

FORMATION LOG

Stewart Oil Co. #3 Long "B"
 App. NW NW SE; 36-31S-4E
 839' F.N.L. & 802' F.E.L. SE/4
 Cowley County, Kansas
 Elevation: 1185 Kelly Bushing

8 5/8" Surface Casing: 206'
 5 1/2" Casing: 2839'
 Comm: 7-3-58
 Comp:

NOTE: All measurements are from the top of the kelly bushing.

<u>Depth</u>	<u>Formation Description</u>	<u>Remarks</u>
0 - 206	Surface hole	Drilled with cable tools.
206 - 260	Limestone	Rotary drillers log 206-1800
260 - 280	Limestone and shale	
280 - 305	Shale and red bed	
305 - 420	Limestone and shale	
420 - 500	Shale and limestone	
500 - 1070	Shale and shells	
1070 - 1435	Limestone and shale	
1435 - 1540	Limestone	
1540 - 1600	Shale and limestone	
1600 - 1800	Shale and shells	
1800 - 17	Shale, light to dark gray	Sample log 1800 to Total Depth
1817 - 37	Sand, white to light gray, sub- angular, clear to frosted, sub- medium to fine, some glassy, some slightly micaceous, fairly shaly	Top Stalnaker 1817' No shows in Stalnaker
1837 - 68	Sand, coarse to medium, glassy, subangular, cleaner	No show
1868 - 83	Sand, as above, submedium to coarse, very shaly	
1883 - 1946	Sand, as above, clean	No show
1946 - 2021	Shale, light to dark gray, some sandy; some green and brown shale	
2021 - 24	Limestone, cream, subcrystalline, sandy	
2024 - 35	Shale, gray to brown	
2035 - 72	Mostly, shale, as above; streaks fine to submedium shale, micaceous sand	
2072 - 2154	Shale, light to dark gray	
2154 - 60	Limestone, gray to brown, sub- crystalline	

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<u>Depth</u>	<u>Formation Description</u>	<u>Remarks</u>
2160 - 2244	Shale, as above	
2244 - 48	Sand, gray, submedium to medium, subangular, slightly micaceous, calcareous, tight	Top Upper Layton 2244; trace free oil
2248 - 53	Sand, as above, porous	Fair show very light free oil, no odor; D.S.T. #1
2253 - 55	Sand, tight, as above	
2255 - 62	Shale, gray, sandy	
2262 - 68	Sand, fine to very fine, gray, tight	
2268 - 72	Shale, as above	
2272 - 77	Sand, fine to very fine, gray, finely micaceous, porous	No show
2277 - 2319	Shale, gray to brown; thin streaks tight sand, as above	
2319 - 36	Sand, tan to gray, medium to coarse, micaceous, angular to subangular to rounded, frosted and glassy	Lower Layton, some tan staining, no fluorescence
2336 - 56	Shale, gray	
2356 - 88	Limestone, cream to tan, sub-crystalline to dense, fossiliferous; streaks gray shale 2382-84	Top Kansas City "Lime" 2356
2388 - 2403	Limestone, cream to buff, sub-crystalline to finely crystalline; chalky, spotted vugular porosity	No show
2403 - 06	Limestone, as above, non-porous	
2406 - 20	Shale, dark gray to brown, soft	
2420 - 58	Limestone, tan to brown, finely crystalline to dense, fossiliferous; streaks gray and brown shale 2431-34 and 2444-49	
2458 - 79	Limestone, cream to tan, finely crystalline to coarsely crystalline; fair inter-crystalline porosity	No show
2479 - 86	Limestone, as above, non-porous	
2486 - 98	Limestone, porous, as above, no show	
2498 - 2504	Limestone, cream to brown, sub-crystalline, dolomitic; some brown, dense	Base Kansas City 2504 Top Pleasanton 2504
2504 - 29	Shale, light to dark gray to gray-green, silty	
2529 - 33	Limestone, brown to gray, subcrystalline	Possible Top Marmaton 2529

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<u>Depth</u>	<u>Formation Description</u>	<u>Remarks</u>
2533 - 2537	Shale, brown to gray	
2537 - 49	Sand, light green, finely micaceous, very shaly	
2549 - 2662	Shale, light to dark gray; few streaks brown dense limestone toward base	
2662 - 71	Limestone, cream to gray, subcrystalline	Top Fort Scott 2662
2671 - 73	Shale, gray	
2673 - 85	Limestone, as above	
2685 - 95	Shale, dark gray, earthy	
2695 - 2725	Limestone, tan to gray, subcrystalline to dense; streaks gray-black shale	Base Ft. Scott 2725
2725 - 91	Shale, light to medium gray to green-gray, silty, finely micaceous	Top Cherokee 2725
2791 - 94	Lignite and brown-black micaceous shale	
2794 - 2802	Sand, tan to gray, fine to submedium, micaceous, shaly	
2802 - 28	Shale, gray; streak lignite 2808-10	
2828 - 33	Sand, gray, angular, submedium, micaceous, porous	Top Cattlemans Sand 2828; good odor, trace free oil, very good fluorescence D.S.T. #2 covered lower 3'
2833 - 35	Shale, gray, sandy	
2835 - 59	Sand, gray, angular, medium to submedium, glassy	Trace free oil at top, diminishing toward bottom D.S.T. #2 covered upper 10'
2859 - 85	Shale, light to dark gray; streaks fine to submedium shaly sand	
2885	Total Depth	

Samples examined and log compiled by Willis Jack Magathan.