Water Well Log

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

Well HGCD Monitor Well # 9
Location 2 miles north of Hwy 41 off west side of Hwy 83, Kerr Co., Texas
Geologist Wm Feathergail Wilson, PG # 21
Driller Aramdigger
Rig Type Air Rotary
Total Depth 1,055' Completed 10-10-07

Description
0, -180 LIMESTONE: cream-lt tan-white chert bearing karst biomicrite, micrite, pelmicrite, intrasparudite, in Edwards Group @ surface
-180, -190 SILTSTONE: lt tan very fine grained siltstone
-190, -260 LIMESTONE: cream-lt tan-white chert bearing karst biomicrite, micrite, pelmicrite, intrasparudite, in Edwards Group @ surface
-260, -300 CAVE BRECCIA: lt orange cave breccia and karst lost circulation zone
-300, -667 LIMESTONE: cream-lt tan-white chert bearing karst biomicrite, micrite, pelmicrite, intrasparudite, in Edwards Group @ surface
-667, -805 MARL & LIMESTONE: lt gray marl altenating with thin bedded biomicrite
-805, -810 SABHKA: white-lt orange anhydrite/gypsum Sabhka evaoprites
-810, -850 SILTSTONE: lt gray-lt tan argillaceous siltstone
-850, -855 MARL: lt gray marl
-855, -860 SILTSTONE: lt gray-lt tan argillaceous siltstone
-860, -890 SILTY MARL: lt gray-lt tan silty marl
-890, -900 SILTSTONE: lt gray-lt tan argillaceous siltstone
-900, -920 MARL: lt gray marl
-920, -960 SANDSTONE: lt tan-lt orange fine-med grained sandstone, top of Hensel
-960, -1050 SAND & GRAVEL: white-lt orange coarse-very course grained gravel bearing loose-semi-consolidated saturated sand
-1050, -1055 DOLOMITE: white iron stained aphanitic dolomite, top of Ellenburger Group??

Comments

Edwards Group @ surface

Elevation = 2,318'

GPS: N 30 06' 21.44" W 99 41' 43.04"

orange karst carbonates

Drilled and reamed 16" to 320; drilled and reamed 13" from 320-720; drilled 8 3/4" from 720-790; drilled with 7 7/8" from 790-TD; cement and fill shoe from 885-790'

chert beds

chert beds

2" PVC 0-1050'; 8 5/8" (8" ID) steel 0-704'

Geophysical log to 1040'; lithologic log corrected to geophysical tops

orange karst carbonates

orange karst carbonates

fractures

Milliolids

Lost circulation @ 260-930'; cemented well from surface to 440' to contain lost circulation; did not work; set 8 5/8" steel 0-704' with cement shoe

360' water column in the Edwards Group

Top of Upper Glen Rose Mbr @ 667'

Water level @ 700'; may rise after completion

Trace of gypsum

Orbitolina texana

Orbitolina texana

Top of Hensel Sand Mbr, Pearsall Fm @ 920'

Orbitolina texana

Screen 950-1050'; gravel pack around 2" 930-1050'

758 ppm ~ 250-300 gpm

Interpretation: At 1050 drill string dropped 5-6' into a void and stuck. Small white dolomite cuttings came to the surface along with copious amounts of medium grained sand. Interpreted to be the top of the Ellenburger dolomite karst surface. At this point lost circulation was observed for approximately 10 minutes.

Top of Ellenburger @ 1050' ???