

NORTH DAKOTA GEOLOGICAL SURVEY CIRCULAR NO. 147

Summary of the Shell Oil Company Oscar Sinness No. 1  
Well No. 692 - Permit No. 706

by Dana E. Hanson

Shell Oil Company - Oscar Sinness No. 1, Benson County, North Dakota.  
Location: 1980 feet from the south line and 1930 feet from the west line of  
Section 2 - Twp. 156N. - Rge. 67W. Elevation: 1479 ground, 1490 K.B. Total  
Depth - 2316 feet.

The Shell Oil Company - Oscar Sinness No. 1 was spudded August 19, 1954,  
drilled to a total depth of 2316 feet, found dry and plugged August 27, 1954.  
No cores or drill stem tests were taken. No oil shows reported. Electrical,  
Micro, and Gamma Ray-Neutron logs were run by Schlumberger August 27, 1954.

Casing record

Set 8 5/8" surface casing at 217' with 195 sacks construction cement.

Plugging record

Cement plugs of 10 sacks each were set at the following depths; 2270',  
2110', 1940', 1580', 1420', and 217'. A plug of 5 sacks was set at the  
surface.

Formation tops were determined from samples and electric logs. Doubtful  
or obscure formation tops were not picked. Color names and identifying numbers  
are from the 1948 Rock-Color Chart(second printing 1951) distributed by the  
Geological Society of America, New York, N.Y.

FORMATION TOPS

Cretaceous system

Niobrara formation	605
Greenhorn formation	1097
Dakota group sands	1497

Jurassic system

Piper limestone	1782
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Mississippian system

Lodgepole formation	2095
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Devonian system

"Nisku" formation	2250
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0-100	Sands, loose medium to coarse grained, angular to rounded, clear pink quartz grains, rounded grains of coarse, light brown gray dolomite, angular fragments of feldspar, clear, white, pink, dark minerals of hornblende. Sand biotite. Much medium gray massive, oily, micromicaceous shale.
100-200	Samples missing.
200-530	Shale, as above, plus small amounts of above sand. Casing shoe at 218.
530-640	Shale, medium gray, massive, oily, compact to spongy.
640-710	Shale, dark gray, soft, flaky, lumpy, spongy, with light blue gray bentonite.

710-750 Shale, medium gray to medium dark gray, soft, spongy, flaky to disaggregated with light gray bentonite. Traces of pyrite. "White specks" in shale, calcareous.

750-850 Shale, medium gray to medium dark gray, lumpy and spongy, calcareous. "White specks", soapy to earthy. With light brownish gray calcite crystals and light gray bentonite.

850-960 Shale, medium gray to dark gray, lumpy and spongy, slightly calcareous. Light gray bentonite.

960-1090 Shale, medium dark gray, lumpy and spongy, silky, and soft.

1090-1110 Shale, medium dark gray to dark gray, soft, spongy and lumpy to disaggregated and flaky. Traces coarse quartz grains and calcite prisms.

1110-1260 Shale, dark gray, soft, spongy, flaky, and disaggregated to lumpy, calcareous, micro-micaceous with many calcite prisms. Traces of pyrite.

1260-1310 Shale, medium dark gray, soft, lumpy and disaggregated, oily, with traces of light blue gray bentonite, calcite prisms, and Globigerina.

1310-1400 Shale, medium dark gray, soft, lumpy and flaky, disaggregated and spongy, silky, with traces of light blue gray bentonite and pyrite.

1400-1430 Shale, as above, with traces of calcareous, glauconitic and micaceous, siltstone to very fine grained sandstone.

1430-1570 Shale, medium dark gray, soft, lumpy and flaky, disaggregated to spongy, silky, with traces of light greenish gray and light gray bentonite. Mostly. Greenhorne cave.

1570-1590 Shale as above with light gray, fine grained, calcareous cement, glauconitic sandstone, friable. Much crystalline pyrite, and soft, waxy, green gray, shale, and light reddish brown shale.

1590-1650 Shale, sandstones, pyrite as above, plus light brownish gray, calcareous, very fine grained quartzose sandstone.

1650-1720 Shale, green gray, soft, waxy, splintery, shale, light red brown, slightly calcareous, soft, waxy, disaggregated. Much pyrite and loose angular, fine grained quartz with fine grained light gray and light brownish gray sandstone as above.

1720-1810 Shale, green gray and light red brown as above. Much pyrite. Fine grained calcareous, light gray quartz sandstone, light gray, crystalline, fine to medium grained to sublithographic. Limestone with carbonaceous streaks. Traces of coarse grained, subrounded, clear quartz grains and white pink anhydrite.

1810-1840 Limestone, white light gray to yellowish gray sandy grading into a calcareous fine grained quartz sandstone, thin bedded, varying from sandstone to a coarse grained limestone.

1840-1850 Shale, green gray as above, limestone and sandstone as above, plus white pink anhydrite.

1850-1860 Limestone, sublithographic, light gray, with inclusions of anhydrite. Shale, as above.

1860-1920 Shale, dark greenish gray splintery, slightly calcareous, waxy, with grayish red to moderate pink, calcareous massive shale. Red staining on some of the green gray shale. Small amounts of white pink anhydrite. Much red shale from 1910-1920.

1920-1940 Limestone, yellowish gray, chalky, sublithographic, some pinpoint porosity. The limestone grades into a very quartzose sandy limestone. With shales, as above.

1940-1955 Shale and limestone, as above.  
 1955-2000 Limestone, yellowish gray, sublithographic to fine grained and micro-sucrosic. Shale as, above.  
 2000-2095 Anhydrite, white, fine grained. With small amounts of above limestone and shale.  
 2095-2125 Limestone, grayish orange pink, fine medium grained to sub-lithographic microsucrosic. White chert. Much Cretaceous cave, gray and green gray shales.  
 2125-2290 Limestone, grayish pink, fine medium grained microsucrosic to sublithographic. With limestone as above. White and pink chert. Traces of crinoid stems interval from 2280-2290 light red.  
 2290-2295 Shale, dark gray, fissle, laminated, silky, compact to brittle, with above limestone and with rounded, frosted, coarse, quartz grains.  
 2295-2315 Dolomite, limey, grayish orange pink to moderate orange pink, fine to medium grained, crystalline and microsucrosic, intergranular and vuggy porosity.  
 2316 Total Depth.