

Era	System	Series	Stratigraphic unit <small>Modified from Baker, 1979</small>	Lithology	Hydrogeologic unit commonly used in Texas <small>Modified from Baker, 1979</small>	Hydrogeologic nomenclature used in this report <small>Modified from Weiss, 1992</small>			
Cenozoic	Quaternary	Holocene	Alluvium	Sand, silt, and clay	Chicot aquifer	Permeable zone A			
		Pleistocene	Beaumont Formation	Sand, silt, and clay			Permeable zone B		
			Montgomery Formation Bentley Formation Willis Sand						
	Tertiary	Pliocene	Goliad Sand	Sand, silt, and clay	Evangeline aquifer	Permeable zone C			
			Fleming Formation	Clay, silt and sand			Burkeville confining unit	Zone D confining unit [1]	
		Miocene	Oakville Sandstone	Sand, silt, and clay	Jasper aquifer	Permeable zone D			
			Catahoula Sandstone or Tuff [2]				Clay, silt and sand	Catahoula confining unit (restricted)	Zone E confining unit [1]
			Anahuac Formation [1]				Sand, silt, and clay		
		Oligocene	Frio Formation [1]	Clay and silt	Vicksburg-Jackson confining unit				
			Vicksburg Formation [1]						
		Eocene	Jackson Group	Frio Clay [3]	Clay and silt	Vicksburg-Jackson confining unit			
	Whitsett Formation Manning Clay Wellborn Sandstone Caddell Formation								

[1] Present only in the subsurface

[2] Called Catahoula Tuff west of Lavaca County

Not recognized at surface east of Live Oak County

[1] Present only in the subsurface

[2] Called Catahoula Tuff west of Lavaca County

[3] Not recognized at surface east of Live Oak County

Figure 2.3.1-16 Correlation of USGS and Texas Nomenclature (modified from Reference 2.3.1-2)

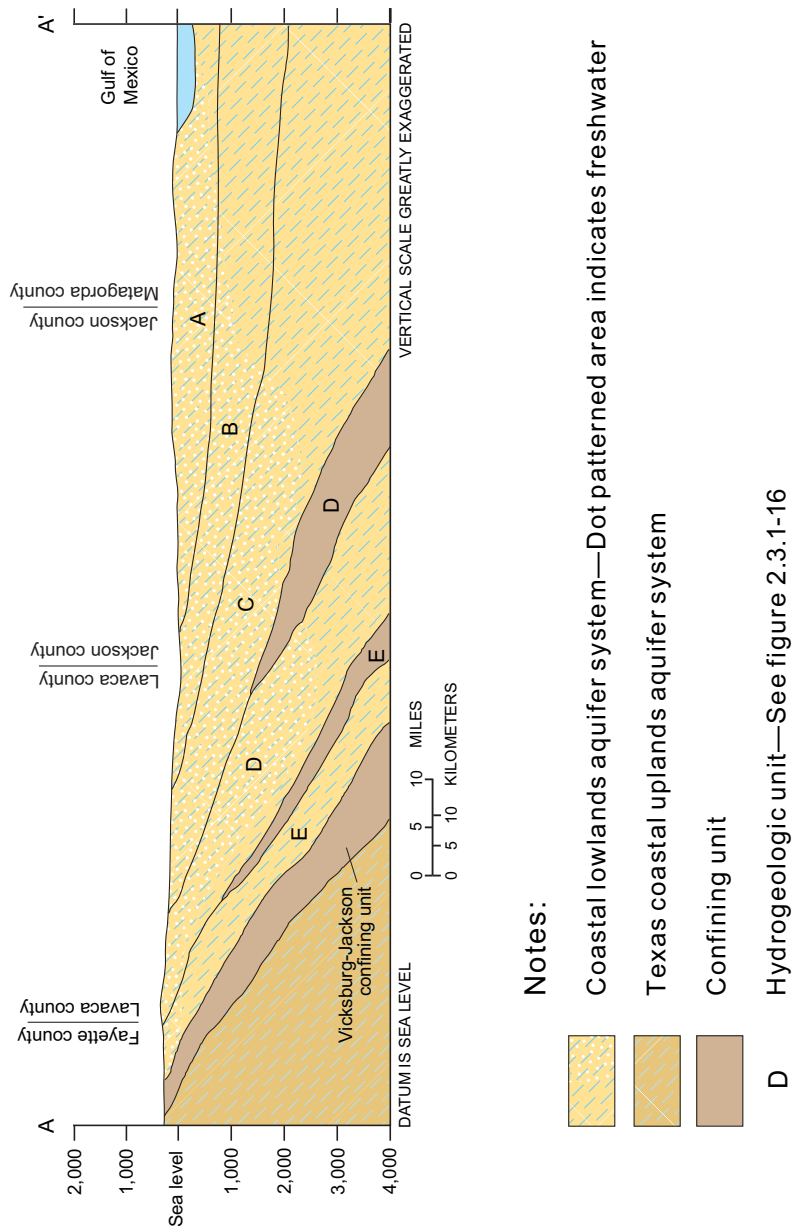


Figure 2.3.1-17 Generalized Cross Section through the Coastal Lowlands/Coastal Uplands Aquifer Systems (modified from Reference 2.3.1-21)

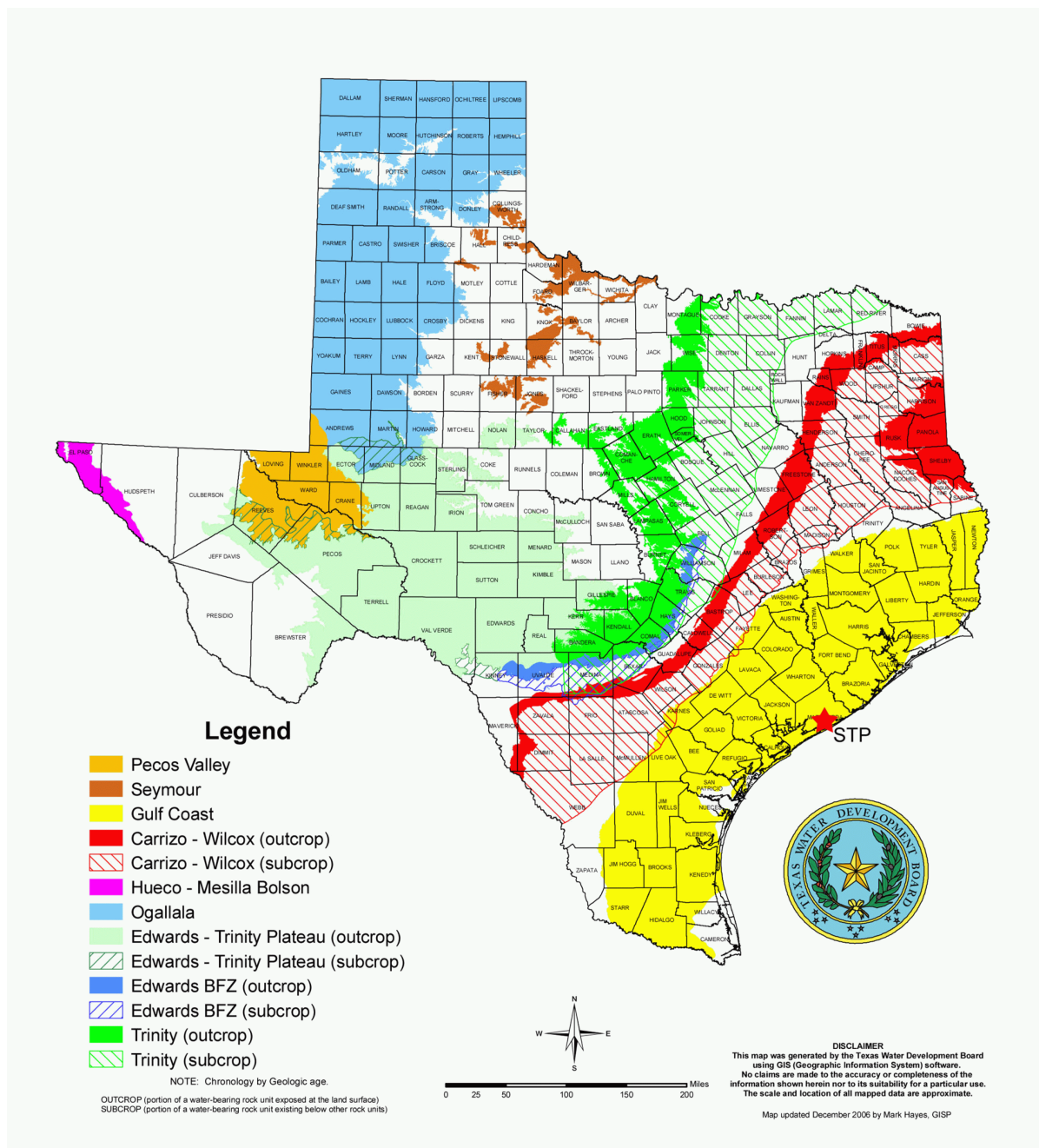


Figure 2.3.1-18 Major Aquifers of Texas (modified from Reference 2.3.1-22)

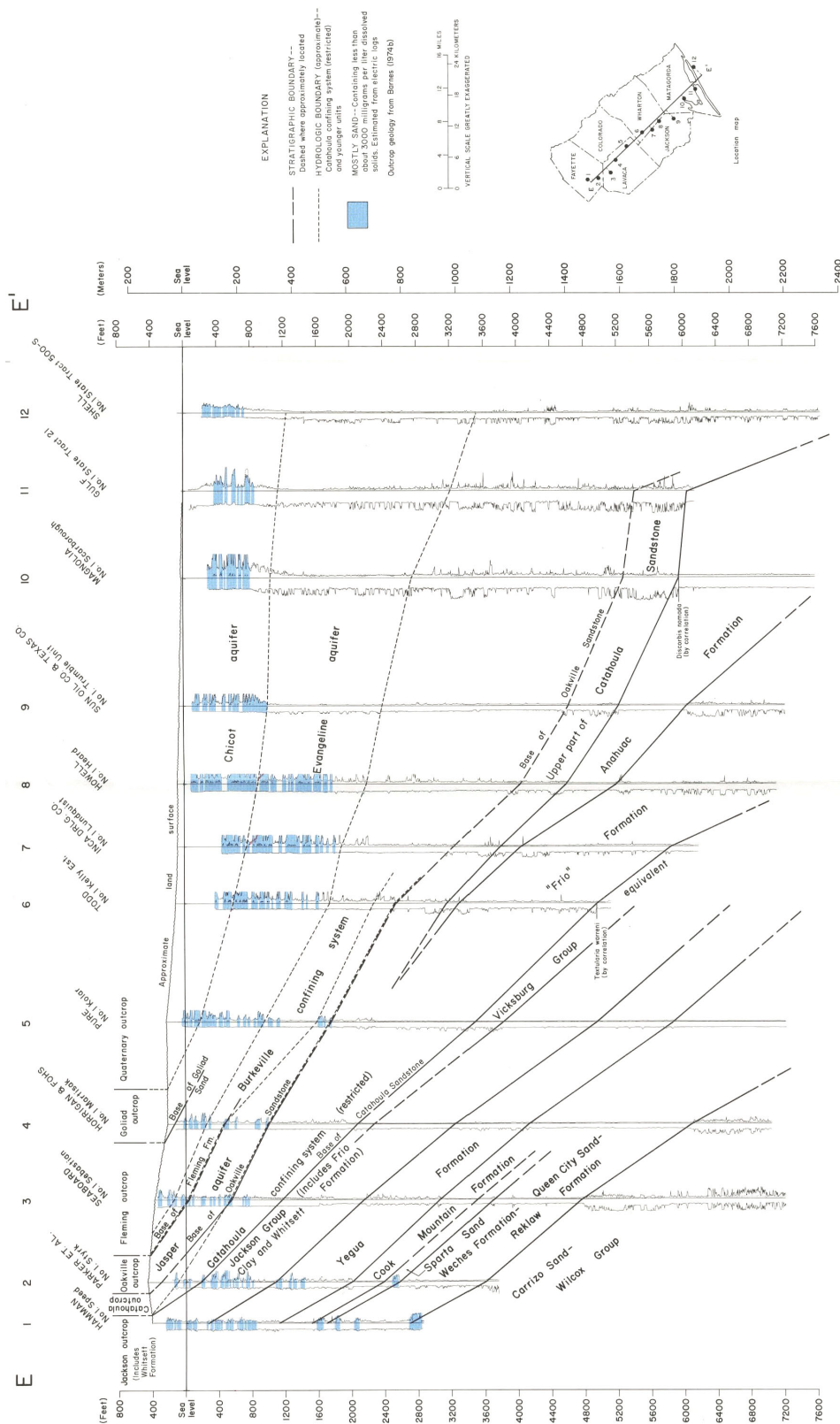


Figure 2.3.1-19 Regional Hydrogeologic Cross Section through the Gulf Coast Aquifer System (Reference 2.3.1-23)

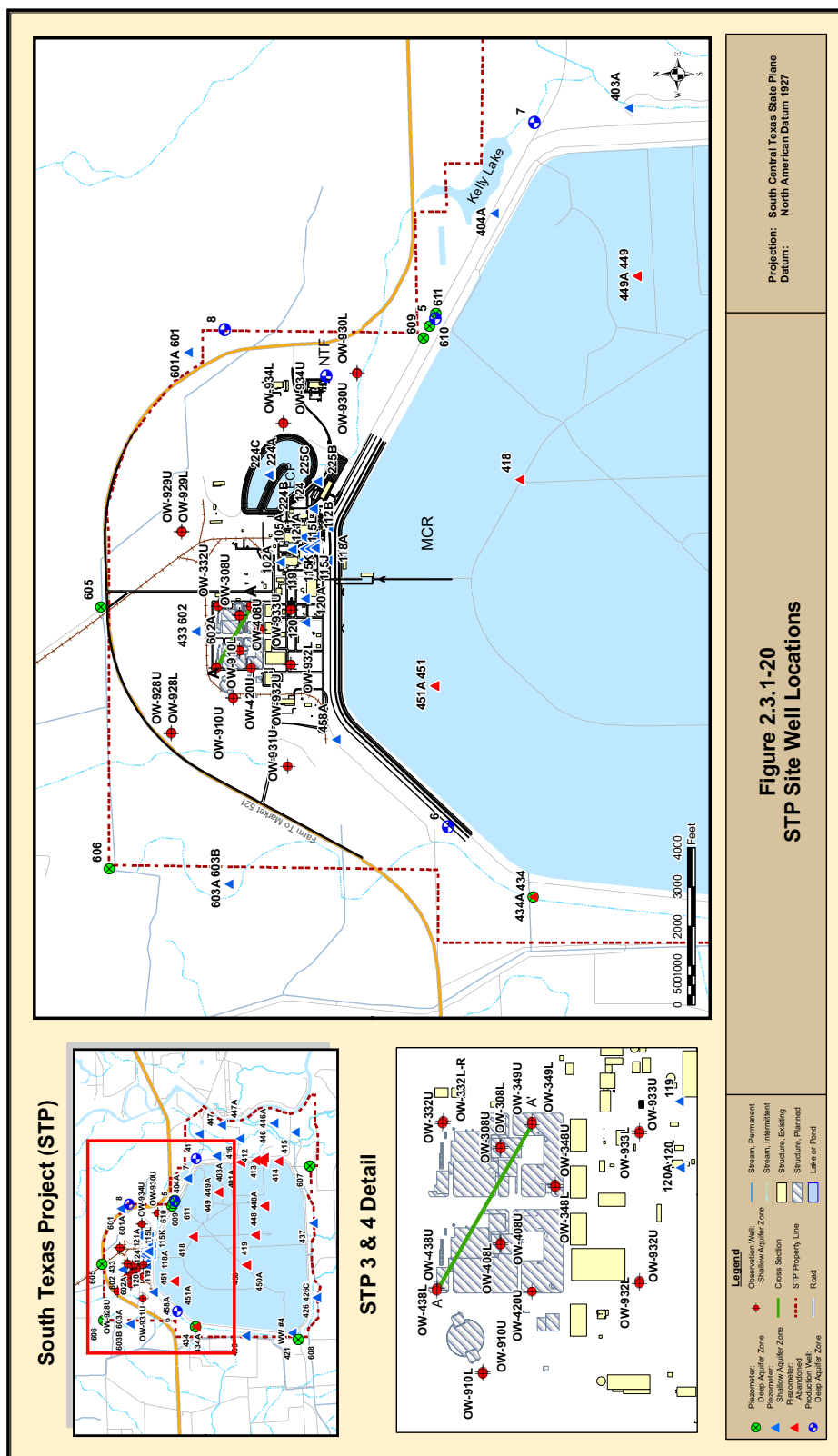
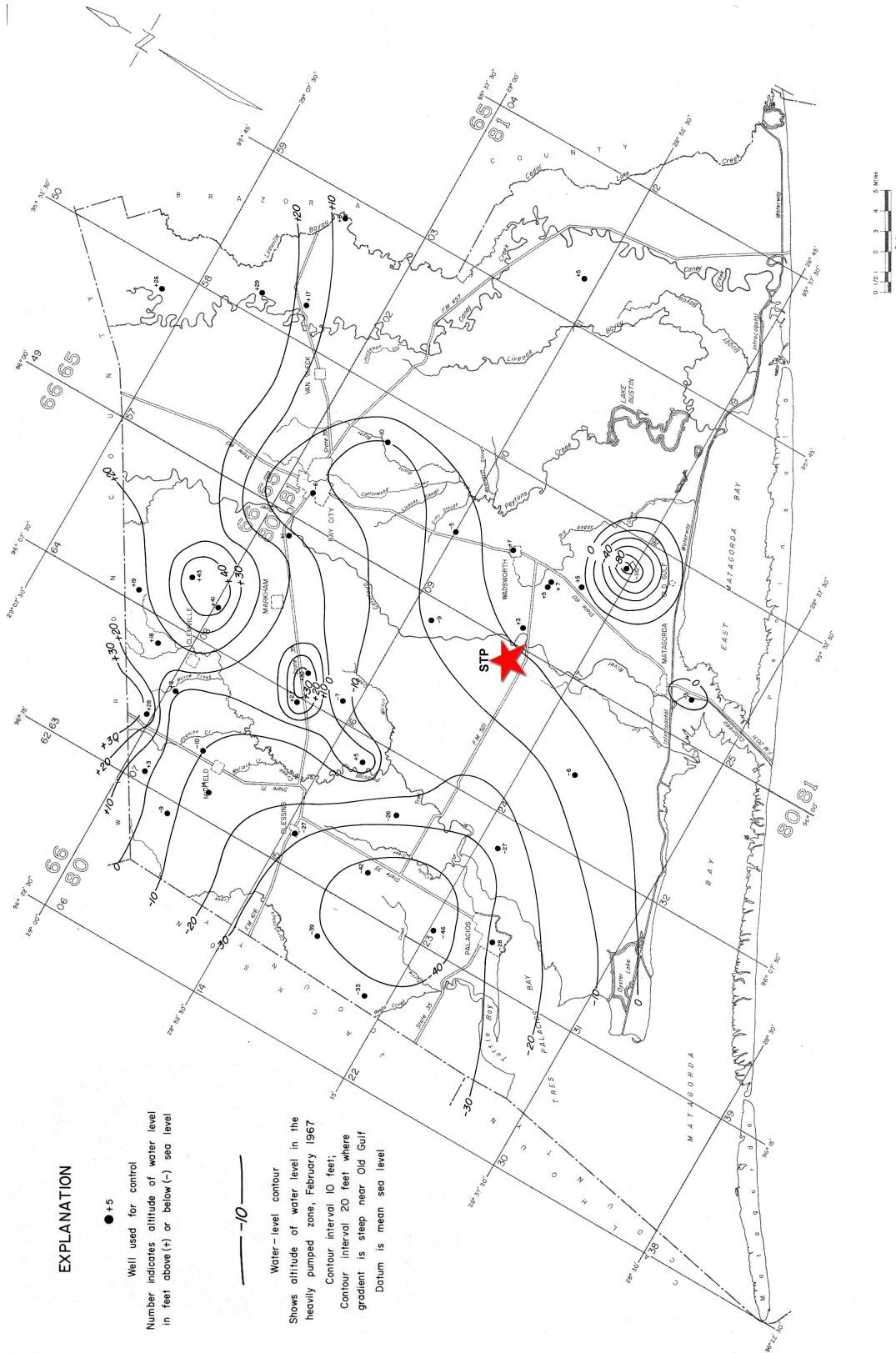


Figure 2.3.1-20 STP Site Well Locations



**Figure 2.3.1-21 Potentiometric Surface in the Deep Aquifer in Matagorda County in 1967
(modified from Reference 2.3.1-24)**

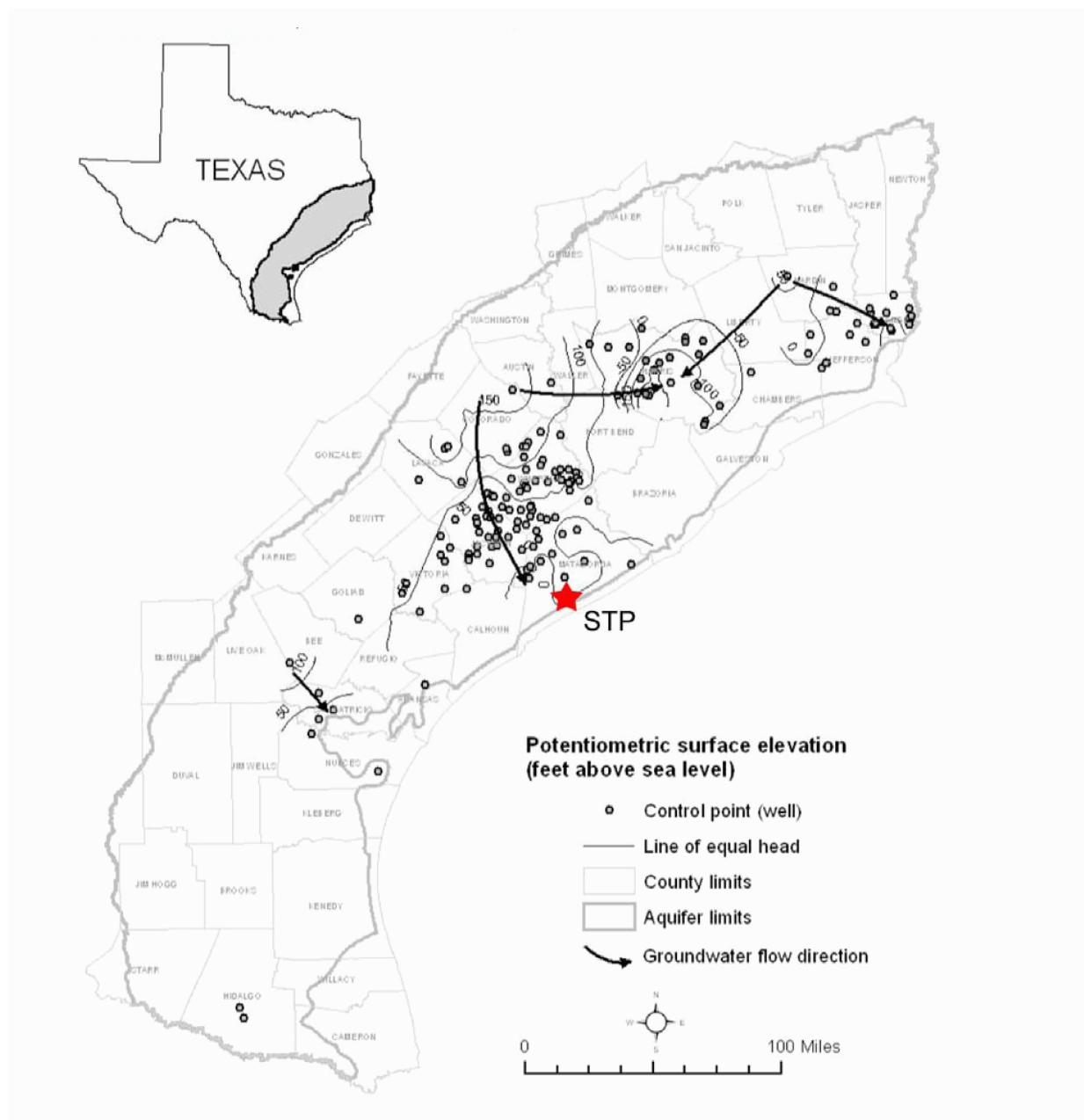


Figure 2.3.1-22 Regional Potentiometric Surface Map including water level measurements from 2001 to 2005 (modified from Reference 2.3.1-26)

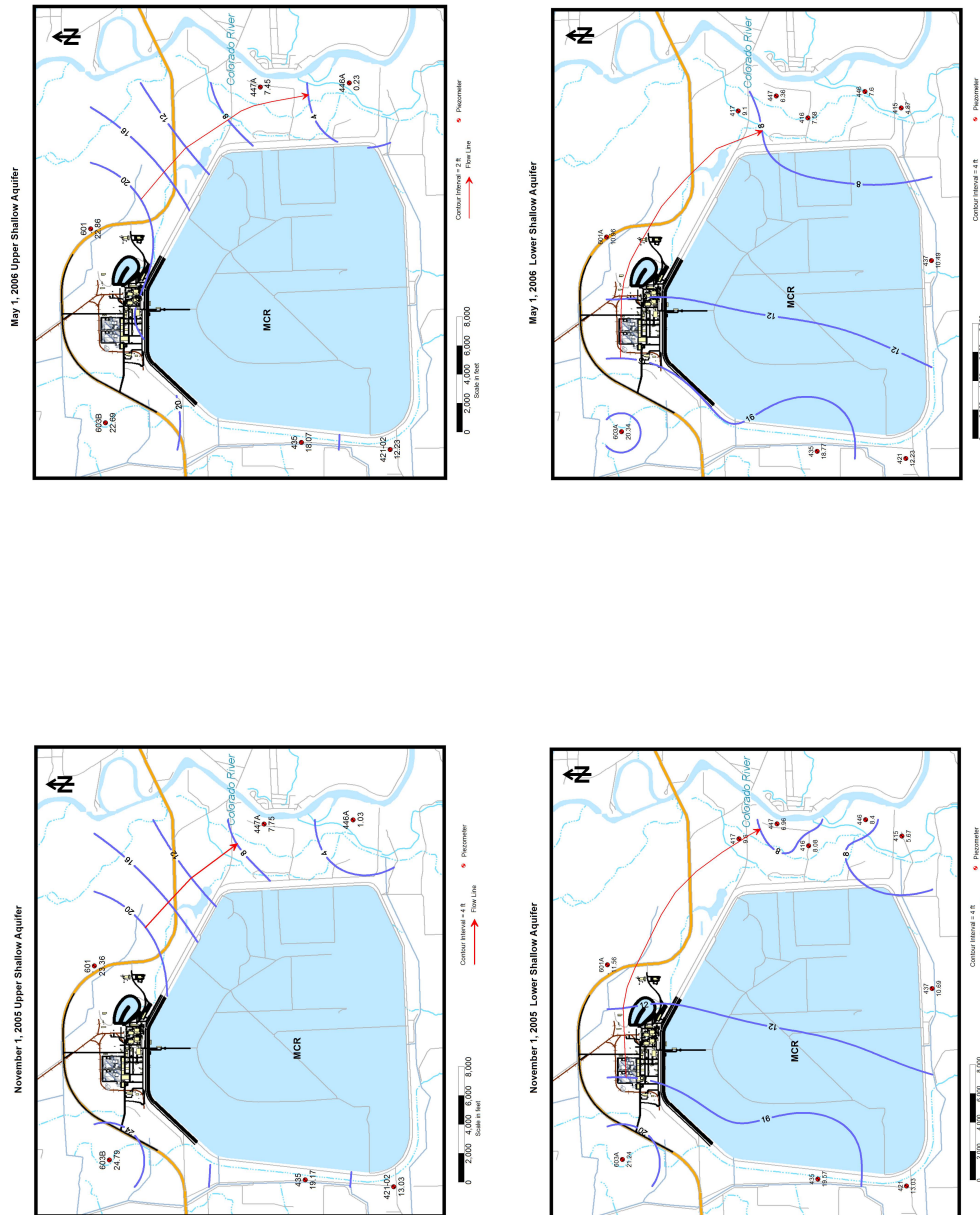


Figure 2.3.1-23 Shallow Aquifer Potentiometric Surface Maps

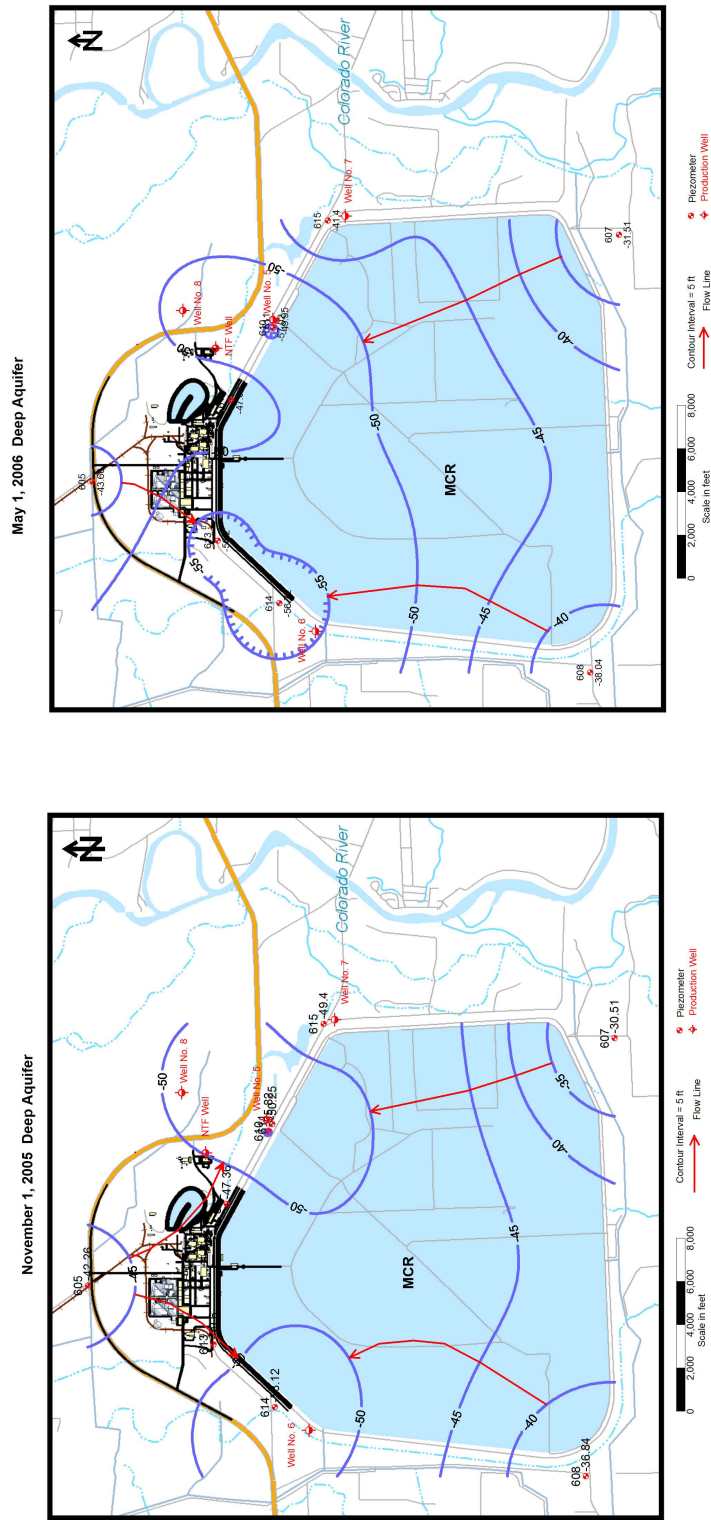
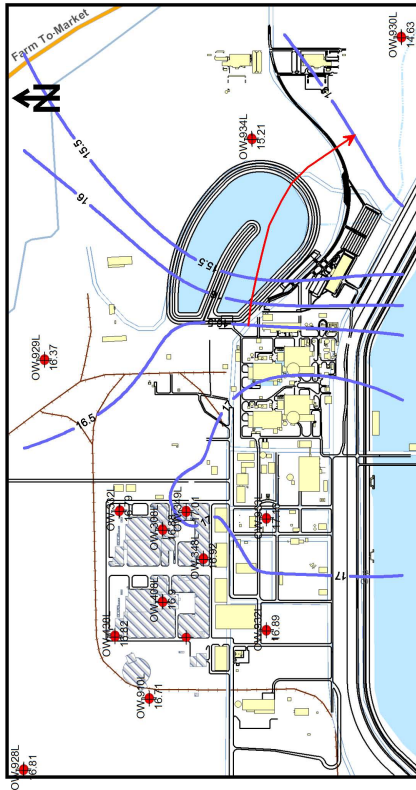
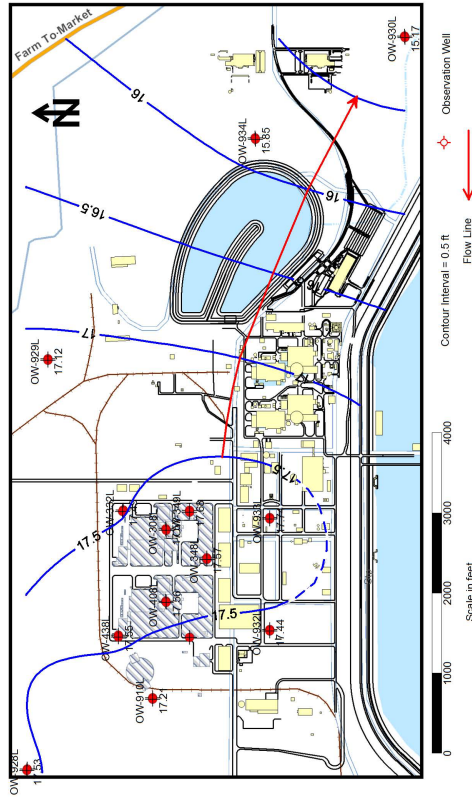


Table 2.3.1-24 Deep Aquifer Potentiometric Surface Maps

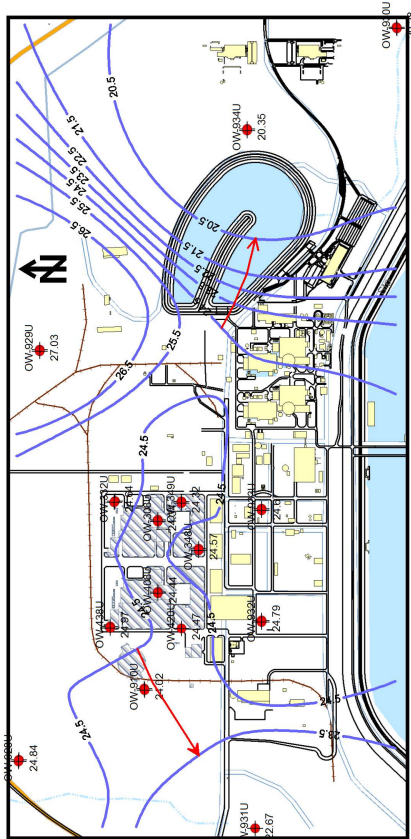
Lower Shallow Aquifer February 22, 2007



Lower Shallow Aquifer April 27, 2007



Upper Shallow Aquifer February 22, 2007



Upper Shallow Aquifer April 27, 2007

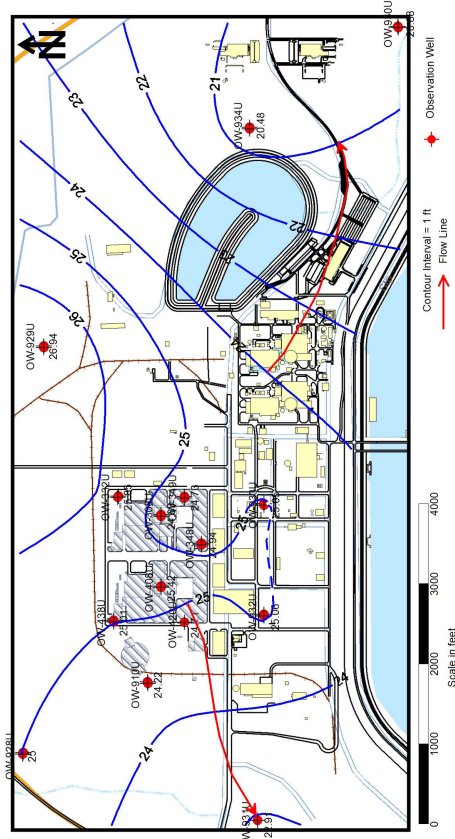


Figure 2.3.1-25 Quarterly Potentiometric Surface Maps in the STP 3 & 4 Areas

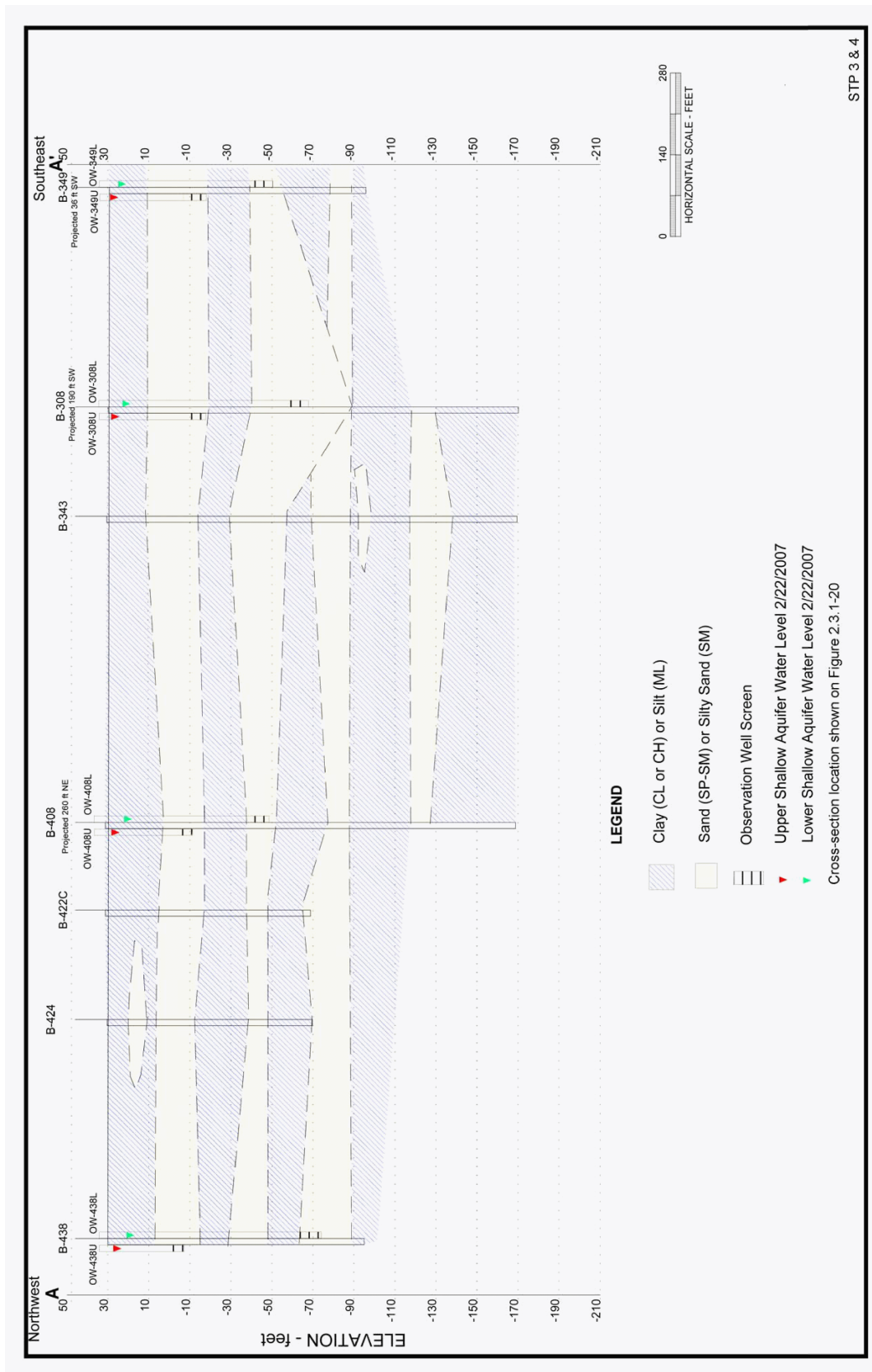


Figure 2.3.1-26 Hydrogeologic Cross-Section A-A'

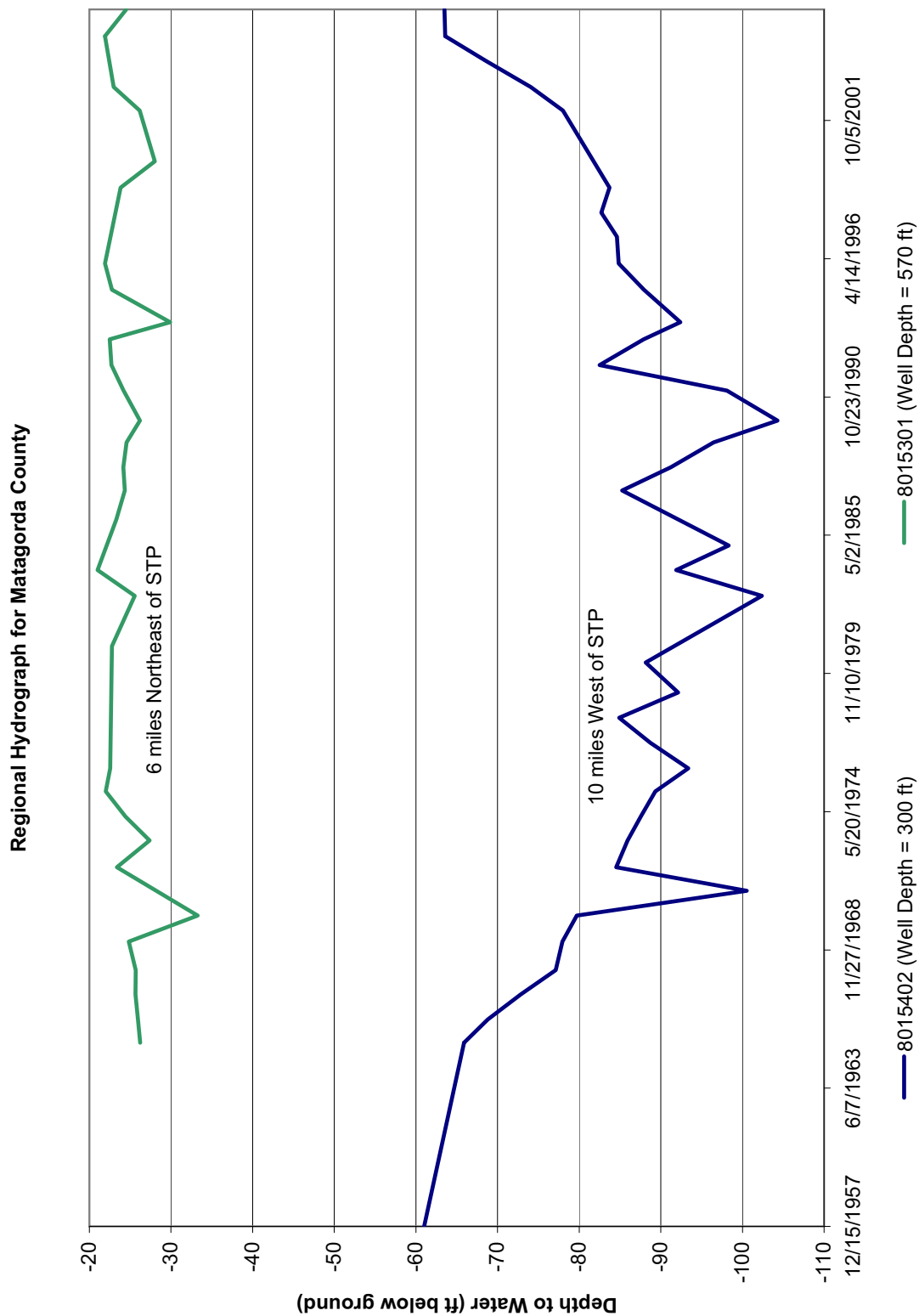


Figure 2.3.1-27 Regional Hydrographs for Deep Aquifer (Reference 2.3.1-27)

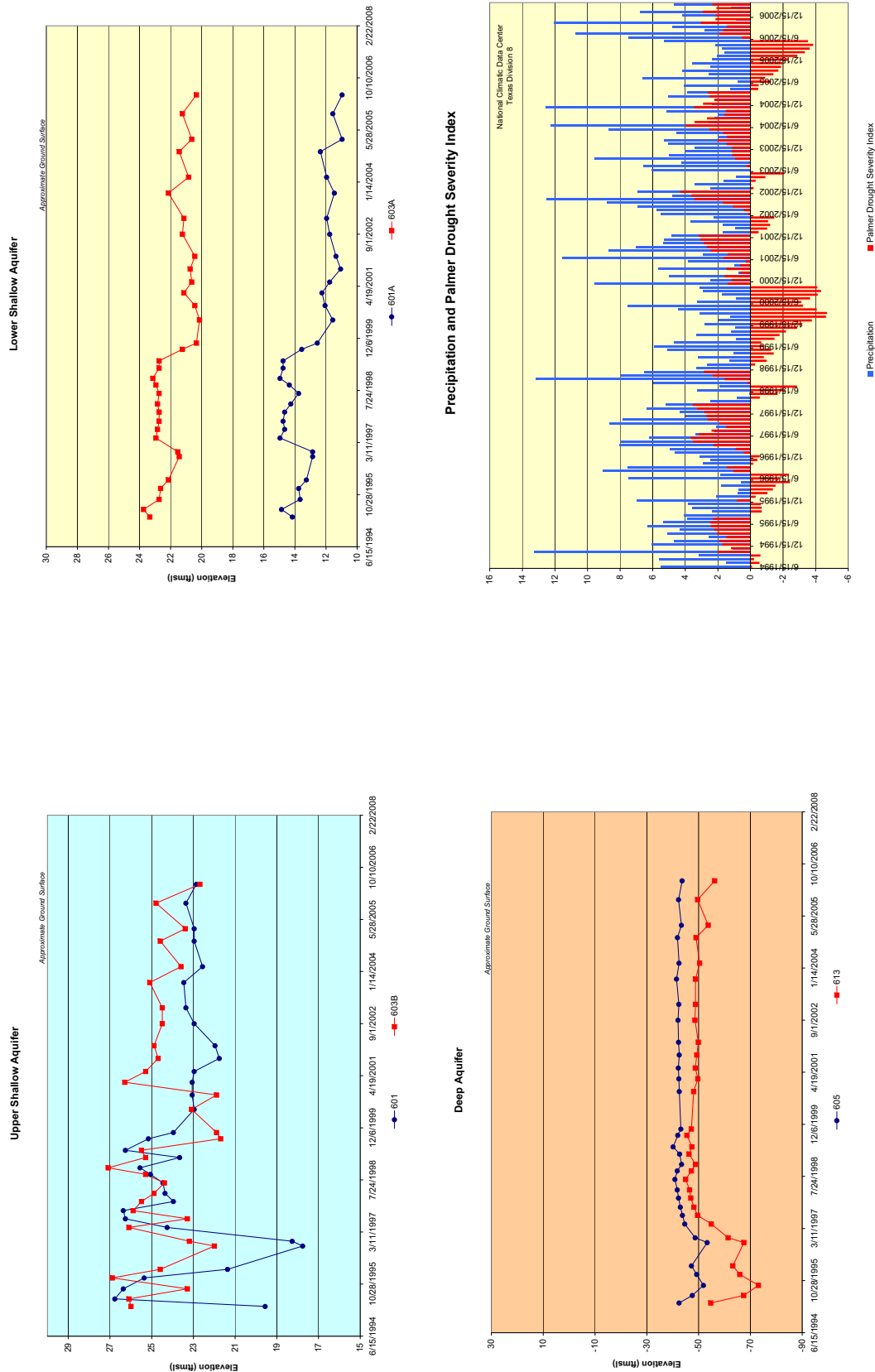


Figure 2.3.1-28 Hydrographs of Selected Wells at the STP Site

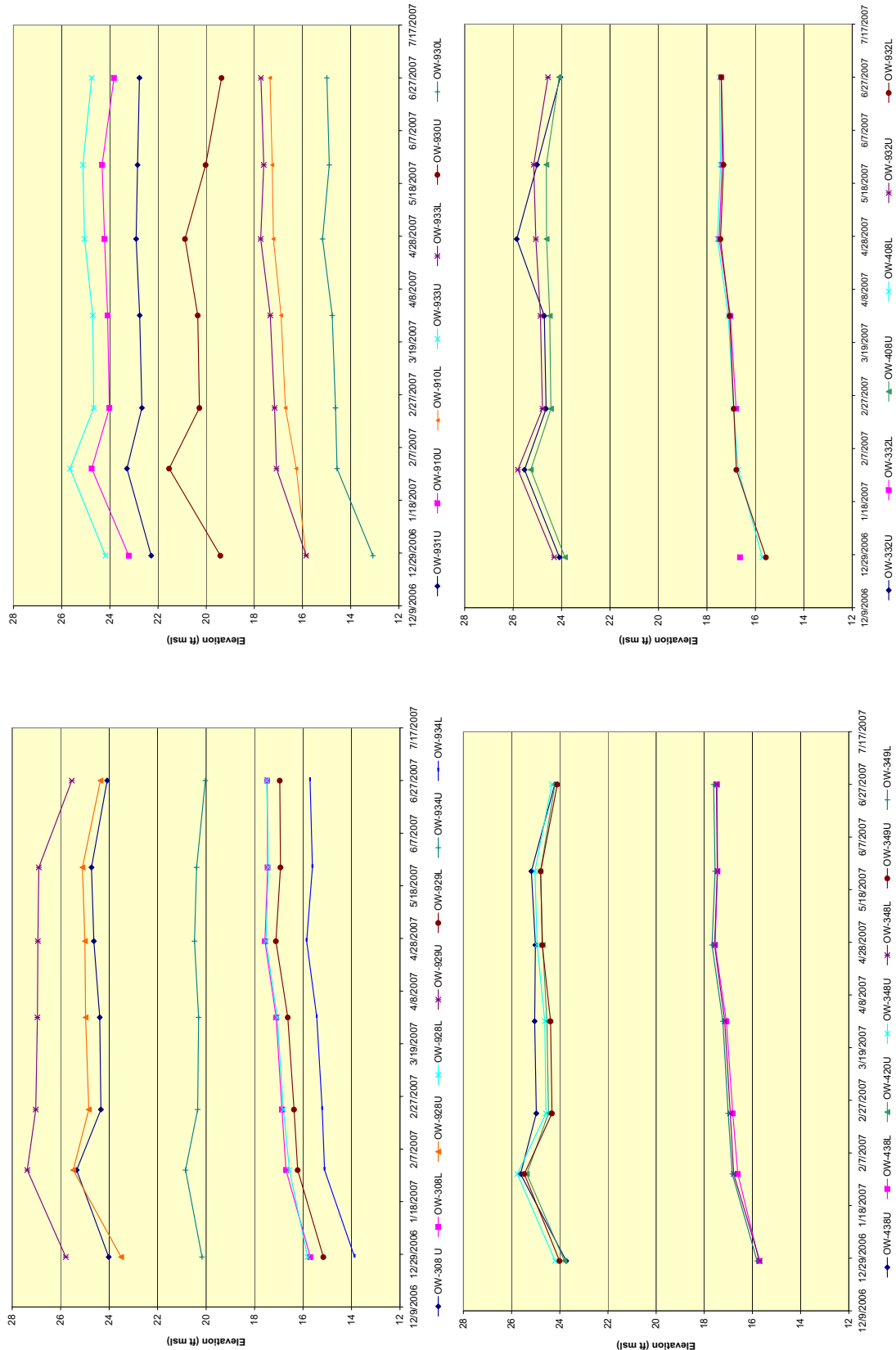


Figure 2.3.1-29 Hydrographs of Wells in the STP 3 & 4 Area

Parameter	Regional Transmissivity (gpd/ft)	STP Deep Aquifer Transmissivity (gpd/ft)	STP Shallow Aquifer Transmissivity (gpd/ft)	Regional Storage Coefficient (unitless)	STP Deep Aquifer Storage Coefficient (unitless)	STP Shallow Aquifer Storage Coefficient (unitless)
Sample Size (N)	40	3	5	6	2	4
Standard Deviation	71,936	14,526	11,620	0.0006	0.0004	0.0006
Mean	84,500	33,245	14,320	0.0008	0.0005	0.0009
Geometric Mean	63,725	31,379	9,295	0.0005	0.0004	0.0008
Median	63,800	25,533	13,000	0.0010	0.0005	0.0007

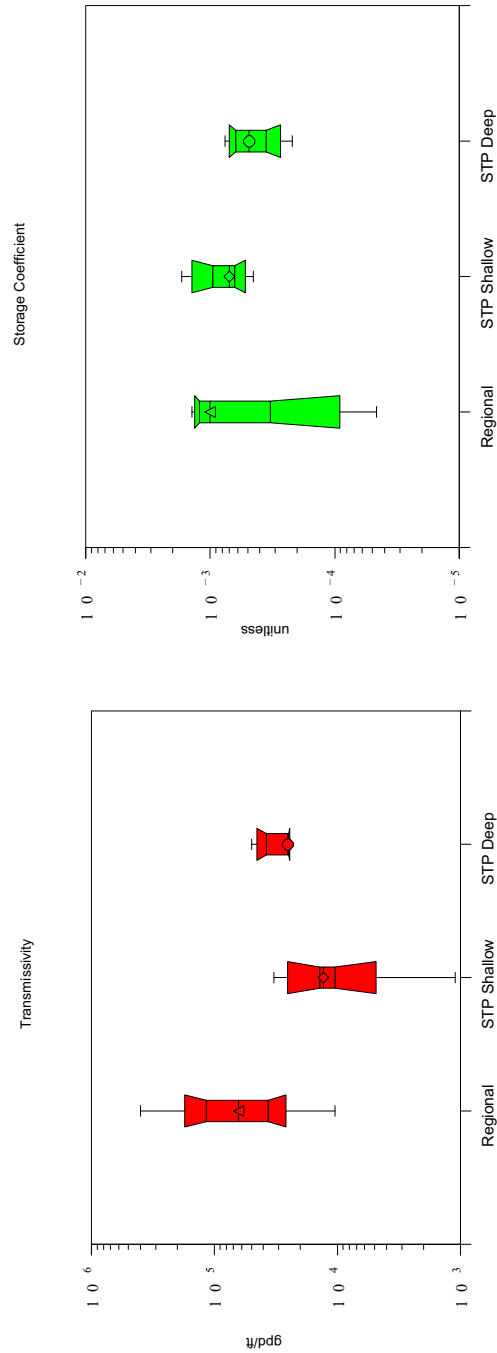


Figure 2.3.1-30 Summary of Aquifer Transmissivity and Storage Coefficient Data from Aquifer Pumping Tests