# NORTH DAKOTA GEOLOGICAL SURVEY CIRCULAR NO. 197

Summary of the Texota Oil Company - Edward L. Ely #1
Burke County, North Dakota
Well No 898 - Permit No. 910

by Dan Hansen
July 7, 1958

The Texota Oil Company - E. L. Ely No. 1, Burke County, North Dakota. Location: 660 feet from the south line and 660 feet from the east line of Section 32, T. 163N., R. 93W., Elevation: 1927 G.L. - 1936 K.B.

The Texota Oil Company - E. L. Ely No. 1 was spudded July 7, 1955, drilled to a total depth of 6999 feet, found dry and plugged August 9, 1955.

Logging Record:

Electric Log
Run 1, 532-5190, 7/18/55
Microlog
Run 1, 3700-5188, 7/18/55
Microlaterloog
Run 1, 5900-6994, 8/7/55
Laterolog-3 and Gamma Ray
Run 1, 5190-6995, 8/7/55

CORES: None

TESTS:

DST. No. 1, 5967-6017, recovered 50' mud, SI BHP 245#.

DST. No. 2, 6344-6371, recovered 50' slightly gas cut mud, 90' SW cut mud and 933' salt water. FFP 560#, SIBHP 2825#.

DST. No. 3, 6614-6691, recovered 30' drilling mud, 180' slightly oil and gas cut mud, 90' salt water. FFP 225#, SIBHP 2900#.

CASING RECORD:

10 3/4 inch, 32.75#, H-40 casing set at 532 feet with 335 sacks cement.

PLUGGING RECORD:

Surface - top of casing.
Cut off and cemented at top.
Five sacks of cement.
495- 532 - 15 sacks of cement
4060-4000 - 15 sacks of cement
4490-4550 - 15 sacks of cement
6250-6310 - 15 sacks of cement
6590-6630 - 15 sacks of cement

Formation tops were determined from the samples and the electric and laterolog - Gamma Ray logs. Not all formation tops were called. Color names were taken from the 1948 Rock Color Chart which was distributed by the National Research Council, Washington, D.C.

FORMATION TOPS

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| Cretaceous System | |
| Pierre Shale | 1202 |
| Niobrara formation | 2880 |
| Greenhorn formation | 3458 |
| Mowry (L. K.) | 3723 |
| Newcastle sandstone | 3827 |
| Basal sandstones | 4048 |
| Jurassic System | |
| Piper Limestone | 5138 |
| Triassic System ? | |
| “Spearfish” | 5352 |
| Mississippian System | |
| Kibbey Lime | 5707 |
| Charles | 5870 |
| Mission Canyon | 6421 |

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| 0-800 | Samples missing. |
| 800-920 | Clay, silty, light gray and light gray fine-grained sandstone. Small amounts of lignite fragments. |
| 920-950 | Shale, medium dark gray, massive to flaky. |
| 950-1000 | Sandstone, light gray, fine medium grained, calcareous in part, green mineral, micaceous, predominately quartz. Light gray clay and silty, as above. Lignite fragments. |
| 1000-1070 | Clay and silt, light gray many fragments of lignite. |
| 1070-1170 | Sandstone clay and silt as above, light brown silty clay. |
| 1170-1210 | Sandstone light gray medium - coarse grained quartzose. Light gray clay and silt. |
| 1210-1230 | Sandstone light gray fine grained, calcareous in part, green mineral light gray silt and clay. |
| 1230-1400 | Clay, silty, light gray to olive gray with pale red clay. Fragments of sandstone as above. Traces medium light gray clay. |
| 1400-2900 | Shale, medium light gray to medium gray earthy, massive and spongy. Traces of light gray bentonite, brown concretion fragments and calcite prisms. |
| 2900-3160 | Shale, medium gray massive silty. |
| 3160-3250 | Shale, medium gray as above. “First white specks”, calcareous. |
| 3250-3400 | Shale medium gray to medium dark gray massive. |
| 3400-3480 | Shale, medium dark gray, massive to flaky. |
| 3480 | Circulation 40 minutes. Shale, medium dark gray massive calcareous “second white specks”. Small amounts of light gray fragmental limestone. |
| 3480-3600 | Shale, medium dark gray massive calcareous; “white specks”, light gray fragmental limestone, and calcite prisms. |
| 3600-3840 | Shale, medium dark gray to dark gray massive to flaky. |
| 3844 | Circulation 30 minutes. Shale as above. Fragments of cemented, fine-grained sandstone, fair porosity. |
| 3840-3870 | Shale, medium dark gray to dark gray. Traces of above sandstone. |
| 3870-4040 | Shale, as above. |
| 4040-4090 | Shale, medium dark gray to dark gray. Massive with small amounts of fine-grained quartzose sandstone. Calcareous cement and light gray siltstone. |
| 4092 | Circulation one hour. Shale and sandstone as above. |

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| 4090-4200 | Shale medium dark gray to dark gray. Traces of sandstone and siltstone as above. |
| 4206 | Circulation one hour. Shale as above, clay, light olive gray and reddish brown variegated. Iron carbonate siltstone “pellets.” Traces of medium quartz grains. |
| 4200-4280 | Samples as above. |
| 4288 | Circulation one hour. Shale as above and fine-grained quartzose sandstone fragments. |
| 4280-4360 | Samples as above. |
| 4368 | Circulation one and one quarter hours. |
| 4360-4410 | Shale as above with traces of medium to coarse grained quartz grains. |
| 4410 | Circulation one hour. Samples as above. |
| 4410-4440 | Samples as above. |
| 4440-4540 | Shale, medium dark gray to dark gray; greenish gray to light olive gray silty shale; and light gray arenaceous silty limestone and calcareous silty very fine grained sandstone, slightly pyritic. |
| 4540-4590 | Shales as above, sandstone very light gray, calcareous very fine grained slightly glauconitic. |
| 4590 | Circulation one hour. Sandstone, very light gray, fine-grained calcareous. Shales as above. |
| 4590-4670 | Samples as above. |
| 4670-4690 | Siltstone calcareous. Shales as above. |
| 4690-4700 | Shale greenish gray to olive gray, dark gray, and brownish gray. |
| 4700-4850 | Shale greenish gray to olive gray, silty, dark gray shale. |
| 4850-4960 | Shale as above with very small chips of very light gray limestone, arenaceous limestone and calcareous siltstone. |
| 4960-4990 | Shales as above, and reddish brown splintery shale. |
| 4990-5030 | Shales as above and very light gray calcareous siltstone and argillaceous limestone. |
| 5030-5040 | Limestone, light brownish gray fragmental coarse-grained with a very fine-grained matrix and therefore dense, shales as above. |
| 5040 | Circulation one hour. Limestone as above and arenaceous limestone, shales as above. |
| 5040-5060 | Samples as above. |
| 5060-5070 | Shales as above. |
| 5070-5075 | Limestone, light brownish gray dense fine-grained. Shales as above. |
| 5075-5110 | Shale greenish gray, splintery. Dark gray shale and traces of above limestone. |
| 5110-5150 | Shales greenish gray dark gray and reddish brown splintery. |
| 5150-5190 | Limestone very light gray dense fine grained shales as above. |
| 5190-5200 | Shales as above. Traces of anhydrite and limestone as above. |
| 5206 | Circulation one and one half hours. Samples as above. |
| 5200-5260 | Shale greenish gray and reddish brown splintery dark gray shale also. |
| 5260-5280 | Limestone brownish gray, dense fine-grained. Shales as above and traces of white gypsum. |
| 5280-5340 | Shales as above. |
| 5340-5370 | Shales as above with white clear anhydrite. |
| 5370-5410 | Siltstone shale pale reddish brown sandy. |
| 5410-5560 | Siltstone shale and sandstone very fine-grained pale reddish brown with a few loose quartz grains that are rounded and frosted. |

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| 5560-5590 | Silt and shale, pale reddish brown anhydritic, sandy. Mostly cave from above. |
| 5590-5690 | Samples missing. |
| 5690-5720 | Silt and shale as above, traces coarse-grained rounded frosted quartz grains. |
| 5720-5740 | Limestone pinkish gray dense fine medium-grained subcrystalline anhydrite inclusion. |
| 5740-5760 | Sandstone pinkish gray to very light gray fine-grained calcareous quartzose. |
| 5760-5910 | Mostly cave. Grayish red shale and traces of above sandstone traces of white anhydrite from 5830-5910. |
| 5910-5930 | Limestone light brownish gray to pale red fragmental oolitic in part anhydritic dense. |
| 5930-5950 | Anhydrite white pinkish gray dense crystalline cave as above. |
| 5950-5960 | Anhydrite as above. Limestone moderate pink shale and sandstone as above. |
| 5960-5970 | Anhydrite, light gray dense shaly. |
| 5970-6020 | Limestone light brownish gray dense crystalline trace vuggy to fragmental coarse-grained much recrystallized small amounts anhydrite, much cave. |
| 6020-6150 | Anhydrite, white light gray shaly much cave. |
| 6150-6300 | Cave, occasional trace of light brownish gray fragmental limestone and light gray anhydrite. |
| 6300-6330 | Anhydrite light gray to white. |
| 6330-6350 | Cave, traces of anhydrite and light brownish gray limestone granular. |
| 6350-6410 | Limestone very light brownish gray to light gray fragmental dense with traces granular limestone as above. |
| 6410-6500 | Limestone, light brownish gray to light gray dense very fine-grained, crystalline to fragmental subcrystalline traces of anhydrite. |
| 6500-6540 | Limestone, very light brownish gray dense, crystalline fine-grained trace vuggy porosity. Trace oolites fragmental. |
| 6540-6550 | Limestone, light gray to very light brownish gray fragmental fine-grained grainy and granular. Also dense crystalline shaly, medium gray shale. Trace of dark gray shale. |
| 6550-6580 | Limestone, light gray to medium gray dense grainy to granular, silty medium gray shale. |
| 6580-6600 | Limestone, light gray to medium gray fragmental, grainy partially oolitic sandy appearance and medium gray shale all silty. Varys to a dense crystalline light brownish gray limestone with carbonaceous streaks. |
| 6600-6650 | Limestone, light brownish gray fragmental fine-medium-grained grainy silty with small amounts of shale and sandstone, light to medium gray calcareous quartzose. |
| 6650-6680 | Limestone, light brownish gray fragmental fine medium-grained, grainy. |
| 6680-6710 | Limestone light brownish gray to medium light gray dense, fragmental to crystalline fine-grained. |
| 6710-6850 | Cave, mostly shale, limestone light brownish gray fragmental dense chalky in part traces pink anhydrite in all samples. |
| 6850-6910 | Limestone brownish gray fine-grained crystalline and sub-crystalline inclusions of anhydrite. Much medium gray shale. |

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| 6910-6940 | Shale dark gray, calcareous massive compact. Traces of shell fragments. |
| 6940-6995 | Limestone, light gray to a very light brownish gray, dense fragmental fine-grained. Chalky in part. |
| | T.D. 6995 samples. |
| | T.D. 6999 drill. |