

NORTH DAKOTA GEOLOGICAL SURVEY CIRCULAR NO. 259

Summary of the Hunt Oil Company - Clifford Price 1  
Williams County, North Dakota  
Well No. 2824 - Permit No. 2836

by Clarence G. Carlson  
December, 1961

The Hunt Oil Company - Clifford Price No. 1 well is located in the C SW NE of Section 29, T. 159N., R. 103W., Williams County, North Dakota. Elevations: 2042 K.B.; 2027 G.L.

The Hunt Oil Company - Clifford Price No. 1 well was spudded January 13, 1961, was drilled to a total depth of 8,210 feet and completed as the discovery well for the Grenora Field on February 21, 1961.

LOGS RUN:

Laterolog - Gamma Ray  
Sonic Log

CORES:

None

TESTS:

DST 1 - 7,682 to 7,704; Initial shut-in 30 minutes, open 1 hour, final shut-in 1 hour. Recovered 40 feet of drilling mud. Pressures: ISIP 2000, IFP 30, FFP 50, FSIP 332, IHP 4590, FHP 4150.

DST 2 - 7,718 to 7,736; Initial shut-in 30 minutes, open 5 hours, final shut-in 1 hour; gas to the surface in 1 1/2 hours. Recovered 36 feet of mud, 94 feet of highly gas cut oil and mud emulsion, 94 feet of slightly mud cut oil, 470 feet of clean oil and 94 feet of salt water. Pressures: ISIP 3170, IFP 125, FFP 290, FSIP 3400, IHP 4180, FHP 4140. BHT 184° F.

DST 3 - 7,742 to 7,786; Initial shut-in 30 minutes, open 5 hours, final shut-in 1 hour. Recovered 282 feet of mud cut salt water. Pressures: ISIP 3166, IFP 140, FFP 166, FSIP 1039, IHP 3893, FHP 3906. BHT 180° F.

DST 4 - 8,090 to 8,108; Initial shut-in 30 minutes, open 2 hours and 10 minutes, final shut-in 1 hour. Recovered 1,316 feet of black salty sulphur water and 6,572 feet of salt water. Pressures: ISIP 3827, IFP 1514, FFP 3880, FSIP 3880, IHP 4329, FHP 4302. BHT 198° F.

CASING RECORD:

Set 9 5/8 inch casing at 624 feet with 385 sacks of cement.  
Set 5 1/2 inch casing at 7,951 feet with 870 sacks of cement.  
Perforated the interval from 7708 to 7724 feet with 4 shots per foot.  
Acidized with 1000 gallons. Initial potential - flowed 179 barrels of 33.9° API gravity oil, 2% water through 2 3/8 inch tubing with a 16/64 inch choke. GOR 335-1.

Formation tops were determined from samples and mechanical logs; tops were corrected to Laterolog-Gamma Ray logs. Not all formations were called in the following list.

#### FORMATION TOPS

##### Cretaceous System

Pierre Formation	1286
Niobrara Formation	3434
Greenhorn Formation	3852
Mowry Formation	4143
Newcastle Sandstone	4304
Fall River Formation	4620

##### Jurassic System 5055 ?

Rierdon Formation	5522
Piper Limestone	5894

##### Triassic System

Spearfish Formation	6115
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##### Mississippian System

Kibbey Sandstone	6695
Kibbey Limestone	6848
Madison Group	6978
Poplar Interval	6978
Ratcliffe Interval	7550

3160-3400	Shale, medium light gray, platy to fissile.
3400-3430	Shale, as above; some sandstone, very light gray, very fine grained, calcareous, argillaceous.
3430-3460	Shale, medium light gray, platy to fissile.
3460-3490	Shale, light brownish gray and medium light gray, platy.
3490-3550	Shale, medium light gray to medium gray, fissile, calcareous, contains "white specks."
3550-3760	Shale, medium gray to medium light gray, platy to fissile.
3760-3850	Shale, medium dark gray, fissile, calcareous, contains "white specks."
3850-3880	Shale, medium dark gray, fissile.
3880-3970	Shale, as above; numerous Inoceramus fragments and some fragmental limestone.
3970-4000	Shale, medium dark gray, and medium light gray, fissile and platy.
4000-4090	Shale, medium dark gray, fissile, calcareous, contains "white specks", many Inoceramus fragments.
4090-4330	Shale, medium dark gray, platy to fissile.
4330-4390	Shale, as above, traces of interbedded shale and siltstone, light olive gray.
4390-4480	Sandstone, very light gray, fine to very fine grained, rounded to subangular; some loose coarse to very coarse, rounded sand grains; shale as above.
4480-4600	Shale, medium gray and medium dark gray, platy to fissile; some loose, coarse, rounded sand grains.
4600-4660	Shale, medium dark gray and medium gray, platy and fissile; some sandstone, very light gray, fine to very fine grained, micaceous.
4660-4750	Interbedded shale, medium dark gray, fissile and siltstone, very light gray micaceous grading to a very fine grained sandstone.

4750-4810 Sandstone, very light gray, fine to very fine grained; shale, medium gray, medium dark gray and light olive gray, fissile to platy; traces of lignite.

4810-4870 Sandstone, as above and sandstone, grayish orange, very fine to medium, grained, rounded to subangular, firmly cemented; shale, as above.

4870-4900 Shale, medium light gray, olive gray, pale brown, soft, lumpy, waxy; sandstone, as above.

4900-4930 Sandstone, white to very light gray, fine to very fine grained, micaceous; shale, as above.

4930-5000 Shale, medium light gray to light olive gray and pale grayish red, soft, lumpy, waxy; a little sandstone as above.

5000-5010 Sandstone, very light gray, very fine to fine grained, partially cemented with pyrite; shale, varicolored, soft, lumpy in part, fissile in part.

5010-5020 Shale, medium light gray to olive gray to pinkish gray, soft, lumpy; traces of lignite.

5020-5040 Shale, as above; a little sandstone, very light gray, very fine to fine grained.

5040-5050 Sandstone, very light gray to light brownish gray, very fine to fine grained; shale, medium light gray, soft, lumpy.

5050-5080 Sandstone, very light gray to very light brownish gray, very fine to fine grained, slightly calcareous, traces of glauconite; shale, light olive gray to pale brown and medium light gray, lumpy, compact.

5080-5110 Shale, light greenish gray to pale brown and medium light gray, lumpy, compact.

5150-5220 Shale, light olive gray to medium light gray, lumpy, compact.

5220-5260 Shale, light olive gray to pale brown, lumpy, compact.

5260-5290 Shale, light olive gray to medium light gray, lumpy, compact.

5290-5310 Shale, as above and pale brown, lumpy, compact.

5310-5330 Sandstone, very light gray, fine to very fine grained, calcareous; shale, as above.

5330-5340 Shale, light olive gray, medium light gray, lumpy, compact.

5340-5370 Sandstone, very light gray, fine to very fine grained, calcareous; shale light olive gray to light greenish gray and medium light gray, lumpy, compact to fissile, calcareous.

5370-5380 Shale, light greenish gray, fissile, calcareous; some sandstone as above.

5380-5400 Shale, as above; a little sandstone, as above; traces of limestone, very light gray, finely crystalline.

5400-5440 Sandstone, very light gray, very fine to fine grained, calcareous; shale light greenish gray, fissile to platy, calcareous.

5440-5500 Shale, light greenish gray, fissile to platy, calcareous; some sandstone as above.

5500-5540 Sandstone, very light gray, very fine to fine grained, calcareous; shale; light greenish gray to light olive gray, fissile to platy, calcareous.

5540-5570 Sandstone, very light gray to light grayish orange, very fine to fine grained, calcareous.

5570-5580 Shale, light greenish gray to light olive gray, fissile, calcareous; sandstone as above.

5580-5620 Sandstone, very light gray to light grayish orange, very fine to fine grained, calcareous; shale as above.

5620-5660 Shale, light olive gray to light greenish gray, fissile, to platy, calcareous; some sandstone, as above.

5660-5700 Shale, as above and pale brown, platy; some sandstone, very light gray, very fine.

5700-5720 Limestone, very light gray to light yellowish gray, pelletoidal in part, very finely crystalline in part; shale, as above.

5720-5730 Shale, light greenish gray, platy to fissile, calcareous, some limestone as above.

5730-5750 Shale, pale reddish brown and light greenish gray, platy to fissile, calcareous; limestone as above.

5750-5760 Limestone, light yellowish gray to light gray, pelletoidal with a fine grained matrix.

5760-5830 Limestone, as above; and limestone, light yellowish gray, finely crystalline.

5840-5860 Limestone, light yellowish gray, fine grained, fragmental, pelletoidal in part.

5860-5890 Limestone, light yellowish gray, very finely crystalline, dense.

5890-5940 Limestone, very light yellowish gray to white, fine grained, a little white chert.

5940-6030 Limestone, light yellowish gray, very finely crystalline, dense.

6030-6060 Limestone, as above; shale, pale reddish brown, lumpy, compact, slightly calcareous.

6060-6080 Limestone, light yellowish gray, very finely crystalline, traces of white anhydrite; shale, as above.

6080-6110 Shale, pale reddish brown to grayish red, lumpy, compact, slightly calcareous; traces of white anhydrite; some limestone, as above.

6110-6130 Siltstone, moderate, reddish orange, slightly calcareous; shale and anhydrite, as above.

6130-6230 Siltstone, as above, slightly anhydritic.

6230-6290 Siltstone, moderate reddish orange, scattered rounded, frosted, medium sand grains, slightly calcareous.

6290-6350 Limestone, grayish pink to very light gray, very finely crystalline; shale, pale reddish brown to grayish red, lumpy, soft, traces of yellow ochre shale; much siltstone, as above.

6350-6370 Shale, grayish red and yellow ochre, lumpy, compact; some limestone, grayish pink to light gray, finely crystalline; traces of dolomite, grayish orange pink, finely crystalline.

6370-6430 Limestone, grayish pink to light yellowish gray, finely crystalline with a few ostracodes; shale, as above.

6430-6450 Shale, moderate red and dusky yellow, lumpy, soft to fissile; limestone, as above.

6450-6510 Shale, as above; sandstone, grayish pink to pale red, fine grained.

6510-6530 Dolomite, pale red, finely crystalline; shale, moderate red and dusky yellow, lumpy, compact.

6530-6610 Dolomite, grayish orange pink to dusky yellow and pale red, finely crystalline; some shale, as above.

6610-6640 Limestone, grayish pink, finely crystalline; some shale, light greenish gray and pale red, platy, calcareous.

6640-6660 Shale, grayish red to purplish gray, platy to lumpy, compact, calcareous; limestone, light gray to pinkish gray, finely crystalline.

6660-6680 Dolomite, pale red, fine grained, limy; some shale, greenish gray, platy to lumpy, compact, calcareous.

6680-6700 Shale, pale grayish red to greenish gray and purplish gray, platy, compact calcareous; dolomite as above.

6700-6710 Sandstone, pale red to pinkish gray, very fine to fine grained, calcareous; shale, as above.

6710-6880 Sandstone, grayish pink to pale red, very fine to medium grained, rounded, frosted.

6880-6910 Limestone, very light gray, very finely crystalline; sandstone, as above.

6910-6950 Siltstone, moderate reddish orange, calcareous, shale, moderate red, lumpy, compact.

6950-7010 Siltstone, moderate reddish orange, calcareous.

7010-7100 Siltstone, as above; traces of white anhydrite.

7100-7180 Salt; some siltstone, as above.

7180-7220 Siltstone, moderate reddish orange, calcareous; anhydrite, white to colorless.

7220-7250 Anhydrite, white; siltstone, as above.

7250-7270 Limestone, very light brownish gray to light gray, very finely crystalline dense; some anhydrite, white.

7270-7290 Limestone, very light brownish gray, oolitic in part, finely crystalline in part; anhydrite, white.

7290-7320 Limestone, light gray, fine grained, argillaceous; some shale, medium light gray, calcareous.

7320-7370 Anhydrite, white; limestone, light yellowish gray, finely crystalline.

7370-7400 Limestone, light yellowish gray, oolitic to fine grained, fragmental.

7400-7450 Limestone, light yellowish gray, finely crystalline to fine grained, fragmental; anhydrite, white.

7450-7510 Anhydrite, white; limestone, as above.

7510-7520 Limestone, very light brownish gray, finely crystalline to fine grained, fragmental.

7520-7590 Limestone, as above; a little anhydrite, white.

7590-7630 Anhydrite, white; as above.

7630-7640 Anhydrite, very light gray to white, granular, calcareous grading to anhydritic limestone.

7640-7700 Anhydrite, white to very light gray, dense; some limestone, very light brownish gray, fine grained.

7700-7710 Limestone, light brownish gray, fine to medium crystalline, fragmental; anhydrite, white.

7710-7720 Limestone, light brownish gray, very fine to finely crystalline, fossiliferous, fragmental, slightly argillaceous.

7720-7770 Limestone, light brownish gray, fine to medium grained, fragmental, fossiliferous, some slight staining and cut with  $\text{Ccl}_4$ .

7770-7850 Limestone, very light gray to light brownish gray, fragmental, fossiliferous.

7850-7930 Limestone, light brownish gray to medium gray, fragmental, fossiliferous, argillaceous; some limestone, light brownish gray, fragmental, fossiliferous.

7930-8008 Limestone, light brownish gray, fragmental, fossiliferous.

8008-8030 Limestone, very light brownish gray to brownish gray, fragmental, fossiliferous.

8030-8100 Limestone, as above; traces of light gray chert.

8100-8150 Limestone, very light brownish gray, fragmental, fossiliferous.

8150-8210 Limestone, very light gray, fragmental, fossiliferous.