

NORTH DAKOTA GEOLOGICAL SURVEY CIRCULAR NO. 88

Summary of the Herman Hanson Oil Syndicate Harold Billey #1
Dickey County, North Dakota
Well No. 515 - Permit No. 530

By Morton Strassberg
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Herman Hanson Oil Syndicate - H. Billey No. 1, Dickey County, North Dakota, C SE 1/4 NW 1/4 Section 11, T. 129N., R. 63W. (660 feet from S. line and 660 feet from E. line) Elevation D.F. 1441.

The Herman Hanson Oil Syndicate - Billey No. 1 was spudded December 29, 1953; 8 1/2 inch casing was set at 365 with 160 sacks of cement and 5 1/2 inch casing was set at 1544 feet. The well was temporarily abandoned.

TESTS

DST 1 1673-1710

Open 1 hour, recovered 25 feet mud, no pressure.

DST 2 1492-1532

Open 90 minutes, good blow changing to gas in 55 minutes, no gauge gas, gas burned with small flame, recovered 200 feet highly G.C.M., 300 feet highly G.C. muddy fresh water, 700 feet slightly muddy water, FP 95-485# SIP (30 minutes) 770#.

Formation tops were determined from samples and radioactivity logs. Not all lithologic tops were called in the following list. Colors were determined from the rock color chart.

FORMATION TOPS

Cretaceous System	
Niobrara Formation	360
Greenhorn Formation	724
Dakota	1010
Ordovician System	
Red River	1524
Winnipeg Shale	1630
Winnipeg Sandstone	1678
Lower Winnipeg Sandstone	1835
Pre Cambrian	1875
Total Depth	1881

0-40	Sand, fine to coarse grained.
40-60	Sand, very fine to coarse grained.
60-100	Sand, very fine to coarse grained, medium light gray shale.
100-140	Shale, medium light gray, calcareous, coarse to very coarse grained sand.

140-180 Shale, medium light gray, bentonitic.
 180-200 Shale, medium light gray, bentonitic, medium to very coarse grained quartz.
 200-220 Sand, very fine to very coarse grained.
 220-260 Shale, medium light gray, very coarse grained sand.
 260-300 Shale, medium light gray, calcareous, calcite prisms.
 300-320 Sand, coarse to very coarse grained, medium light gray calcareous shale.
 320-340 Shale, medium dark to dark gray.
 340-360 Shale, medium light to medium dark gray, calcareous, very coarse grained sand.
 360-530 Shale, light gray, white specks, highly calcareous.
 530-540 Shale, light gray, white specks, calcareous, fine to medium grained sand.
 540-560 Sandstone, fine to coarse grained, medium light gray shale white specks, highly calcareous, pyritic.
 560-590 Sandstone, fine to coarse grained, subangular to subrounded, calcareous cement, pyritic.
 590-600 Shale, light gray, white specks, highly calcareous, medium to coarse grained sand grains.
 600-610 Sandstone, fine to coarse grained, subangular to subrounded, pyritic.
 610-620 Lost circulation.
 620-650 Shale, light gray, highly calcareous, white specks, fine to coarse grained quartz.
 650-660 Sandstone, very fine to coarse grained, subrounded to subangular, medium light gray siltstone.
 660-680 Shale, light gray, highly calcareous, white specks, very light gray argillaceous limestone.
 680-690 Sandstone, fine to coarse grained, subangular to subrounded.
 690-710 Shale, light to medium dark gray, white specks, calcareous, fine to coarse grained, subangular sandstone and medium light gray siltstone.
 710-720 Siltstone, light olive gray, dolomitic.
 720-780 Limestone, yellowish gray argillaceous, medium light gray highly calcareous shale with white specks.
 780-850 Shale, medium gray, highly calcareous, white specks, calcite prisms.
 850-880 Shale, medium to medium dark gray, calcareous, calcite prisms.
 880-900 Sandstone, fine to coarse grained, subangular frosted calcite prisms, pyritic.
 900-910 Shale, medium gray, highly calcareous, white specks and calcite prisms.
 910-940 Limestone, calcite prisms and fragments, pyritic, medium gray calcareous shale.
 940-960 Shale, medium gray, calcite prisms.
 960-990 Sandstone, fine to coarse grained, subrounded to subangular, frosted, medium gray shale, calcite prisms, light bluish gray bentonite.
 990-1000 Limestone, calcite prisms and fragments, pyritic, light bluish gray bentonite.
 1000-1020 Sandstone, very fine grained, calcareous, calcite prisms, pyritic.
 1020-1030 Limestone, calcareous prisms and fragments, pyritic, medium gray calcareous siltstone.

1030-1070 Shale, medium gray calcareous, medium gray siltstone, calcite prisms.

1070-1080 Sandstone, very fine to coarse grained, subangular to subrounded, medium gray calcareous shale.

1080-1130 Shale, medium gray calcareous, fine grained calcareous sandstone and medium gray siltstone.

1130-1140 Sandstone, very fine to fine grained, light olive gray siltstone.

1140-1150 Sandstone, fine to coarse grained, subrounded to subangular, frosted, light olive gray siltstone.

1150-1220 Sandstone, very fine to medium grained calcareous.

1220-1240 Shale, medium gray calcareous medium light gray calcareous, fine grained sandstone.

1240-1290 Sandstone, very fine grained to silty, calcareous, pale yellowish brown.

1290-1310 Sandstone, light gray, very fine grained calcareous.

1310-1320 Sandstone, medium to very coarse grained, fine grained silty limestone, pyritic.

1320-1350 Sandstone, medium to coarse grained, fine grained silty limestone, pyrite.

1350-1360 Limestone, medium light gray, fine grained silty, medium to coarse grained pyritic sandstone.

1360-1410 Sandstone, fine to very coarse grained, angular to subangular, pyritic, calcareous cement.

1410-1460 Sandstone, very coarse grained, subangular to subrounded, frosted, pyritic.

1460-1490 Sandstone, medium to very coarse grained, subangular to subrounded, pyritic. Iron stained siltstone concretions.

1490-1500 Siltstone, pale red, arenaceous, calcareous, medium to coarse grained sandstone and iron stained siltstone concretions.

1500-1505 Shale, medium gray and pale red calcareous.

1505-1510 Siltstone, grayish orange pink, arenaceous, argillaceous.

1510-1520 Siltstone, pale reddish brown, arenaceous, argillaceous.

1520-1530 Limestone, pale red to very light gray, fine grained, arenaceous, white chert.

1530-1550 Limestone, pinkish gray, fine grained to fragmental arenaceous, white chert.

1550-1630 Limestone, pinkish gray to pale red, fine grained to fragmental, silty.

1631 Circulation, limestone, pinkish gray to pale red, fine grained to fragmental silty, fine to coarse grained silty sandstone.

1631-1635 Siltstone, pale reddish brown, arenaceous, pale red fragmental, silty limestone.

1635-1545 Limestone, pinkish gray to pale red, fine grained to fragmental, silty.

1545-1660 Limestone, same as above, coarse to very coarse, subangular frosted sandstone.

1660-1690 Sandstone fine to very coarse grained, subangular, frosted, pinkish gray to pale red fragmental, silty limestone.

1690-1700 Limestone, pinkish gray to pale red, fine grained to fragmental, silty.

1700-1710 Shale, greenish gray and pale red, pinkish gray and pale red, fine grained to fragmental, silty limestone.

1710-1730 Shale, greenish gray and pale red.

1730-1760 Shale, pale red, calcareous.

1760-1780 Shale, pale red and medium light gray.
1780-1805 Shale, pale red and greenish gray.
1805-1810 Shale, medium light gray, pale red fine grained to fragmental limestone.
1810-1820 Limestone, pinkish gray fine grained to fragmental, silty.
1820-1835 Shale, medium light and pale red, limestone as above.
1835-1840 Shale, pale red and medium light gray, fine to coarse grained free quartz.
1840-1845 Sandstone, fine to coarse grained, subrounded, frosted.
1845-1850 Shale, pale brownish gray and pale reddish brown, fine to medium grained free quartz.
1850-1865 Limestone, white to pinkish gray, fine grained to fragmental, silty, medium gray shale, fine to very coarse grained free quartz.
1865-1875 Sandstone, fine to very coarse grained, subrounded, frosted, medium light gray shale, pink gray, fine grained silty limestone.
1875 Basic igneous rock.