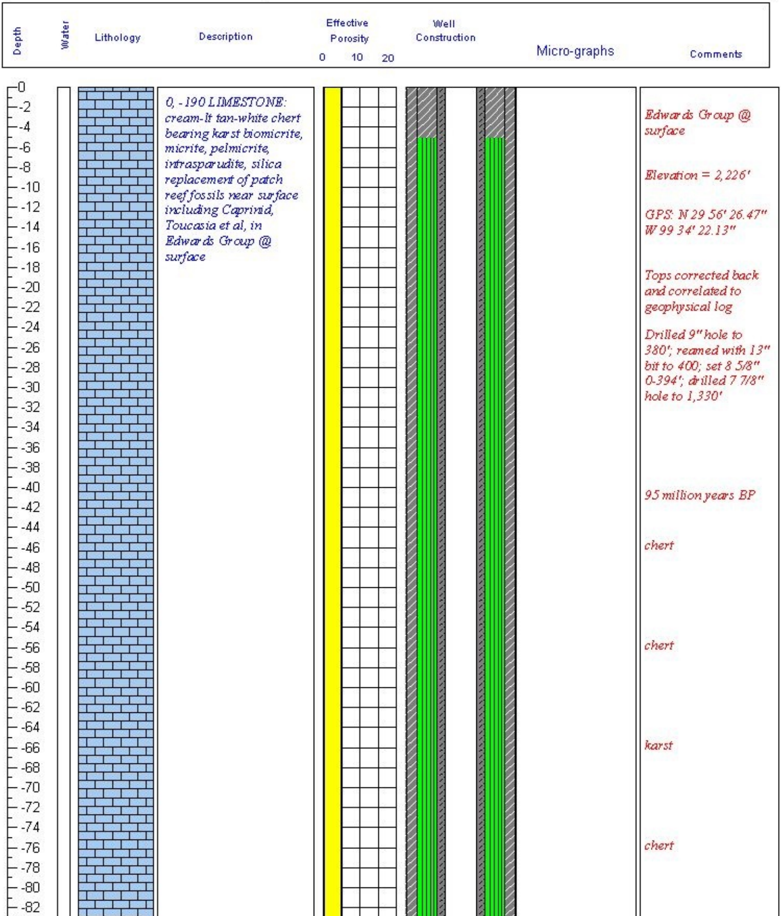
Water Well Log

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

Well HGCD Monitor Well #10
Location West side of RR 187, SW Kerr Co., Texas, Menagerie Ranch
Geologist Wm Feathergail Wilson, PG # 21
Driller Aramdigger
Rig Type Air Rotary
Total Depth 1,330' Completed 11-01-07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Description
Effective Porosity
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0, -190 LIMESTONE: cream-lt tan-white chert bearing karst biomicrite, micrite, pelmicrite, intrasparudite, silica replacement of patch reef fossils near surface including Caprinid, Toucasia et al, in Edwards Group @ surface

Edwards Group @ surface

Elevation = 2,226'

GPS: N 29 56' 26.47" W 99 34' 22.13"

Tops corrected back and correlated to geophysical log

Drilled 9" hole to 380'; reamed with 13" bit to 400; set 8 5/8" 0-394'; drilled 7 7/8" hole to 1,330'

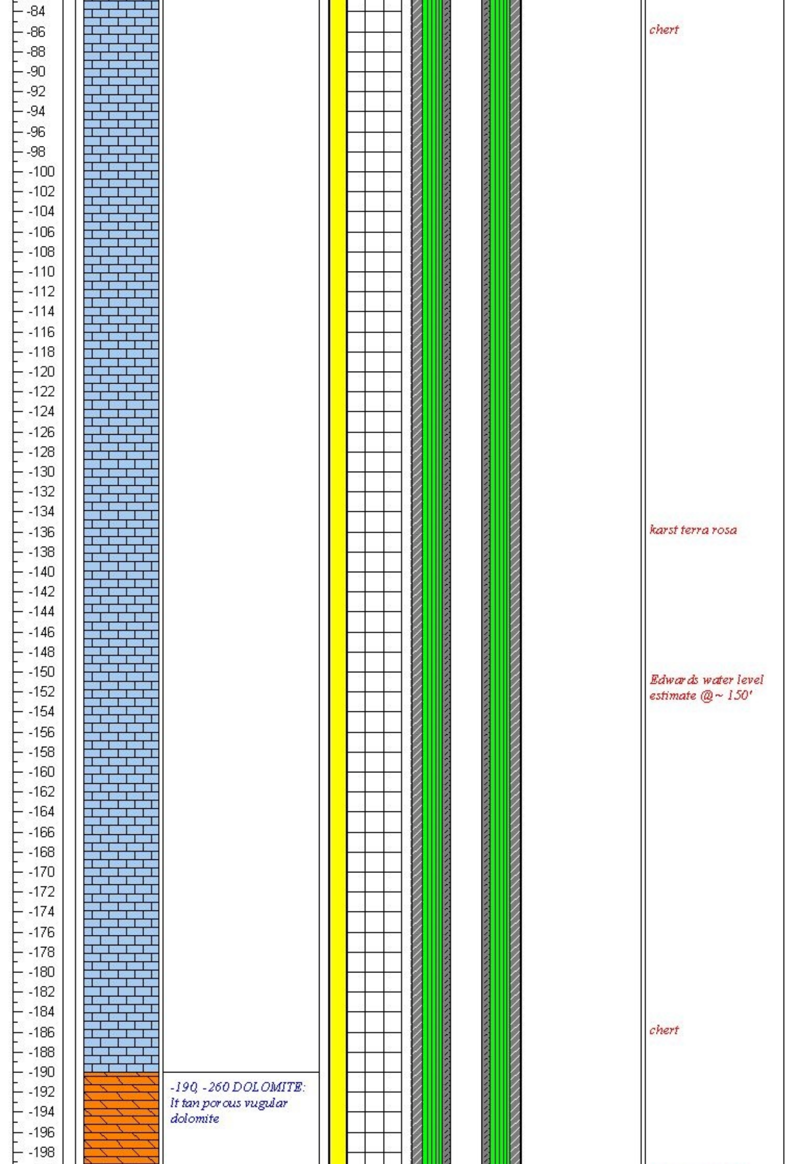
95 million years BP

chert

chert

karst

chert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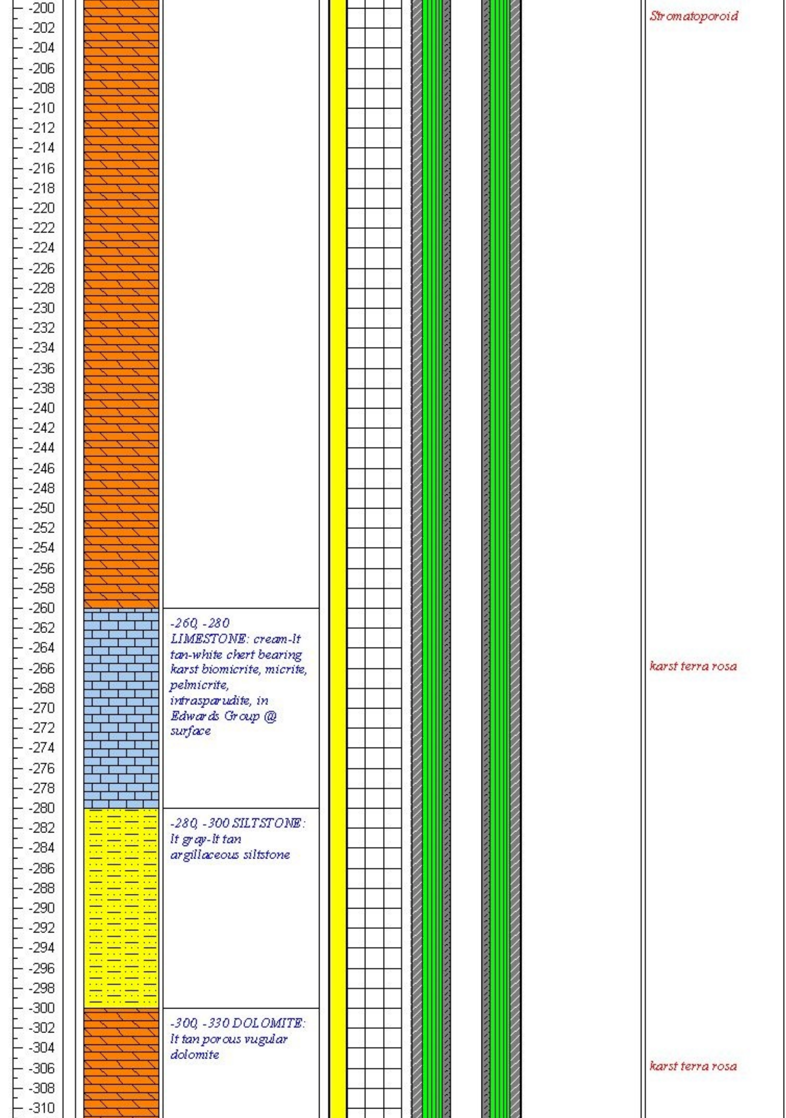
-190, -260 DOLOMITE: lt tan porous vugular dolomite

chert

karst terra rosa

Edwards water level estimate @~ 150'

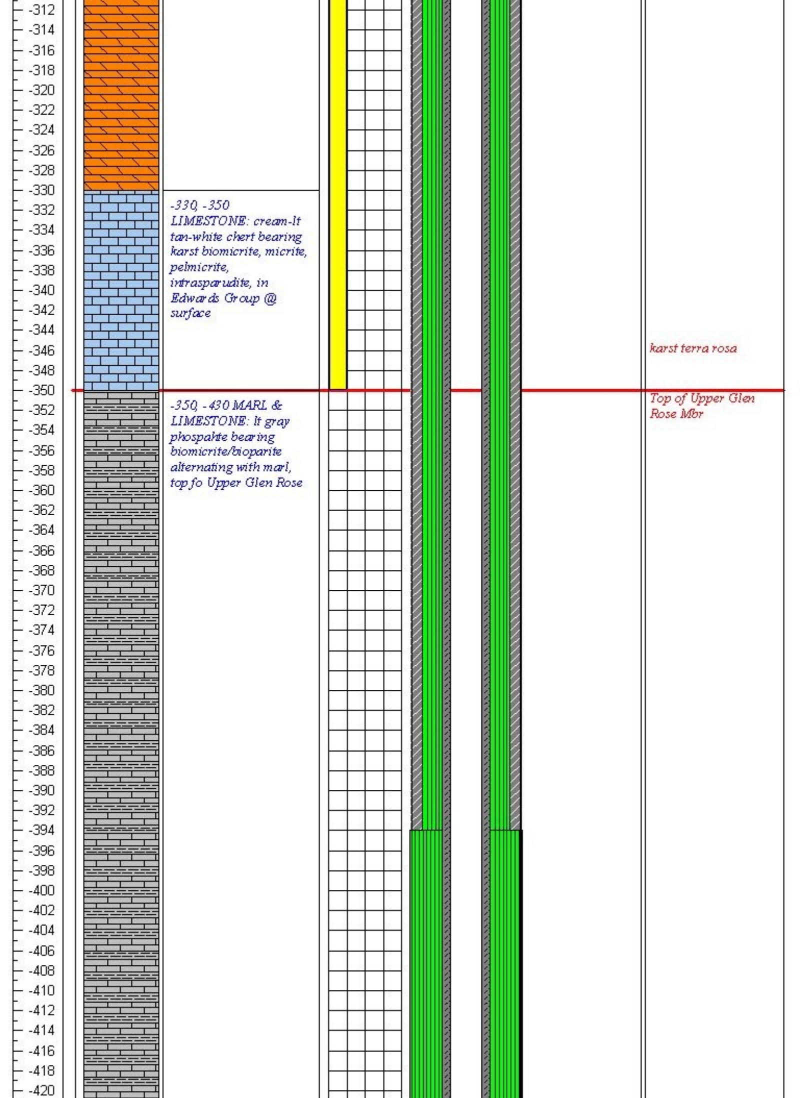
chert



-260, -280 LIMESTONE: cream-lt tan-white chert bearing karst biomicrite, micrite, pelmicrite, intrasparudite, in Edwards Group @ surface

-280, -300 SILTSTONE: lt gray-lt tan argillaceous siltstone

-300, -330 DOLOMITE: lt tan porous vugular dolomite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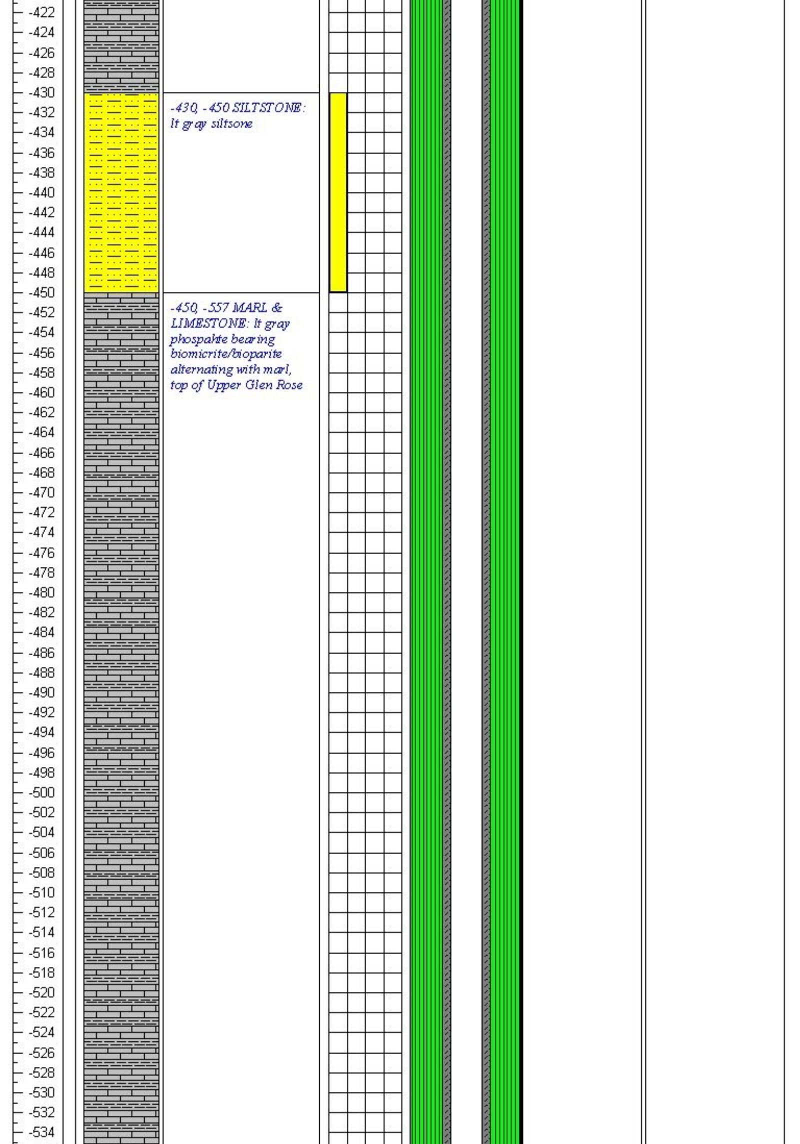
-330, -350 LIMESTONE: cream-lt tan-white chert bearing karst biomicrite, micrite, pelmicrite, infrasparudite, in Edwards Group @ surface

karst terra rosa

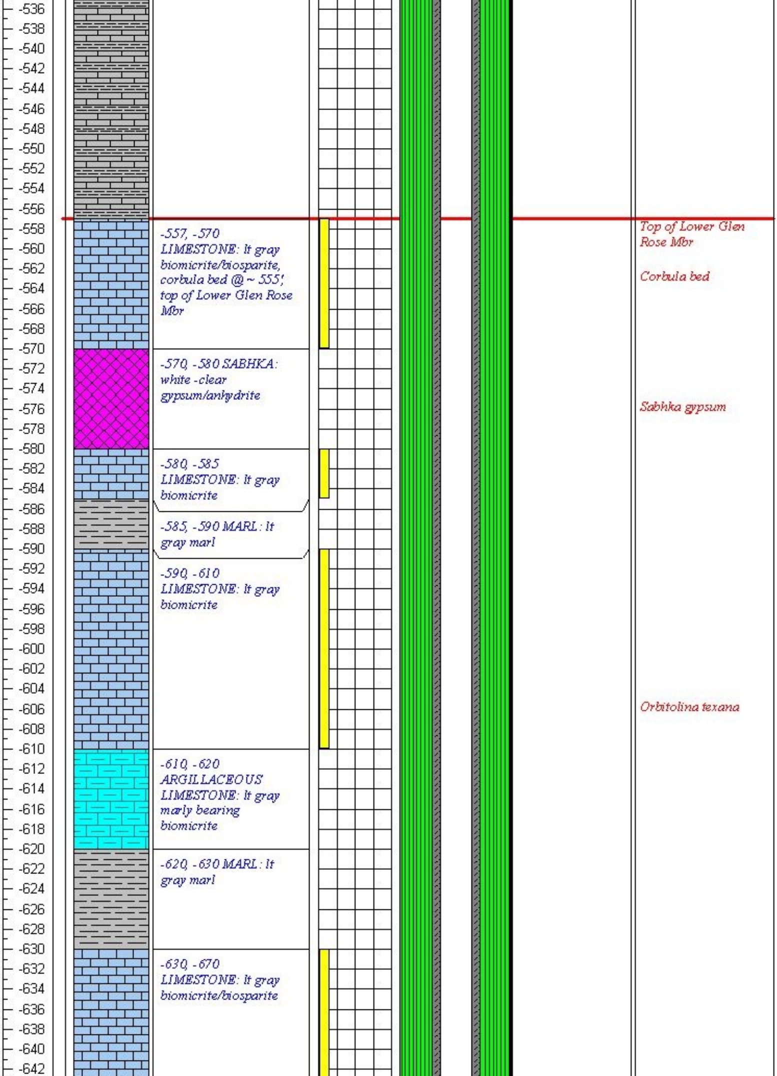
-350, -430 MARL & LIMESTONE: lt gray phospahte bearing biomicrite/bioparite alternating with marl, top fo Upper Glen Rose

Top of Upper Glen Rose Mbr



-430, -450 SILTSTONE: lt gray siltsone

-450, -557 MARL & LIMESTONE: lt gray phospahte bearing biomicrite/bioparite alternating with marl, top of Upper Glen Rose



-557, -570 LIMESTONE: lt gray biomicrite/biosparite, corbula bed @ ~ 555', top of Lower Glen Rose Mbr

-570, -580 SABHKA: white -clear gypsum/anhydrite

-580, -585 LIMESTONE: lt gray biomicrite

-585, -590 MARL: lt gray marl

-590, -610 LIMESTONE: lt gray biomicrite

-610, -620 ARGILLACEOUS LIMESTONE: lt gray marly bearing biomicrite

-620, -630 MARL: lt gray marl

-630, -670 LIMESTONE: lt gray biomicrite/biosparite

Top of Lower Glen Rose Mbr

Corbula bed

Sabhka gypsum

Orbitolina texana

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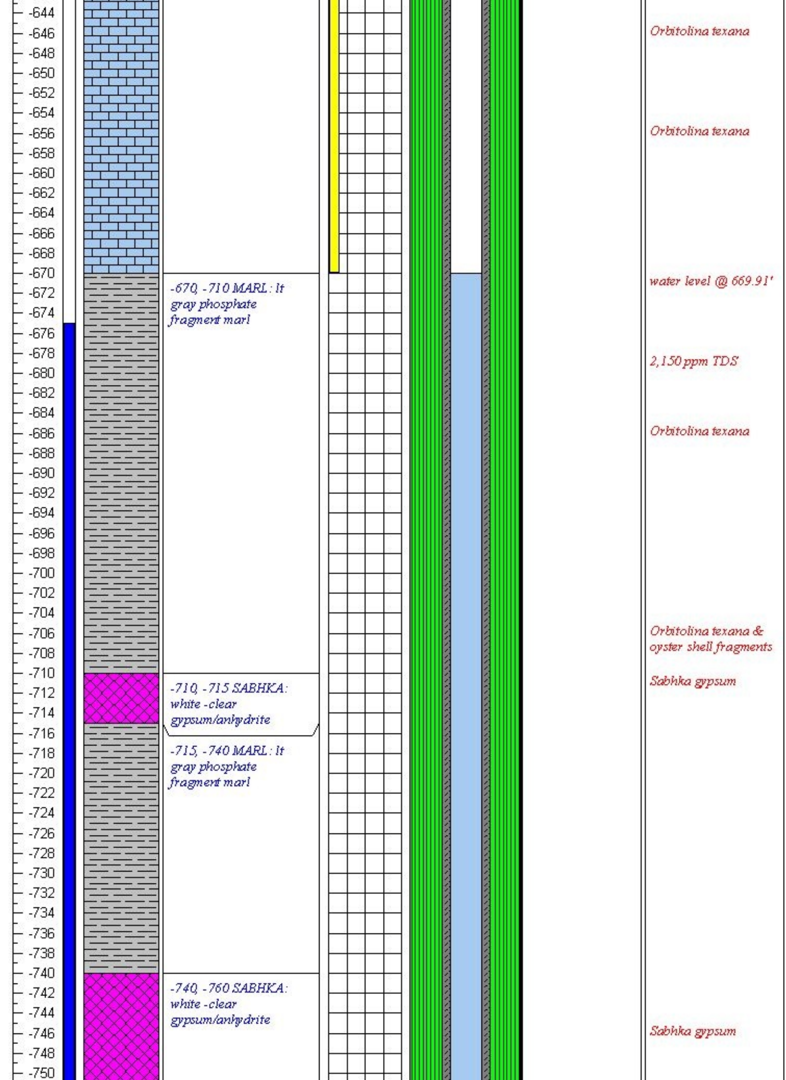
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-670, -710 MARL: lt gray phosphate fragment marl

-710, -715 SABHKA: white -clear gypsum/anhydrite

-715, -740 MARL: lt gray phosphate fragment marl

-740, -760 SABHKA: white -clear gypsum/anhydrite

Orbitolina texana

Orbitolina texana

water level @ 669.91'

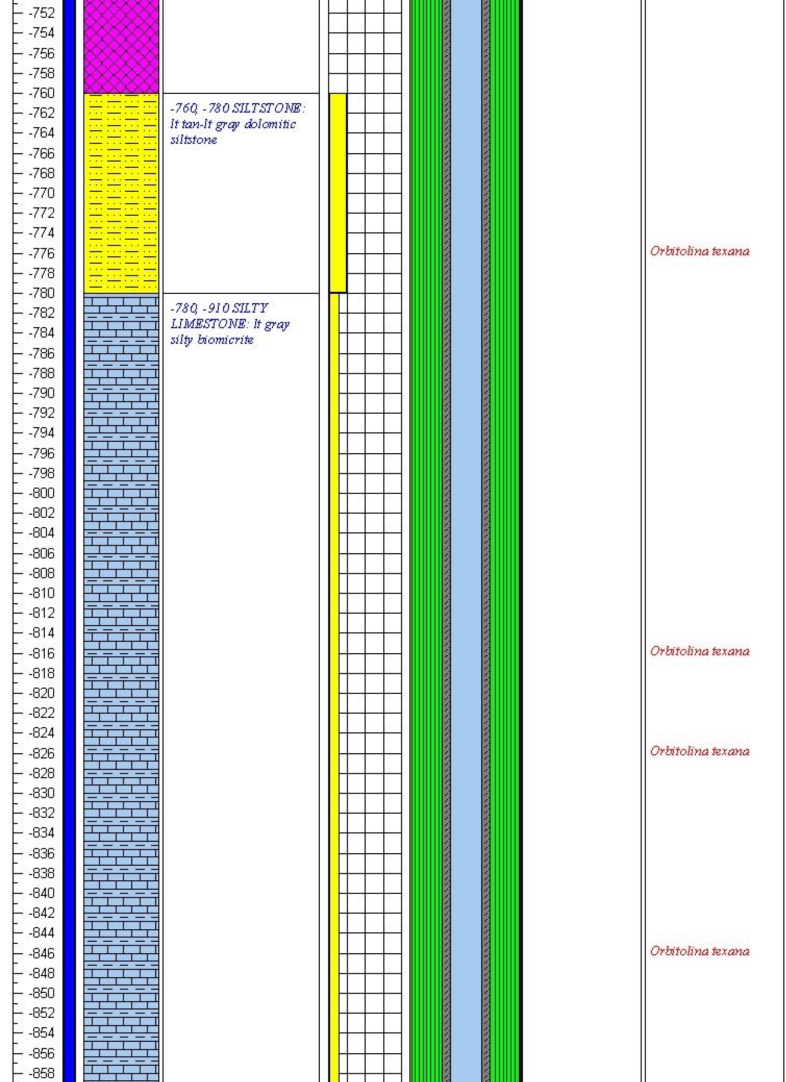
2,150 ppm TDS

Orbitolina texana

Orbitolina texana & oyster shell fragments

Sabhka gypsum

Sabhka gypsum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-760, -780 SILTSTONE: lt tan-lt gray dolomitic siltstone

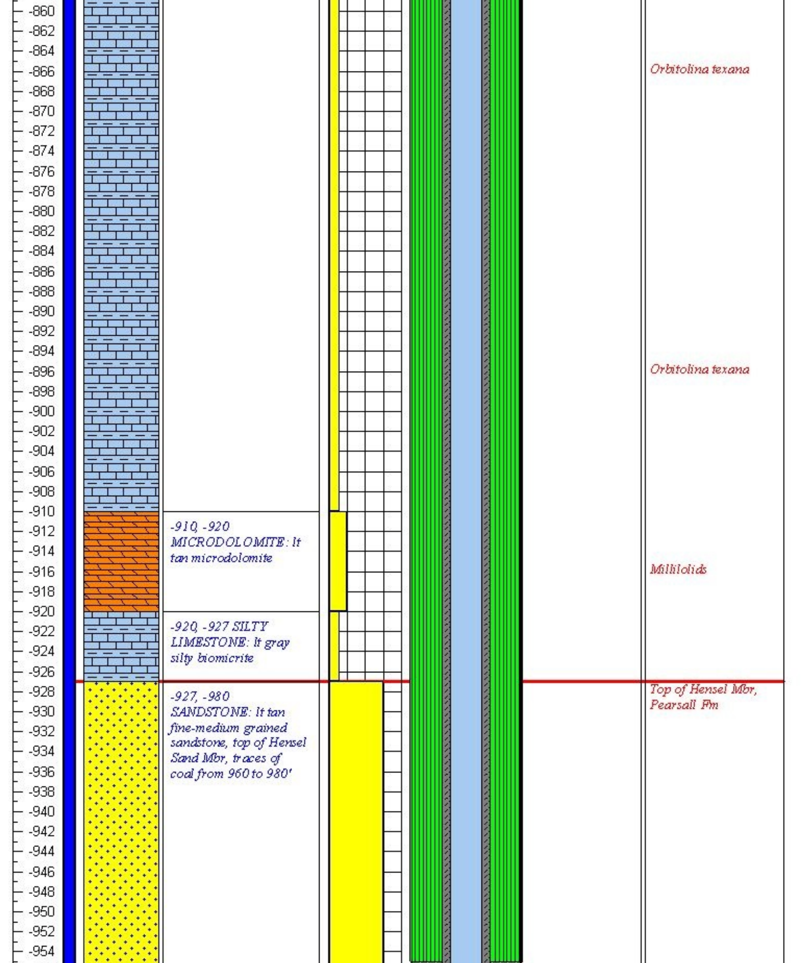
-780, -910 SILTY LIMESTONE: lt gray silty biomicrite

Orbitolina texana

Orbitolina texana

Orbitolina texana

Orbitolina texana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Orbitolina texana

Orbitolina texana

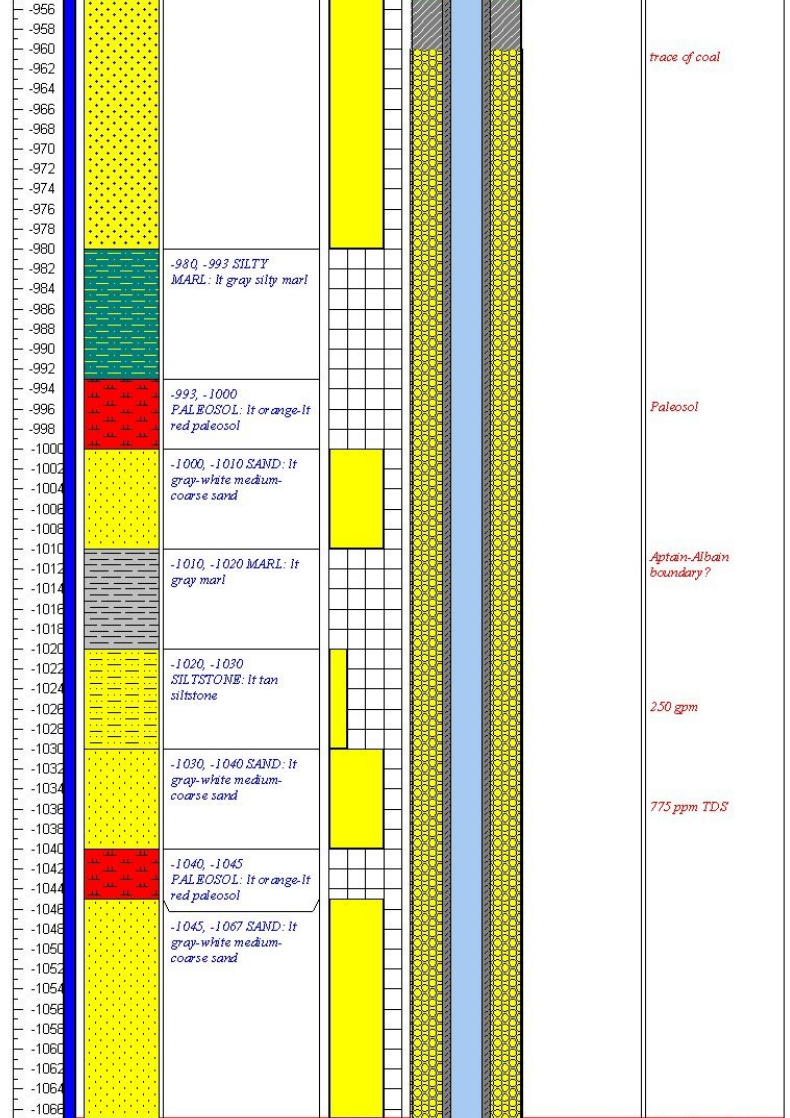
-910, -920 MICRODOLOMITE: lt tan microdolomite

Millilolids

-920, -927 SILTY LIMESTONE: lt gray silty biomicrite

Top of Hensel Mbr, Pearsall Fm

-927, -980 SANDSTONE: lt tan fine-medium grained sandstone, top of Hensel Sand Mbr, traces of coal from 960 to 980'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-980, -993 SILTY MARL: lt gray silty marl

-993, -1000 PALEOSOL: lt orange-lt red paleosol

-1000, -1010 SAND: lt gray-white medium-coarse sand

-1010, -1020 MARL: lt gray marl

-1020, -1030 SILTSTONE: lt tan siltstone

-1030, -1040 SAND: lt gray-white medium-coarse sand

-1040, -1045 PALEOSOL: lt orange-lt red paleosol

-1045, -1067 SAND: lt gray-white medium-coarse sand

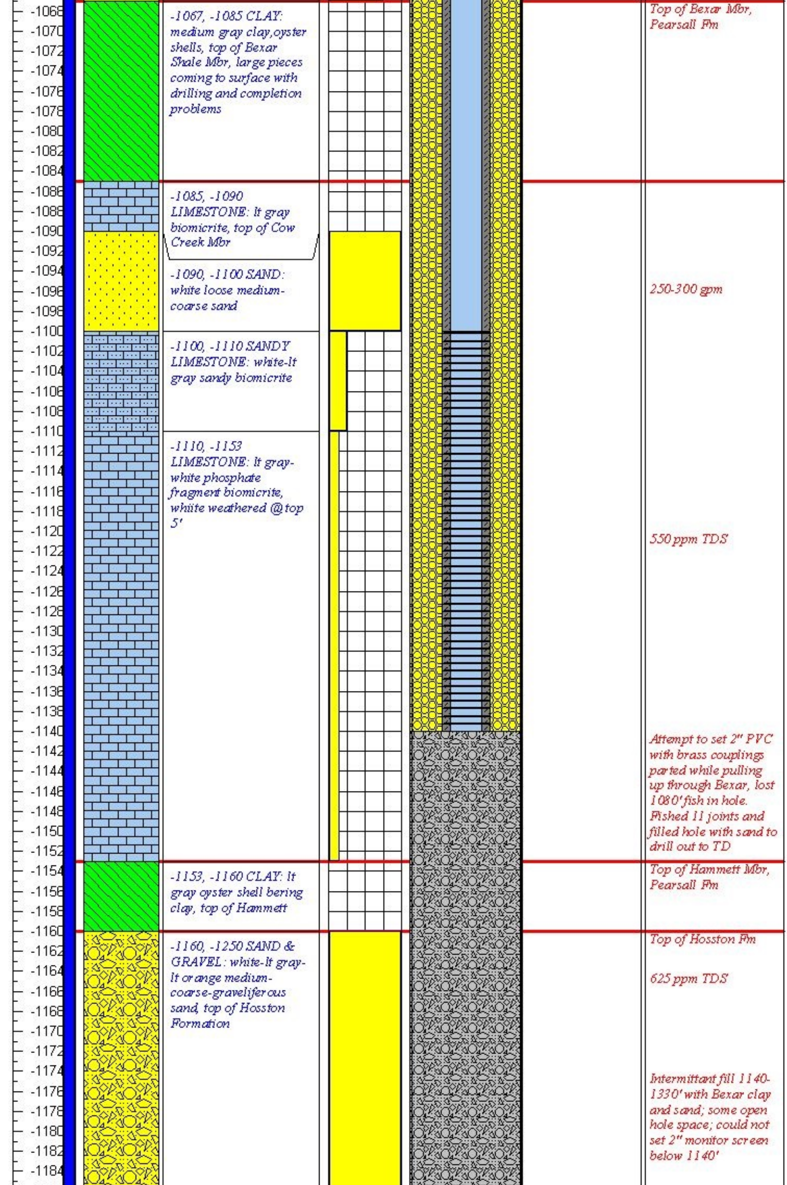
trace of coal

Paleosol

Aptain-Albain boundary?

250 gpm

775 ppm TDS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-1067, -1085 CLAY: medium gray clay,oyster shells, top of Bexar Shale Mbr, large pieces coming to surface with drilling and completion problems

Top of Bexar Mbr, Pearsall Fm

-1085, -1090 LIMESTONE: lt gray biomicrite, top of Cow Creek Mbr

-1090, -1100 SAND: white loose medium-coarse sand

250-300 gpm

-1100, -1110 SANDY LIMESTONE: white-lt gray sandy biomicrite

-1110, -1153 LIMESTONE: lt gray-white phosphate fragment biomicrite, whiite weathered @ top 5'

550 ppm TDS

Attempt to set 2" PVC with brass couplings parted while pulling up through Bexar, lost 1080' fish in hole. Fished 11 joints and filled hole with sand to drill out to TD

-1153, -1160 CLAY: lt gray oyster shell bering clay, top of Hammett

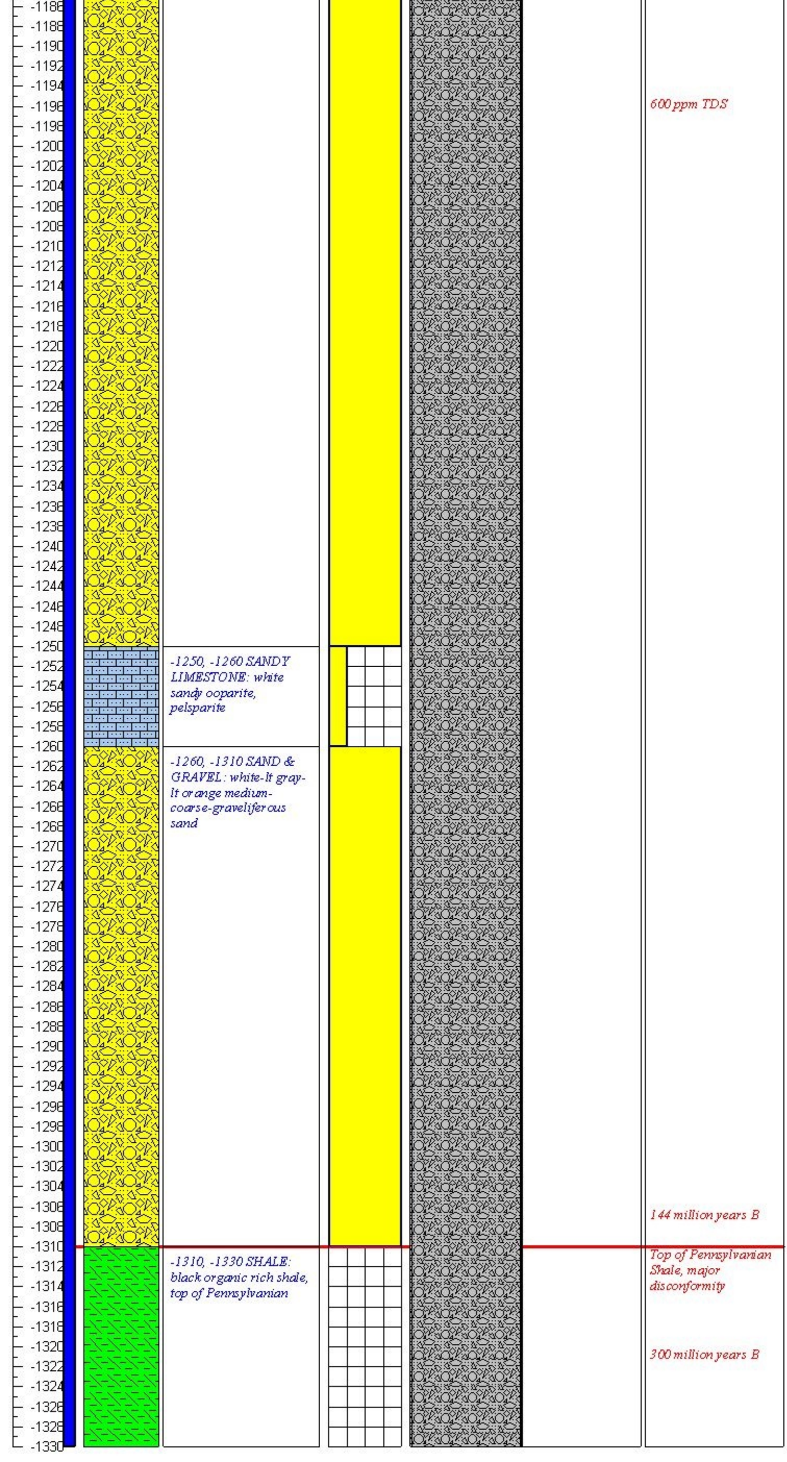
Top of Hammett Mbr, Pearsall Fm

-1160, -1250 SAND & GRAVEL: white-lt gray-lt orange medium-coarse-graveliferous sand, top of Hosston Formation

Top of Hosston Fm

625 ppm TDS

Intermittant fill 1140-1330' with Bexar clay and sand; some open hole space; could not set 2" monitor screen below 1140'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-1250, -1260 SANDY LIMESTONE: white sandy ooparite, pelsparite

-1260, -1310 SAND & GRAVEL: white-lt gray-lt orange medium-coarse-graveliferous sand

-1310, -1330 SHALE: black organic rich shale, top of Pennsylvanian

600 ppm TDS

144 million years B

Top of Pennsylvanian Shale, major disconformity

300 million years B