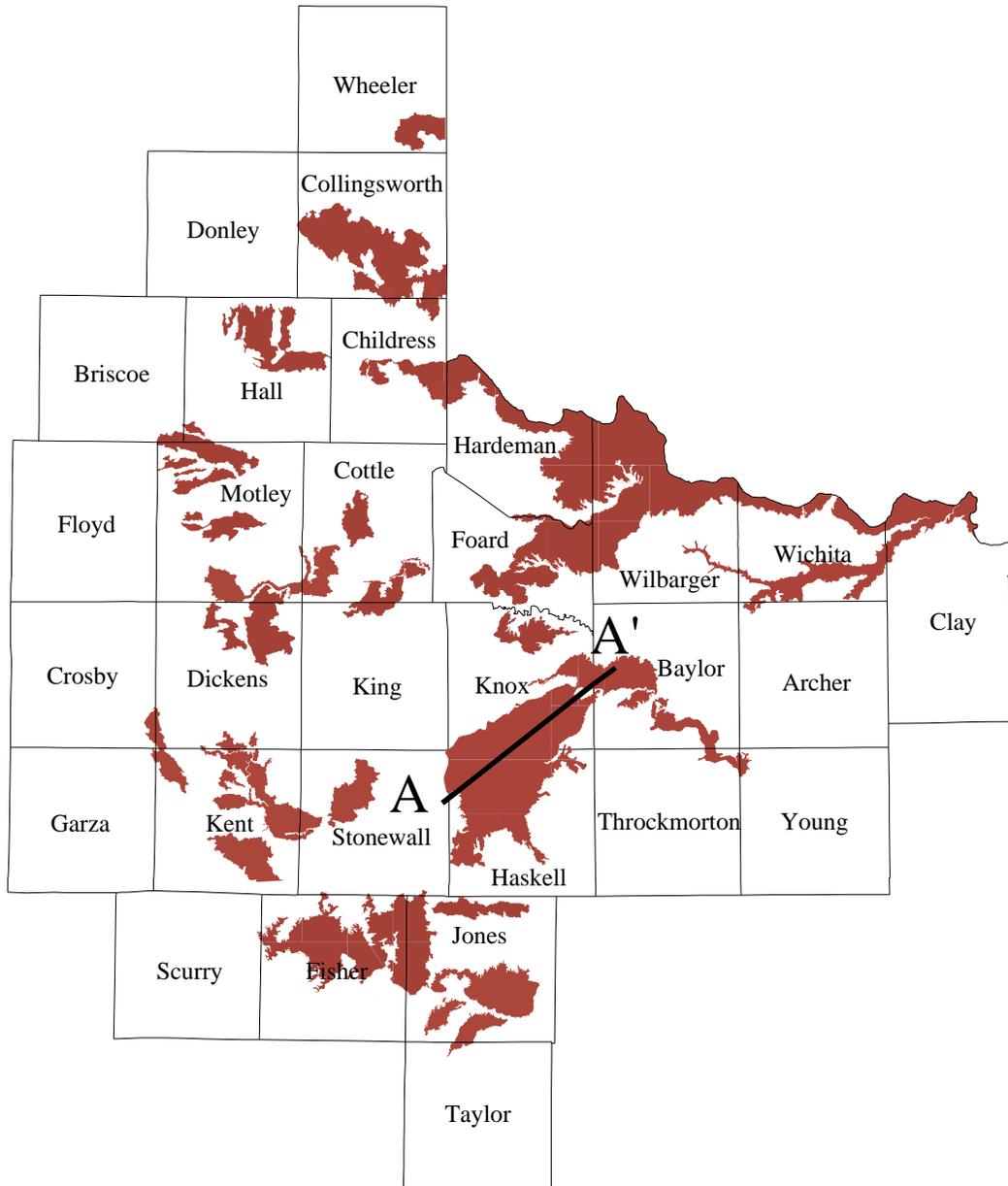
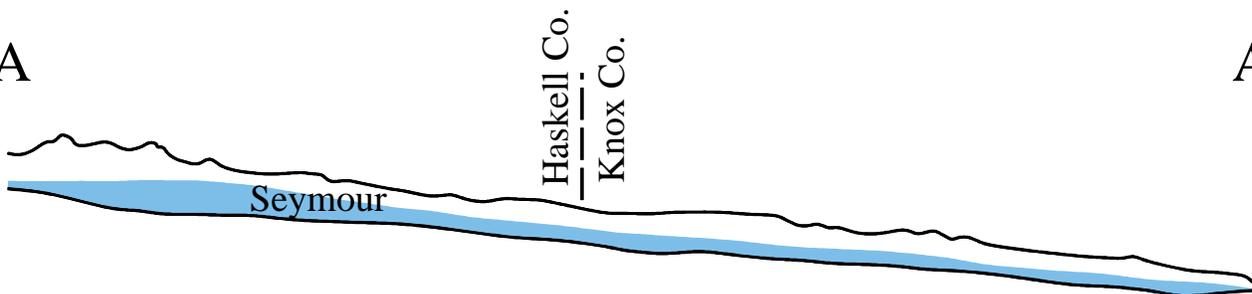


Seymour



A



Permian

Seymour Aquifer

The Seymour Formation consists of isolated areas of alluvium found in parts of 23 north-central and Panhandle counties. Approximately 90 percent of the water pumped from the aquifer is used for irrigation. Municipal pumpage, primarily for the communities of Vernon, Burkburnett, and Electra, accounts for eight percent.

The Seymour aquifer consists of discontinuous beds of poorly sorted gravel, conglomerate, sand, and silty clay deposited during the Quaternary Period by eastward-flowing streams. Individual accumulations vary greatly in thickness, although most of the Seymour is less than 100 feet thick. In isolated northern parts of the aquifer, the formation may be as thick as 360 feet.

The aquifer exists under water-table conditions throughout much of its extent, but artesian conditions may occur where the water-bearing zone is overlain by clay. The lower, more permeable part of the aquifer produces the greatest amount of ground water. Yields of wells range from less than 100 gal/min to as much as 1,300 gal/min, depending on saturated thickness, and average about 300 gal/min. No significant water-level declines have occurred in the aquifer.

Water quality in these alluvial remnants generally ranges from fresh to slightly saline; however, higher salinity problems occur. The salinity has increased in many heavily pumped areas to the point where the water has become unsuitable for domestic and municipal uses. Natural salt pollution in the upper reaches of the Red and Brazos river basins precludes the full utilization of these water resources. Brine pollution from earlier oil field activities has resulted in localized contamination of fresh ground- and surface-water supplies. High nitrate concentrations in excess of drinking water standards in Seymour ground water are widespread.

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