure 14a illustrates how the largest Texas springs, those along the Balcones Fault Zone, were formed. Displacement of the rocks by faulting has brought the Austin Chalk and Taylor Marl against the southeast edge of the Edwards Limestone underground reservoir where they form an impervious dam. The water under artesian pressure in this reservoir usually escapes upward along fault planes.