NORTH DAKOTA GEOLOGICAL SURVEY CIRCULAR NO. 120

Summary of the Turner Oil Co. - Theodore Belanus #1
Pembina County, North Dakota
Permit #713 - Well #700

By Dan E. Hansen
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Turner Oil Company - Theodore Belanus #1, Pembina County, North Dakota, NE 1/4, SE 1/4 Section 28, T. 164N. R. 56W. (2222 feet from south line, 500 feet from east line), Elevation 952 GL.

The Turner Oil Company - Belanus #1 was spudded September 1, 1954, by Zachmeir and Wetch of Mandan, North Dakota. 8 1/4" surface casing was set at 209 feet with 80 sacks of cement. The well was drilled to a total depth of 1544 feet and ended in the Precambrian.

No cores or drill stem tests taken. Schlumberger electric log run. Cement plugs of 10 sacks each were set at the following depths: 1510, 750, 206, and at surface.

Formation tops determined from samples and electric log. Colors were determined from Rock Color Chart.

FORMATION TOPS

Cretaceous System
Dakota 210?
Silurian System
Interlake Group 510
Ordovician System
Upper Stony Mountain 696
Lower Stony Mountain 760
Red River Formation 852
Winnepeg Formation 1433
Winnepeg Sand 1528
Precambrian 1540

0-220 Samples missing.
220-230 Silt, medium-gray, soft, lumpy, micaceous, bentonitic.
230-260 Sandstone, medium-grained, angular subrounded, loose quartz grains. Some pyrite cemented, fragments of pyritized carbonaceous material.
260-270 Silt as above.
270-310 Sandstone, fine-coarse-grained, subangular-subrounded, loose, clear, quartz grains. Some medium-gray calcareous and bentonitic silty shale. Coal fragments.
310-330 Sandstone, as above, much pyrite cement.
330-360 Clay, massive, soft, calcareous, pale red brown and sandstone as above red stained, some white, kaolinitic clay.
360-380 Sandstone and silt, very-fine grained, quartzose, light gray, calcareous with light gray, fine medium-grained crystalline, vuggy limestone.
380-390 Silt, light gray, calcareous.
390-400 Silt, as above and very silty, light gray, dense limestone.
400-410 Clay, red-brown, soft, calcareous with light green-gray, sandy (very fine grained) silt.
410-420 Clay and sandstone, light-green-gray, calcareous clay with very fine grained quartz.
420-450 Clay, moderate-brown, very calcareous.
450-460 Clay, light gray, very calcareous.
460-470 Sandstone, very-fine grained, light gray to white, very calcareous with pale yellowish brown clay, calcareous. Few loose grains of medium coarse rounded quartz.
470-480 Clay, light gray, calcareous, with fine-grained sandstone as above.
480-500 Clay, pale yellowish brown, silty, with few loose quartz grains, sandstone as above, and pale red brown silt.
500-510 Clay, grayish red, calcareous.
510-520 Limestone, dolomitic, white grayish pink, few fragments contained fine grained quartz.
520-590 Dolomite, very pale orange, some red stained, very fine grained, dense to microsucrosic, white, pink, chert. Red silt at 580-590.
590-600 Dolomite, very pale orange, fine grained microsucrosic and medium grained oolitic, spherical, elliptical.
600-650 Dolomite, very pale orange, red stains, limey, fine medium grained, granular. Some red brown silt. Traces cherty fragments.
650-660 Dolomite, pale red, fine grained, crystalline, dense, vuggy, vugs generally filled with moderate orange pink dolomite.
660-690 Dolomite, very pale orange, fine grained, crystalline, dense, some chert some red staining, with red brown clay.
690-710 Siltstone, dolomitic, pale to moderate red. Much loose, fine medium grained rounded frosted clear quartz grains.
710-740 Dolomite, white very pale orange, fine grained, grainy to crystalline, some vuggy porosity.
740-750 Dolomite, light brown, as above.
750-770 Dolomite, grayish orange pink, fine grained, granular, with dolomite as above.
770-830 Limestone, grayish orange pink, fine coarse grained, fragmental, fossiliferous. Many bryozoan fragments. Red stain and shaly.
830-840 Limestone, as above, plus red brown, calcareous silt.
840-860 Limestone, yellowish gray, fine grained, crystalline to sublithographic some paper thin light gray shale.
860-960 Limestone, yellowish gray, pinkish gray, fine medium grained, granular and fragmental to fine grained crystalline.
960-970 Sample missing.
970-990 Limestone as above.
990-1060 Limestone, white yellowish gray, fine medium grained granular to sublithographic. Trace chert.
1060-1165 Limestone, pale yellowish brown, fine medium grained, granular, crystalline, vuggy and intergranular pcrosity, anhydrite filling, trace, fossiliferous.
1165-1200 Limestone, grayish orange pink, yellowish brown, as above.
1200-1265 Limestone, as above, plus fragmental limestone, coarse grained.
1265-1435 Limestone, light gray, yellowish gray, fine grained, crystalline and medium coarse grained, fragmental, slightly shaly, fossiliferous, dense.
1435-1528 Shale, greenish gray, compact, splintery, waxy.
1528-1536 Sandstone, fine medium grained, subangular to rounded, frosted, clear, loose quartz grains.
1536-1538 Shale and sandstone, as above, plus large fragments of pink clear feldspar biotite, and quartz.