

NORTH DAKOTA GEOLOGICAL SURVEY CIRCULAR NO. 141

Summary of the Calvert Exploration Co. State #1
Eddy County, North Dakota
Well No. 768 - Permit No. 781

By Clarence Carlson

Calvert Exploration Co. - State #1, Eddy County, North Dakota. C NE NE
Section 8, T. 150N., R. 65W. Elevation 1561 K.B., 1550 GL.

The Calvert Exploration Co. - State #1, was spudded December 11, 1954
and 195 feet of surface casing was set with 125 sacks of cement. The well
was drilled to a total depth of 3865 feet, dry and abandoned December 24,
1954.

Cement plugs of 15 sacks each at: 195-240, 1572-1617, 1785-1830, 2014-
2059, 2296-2341, 2714-2759, 3002-3047, 3754-3799 and 5 sacks at the surface.

Formation tops were picked from samples, electric logs and radioactivity
logs, adjusted to electric log tops. Not all formation tops called in the
following list. Colors determined from the rock color chart.

FORMATION TOPS

Cretaceous System	
Niobrara Formation	740
Greenhorn Formation	1130
Dakota Formation	1404
Dakota Group Sand	1574
Jurassic System	1927 ?
Mississippian System	
Lodgepole Formation	1998
Devonian System	
Nisku Formation	2296
Duperow Formation	2322
Ashern Formation	2690
Silurian System	
Interlake Group	2716
Ordovician System	
Story Mountain Fm.	
Upper Member	2835
Lower Member	2902
Red River Formation	3000
Winnipeg Formation	3590
Winnipeg Shale	3622
Winnipeg Sand	3755
Precambrian	
Granite	3860

0-60 Glacial sand and gravel, medium to very coarse sand, rounded to
 subangular quartz, some pieces of light gray shale and a few
 limestone, granular.

60-75 Gravel, rounded to subangular quartz is the most abundant material, various compositions present.

75-135 Sand and gravel, mainly quartz, rounded to subangular, medium grained sand to granule size.

135-150 Shale, light gray, massive, compact, some sand and gravel as above.

150-220 Shale, light gray, massive, compact.

220-310 Shale, light gray to medium gray, massive, compact.

310-550 Shale, light gray, massive to platy, compact.

550-610 Shale, light gray and yellowish gray, spongy and compact.

610-670 Shale, light gray, massive, compact.

670-730 Shale, dark gray, flaky, spongy.

730-850 Shale, light gray, calcareous, white specks, spongy to compact.

850-910 Shale, light gray, lumpy, spongy to compact.

910-970 Shale, medium gray, lumpy, compact.

970-1000 Shale, medium gray and light gray, lumpy, compact, little light gray bentonite.

1000-1140 Shale, medium gray, lumpy, spongy to compact.

1140-1170 Shale, medium dark gray, calcareous, white specks, lumpy, compact.

1170-1260 Shale, medium gray, calcareous, white specks, lumpy, compact.

1290-1440 Shale, medium gray, lumpy, compact.

1440-1600 Shale, medium dark gray, lumpy, compact.

1600-1640 Sand, medium to coarse, subangular, clear quartz with some pyrite cement.

1640-1720 Shale, medium gray, lumpy, compact, some sand, loose, medium to coarse, subangular quartz.

1720-1740 Sandstone, fine to medium grained, subangular to subrounded quartz - some loose, coarse, subangular quartz.

1740-1780 Sand, medium to very coarse, gravely, subangular to subrounded, loose quartz.

1780-1840 Shale, medium gray, lumpy, compact, some loose sand as above.

1840-1850 Sand, mainly loose, colorless quartz, medium grain to pebble size, subrounded, a few pieces of chert and some pyrite.

1850-1860 Sandstone, white, fine grained, very calcareous, some medium to coarse, loose sand.

1860-1870 Shale, medium gray, lumpy, some pieces of limestone, light gray with carbonaceous streaks.

1870-1890 Limestone, light gray, medium grained, granular, arenaceous with shell fragments of brachiopods and/or pelecypods in a poorly preserved condition, some loose sand, light gray chert and medium gray shale.

1890-1910 Shale, light gray to medium dark gray, some loose medium to coarse sand.

1910-1920 Sand, loose, colorless, rounded to subangular, medium grained to pebble size.

1920-1930 Shale, medium to medium dark gray, lumpy, compact.

1930-1950 Shale as above, some loose, medium to coarse, colorless, quartz.

1950-1970 Shale and sand as above with some shale, moderate reddish orange, silty, calcareous.

1970-1980 Limestone, very light gray, fine grained, granular, arenaceous.

1980-2000 Shale, various shades of gray and moderate reddish orange, some loose sand and limestone as above, poor samples.

2000-2010 Dolomite, very light gray to yellowish gray with some red staining, fine to medium grained granular limey.

2010-2020 Limestone, very light gray, fine grained, little red staining.

2020-2030 Limestone, very light gray, finely crystalline to fine grained with a few shell fragments, some pyrite filling.

2030-2090 Limestone, very light gray, with red mottling, fine grained fragmental, fossiliferous.

2090-2118 Limestone, pinkish gray, fine to medium grained, granular.

2118-2190 Limestone, very light gray to yellowish gray, fine to medium grained, granular.

2190-2210 Dolomite, pinkish gray, finely crystalline.

2210-2230 Limestone, yellowish gray, fine to medium grained, granular, some dolomite, yellowish gray, finely crystalline to microsugrosic, anhydritic.

2230-2240 Dolomite, yellowish gray, finely crystalline, some fine to medium grained, granular.

2240-2270 Dolomite, white to yellowish gray, fine to medium grained, granular.

2270-2290 Limestone, white, fine grained, microsugrosic.

2290-2350 Dolomite, grayish orange, pink, finely crystalline.

2350-2360 Limestone, white, finely crystalline to fine grained, some dolomite, as above.

2360-2370 Dolomite, grayish orange, pink, finely crystalline, dense.

2370-2390 Dolomite as above and some medium grained, granular.

2390-2410 Dolomite, grayish orange pink, finely crystalline to medium grained, granular with fair intergranular porosity.

2410-2414 Dolomite, grayish orange pink, fine to medium grained, granular.

2414-2420 Dolomite, grayish orange pink, finely crystalline to fine grained granular.

2420-2440 Dolomite, yellowish gray, very finely crystalline with some reddish mottling, some limestone, white, very fine grained.

2440-2460 Dolomite, grayish orange pink, finely crystalline, dense and medium to fine grained, granular.

2460-2470 Limestone, pinkish gray, finely crystalline, dense.

2470-2480 Limestone, pinkish gray to pale red 10R6/2, fine to medium crystalline, dense, granular in part.

2480-2510 Limestone, yellowish gray, very finely crystalline, dense.

2510-2530 Limestone, yellowish gray to pinkish gray, fine to medium crystalline, granular in part.

2530-2540 Dolomite, yellowish gray, fine to medium grained, granular.

2540-2570 Limestone, moderate orange pink, fine grained, argillaceous, some limestone light gray, fine grained.

2570-2610 Dolomite, yellowish gray, fine grained, granular, limey.

2610-2630 Limestone, yellowish gray, finely crystalline to fine grained, granular, dolomitic.

2630-2640 Dolomite, yellowish gray to pinkish gray, fine grained, granular, limey.

2640-2650 Limestone, light gray to yellowish gray, fine grained, chalky.

2650-2660 Limestone, pinkish gray, finely crystalline to fine grained.

2660-2680 Limestone, pinkish gray to yellowish gray, fine grained, fragmental.

2680-2690 Limestone, grayish orange pink, fine to medium grained, granular, dolomitic.

2690-2700 Limestone as above with traces of shale, pale reddish brown, very calcareous.

2700-2710 Shale, pale reddish brown, very calcareous, lumpy compact.

2710-2720 Limestone, white, very finely crystalline to very fine grained.
 2720-2740 Limestone, yellowish gray to white, finely crystalline.
 2740-2750 Limestone, yellowish gray, fine grained, oolitic.
 2750-2780 Limestone, yellowish gray, fine grained, oolitic and white, very finely crystalline.
 2790-2810 Limestone, yellowish gray, fine grained, oolitic.
 2810-2850 Limestone, white to light gray, finely crystalline to fine grained.
 2850-2860 Limestone, light gray, finely crystalline, some limestone moderate orange pink, fine grained, very argillaceous, poor sample.
 2860-2880 Sandstone, white to pinkish gray, medium to coarse grained, rounded, frosted, quartzose, calcareous cement, some limestone, white fine grained, containing some rounded, coarse sand grains.
 2880-2900 Limestone, yellowish gray to pinkish gray, very finely crystalline to fine grained, granular.
 2900-2930 Limestone, pinkish gray, fine grained, granular, poor samples.
 2930-2970 Limestone, pinkish gray, finely crystalline to fine grained.
 2970-3000 Limestone, light gray, fine grained, fragmental, fossiliferous.
 3000-3030 Limestone, light gray to pinkish gray, very fine grained to finely crystalline.
 3030-3050 Dolomite, pinkish gray, fine to medium grained, granular, limey.
 3050-3060 Limestone, yellowish gray to light gray, fine to medium grained, fragmental.
 3060-3100 Limestone, yellowish gray, finely crystalline to fine grained.
 3100-3120 Limestone, yellowish gray to white, finely crystalline to sublithographic.
 3120-3137 Limestone as above and limestone grayish orange pink, fine to medium grained, granular.
 3137-3150 Limestone, yellowish gray, fine grained, granular, some light gray, finely crystalline with a few pieces of white chert.
 3150-3170 Limestone, yellowish gray to light gray, fine grained, fragmental, some yellowish gray, fine grained, granular to finely crystalline.
 3170-3230 Limestone, yellowish gray, fine grained, granular to finely crystalline.
 3230-3240 Limestone as above with some white chert.
 3240-3250 Limestone, yellowish gray, fine grained to finely crystalline, and limestone, very light gray, fine grained fragmental with some white chert.
 3250-3280 Limestone, very light gray to yellowish gray, finely crystalline, some white chert, some yellowish gray, fine grained granular limestone.
 3280-3330 Limestone, yellowish gray to pinkish gray, finely crystalline, a little white to yellowish gray chert.
 3330-3350 Limestone, light gray to light yellowish gray, fine grained, fragmental with a few brachiopod fragments, some chert, white to yellowish gray.
 3350-3370 Limestone, yellowish gray, fine grained, granular to finely crystalline, some white chert.
 3370-3380 Limestone, yellowish gray, finely crystalline, some chert.
 3380-3390 Limestone, light brownish gray, fine grained, granular, slightly argillaceous, some limestone, light gray, finely crystalline.
 3390-3410 Limestone, yellowish gray, finely crystalline to fine grained with some coarse, subhedral to euhedral crystals of quartz.

3410-3440 Limestone, yellowish gray, fine grained, microsucrosic.

3440-3460 Limestone, light gray to yellowish gray, fine grained, fragmental.

3460-3500 Limestone, light gray, finely crystalline, fine grained, fragmental in part, some Bryozoa fragments.

3500-3560 Limestone, yellowish gray, finely crystalline, fragmental in part.

3560-3580 Limestone, yellowish gray, fine grained, fragmental.

3580-3600 Limestone as above and light gray shale, poor samples.

3600-3680 Shale, greenish gray 5GY6/1 and 5G6/1, platy, compact, poor samples 3600-3630.

3680-3750 Shale, greenish gray 5G6/1, platy, compact, also shale, grayish red 5R4/2, platy compact.

3750-3760 Sandstone, fine to very coarse and granule size, rounded, frosted quartz, mostly loose grains but some are poorly cemented with gypsum.

3760-3770 Sandstone as above, some shale, grayish red 5R4/2, platy compact.

3770-3780 Sandstone, pinkish gray, fine to very coarse, rounded, quartz poorly cemented with gypsum, few specks of glauconite.

3780-3800 Sandstone, pinkish gray, fine grained, glauconitic, much loose medium to coarse, rounded quartz.

3800-3810 Sandstone, pinkish gray, fine to very coarse grained, rounded quartz, some gypsum and calcareous cement, glauconitic.

3810-3830 Sandstone, pale red 5R6/2, fine grained, slightly calcareous, glauconitic.

3830-3850 Sandstone, very light gray, fine to coarse grained, glauconitic.

3850-3860 Shale, grayish red 5R4/2, platy, compact, some greenish gray and pale red shale.

3860-3865 Granite, composed of quartz and Horneblende, with the Horneblende being unusually abundant.