

NORTH DAKOTA GEOLOGICAL SURVEY CIRCULAR NO. 117

Summary of the Calvert Exploration Co. - C. C. Nitschke #1
McIntosh County, North Dakota
Well #620 - Permit #634

by John L. Hainer

Calvert Exploration Co. - C. C. Nitschke #1 - Wildcat, McIntosh County, North Dakota, Section 13-T130N-R69W - 1980 feet from south line and 660 feet from east line of Section. Elevation: GL - 2031 feet, KB - 2042 feet.

The Calvert - Nitschke #1 was spudded August 30, 1954, drilled to a total depth of 3594 feet, found dry and plugged according to regulations September 8, 1954. No drill stem tests or cores were taken. Electric log was run by Schlumberger September 8, 1954. Surface casing - 10 3/4" was set at 195 feet with 125 sacks of cement.

Plugging Record:

Depth	Sacks of Cement
0- 45	15
196- 241	15
2130-2175	15
2295-2340	15
2400-2445	15
2800-2845	15
3450-3495	15

Formation tops were determined from samples and electric log. Colors were determined from rock color chart.

	TOPS
Cretaceous System	
Niobrara fm.	1008
Greenhorn fm.	1490
"Muddy" sandstone	1920
Dakota sandstone	2130
Jurassic System	
Piper Lime	2385
Mississippian	
Lodgepole Fm.	2405
Ordovician System	
Red River fm.	2797
Winnipeg shale	3307
Winnipeg sand	3448
Cambrian System	3458
Pre-Cambrian System	3589
Total Depth	3594

0-70	Glacial drift.
70-100	Shale, medium light gray, silty, lumpy. Glacial drift.
100-160	Shale as above.
160-350	Shale, medium dark gray to dark gray, silty, calcareous, lumpy.
350-380	Shale, medium to medium dark gray, slightly calcareous, lumpy.

380-500 Shale as above, little bentonite, very light gray.
 500-710 Shale, medium light gray, lumpy.
 710-830 Shale as above, few limestone fragments, yellowish gray 5Y7/2, finely crystalline.
 830-860 Shale, medium light to medium dark gray, lumpy to foliated. Limestone as above inoceramus prisms.
 860-890 Shale and limestone as above. Bentonite, very light gray.
 890-920 Shale, medium light to medium gray, lumpy, bentonite.
 920-950 Shale as above.
 950-1040 Shale, medium dark gray, lumpy, limestone, pale reddish brown 10R5/4, finely crystalline.
 1040-1100 Shale and limestone as above. Bentonite.
 1100-1220 Shale, medium gray, foliated, "white specks". Little bentonite, light bluish gray 5B7/1. Pyrite. Few loose quartz sand grains.
 1220-1250 Shale with white specks, pyrite and sand as above.
 1250-1310 Shale, medium to dark gray, foliated to lumpy, few "white specks". Pyrite.
 1310-1460 Shale, medium to dark gray, foliated, pyrite.
 1460-1490 Shale, medium to medium dark gray, foliated to lumpy, sandstone, medium light gray, silty, highly calcareous, fine grained, angular quartz, pyrite.
 1490-1520 Shale, medium light to medium dark gray, pyrite. Inoceramus prisms.
 1520-1580 Poor samples - predominantly caving of glacial material. Shale, medium light to medium dark gray, some "white specks". Inoceramus pyrite.
 1580-1670 Shale, medium light to medium dark gray, lumpy to foliated. Inoceramus. Pyrite.
 1670-1730 Shale, medium light to medium dark gray, foliated, few white specks. Inoceramus. Pyrite.
 1730-1790 Poor Samples. Same as above with much caving of glacial material.
 1790-1830 Poor samples with caved glacial material. Shale, medium light to medium dark gray, few white specks. Little limestone, medium gray, argillaceous.
 1830-1850 Shale, greenish gray 5GY6/1, soft, foliated. Pyrite. Inoceramus.
 1850-1910 Poor samples with caved glacial material. Shale, pyrite and Inoceramus as above.
 1910-1950 Poor samples as above. Siltstone, yellowish gray, extremely fine grained.
 1950-1970 Dolomitic siltstone, pale to dark yellowish brown.
 1970-1990 Dolomitic siltstone as above grading to sandstone and becoming more friable.
 1990-2030 Sandstone, dolomitic, dark yellowish brown, fine grained, friable.
 2030-2050 Dolomite, dark yellowish brown 10YR4/2, dense, microcrystalline, silty. Little sandstone as above.
 2050-2130 Shale, light to medium gray, dolomite and sandstone as above.
 2130-2150 Quartz sand, unconsolidated, coarse, subangular, clear to multicolored. Pyritized sandstone, fine grained.
 2150-2290 Sands as above, dolomite, pale to dark yellowish brown, silty, to sandy.
 2290-2330 Quartz sand, unconsolidated, coarse, subangular, clear to multicolored. Pyrite.
 2330-2350 Sandstone, white, fine grained, calcareous cement. Sand as above, calcareous shale, moderate reddish brown 10R4/6, lumpy.

2350-2390 Sandstone and sand as above.

2390-2410 Limestone, white to yellowish gray, 5Y8/1, sublithographic to finely crystalline, dense.

2410-2430 Limestone, pale yellowish brown 10YR6/2, microsucrosic, dolomitic.

2430-2450 Limestone, white to yellowish gray, sublithographic to finely crystalline, dense, some limestone as above.

2450-2470 Limestone, grayish pink 5R8/2, granular.

2470-2500 Limestone, white to pale yellowish brown, finely crystalline to fragmental.

2500-2550 Limestone, pale yellowish brown and grayish pink mottled, fragmental chert, white.

2550-2560 Limestone, yellowish gray, fragmental, chert.

2560-2590 Limestone, yellowish gray, fragmental to oolitic.

2590-2660 Limestone, yellowish gray, fragmental to oolitic, some chert, white.

2660-2680 Limestone as above, dolomite, pale yellowish brown, sucrosic, chert white.

2680-2700 Limestone as above, with more dolomite and chert as above.

2700-2790 Dolomite, pale yellowish brown, sucrosic, limestone, yellowish gray, finely crystalline to fragmental, chert, white.

2790-2880 Dolomite, limestone and chert as above with dolomite pinkish gray 5R8/2, sucrosic.

2880-3000 Dolomite, pale yellowish brown, sucrosic to finely crystalline, calcite crystals, chert, white.

3000-3020 Dolomite as above, chert, white.

3020-3050 Dolomite and chert as above, dolomite grayish pink, sucrosic to crystalline.

3050-3120 Dolomite as above, little limestone, white, finely crystalline, dense, chert.

3120-3130 Limestone, white very finely crystalline, dense, dolomite as above.

3130-3200 Limestone, pale yellowish brown, sublithographic to finely crystalline, limestone and dolomite as above.

3200-3270 Dolomite and limestone as above.

3270-3310 Dolomite and limestone as above with shale, greenish gray, medium gray, little sandstone, light gray, very fine calcareous cement, friable, composed of subangular quartz sand grains.

3310-3330 Shale, greenish gray, medium to medium dark gray, siltstone, light gray, calcareous, pyrite.

3330-3360 Shale, greenish gray, medium to medium dark gray, foliated, splintery.

3360-3450 Shale, greenish gray, 5G6/1 splintery, included pyrite.

3450-3460 Sandstone, clear quartz, medium grained, calcitic cement, pyrite.

3460-3470 Sandstone, medium grained, clear quartz grains, subrounded to angular, calcitic cement, pyritic, glauconitic.

3470-3510 Glauconitic dolomite, white and looks like medium grained, glauconitic sandstone, however, in dilute HCL the grains dissolve and leave a residue of fine quartz chips.

3510-3580 Glauconitic dolomite as above, becoming courser with larger quartz inclusions. Pyrite.

3580-3590 Quartz sand, well rounded, frosted grains up to 1.5 mm in diameter. Glauconitic dolomite as above.

3590-3594 Poor samples, mostly caving of sand. Feldspar, white to grayish pink, free Quartz.