

NORTH DAKOTA GEOLOGICAL SURVEY CIRCULAR NO. 135

Summary of the Carter Oil Company - Mayme Morrissey #1
Burke County, North Dakota
Well No. 836 - Permit No. 849

by Clarence Carlson and LaVerne Nelson
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Carter Oil Company - Mayme Morrissey #1, Burke County, North Dakota, SE SE Section 6, T. 161N., R. 92W. (660 feet from south line, 760 feet from east line.) Elevation 2153 K.B., 2140 GL.

The Carter-Morrissey #1 was spudded March 13, 1955. 10 3/4 inch casing was set at 617 feet with 400 sacks of cement. The well was drilled to a total depth of 7322 feet, plugged and abandoned April 17, 1955.

Cement Plugs were set at:

6895 feet - 25 sacks
6315 feet - 25 sacks
5000 feet - 25 sacks
4386 feet - 25 sacks
550 feet - 25 sacks
surface - 10 sacks

Cores: 6842' - 7001'

Logs: Laterolog, Gamma Ray, Microlaterolog.

Drill Stem Tests:

DST #1 - 6768-6788; Tool open 4 hours, weak blow for 3 minutes, then died; recovered 120 feet of drilling mud; IFP 0#, FFP 150# 30 minute SIP 2250 HP 3900#.

DST #2 - 6890-6900; Tool open 4 hours, weak blow throughout; Recovered 330' fluid 150' gas cut mud, sulphur odor, 180' of oil and gas cut sulphur water; IFP 0# FFP 100# 30 minute SIP 1080#, HP 4000#.

DST #3 - 6960-6978; Tool open 4 hours, weak blow throughout; Recovered 550 feet of gas cut salt water with sulphur odor; IFP 40# FFP 304#, 30 minute SIP 0#, HP 4150#.

DST #4 - 7191-7225; Tool open 4 hours, weak blow for 20 minutes, then died; Recovered 120 feet of gas cut mud; FP 0#, 30 min. SIP 0#, HP 4150#.

DST #5 - 7245-7275; Tool open 4 hours, weak blow increasing to fair blow in first hour and decreased to weak blow during last hour; Recovered 750 feet of slightly gas cut salt water with strong sulphur odor; IFP 40#, FFP 455#, 30 min. SIP 2925#, HP 4210#.

Formation tops picked from samples and Laterolog-Gamma Ray. Colors determined from the rock color chart. Not all lithologic units called in the following list.

Cretaceous System	
Pierre Formation (samples)	1550
Niobrara Formation	3410
Greenhorn Formation	3770
Dakota Group Sand	4390
Jurassic System	4950
Piper Lime	5455
Triassic System	
Spearfish Formation	5720
Mississippian System	
Big Snowy Group	6080
Kibbey Lime	6190
Charles Formation	6380
Mission Canyon Formation	6895

680-710	Lignite.
710-770	Siltstone, light greenish gray, argillaceous, very friable.
770-800	Shale, light greenish gray, silty, massive, spongy.
800-890	Sandstone, very fine to fine grained, well rounded, very argillaceous.
890-920	Shale, very light gray to light greenish gray, silty, massive, spongy.
920-1190	Sandstone, very fine grained, well sorted, very argillaceous, very light gray. Trace of limestone fragments.
1190-1250	Shale, dark gray, flaky, disaggregated.
1250-1400	Sandstone, very fine to fine grained, well sorted, friable, angular to subangular, argillaceous. Some black, flaky shale.
1400-1520	Siltstone, very light gray, argillaceous.
1520-1550	Shale, very light gray to light greenish gray, silty massive, disaggregated.
1550-2570	Shale, medium gray and moderate reddish brown, flaky, slightly silty, bentonitic.
2570-3470	Shale, medium gray, flaky, disaggregated, bentonitic. Some bluish white bentonite. Some moderate reddish brown, flaky shale.
3470-3770	Shale, dark gray to black, flaky, disaggregated, first white specks, calcareous. Some pyrite.
3770-3950	Shale, medium dark gray, massive, compact, second white specks, calcareous. Fragments of Inoceramus prisms.
3950-4100	Shale, black, fissile, compact, trace of pyrite.
4100-4410	Shale, medium light gray, flaky, disaggregated. Some shale as above.
4410-4440	Siltstone, white friable, much shale as above.
4440-4500	Shale, medium light gray, lumpy, disaggregated. Trace of very fine grained sandstone and quartz granules.
4500-4530	Shale, medium light gray and moderate reddish brown, lumpy, disaggregated, silty.
4530-4780	Shale, medium gray to dark gray, massive, compact. Very fine grained, well cemented sandstone. Trace of glauconite.
4780-4860	Shale, as above. Some fine grained sandstone. Some ironstone (Siderite) pellets.
4860-4910	Shale, as above. Some fine grained, glauconitic sandstone. Some greenish gray shale.

4910-4960 Sandstone, fine grained, friable, calcareous cement. Some shale as above.

4960-5260 Shale, greenish gray, light olive gray, moderate reddish brown, flaky, earth, to waxy luster. Some siltstone and sandstone as above.

5260-5340 Shale, greenish gray, waxy, platy and massive, compact to brittle. Little moderate reddish brown, compact to brittle shale.

5340-5380 Calcareous sandstone, fine grained, subangular, calcite cemented, quartz grains. Some limestone. Shale as above.

5380-5440 Shale, moderate reddish brown and greenish gray, flaky and fissile, compact. Trace of white fine grained limestone and anhydrite.

5440-5580 Limestone, very pale orange, sublithographic, dense. Some shale as above. Trace of milky chert.

5580-5600 Shale, Greenish gray, moderate reddish brown, olive gray, splintery, brittle.

5600-5670 Limestone, very pale orange, sublithographic. Some shale as above. Some gypsum and anhydrite.

5670-5730 Shale, greenish gray, slightly calcareous, disaggregated. Some limestone as above.

5730-6000 Siltstone, moderate reddish brown, anhydritic, argillaceous, sandy siltstone. Numerous medium sized quartz grains throughout.

6000-6080 Sandstone, fine to medium, pale red to moderate reddish orange.

6080-6110 Sandstone, poorly sorted, subangular to well rounded, light brownish gray to pale red.

6110-6180 Sandstone, moderate reddish orange, argillaceous, anhydritic, silty.

6180-6200 Gypsum, white chalky. Much medium dark gray, massive, compact to brittle shale.

6200-6210 Limestone, pale red, massive crystalline.

6210-6230 Limestone, yellowish gray, very fine grained to sublithographic.

6230-6370 Sandstone, moderate reddish orange, argillaceous, calcareous. Some limestone as above. Some anhydrite inclusions.

6370-6390 Anhydrite and Gypsum, white and pale red, massive and chalky. Some sandstone as above. Some yellowish gray, fine granular limestone.

6390-6410 Shale, medium gray.

6410-6420 Dolomite, pale red, fine grained. Some anhydrite, white, dense.

6420-6440 Limestone, light brownish gray, fine to medium crystalline, dense with anhydrite inclusions.

6440-6464 Anhydrite, white, dense, some limestone as above.

6464-6487 Salt.

6487-6500 Limestone, light brownish gray, very finely crystalline, dense.

6500-6505 Limestone, light brownish gray, very finely crystalline to fine grained, slight fluorescence and cut from granular part.

6505-6510 Limestone, light brownish gray, very finely crystalline to fine grained, granular to oolitic.

6510-6525 Limestone, light brownish gray, fine grained, granular and oolitic.

6525-6535 Limestone, light brownish gray, fine grained, oolitic, and finely crystalline, dense.

6535-6540 Limestone, light brownish gray, finely crystalline, dense.

6540-6550 Limestone, light brownish gray, finely crystalline and fine, grained, oolitic.

6550-6555 Anhydrite, light gray, dense, limestone, light brownish gray, finely crystalline, dense.

6555-6570 Anhydrite, light gray to white, dense.

6575-6600 Limestone, light brownish gray, finely crystalline, dense, some anhydrite, light gray.

6600-6610 Anhydrite, white, dense, some limestone, light brownish gray, fine grained, oolitic.

6610-6645 Limestone, light brownish gray, finely crystalline, dense.

6650-6670 Limestone, light brownish gray, finely crystalline, dense.

6670-6685 Anhydrite, light gray and white, dense, some limestone, light brownish gray, very finely crystalline, dense.

6685-6710 Limestone, light brownish gray, very finely crystalline.

6710-6720 Salt.

6720-6730 Limestone, light brownish gray, fine grained to finely crystalline and anhydrite, white, dense,

6730-6745 Anhydrite, white, dense.

6745-6750 Anhydrite, white, dense, some limestone, light brownish gray, very finely crystalline, dense.

6750-6765 Limestone, light brownish gray, very finely crystalline, dense to fine grained.

6770-6800 Limestone, light brownish gray, fine grained to finely crystalline.

6800-6805 Limestone, light brownish gray, fine grained, fragmental, some fluorescence and cut with C cl_4 .

6805-6810 Limestone, light brownish gray, fine grained, fragmental.

6810-6825 Anhydrite, light gray, dense, some limestone as above.

6825-6840 Limestone, light brownish gray, fine grained to finely crystalline, some fluorescence and slight cut from 6825-30.

Cores

6842-6865 Dolomite, light gray, finely crystalline, dense.

6865-6870 Limestone, light brownish gray, fine grained, slightly argillaceous, fair fluorescence and cut, also limestone, medium gray, finely crystalline, shaly.

6870-6875 Dolomite, light brownish gray, fine grained, slight fluorescence and cut, limestone, medium gray finely crystalline, stained, slight fluorescence and cut.

6875-6890 Limestone, light brownish gray, fine grained to finely crystalline.

6890-6895 Limestone, light brownish gray, finely crystalline, fragmental in part.

6895-6900 Limestone, light brownish gray, fine grained, oolitic.

6900-6905 Limestone, yellowish gray, finely crystalline with a few vugs filled with medium to coarse crystals of calcite, some stylolite seams.

6905-6910 Limestone, yellowish gray, oolitic, with finely crystalline matrix filling pore space.

6910-6915 Limestone as above and limestone yellowish gray, fine grained with medium to coarse crystals of calcite.

6915-6920 Limestone, yellowish gray, finely crystalline, oolitic to finely crystalline, slight fluorescence and cut.

6920-6925 Limestone, light brownish gray, finely crystalline to fine grained fragmental, tight, a little staining and fair fluorescence, slight cut.

6925-6930 Limestone, light brownish gray, finely crystalline, fragmental in part, dense.

6930-6935 Limestone, light brownish gray, fine grained to oolitic.

6935-6945 Limestone, yellowish gray, finely crystalline to oolitic, vuggy, vugs filled with pale brown and colorless anhydrite.

6945-6955 Limestone, light brownish gray, very finely crystalline, dense, some anhydrite filling fractures and vugs, some stylolites 6950-55.

6955-6960 Limestone, light brownish gray, very finely crystalline, dense and fragmental, slightly argillaceous.

6960-6965 Limestone, yellowish gray, finely crystalline, vuggy, vugs filled with colorless anhydrite, some fluorescence and very slight cut, also some limestone, light brownish gray, very fine grained, fragmental.

6965-6970 Limestone, yellowish gray, finely crystalline to fine grained, some anhydrite filling.

6970-6975 Limestone, yellowish gray, oolitic to pisolitic in finely crystalline matrix with some anhydrite filling of vugs and pores.

6975-6980 Limestone, light brownish gray, very finely crystalline, dense.

6980-6985 Limestone, light brownish gray, finely crystalline, fragmental with some anhydrite filling.

6985-7000 Limestone, light brownish gray, oolitic to pisolitic, with finely crystalline matrix, vuggy, vugs mostly, filled with colorless anhydrite.

Samples

7000-7015 Limestone, light brownish gray, finely crystalline to oolitic with anhydrite filling.

7015-7040 Limestone, yellowish gray, oolitic to pisolitic with anhydrite filling, some finely crystalline.

7040-7060 Limestone, yellowish gray, fine grained, fragmental to oolitic.

7060-7100 Limestone, light brownish gray, fine grained, fragmental slightly argillaceous.

7105-7130 Limestone, light brownish gray to yellowish gray, finely crystalline to fine grained, granular.

7130-7145 Limestone, yellowish gray, fine grained, fragmental to oolitic.

7145-7160 Dolomite, light brownish gray, microsucrosic, limey some limestone as above.

7160-7185 Limestone, light brownish gray, fine grained, granular to fine grained, fragmental.

7185-7200 Limestone, light brownish gray, fine grained, fragmental.

7200-7245 Limestone, light brownish gray, fine grained to finely crystalline.

7245-7270 Limestone, yellowish gray, fine grained, fragmental, slightly argillaceous.

7270-7285 Limestone, very light gray to yellowish gray, fine grained fragmental, slightly argillaceous.

7285-7310 Limestone, yellowish gray, fine grained, granular to finely crystalline.

7310-7320 Limestone, yellowish gray, fine grained, fragmental.