NORTH DAKOTA GEOLOGICAL SURVEY CIRCULAR NO. 125

Summary of the Caroline Hunt Trust Estate - George Leitner #1
Wells County, North Dakota
Well #609 Permit #623

By Dan E. Hansen
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Caroline Hunt Trust Estate - George Leitner #1, Wells County, North Dakota, SW SE Section 14, T. 148N., R. 71W. (660 feet from south line and 1980 feet from east line). Elevation 1601 G.L.

The Caroline Hunt - Leitner well #1 was spudded June 4, 1954 and 10 3/4" casing was set at 191 feet with 125 sacks of cement. The well was completed as a dry hole June 17, 1954. Total Depth 5182 feet.

TESTS: None
CORES: None
LOGS RUN: Electrical, Micro, and Radiation

Cement plugs were set at the following depths:

0'- 20'	10 sacks
155'- 195'	20 sacks
2028'-2125'	30 sacks
2870'-2970'	30 sacks
4220'-4307'	25 sacks

Formation tops were determined from samples, electrical, micro, and radioactivity logs and were corrected to electric log tops unless otherwise stated. Not all lithologic tops were called in the following list. Colors were determined from the rock color chart.

FORMATION TOPS

Cretaceous System	
Niobrara Formation	950
Greenhorn Formation	1558
“Dakota”	2025
Jurassic System	2417
Piper Lime	2514
Mississippian System	
Mission Canyon Formation	2700
Lodgepole Formation	2870
Englewood Formation	3300
Devonian System	
Lyleton Formation	3321
Nisku Formation	3390
Duperow Formation	3492
Souris River Formation	3639
Winnepegosis Formation	3767
Ashern Formation	3848
Silurian System	
Interlake Group	3916

Ordovician System	
Upper Stoney Mountain	4080
Lower Stoney Mountain	4126
Red River Formation	4220
Winnepeg Shale	4870
Winnepeg Sand	5004
Pre-Cambrian	5180

0-220	Samples missing.
220-360	Shale, medium gray, soft, lumpy, massive, micro-micaceous. Traces dark gray shale at 310-340.
360-900	Shale, medium gray, soft, massive, soapy. Traces light gray bentonite from 600-900.
900-950	Shale, medium gray, soft, massive, spongy.
950-1020	Shale, medium gray, dark gray, soft, massive, lumpy, spongy. Traces light gray bentonite.
1020-1110	Shale, medium gray, very calcareous, massive, “white specks”.
1110-1190	Shale, medium gray, calcareous, lumpy, massive, spongy, trace light blue gray bentonite.
1190-1500	Shale, medium gray, medium dark gray, lumpy, massive, spongy. Traces light blue gray bentonite.
1500-1550	Shale, medium dark gray, soft, lumpy. Traces calcareous shale, calcite prisms, “white specks”, pyrite, angular, coarse medium grained, clear, quartz grains.
1550-1580	Shale, dark gray, lumpy, massive, calcareous, “white specks”, calcite prisms, trace pyrite.
1580-1640	Shale, medium dark gray, lumpy, massive, disaggregated, calcareous, “white specks”, calcite prisms, Globigerina. Trace pyrite.
1640-1740	Shale, medium dark gray, calcareous, massive, traces calcite prisms, light blue gray bentonite, pyrite.
1740-2000	Shale, medium dark gray, massive, lumpy, spongy, traces light gray bentonite, traces dark gray shale.
2000-2070	Shale, as above, with very calcareous, fine grained, light gray, quartzose sandstone.
2070-2090	Sandstone, medium coarse grained, white, clear, subangular rounded, loose, quartz grains. Shale as above, trace pyrite.
2090-2110	Shale, as above, coarse grained, pale brown silt iron, carbonate concretions. Loose quartz grains as above.
2110-2170	Shale, as above.
2170-2200	Sandstone, white clear, subangular subrounded, fine medium grained, pitted, vitreous loose quartz grains. Pyrite.
2200-2270	Shale, as above, light blue gray bentonite. Traces fine grained, white quartzose sandstone fragments and siltstone iron carbonate concretions.
2270-2280	Sandstone, light gray, fine grained, pyrite and iron oxide cemented quartzose sandstone with loose grains of clear, white, medium coarse grained, angular, subrounded quartz. Fragments of pyritized carbonaceous material.

2280-2370	Sandstone, loose, grains of angular subround, pitted and polished, coarse grained, granules, white, pink, clear quartz grains, polished, rounded coarse grained, granules, pale brown, dolomite, and polished, coarse grains gray chert. Small amount of pyrite.
2370-2440	Shale, medium gray, dark gray, soft, slightly calcareous, massive, lumpy with above granules, pyrite and light gray, soft, carbonaceous, medium crystalline limestone. Fine grained, calcareous, quartzose sandstone at 2400-2440 with green mineral.
2440-2510	Shale, as above, with traces of light green gray and red brown calcareous shale.
2510-2570	Limestone, pinkish gray, white, fine grained, crystalline, chalky with anhydrite. Fine grained quartz, at 2520-2540. Shale as above.
2570-2600	Limestone, very light gray, white, very fine grained, crystalline, sublithographic.
2600-2630	Limestone, as above, with pale brown, massive, calcareous shale and medium gray, massive shale. Some anhydrite.
2630-2660	Shale, pale brown, massive, calcareous, with limestone and anhydrite as above, plus gray shale.
2660-2700	Shale, red brown, silty, massive calcareous, anhydrite, limestone as above.
2700-2780	Anhydrite, white, medium crystalline with pale red dolomite from 2700-2710, yellowish gray dolomite from 2710-2730, and yellowish gray, fine grained, crystalline limestone from 2730-2780.
2780-2800	Limestone, dolomitic, light red, grayish pink, fine medium grained, crystalline, few vugs, anhydrite filling, coarse grained fragmental.
2800-2900	Limestone, yellowish gray, oolitic, irregular to elliptical, good porosity with limestone, light grayish brown, granular medium grained vuggy, intergranular porosity. Some anhydrite filling.
2890-2920	Limestone, yellowish gray, fragmental, medium coarse grained, with medium grained, granular and traces of oolites.
2920-2930	Limestone, dolomitic, pale red, fine grained, granular. With anhydrite and massive, compact, red brown, calcareous shale.
2930-3040	Limestone, pinkish gray, fragmental, medium coarse grained and fine grained, granular, dense, pale yellow brown and yellow gray.
3040-3080	Limestone, light gray, medium coarse grained, fragmental, shaly, many brachiopod shell fragments.
3080-3100	Samples missing.
3100-3200	Limestone, pinkish gray, fragmental, medium coarse grained, brachiopod shell fragments, with fine grained, granular, dense limestone, gray calcareous shales.
3200-3300	Limestone, very light gray, white fine grained, crystalline, chalky, anhydrite.
3300-3320	Limestone, pink gray, fragmental, medium coarse grained.
3320-3330	Shale, medium gray, calcareous, massive.
3330-3350	Shale, medium gray, calcareous, red staining, pink gray, fragmental limestone.
3350-3390	Shale, medium dark gray, with brown red staining, some brown red shale, calcareous with traces of limestone, pink gray white, crystalline, medium grained, soft and traces of fine grained, rounded quartz grains.
3390-3440	Dolomite, grayish orange pink, medium grained, granular with intergranular and vuggy porosity. With fragments of medium grained, crystalline that show rhombic dolomite crystals.

3440-3460	Dolomite, as above, but red stained with small fragments of calcareous red shale.
3460-3500	Dolomite, limey, grayish orange pink, medium grained, crystalline, granular. Intergranular porosity.
3500-3530	Dolomite, light brownish gray, crystalline and granular, fine medium grained.
3530-3550	Limestone, pink gray, fine grained crystalline to sublithographic, brachiopod fragments, traces of red brown shale, calcareous, silty.
3550-3620	Dolomite, limey, pink gray, light brown gray, granular and crystalline intergranular porosity. Traces pink gray, fine grained, crystalline sublithographic limestone, purple mottlings.
3620-3630	Limestone, and dolomite, as above, with red brown, massive calcareous shale.
3630-3670	Limestone, white pinkish gray, soft, fine grained, soft to medium grained fragmental, granular, gray shale.
3670-3780	Dolomite, calcareous, grayish orange pink, light brown gray, granular fine grained. Few fragments, medium grained, fragmental.
3780-3850	Limestone, light gray, fine grained, crystalline, with fragments medium grained, fragmental.
3850-3920	Shale, pale red, very calcareous, soft with fine grained, white pink gray limestone. Few grains well rounded, frosted, fine medium grained clear quartz from 3850-3880.
3920-4030	Dolomite, yellowish gray, pink gray, moderate red, dense, fine grained crystalline, cherty. Few fragments pink gray chert.
4030-4070	Dolomite, white yellowish gray, fine grained, crystalline, calcareous, with above dolomite.
4070-4080	Shale, pale red, light brown, soft, calcareous, few grains of rounded, frosted, clear, medium grained quartz.
4080-4100	Shale, light gray, soft, calcareous, with light gray, medium coarse grained fragmental limestone.
4100-4140	Dolomite, calcareous, grayish orange pink, fine grained, granular.
4140-4190	Limestone and shale, light gray, very fossiliferous, fragmental. Has appearance of being weathered, soft.
4190-4250	Shale, light gray, very calcareous, fossiliferous with many bryozoan remains.
4250-4370	Limestone, yellow gray, fine grained, dense, crystalline with fragments of fine grained, granular, anhydrite filling.
4370-4600	Limestone, dolomitic, yellowish gray, light brownish gray, fine medium grained, granular, with above limestone.
4600-4790	Limestone, light gray, fine grained, granular to dense, fine grained crystalline. Traces white light gray chert, and a few fragments dense coarse grained fragmental, with traces of brachiopod shell fragments.
4790-4890	Cottonseed hulls.
4890-5000	Shale, green gray, compact, waxy, splintery. With few fragments pinkish gray, dense, very fine grained limestone, and traces of fine grained, calcareous cemented quartzose sandstone.
5000-5160	Cottonseed hulls.
5160-5182	Sandstone, fine coarse grained, angular, white, pink quartz with fragments of pink orthoclose feldspar, quartz and micaceous, green metamorphic rock.