Water Well Log

Strata Geological Services, Inc.
Tarpley, Texas
830-562-3680

Well: No. 4 Headwaters Monitor Well
Location: 15 miles NW of Kerrville - TPWD
Geologist: Wm Feathergail Wilson, Texas State Licensed PG # 21
Driller: Aramadigger, Mike Tumilson
Rig Type: Air Rotary
Total Depth: 840' completed 04-05-04

Depth	Description	Comments
0, -30	MICRODOLOMITE: cream-lt gray-white porous fossil fragment microdolomite, Edwards @ surface	Edwards Group @ surface Elev = 2020' GPS: N 30 10.8" W 99 20' 50.6" 4.5" PVC casing set to 620' on top of fill; slotted casing from 520'-620' 9" bit to 170', 8.75 " bit to 840'
-30, -70	LIMESTONE: white-lt gray nnon-porous mega-fossil biomicrite & pelmicrite	
-70, -100	MICRODOLOMITE: lt tan-lt gray slightly porous microdolomite	
-100, -143	LIMESTONE: white-lt gray mega-fossil fragment biomicrite with lesser amounts of microdolomite	
-143, -160	LIMESTONE: gray phosphate fragment marly biomicrite, top Upper Glen Rose Mbr	In Upper Glen Rose Mbr @ 143'
-160, -180	MARL: gray slightly sandy foraminferal marl	
-180, -200	SILTSTONE: lt gray marly siltstone	
-200, -230	MARL: gray silty foraminferal marl	
-230, -240	LIMESTONE: lt gray phosphate fragment biomicrite	
-240, -260	MARL: lt gray silty foraminiferal marl	
-260, -280	SILTSTONE: lt gray silty foraminiferal marl	
-280, -310	MARL: lt gray silty sandy marl	
-310, -320	SILTY LIMESTONE: white biomicrite interbeded with gray phosphatic siltstone	
-320, -330	MARL: lt gray silty sandy marl	
-330, -380	SILTSTONE: lt gray phosphate fragment marly calcareous siltstone	
-380, -390	LIMESTONE: gray non-porous silty biomicrite	
-390, -400	MARL: lt gray silty sandy marl	
-400, -405	SHALE: lt gray compact shale	
-405, -422	CLAY: lt green - gray bentonitic clay, top of Hensel Formation	In Hensel Formation @ 405', probable equivalent facies of the Lower Glen Rose, Pearsall, Sligo and Hosston, very sharp boundary, probable disconformity, continental depositional environment while the Upper Glen Rose above is a marine paleoenvironment. Well caving in as the drill bit and string were being pulled out of the hole.
-422, -450	SANDSTONE: white-orange-gray fine grained slightly porous calspar cemented sandstone	water level @ 420' 04-09-04
-450, -466	COAL: black sub-bituminous coal	marine from 0-405'; continental from 405-820'
-466, -493	SANDSTONE: white -lt gray calspar cemented slightly porous medium grained sandstone	
-493, -610	SAND: white-orange-lt gray loose very porous medium-coarse grained sand with lesser amounts of clay, marl & shale	possible time equivalent of the Sligo-Hosston couplet @ 493'
-610, -650	SAND & GRAVEL: white-lt orange coarse grained loose sand and gravel	
-650, -790	SAND: white-orange coarse grained loose very porous sand	
-790, -820	SAND & GRAVEL: white-orange coarse grained sand and gravel	395 ppm water TDS
-820, -840	SHALE: dark gray organic fragment shale, top of Pennsylvanian shale	In Pennsylvanian shale @ 820', unconformable surface