

NORTH DAKOTA GEOLOGICAL SURVEY CIRCULAR NO. 261

Summary of the Hunt Oil Company - Carl Overlee No. 3 Well
Burke County, North Dakota
Well No. 2033 - Permit No. 2045

by Clarence G. Carlson
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The Hunt Oil Company - Carl Overlee No. 3 well is located in the SW SW of Section 30, T. 160N., R. 94W., Burke County, North Dakota. Elevations: 2375 G.L.; 2389 K.B.

The Hunt Oil Company - Carl Overlee No. 3 well was spudded October 18, 1958; drilled to a total depth of 11,512 feet; plugged back to 8,012 feet and completed as a producing well in the North Tioga-Madison field.

Logs Run:

Laterolog-Gamma Ray
Microlaterolog
Sonic
Radioactivity

Cores: None

Tests:

DST 1-7894-7914; Four hour test; shut in 45 minutes; Gas to surface in ten minutes; Recovered 3,149 feet of fluid; 2,976 feet of highly gas cut clean oil, 117 feet of oil cut mud and 56 feet of black sulphur water. Pressures: IF 1920, FF 6796, IH 4416, FH 4416, SIP 3262, BHT 206° F.

DST 2-9618-9720; Tool open 4 hours, shut in 1 hour. Tool opened with fair blow increased to good blow in 5 minutes, good blow for 2 1/2 hours, decreased to weak blow in 2 1/2 hours, increased to strong blow in 3 1/2 hours, held strong for rest of test. Recovered 5,700 feet of fluid; 5,700 feet of muddy salt water. Pressures: IF 96, FF 3010, IH 5430, FH 5385, SIP 4155, BHT 230° F.

DST 3-9822-9920; Four hour test, 1 hour shut in. Tool opened with weak blow, increased to strong blow in 5 minutes, held strong blow throughout test. Recovered 6,328 feet of muddy salt water, loaded with salt crystals. Pressures: IF 50, FF 2840, IH 5420, FH 5420, SIP 4260, BHT 232° F.

DST 4-10,973-11,005; Tool open 2 1/4 hours, shut in 1 hour. 5/8" bottom and 1" top choke; 1,502 feet of water cushion. Tool opened with weak blow, held weak for 1 3/4 hours, died. Recovered 1,502 feet of water cushion, 633 feet of muddy salt water with 88 feet of salt crystals. Pressures: IF 650, FF 1025, IH 6121, FH 6125, SIP 4250.

DST 5-11,360-11,400; Tool opened for 3 hours and 50 minutes, could not close tool. Pulled packer loose and reopened tool and closed in okay for 1 hour. Shut in had tight place at 3,155 feet, worked packer through okay. Tool opened with blow, held weak blow for 3 hours and 20 minutes and died. Recovered 1994 feet of fluid, 1907 feet of water cushion, 87 feet of drilling mud. Pressures: IF 830, FF 830, IH 6200, FH 6170, SIP 2610, BHT 250° F.

Casing:

- 9 5/8" at 603 feet with 385 sacks
- 4 1/2" at 8,088 feet with 1000 sacks

Completion:

Perforated the interval from 7926 to 7932 with 6 shots per foot, acidized with 500 gallons. Initial potential 84 barrels of oil, 16% water, 41.6° API, 885 GOR, flowing through 2 3/8" tubing, 12/64" choke, flowing pressure on tubing 425#, shut in pressure 1050#.

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

The samples were discontinuous from 6020 to 7020. These samples were logged but the depths have undoubtedly been mixed up somewhere in the process of sampling, drying or bagging of these samples.

FORMATION TOPS

Cretaceous System	
Greenhorn Formation	4177
Mowry Formation	4464
Fall River Formation	4832
Jurassic System	5192
Rierdon Formation	5596
Triassic System	
Spearfish Formation	6164
Mississippian System	
Kibbey Sandstone	6886
Kibbey Limestone	7022
Madison Group	7178
Poplar interval	7178
Ratcliffe interval	7625
Frobisher-Alida interval	7900
Bakken Formation	9090
Devonian System	
Three Forks Formation	9204
Birdbear Formation	9424
Duperow Formation	9521
Souris River Formation	9965
Dawson Bay Formation	10,307
Prairie Evaporite	10,458
Winnipegosis Formation	10,863
Silurian System	
Interlake Formation	11,154

- 6020-6930 Dolomite, light brownish gray, very finely crystalline, dense.
- 6030-6040 Dolomite, very light brownish gray to light brownish gray, very finely crystalline, dense, limy.
- 6180-6190 Anhydrite, white to pale orange, granular; a little shale, moderate reddish brown, lumpy, slightly calcareous.
- 6270-6310 Siltstone, moderate reddish orange, calcareous, micaceous.
- 6360-6370 Siltstone, as above with scattered fine to medium, rounded sand grains.

6390-6400 Siltstone, as above.

6470-6480 Siltstone, as above.

6510-6520 Shale, moderate red to pale reddish brown, traces of dusky yellow and purplish gray, platy.

6630-6640 Shale, variegated, mostly moderate red and olive gray, platy.

6650-6660 Shale, as above.

6690-6700 Shale, light greenish gray, platy to lumpy, calcareous; variegated shale and limestone, very light gray, fine grained, dolomitic.

6720-6730 Sandstone, pinkish gray to moderate red, very fine to medium, rounded grains, silty, calcareous.

6770-6780 Sample, same as from 6690-6700.

6780-6790 Sample, same as from 6630-6640.

6810-6820 Dolomite, light gray, finely crystalline.

6820-6830 Shale, pale reddish brown, platy; limestone, yellowish gray, very finely crystalline.

6850-6860 Siltstone, moderate reddish orange to pale red, calcareous.

6860-6870 Dolomite, light gray, finely crystalline, argillaceous.

6870-6880 Siltstone, as from 6850-6860.

6890-6900 Anhydrite, very light gray to white, calcareous, solution cavities.

6920-6940 Sandstone, pinkish gray to pale red, very fine to medium grained, calcareous; siltstone, moderate reddish orange to pale red, calcareous.

6940-6950 Siltstone, as above.

6950-6980 Shale, variegated, platy.

6980-6990 Sandstone, as from 6920-6940.

7020-7050 Limestone, light gray, fine grained, anhydritic, many solution cavities.

7050-7080 Limestone, light brownish gray, very finely crystalline, dense, traces of fragmental texture.

7080-7110 Dolomite, very light brownish gray, granular.

7110-7170 Siltstone, moderate reddish orange, calcareous.

7170-7200 Dolomite, as from 7080-7110.

7200-7330 Dolomite, as above and anhydrite, white.

7330-7430 Limestone, light gray, fine grained, many solution cavities; some anhydrite, white.

7430-7450 Limestone, light brownish gray to light gray, very finely crystalline to fragmental, traces of oolitic texture.

7450-7550 Anhydrite, white; some limestone, as above.

7550-7630 Limestone, light brownish gray, very finely crystalline, dense.

7630-7650 Siltstone, moderate reddish orange, calcareous; a little sandstone, pinkish gray, fine to medium grained.

7650-7710 Limestone, light brownish gray, very finely crystalline.

7710-7715 Anhydrite, very light gray to white.

7715-7720 Limestone, light brownish gray, very finely crystalline.

7720-7750 Anhydrite, very light gray to white.

7750-7770 Anhydrite, as above; a little limestone, light brownish gray, fragmental.

7770-7775 Limestone, light brownish gray, fragmental.

7775-7780 Anhydrite, very light gray to white; limestone, very light gray, fine grained, anhydritic.

7780-7790 Limestone, light brownish gray, very finely crystalline, fragmental.

7790-7840 Limestone, as above; some anhydrite, very light gray to white.

7840-7875 Limestone, light brownish gray, very finely crystalline, dense.

7875-7880 Limestone, light brownish gray, finely crystalline, fragmental, fossiliferous.

7880-7900 Anhydrite, very light gray to white; some limestone, as above.

7900-7910 Limestone, very light brownish gray, fine grained, granular, slightly dolomitic, fragmental in part.

7910-7920 Limestone, light brownish gray, fine to medium crystalline, granular, dolomitic.

7920-7950 Limestone, yellowish gray, finely crystalline, fragmental.

7950-8010 Limestone, light brownish gray, very finely crystalline, dense.

8010-8030 Limestone, very light brownish gray to brownish gray, fine to medium crystalline, fragmental.

8030-8045 Limestone, light brownish gray, pelletoidal to fragmental with a finely crystalline matrix.

8045-8100 Limestone, light brownish gray, fragmental with a finely crystalline matrix.

8100-8110 Limestone, very light brownish gray to pinkish gray, microucrosic, dolomitic.

8110-8190 Limestone, light gray to light brownish gray, fragmental with a finely crystalline matrix.

8190-8240 Limestone, light gray to medium gray, fragmental with a finely crystalline matrix, slightly argillaceous.

8240-8340 Limestone, as above; some light gray; fossiliferous chert.

8340-8370 Limestone, light gray to medium light gray, fragmental with a finely crystalline matrix, siliceous.

8370-8420 Limestone, light gray to very light brownish gray, fragmental with a finely crystalline matrix; some chert, light brownish gray to light gray.

8420-8860 Limestone, light gray to medium gray, fragmental with a finely crystalline matrix, siliceous.

8860-8880 Limestone, very light brownish gray, fine grained, granular.

8880-8930 Limestone, light gray to medium gray, finely crystalline, argillaceous.

8930-8940 Limestone, light gray to medium light gray, fragmental, fossiliferous with a finely crystalline matrix, slightly argillaceous.

8940-9010 Limestone, light gray to medium gray, finely crystalline, slightly argillaceous.

9030-9040 Limestone, light gray to medium gray, finely crystalline, slightly argillaceous, some chert, medium gray.

9050-9090 Limestone, as above; chert, light brownish gray to light gray.

9090-9130 Shale, dark brownish gray, platy.

9130-9190 Siltstone, very light gray, calcareous.

9190-9220 Shale, dark brownish gray, platy, slightly calcareous; siltstone, very light gray, calcareous.

9220-9240 Dolomite, very pale orange, fine to medium crystalline, granular.

9240-9270 Dolomite, as above; traces of shale, light greenish gray, platy, contains pyrite.

9270-9320 Limestone, light gray to medium light gray, finely crystalline and shale, dark brownish gray.

9320-9370 Dolomite, very pale orange, finely crystalline, slight pinpoint porosity.

9370-9440 Shale, pale reddish brown, very calcareous; dolomite, as above.

9440-9470 Anhydrite, very light gray, dense; limestone, light gray to light brownish gray, finely crystalline, dense in part, granular in part.

9470-9520 Limestone, very light gray to very light brownish gray, fragmental with a finely crystalline matrix.

9520-9540 Limestone, light brownish gray, sublithographic in part, fragmental with a finely crystalline matrix in part.

9540-9630 Dolomite, very light brownish gray, microsucrosic.

9630-9675 Dolomite, very light brownish gray to brownish gray, micro-sucrosic; limestone, very light brownish gray, finely crystalline.

9675-9695 Limestone, very light brownish gray, finely crystalline; dolomite, as above.

9695-9710 Dolomite, very light brownish gray, microsucrosic to sucrosic.

9720-9740 Limestone, light brownish gray, sublithographic.

9740-9765 Dolomite, very light brownish gray to light brownish gray, sucrosic to microsucrosic.

9765-9835 Limestone, light brownish gray to brownish gray, sublithographic.

9835-9910 Dolomite, light brownish gray, sucrosic to microsucrosic.

9910-9940 Dolomite, as above; limestone, light brownish gray, finely crystalline fragmental.

9940-10,000 Limestone, brownish gray, sublithographic.

10,000-10,060 Dolomite, very light brownish gray to light brownish gray, microsucrosic to sucrosic; limestone, light brownish gray to brownish gray, finely crystalline, fragmental in part.

10,060-10,190 Limestone, brownish gray, very finely crystalline.

10,190-10,210 Limestone, light brownish gray, microsucrosic, dolomitic, slightly argillaceous; traces of anhydrite, white.

10,210-10,240 Limestone, as above.

10,240-10,280 Dolomite, brownish gray, finely crystalline, dense.

10,280-10,320 Dolomite, very light brownish gray, very finely crystalline.

10,320-10,380 Dolomite, brownish gray, very fine to medium crystalline, slightly vuggy.

10,380-10,410 Dolomite, very light brownish gray, microsucrosic.

10,410-10,440 Dolomite, light brownish gray to brownish gray, very fine to medium crystalline, slightly vuggy.

10,440-10,530 Dolomite, light brownish gray, microsucrosic.

10,530-10,840 Salt, colorless and pinkish gray.

11,360-11,460 Dolomite, light yellowish gray, very finely crystalline.

11,460-11,490 Dolomite, as above; and dolomite, light brownish gray, pelletoidal with a finely crystalline matrix, limy.

11,490-11,505 Dolomite, very light yellowish gray, microcrystalline.