NORTH DAKOTA GEOLOGICAL SURVEY CIRCULAR NO. 64

Summary of the E. Wilson Germany and Cardinal Drilling Company
George Seibel #1
Wells County, North Dakota
Well No. 384, Permit No. 400

by Carole Smith
April, 1954

The E. Wilson Germany and Cardinal Drilling Company - George Seibel #1, Wells County, North Dakota. Located: NW NE Section 13, T. 145N., R. 71W. (600' from North line, 2040' from East line, Section 13). Elevation: 1891 K.B.

The Germany-Cardinal Drilling Company - George Seibel #1 was spudded September 5, 1953 and 317' of 10 3/4" surface casing was set with 190 sacks of cement. Plugs of eight sacks were set at 2968; 2603; 2353; and 344'; a five sack plug was set in the top of the surface pipe. The well was plugged and abandoned as a dry hole on September 13, 1953 at a total depth of 3500 feet.

No cores.

No tests.

FORMATION TOPS

Cretaceous System	
Niobrara	1225
Greenhorn	1787
Dakota	2325
Jurassic System	
Morrison	2570
Sundance	2627
Piper lime	2805
Triassic System	
Spearfish	2890
Mississippian System	
Charles	2986
Mission Canyon	3028
Lodgepole	3183
Total Depth	3500

From	To	Formation
400	430	Shale--medium gray to medium light gray, firm; much subangular, very coarse quartz sand.
430	700	Shale--gray black lumpy; decreasing amounts of silty, medium gray shale; traces of sand.
700	790	Shale--gray black to dark gray, lumpy partly bentonitic (quite bentonitic: 730 - 760).
790	880	Shale--medium gray, slightly green, firm, partly bentonitic.
880	1100	Shale--medium gray, slightly green, firm, becoming slightly softer and bentonitic in part beginning at 1000.

From	To	Formation
1100	1150	Shale--medium gray to dark gray, firm to flaky, slightly bentonitic in part.
1150	1210	Calcareous shale--medium gray, lumpy; traces of inoceramus prisms.
1210	1240	Shale--medium to dark gray, lumpy, partly bentonitic.
1240	1330	Shale--gray black to black, lumpy.
1330	1420	Calcareous shale--medium gray to medium dark gray, with white specks, lumpy; traces of inoceramus prisms.
1420	1450	Shale--medium dark gray, partly firm, partly calcareous.
1450	1570	Shale--medium gray to dark gray, lumpy, silty and sandy, partly calcareous; some coarse, fine grained, shaly gray sandstone (1450-1480).
1570	1660	Shale--medium gray to dark gray, lumpy, slightly silty and glauconitic.
1660	1690	Missing samples.
1690	1810	Shale--medium dark gray to dark gray, firm and lumpy, partly limey and glauconitic and silty, becoming darker and more calcareous at 1780; traces of iridescent shell fragments.
1810	1930	Calcareous shale--medium dark gray, lumpy, becoming firm and white specked at 1870; some lithographic white limestone, dense dark limestone, and fragmental limestone beginning at 1900.
1930	2020	Shale--medium dark gray, partly calcareous lumpy; some inoceramus prisms and fragmental limestone, decreasing in quantity.
2020	2110	Shale--medium dark gray and dark gray, firm and flaky partly limey; traces of inoceramus prisms; glauconite, sand.
2110	2170	Calcareous shale--medium gray to medium dark gray, lumpy; traces of shell fragments.
2170	2320	Shale--medium gray to dark gray, firm to lumpy, slightly calcareous in parts, increasingly calcareous beginning at 2260.
2320	2360	Calcareous shale--medium gray to dark gray, lumpy; traces of inoceramus prisms, pyrite, and fine sand.
2360	2390	Shale--medium gray to medium dark gray flaky to lumpy to firm, partly calcareous, partly sandy and silty; traces of inoceramus prisms.
2390	2420	Shale--medium gray, lumpy, silty, somewhat calcareous, traces of inoceramus prisms.
2420	2460	Shale--medium gray to medium dark gray, lumpy to flaky to firm, partly calcareous and silty; traces of pyrite, glauconite, shaly siltstone, sand, dense limestone; traces of very coarse, light brown, concretionary quartz beginning at 2450.
2460	2490	Shale--medium gray, rather firm, slightly sandy; traces of pyrite and concretionary quartz as above.
2490	2500	Missing samples.
2500	2550	Sand--very coarse, quartz, subangular, much gray shale, decreasing greatly between 2520-2530, and increasing again in quantity at 2530; traces of pyrite.
2550	2590	Sandy shale--gray, firm, becoming partly silty at 2560; traces of pyrite, inoceramus prisms, and sand; much coarse sand beginning at 2580.

From	To	Formation
2590	2600	Gravel; some very coarse concretionary quartz; some pyrite; much gray shale.
2600	2610	Shale--medium gray to gray black; much very coarse, subangular to subround sand.
2610	2620	Missing samples.
2620	2650	Shale--medium gray to dark gray, sandy and silty, partly calcareous; some sand (2630-2640); traces of green shale (beginning at 2640) and pyrite.
2650	2710	Shale--medium gray to dark gray, firm, partly calcareous; traces of greenish shale, dark red shale, pyrite, and sand; more sand (2670-2680).
2710	2720	Shale--dark gray, flaky, some shale as above.
2720	2800	Shale--medium gray to medium dark gray, firm, partly calcareous, becoming increasingly flaky; traces of sand, pyrite, and greenish shale; the shale becomes lumpier and more calcareous at 2790; traces of light reddish brown shale beginning at 2790.
2800	2840	Calcareous shale--gray, lumpy; some flaky gray shale as above; small amounts of reddish brown shale; traces of green shale; small amounts of fine sugary to lithographic, very pale orange to very light gray limestone beginning at 2830.
2840	2880	Shale--medium gray to dark gray, flaky to firm; some almost white, sublithographic limestone which becomes more micro-sugary and very pale orange; missing: 2860-2870.
2880	2930	Shale--medium gray to dark gray, firm, slightly green, some sublithographic to lithographic very pale orange to almost white limestone; traces of reddish brown shale.
2930	2940	Limestone--very pale orange to white, micro-sugary to lithographic; much gray shale as above; small amounts of reddish brown shale.
2940	2960	Shale--medium gray, firm; increasing amounts of white anhydrite; traces of limestone and reddish shale.
2960	2980	Shale--medium gray, firm; some very pale orange, lithographic limestone; small amounts of anhydrite and reddish shale; more reddish shale at 2970.
2980	3000	Shale--medium gray, firm, slightly green; small amounts of green shale, anhydrite, and limestone; increasing amounts of reddish shale.
3000	3020	Shale--limey reddish brown, some gray shale as above, small amounts of limestone and anhydrite.
3020	3040	Shale--medium dark gray to dark gray, firm to flaky; increasing amounts of reddish shale; some limestone and anhydrite at 3030; small amounts of dense pink dolomite.
3040	3060	Shale--dark gray, flaky; some reddish shale; some micro-sugary, pink limestone; much very pale yellow brown micro-sugary limestone at 3050; traces of anhydrite.
3060	3080	Shale--medium dark gray, flaky, partly limey; some limestone as above, ending at 3070; much micro-sugary pink, limey dolomite beginning at 3070; small amounts of reddish shale.
3080	3090	Dolomite--pink, micro-sugary, partly limey; much gray shale as above; small amounts of limestone.

From	To	Formation
3090	3110	Shale--medium gray to medium dark gray; much micro-sugary, pink dolomitic limestone and limestone, traces of anhydrite, oolitic limestone, and reddish shale.
3110	3130	Shale--medium gray to medium dark gray; some very pale (rather pink and yellow), micro-sugary and/or chalky limestone; traces of glauconitic sandstone, and reddish shale.
3130	3140	Shale--medium gray to medium dark gray, firm to flaky; some reddish shale; some white to pink, micro-sugary to sub-lithographic limestone; traces of sandstone.
3140	3160	Limestone--pink, white, very pale yellow brown, micro-sugary to lithographic; much reddish, gray, and greenish shale, increasing in quantity and becoming limey.
3160	3190	Shale--dark gray, partly calcareous; some reddish and greenish shale, some micro-sugary and/or chalky, very pale limestone almost ending at 3180.
3190	3200	Calcareous shale--reddish brown, greenish, and gray; much pale, chalky limestone.
3200	3210	Limestone--pink, micro-sugary and/or chalky; much shale as above.
3210	3230	Oolitic limestone--very pale yellow brown, some shale as above.
3230	3250	Shale--reddish and gray, some green; much white, pink, very pale yellow brown micro-sugary to chalky, partly oolitic limestone.
3250	3290	Limestone--white, pink, very pale yellow brown, micro-sugary and/or chalky; much reddish and greenish and gray shale.
3290	3330	Shale--medium dark gray, firm and flaky; increasing amounts of pale, fine sugary and chalky limestone; small amounts of reddish shale.
3330	3350	Shale--medium dark gray, firm; some micro-sugary to sub-lithographic, pale limestone; much sugary and chalky, white to pink limestone beginning at 3340.
3350	3370	Shale as above, some pale, dense to chalky limestone, small amounts of reddish and greenish shales.
3370	3400	Limestone--very pale yellow brown, pink, white, fine sugary and/or chalky, with rust stains; much gray, reddish and greenish shale.
3400	3440	Limestone--light gray, very pale yellow brown, becoming slightly pink, micro-sugary and/or chalky; increasing amounts of shale as above.
3440	3460	Shale as above; some white anhydrite, ending at 3450; some limestone as above, increasing in quantity.
3460	3500	Limestone--pale (pink, yellow, gray, etc.), micro-sugary and/or chalky becoming more chalky; some shale as above, increasing somewhat in quantity; traces of white anhydrite.
3500		Total Depth.