NORTH DAKOTA GEOLOGICAL SURVEY CIRCULAR N0. 127

Summary of the S. D. Johnston - Melvin Tingelstad #1
Rolette County, North Dakota
Permit No. 593 - Well No. 579

By Dan E. Hansen
November 1955

The S. D. Johnson - Melvin Tingelstad Section 3, T. 163N., R. 70W., (600 feet from south line, 660 feet from east line). Elevation 1895 G.L.

The S. D. Johnson - Tingelstad #l was spudded May 3, 1954, by S. D. Johnson of Denver, Colorado. Set 327 feet 8 5/8" surface casing with 200 sacks cement. The well was drilled to a total depth of 2825 feet and ended in the Nisku.

Cores taken: 2571-2600 and 2795-2826

Logs Run: Electric and Gamma Ray, 330-2821, Micro, 2500-2816.

Cement plugs of 10 sacks each were set at the following depths:
2803, 2565, 1896, 1800 with 15 sacks at 327 and at top of surface pipe.

Formation tops determined from samples and electric log. Colors were determined from the Rock Color Chart. All tops not determined.

FORMATION TOPS

Cretaceous System	
Niobrara Formation	1158
Greenhorn Formation	1511
Dakota Group	1743
Newcastle, “Muddy”	1800
Jurassic System	2195
Piper Lime	2352
Mississippian System	
Lodgepole Formation	2563
Englewood Formation	2755
Devonian System	
Lyleton Formation	2773?
Nisku Formation	2818

0-346	Missing.
346-465	Shale, medium gray, massive, compact, earthy, micro-micaceous.
465-618	Samples missing.
618-796	Shale, medium gray, massive, compact, resinous, micro-micaceous.
796-1465	Samples missing.
1465-1525	Shale, medium dark gray, compact, micro-micaceous, with traces of pyrite light blue gray bentonite.
1525-1555	Shale, dark gray, medium dark gray, “white specks”, compact, with traces dark gray limestone.
1555-1585	Samples missing.

1585-1675	Shale, medium gray, dark gray, very calcareous, “white specks”, calcite prisms, traces angular, coarse, clear, quartz grains, with light to dark gray, fragmental, fine medium grained limestone, shaly. Globigerina.
1675-1705	Samples missing
1705-1827	Shale, dark gray, lumpy, micro-micaceous, spongy. Traces pyrite, light gray bentonite.
1827-1888	Sand, coarse, angular, clear, white, polished quartz. Shale as above.
1888-1918	Samples missing.
1918-1979	Sand, loose grains of coarse, white, clear, angular, pitted, oily, quartz, pyrite and pyrite cement. Shale as above.
1979-2101	Samples missing.
2101-2162	Shale, green gray, medium gray, dark gray and light brownish gray, compact, platy, resinous. Sand as above. Pyrite in some of the chips of green gray shale.
2162-2193	Limestone, light gray, carbonaceous, fine grained crystalline and very coarse grained, fragmental. Green gray and medium gray shale as above. Sand, fine medium grained, as above.
2193-2264	Shale, medium gray, compact, platy, calcareous, sand as above.
2264-2294	Shale, green gray, medium gray, as above, with fine grained, calcareous white, light gray quartzose sandstone. Few loose, coarse, angular grains of white quartz. Traces shell fragments.
2294-2370	Shale, green gray, reddish brown, compact, calcareous, platy, with medium gray, calcareous, compact shale, and light olive shale, as above. Traces fragmental, medium coarse grained, and fine crystalline limestone. Traces fine and coarse grained, clear, white, angular quartz grains.
2370-2380	Limestone, yellowish gray, fine grained, crystalline, vuggy, microsucrosic, recrystallized. Shales as above. Traces light gray chert.
2380-2460	Limestone, very light gray, fine grained to sublithographic. Shale, as above.
2460-2550	Anhydrite, white, crystalline, medium grained. Shale, as above, predominately red brown.
2550-2570	Shale, medium gray, brown red as above.

Core #1

2571-2572	Siltstone, light brownish gray, well indurated, slightly calcareous, medium grained, clear quartz throughout. Inclusions of anhydrite. Green mineral.
2572-2573	Anhydrite, white, clear, to very dusky, red, coarse crystalline.
2573-2574	Dolomite, moderate pink, fine grained, microsucrosic.
2574-2575	Dolomite and anhydrite, grayish pink, fine grained dolomite with streaks of coarse crystalline anhydrite.
2575-2576	Anhydrite, pale red, white, streaked, coarse crystalline with fine grained, sublithographic, pinkish gray dolomite.
2576-2578	Limestone, pale yellowish brown, fine grained, microsucrosic.
2578-2580	Limestone, pale orange pink, pale red, fine grained, microsucrosic.
2580-2581	Limestone, as above, with light gray, clear anhydrite, and white chert.
2581-2582	Chert, white, medium gray.

2582-2586 Limestone, grayish pink, fine grained, microsucrosic, with streaks of anhydrite and pale red purple mottling.

Core #2
2586-2593 Limestone, as above, with white chert and anhydrite inclusions.
2593-2596 Limestone, pale red, fine grained, microsucrosic, banding.

Core #3
2595-2597 Silt, dark reddish brown, dolomitic, anhydrite inclusions, with white chert.
2597-2600 Silt, as above, with pinkish gray very fine grained, microsucrosic limestone anydrite inclusions.

End of Core
2600-2710 Limestone, pinkish gray, fine grained, soft, microsucrosic to subcrystalline, dense, with much white, pinkish gray chert.
2710-2760 Limestone, pinkish gray, fine grained, granular to medium grained, fragmental.
2760-2800 Shale, medium gray, splintery, slightly calcareous with pale red, green gray waxy, splintery, slightly calcareous shale, with above limestone and few fragments coarse, crystalline, light gray limestone.

Core #3
2800-2803 Silt, reddish brown, very calcareous to dusky red and light green gray clayey, very calcareous.
2803-2806 Dolomite, moderate orange pink, fine grained, granular, pinpoint porosity very porous.
2806-2808 Dolomite, silty, calcareous, dusky red, fine grained, microsucrosic.
2808-2810 Missing.
2810-2811 Limestone, white, pinkish gray, dense, very fine grained crystalline.
2811-2813 Limestone, grayish orange pink, fine coarse grained, fragmental, recrystallized, porous.
2813-2818 Dolomite, grayish pink, light gray, and pale red color banding, dense to porous, shaly, with angular rubble of dolomite from 2814-2816.
2818-2820 Dolomite, light brownish gray, fine medium grained, granular, intergranular and pinpoint porosity with traces of anhydrite.
End of core

2820-2825 Sample missing.
2825 Total Depth.