

NORTH DAKOTA GEOLOGICAL SURVEY CIRCULAR NO. 130

Summary of the British-American - P. Wenstad No. 1
Rolette County, North Dakota
Well No. 685 - Permit No. 699

By John L. Hainer

British-American - P. Wenstad No. 1 - Wildcat, Rolette County, North Dakota, section 32-T.163N.-R.73W. 660 feet from the south and 4485 feet from the east section lines of section 32-T.163N.-R.73W. Elevation: GL 2030; K.B. 2042.

The British-American - P. Wenstad No. 1 was spudded September 26, 1954, drilled to a total depth of 5274 feet, found dry and plugged according to regulations, October 18, 1954. No drill stem tests or cores were taken. Electric, microlog, and radioactivity logs were run by Schlumberger Well Surveying Corporation.

CASING: Surface casing, 8 5/8" was set at 217' with 220 sacks of cement.

PLUGGING RECORD: Spotted 10 sacks cement from 5180 to 5145; 10 sacks cement from 3629 to 3594; 10 sacks cement from 3112 to 3077; 10 sacks cement from 2434 to 2399; 10 sacks cement from 2270 to 2235; 10 sacks cement from 225 to 190; and 5 sacks cement in surface casing.

Formation tops were determined from samples and electric log and corrected to the electric log. Not all formation tops were picked. Colors were determined from the rock color chart.

FORMATION TOPS

Cretaceous System	
Niobrara formation	1450
Greenhorn formation	1867
Dakota Group	2271
Jurassic System	2529?
Piper lime	2809
Triassic System	
Spearfish formation	3022
Mississippian System	
Lodgepole formation	3112
Englewood formation	3582
Devonian System	
Lyleton formation	3602
"Nisku" formation	3643
Duperow formation	3740
Souris River formation	4136
Dawson Bay formation	4395
Prairie Evaporite formation	4566
Winnipegosis formation	4579
Ashern formation	4703
Silurian System	
Interlake Group	4732

Ordovician System	
Stony Mountain formation	
Upper	5012
Lower	5106
Red River formation	5183
Total Depth	5274

300-410	Shale, medium light gray, micaceous, sand unconsolidated clear quartz sand, subangular. Lignite.
410-570	Shale, medium light gray, micaceous, lumpy.
570-710	Shale, medium to medium dark gray, lumpy, little bentonite.
710-980	Shale, medium light gray to medium gray, foliated.
980-990	Missing.
990-1290	Shale as above.
1290-1350	Shale, medium light to medium gray, lumpy, bentonitic, little pyrite.
1350-1410	Shale as above.
1410-1450	Shale, medium gray to dark gray, bentonitic, lumpy, little pyrite.
1450-1510	Shale, medium gray, foliated, "white specks", calcareous, little pyrite.
1510-1570	Shale, medium to medium dark gray, lumpy, slightly bentonitic, little lignite.
1570-1730	Shale as above.
1730-1790	Shale as above, little lignite.
1790-1850	Shale as above.
1850-1910	Shale, dark gray, fissile, aggregates of Inoceramus prisms.
1910-1970	Shale, medium dark gray, foliated, "white specks", calcareous, Inoceramus, as above.
1970-2000	Shale, dark gray, fissile, medium to dark gray, lumpy, little bentonite.
2000-2050	Shale, grayish black, fissile to lumpy, little pyrite and Inoceramus prisms, bentonite, white to bluish white.
2050-2280	Shale medium dark gray, fissile to lumpy, little bentonite as above.
2280-2310	Shale as above, little sandstone, white, fine grained, pyritic and calcareous cement.
2310-2330	Sand, unconsolidated quartz sand, clear to frosted, subrounded, 0.5 to 1 mm in diameter, pyrite.
2330-2360	Sand as above, limestone pebbles, varicolored, subangular to subrounded, pyrite.
2360-2390	Shale, medium dark gray, fissile, sand, clear to stained, subangular to subrounded, pyrite.
2390-2420	Shale, as above, sandstone, white, fine grained, friable, calcareous cement.
2420-2500	Siltstone, white, calcareous, shale as above.
2510-2530	Shale, medium dark gray, fissile, bentonite, bluish white.
2530-2550	Shale as above, shale light brown 5YR5/6, lumpy, calcareous.
2550-2590	Shale, medium dark gray and greenish gray 5GY6/1, fissile, shale, light brown as above, bentonite.
2590-2610	Shale, medium dark gray, fissile to lumpy, bentonite, little limestone, yellowish gray with dark gray streaks, finely crystalline.

2610-2640 Shale and limestone as above, little shale, greenish gray 5GY6/1, waxy.

2640-2660 Shale, medium gray, lumpy, greenish gray, waxy.

2660-2680 Shale, medium gray, foliated, greenish gray, waxy.

2680-2710 Shale as above, shale grayish red 10R4/2, calcareous, waxy.

2710-2790 Variegated shale, splintery, calcareous, waxy.

2790-2850 Limestone, yellowish gray 5Y8/1, finely crystalline, shale as above.

2850-2910 Limestone, yellowish gray, fragmental to microsucrosic.

2910-2950 Limestone, pale yellowish brown, microcrystalline, dense.

2950-2970 Limestone, very pale orange 10YR8/2, microcrystalline, gypsum, white.

2970-3030 Gypsum, white, shale, medium dark gray, foliated, greenish gray and grayish red, waxy, calcareous.

3030-3050 Shale, pale reddish brown 10R5/4, lumpy, slightly calcareous, shale, medium light to medium dark gray, fissile to foliated, gypsum, white.

3050-3110 Shale as above, siltstone, pale reddish brown, calcareous, with included quartz sand grains, rounded, frosted.

3110-3160 Limestone, very pale orange 10YR8/2, fragmental.

3160-3200 Limestone, grayish orange pink 10R8/2, fragmental to granular.

3200-3250 Limestone, very pale orange 10YR8/2, sublithographic.

3250-3310 Limestone, mottled white and pale red, sublithographic to fragmental, few oolites.

3310-3390 Limestone, grayish orange pink 10R8/2, fragmental to granular.

3390-3410 Limestone, as above, chert, grayish orange pink.

3610-3430 Limestone, pale yellowish brown 10YR6/2, finely crystalline, chert, white.

3430-3500 Limestone, very pale orange 10YR8/2, fragmental to granular, chert, light gray to pale pink 5RP8/2.

3500-3520 Limestone, as above, chert, pale pink.

3520-3580 Limestone, very pale orange to pale yellowish brown, finely crystalline, chert, white to light gray.

3580-3600 Shale, dark gray, foliated.

3600-3640 Shale, medium to medium dark gray, fissile, shale, pale reddish brown 10R5/4 and greenish gray 5GY6/1, waxy.

3640-3660 Dolomite, very pale orange 10YR8/2, finely granular.

3660-3750 Dolomite and calcareous dolomite, yellowish gray 5Y8/1 to pale yellowish brown 10YR6/2, microcrystalline to finely granular.

3750-3770 Shale, medium to dark gray, foliated, greenish gray and pale reddish brown, waxy, limestone, very pale orange, finely granular, dolomitic.

3770-3840 Dolomite, very pale orange to pale yellowish brown, finely granular, little anhydrite, white.

3840-3860 Limestone, very pale orange, sublithographic.

3860-3930 Dolomite, very pale orange to pale yellowish brown, finely granular, calcareous.

3930-3950 Dolomite as above, anhydrite, light gray.

3950-4000 Dolomite, pale yellowish brown, sucrosic, little intergranular porosity.

4000-4050 Limestone, very pale orange, sublithographic, slightly vuggy, little dolomite as above.

4050-4070 Poor samples, Jurassic shale caving, little limestone as above, limestone medium light gray, argillaceous.

4070-4090 Dolomite, very pale orange to pale yellowish brown, sucrosic.
4090-4130 Limestone, very pale orange, sublithographic, little dolomite as above.
4130-4180 Dolomite, light gray, greenish gray 5GY6/1, yellowish gray 5Y7/2, dense sucrosic, shale, greenish gray, dolomitic.
4180-4200 Dolomite, light gray to yellowish gray 5Y7/2, sucrosic, dense.
4200-4350 Dolomite as above, anhydrite, white to medium light gray.
4350-4390 Dolomite, pale yellowish brown, sucrosic, some pinpoint porosity.
4390-4400 Dolomite, pale yellowish brown, anhydrite, finely crystalline.
4400-4480 Dolomite, pale yellowish brown, sucrosic, fair intergranular porosity.
4480-4540 Limestone, yellowish gray 5Y8/1, finely crystalline, dense.
4540-4560 Shale, grayish red 10R4/2, massive, calcareous, limestone as above.
4560-4580 Anhydrite, white, dolomite, pale yellowish brown, finely crystalline, dense.
4580-4590 Dolomite, very pale orange, microsucrosic.
4590-4630 Poor samples, predominantly shale caving, little dolomite, pale yellowish brown, microsucrosic.
4630-4640 Shale, caving as above, dolomite as above, limestone, pale yellowish brown to very pale orange, fragmental.
4640-4700 Limestone, very pale orange to pale yellowish brown, fragmental.
4700-4710 Shale, light gray, foliated, slightly dolomitic, little limestone as above.
4710-4740 Shale, pale red 10R6/2 to grayish red 10R4/2, dolomitic, massive.
4740-4770 Limestone, white to grayish orange pink 10R8/2, sublithographic, little shale as above.
4770-4810 Variegated shale, grayish red, medium to dark gray, grayish green, limestone, white, yellowish gray, pale yellowish brown, sublithographic to fragmental.
4810-4840 Limestone, white to yellowish gray, sublithographic.
4840-4860 Dolomite, yellowish gray 5Y8/1, fine grained, siliceous.
4860-4880 Dolomite as above, limestone, white sublithographic.
4880-5010 Dolomite as above.
5010-5030 Dolomite as above, few quartz sand grains, clear to frosted, subrounded.
5030-5040 Dolomite as above.
5040-5050 Dolomite, yellowish gray to grayish orange pink 10R8/2, fine grained, little shale, grayish orange pink, highly calcareous.
5050-5100 Dolomite, very pale orange 10YR8/2, microsucrosic, little pinpoint porosity.
5100-5150 Limestone, medium gray, argillaceous, fossiliferous, variegated shale, little dolomite as above.
5150-5170 Limestone, light to medium gray, argillaceous, fossiliferous.
5170-5210 Limestone, very pale orange to yellowish gray sublithographic, limestone as above.
5210-5220 Dolomite, very pale orange, microsucrosic.
5220-5270 Limestone, very pale orange to pale yellowish brown, fragmental.
5274 Total Depth