

FORMATION LOG

Computer inventoried

Deep Rock #8 Calbeck

SW/SE/NE; 33-26-13W

Frank County, Kansas

Elevation: 1965 derrick floor

8 5/8" surface casing 447'; 250 sacks

1/2 floccle

1 1/2 c.o.

5" casing 4431;

220 sacks

Note: All measurements are taken from the top of the rotary bushing which is three feet above the derrick floor.

<u>Depth</u>	<u>Formation Description</u>	<u>Remarks</u>
0 - 285	Sand	Drillers log 0 - 3500
285 - 450	Red shale	
450 - 940	Shale & sand	
940 - 1800	Shale & shells	
1800 - 1920	Limestone & shale	
1920 - 2110	Skip	
2110 - 2390	Limestone & shale	
2390 - 2540	Shale & sand	
2540 - 2650	Shale	
2650 - 2770	Limestone & shale	
2770 - 3080	Shale	
3080 - 3180	Limestone & shale	
3180 - 3300	Shale	
3300 - 3400	Limestone & shale	
3400 - 3500	Shale & shells	
3500 - 3565	Mostly gray to tan, finely crystalline to sub-crystalline; some light gray, medium crystalline, sucrose limestone.	<u>Sample log starts 3500'</u> Good vugular porosity; spotted stain.
3565 - 3606	Mostly limestone, brown to white, finely crystalline, sucrose; streak gray to black shale.	
3606 - 3610	Shale, dark brown-black	Heebner
3610 - 3617	Limestone, gray to brown, dense	Leavenworth
3617 - 3625	Shale, gray-green and gray	Snyderville
3625 - 3643	Limestone, white to light gray, finely crystalline to sub-crystalline	Toronto
3643 - 3671	Shale, gray & gray-green, silty	Base Oread 3643
3671 - 3713	Sand, light gray, fine, sub-angular to sub-rounded, micaceous	Douglas
3713 - 3768	Shale, silty, as above	
3768 - 3792	Limestone, brown, dense; mostly gray shale	Brown Lansing
3792 - 3818	Limestone, white to light gray, sub-crystalline; trace gray, opaque to translucent chert, streaks gray shale.	Lansing
3818 - 3835	Limestone, gray to white, sub-crystalline, sucrose	Good vugular porosity; slight odor, fair to good show free oil.
3835 - 3845	Limestone, gray to brown, dense	
3845 - 3860	Limestone, gray to buff, crystalline to sub-crystalline.	Good vugular porosity, some collicastic porosity, slight odor and fair show free oil.
3860 - 3883	Limestone, gray to brown, sub-crystalline to dense; streaks gray shale.	

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<u>Depth</u>	<u>Formation Description</u>	<u>Remarks</u>
3883 - 3887	Limestone, light to dark, dirty gray, sub-crystalline.	Some pinpoint porosity; trace stain
3887 - 3893	Limestone, dark, resinous to black	
3893 - 3909	Limestone, gray to brown, sub-crystalline	Good spotted pinpoint porosity, slight stain, some black dead oil, no odor.
3909 - 3945	Limestone, gray, medium to finely crystalline; some chert, gray, opaque to translucent; streaks gray-green & brown shale.	
3945 - 3950	Limestone, gray, sub-crystalline	Some pinpoint porosity, slight stain, no odor
3950 - 3960	Limestone, gray to brown, dense; much chert, as above.	
3960 - 3966	Limestone, brown to gray, sub-crystalline	Some pinpoint porosity, slight odor & stain, no free oil.
3966 - 3977	Limestone, gray, brown to black, mottled, dense.	
3977 - 3981	Limestone, gray to brown, sub-crystalline.	Fair pinpoint and vugular porosity, no odor, fair stain, fair show free oil
3981 - 3982	Limestone, as above	No porosity
3982 - 3986	Limestone, as above	Porous with stain, as above
3986 - 3993	Limestone, as above	No porosity
3993 - 3999	Limestone, brown, finely crystalline to dense.	Fair to good vugular and pinpoint porosity, good odor and show free oil.
3999 - 4174	Limestone, gray to brown, dense to finely crystalline; chert, gray, translucent; streaks gray shale, some brown shale	
4174 - 4202	Much maroon shale, some gray, opal chert, much white chert with orange spots and white, opaque, figured, some brown translucent.	Possible Conglomerate.
4202 - 4224	Gray and maroon shale with some chert	Conglomerate
4224 - 4233	Shale, silvery green-gray; some chert, green, translucent, mottled	
4233 - 4276	Chert, white, opaque, china, gray, translucent, some devitrified white with oil stain.	Probable Viola
4276 - 4320	Chert, white, gray and amber, opaque to transparent, mostly vitreous, some devitrified.	Saturated, slight odor.
4320 - 4322	Streak green shale	
4322 - 4326	Limestone, gray, sub-crystalline	
4326 - 4329	Shale, bright green, sandy	Slapsen
4329 - 4340	Sand, brown, medium, angular, dolomitic.	Fair oil show, very little odor.
4340 - 4362	Dolomite, tan to brown, dense, some sandy dolomite and dolomitic sand; much green shale.	
4362 - 4371	Sand, brown, medium angular, dolomitic, some porous, crystalline dolomite.	Fair saturation, trace free oil, little, if any odor.

<u>Depth</u>	<u>Formation Description</u>	<u>Remarks</u>
4371 - 4374	Shale, green	Some stain
4374 - 4382	Sand, brown, medium, sandy green shale	
4382 - 4428	Mostly shale, green, some brown shale, some brown, sucrose dolomite streaks; streaks poorly sorted sand.	
4428 - 4431	Dolomite, gray to white, tight, finely crystalline to crystalline.	Rotary total depth.
4431		

D.S.T. 3815 - 3840/ open 45 minutes; good blow throughout, gas in 12 minutes/ recovered 90' very heavily oil and gas cut mud, 90' muddy oil and 90' clean oil.
Bottom Hole Pressure = 1100#

D.S.T. 4275 - 4310/ open 45 minutes; gas in 25 minutes/ recovered 150' oil and gas cut mud and 60' muddy oil.
Bottom Hole Pressure test failed.

D.S.T. 4323 - 4345/ open 1 hour/ recovered 75' oil cut mud.
Bottom Hole Pressure = 110#

D.S.T. 4345 - 4375/ open 1 hour; recovered 270' salt water, no oil.
Bottom Hole Pressure = 1420#

WENDELL S. JOHNS

Deep Rock #8 Calbeck
SW/4/NE; 33-263-13W
Pratt County, Kansas
Elevation: 1965 Derrick floor

Note: All measurements are taken from the top of the rotary bushing which is three (3) feet above the derrick floor.

1' time log starts 3500'

<u>Depth</u>	<u>Time</u>	<u>Remarks</u>
3500 - 10	4-2-2-2-3-2-2-3-3-2	
20	2-3-3-3-3-2-2-2-2-2	
30	2-3-2-3-2-3-3-2-3-3	
40	2-3-3-2-2-2-3-3-2-3	
50	2-3-2-3-2-2-2-2-2-2	
60	2-2-2-2-1-1-2-2-2-2	
70	2-3-2-4-2-2-1-1-1-2	
80	1-1-1-1-1-1-1-3-2-1	
90	1-1-2-2-2-2-2-2-3-4-4	
90 - 3600	2-4-3-4-4-4-4-4-4-3	
3600 - 10	4-3-4-5-5-5-4-3-4-3	Reebner 3606
20	2-2-2-2-2-4-6-6-4-4	
30	4-4-3-4-4-4-6-5-4-4	
40	5-6-5-6-5-4-4-5-6-6	
50	4-5-4-3-3-3-3-3-3-3	
60	4-4-1-3-7-5-3-4-5-4	Trip 3654
70	4-4-4-4-4-4-5-4-3-4	
80	4-3-3-2-2-2-1-1-1-1	
90	1-1-2-1-1-1-1-1-1-1	
90 - 3700	1-2-1-1-1-1-1-1-1-2	
3700 - 10	1-1-1-1-1-1-1-1-1-1	
20	1-2-2-2-3-3-6-3-3-4	
30	4-5-3-3-5-5-6-6-4-4	
40	4-6-3-6-5-6-5-5-5-5	
50	4-4-5-5-6-6-5-4-4-7	
60	5-5-5-5-6-5-5-5-5-5	
70	6-5-5-5-5-5-4-5-6-5	
80	5-6-4-6-4-5-8-5-6-6	Brown Lansing 3778
90	6-4-7-5-6-6-6-5-5-5	
90 - 3800	4-4-5-4-5-4-5-5-5-5	Lansing 3792
3800 - 10	5-4-3-3-3-3-4-4-4-4	
20	4-6-4-4-6-4-5-5-3-3	
30	2-3-2-3-4-2-2-3-2-3	
40	2-2-2-2-3-5-5-6-9-8	Circ. 1 1/2 hr. 3840
50	6-7-8-8-4-3-2-2-3-3	SR 3849-48
60	3-4-2-2-3-3-3-4-2-3	
70	5-4-6-8-6-8-7-7-7-6	Kelly Corr. 3861-62; Circ. 1 1/2 hr 3863
80	8-5-9-7-6-5-7-3-8-10	SR 3871-73
90	8-9-7-6-6-6-8-10-6-8	
90 - 3900	7-7-4-5-2-5-5-3-3-2	
3900 - 10	4-4-4-4-4-4-3-3-3-4	Rough 3896
20	5-6-6-6-5-4-4-4-4-4	

(2) Time log; Deep Rock #8 Calback

<u>Depth</u>	<u>Time</u>	<u>Remarks</u>
3920 - 30	4-3-3-3-3-5-3-7-4-3	
40	4-3-4-5-5-9-7-7-7-7	
50	8-7-4-4-6-5-5-4-1-1	
60	7-7-8-9-7-7-6-8-7-6	Circ. 1½ hr. = 3957
70	6-5-3-4-5-5-6-6-7-7	
80	7-7-8-8-6-6-6-5-5-4	Circ. 1½ hr. = 3971
90	4-6-3-3-4-6-6-7-7-6	Circ. 1½ hr. = 3987
90 - 4000	6-6-4-3-2-2-2-2-2-3	
4000 - 10	5-3-7-9-7-6-10-8-8-8	Circ. 1½ hr. = 4004
20	9-6-4-5-7-4-10-11-11-12	Trip = 4020
30	4-4-4-6-6-4-3-5-6-6	
40	6-6-6-7-7-8-7-6-6-6	
50	7-8-7-7-10-7-7-7-8-4	
60	6-5-6-6-6-6-5-6-4-5	
70	5-6-7-7-4-2-3-3-4-7	
80	6-5-5-4-6-7-8-7-6-7	
90	6-6-7-7-6-5-6-7-7-5	
90 - 4100	5-6-7-6-7-6-6-7-7-6	
4100 - 10	6-7-6-6-8-7-7-7-8-5	
20	5-5-5-5-5-5-5-5-4-3	
30	4-5-5-5-5-6-7-6-6-6	
40	7-7-6-7-6-6-6-6-5-5	
50	6-5-6-7-6-6-7-7-6-6	
60	8-6-6-7-8-7-7-9-8-8	
70	7-8-8-7-8-8-7-7-7-5	
80	3-5-5-5-7-9-16-14-10-12	Possible Top Conglomerate 4174
90	11-14-7-9-9-13-9-7-8-11	Trip 4182
90 - 4200	7-5-5-8-9-10-8-5-4-5	
4200 - 10	5-6-6-5-3-4-3-4-3-4	
20	3-3-3-4-4-3-4-4-5-4	
30	5-4-4-5-7-10-10-9-11-11	Minderhook 4224
40	13-12-7-6-3-3-4-3-3-4	
50	4-4-4-5-8-4-4-4-4-4	Circ. 1½ hr. = 4250
60	4-4-4-4-7-8-10-15-17-12	Top Viola? 4254
70	8-12-9-10-10-9-9-9-8-6	Trip 4260
80	8-9-8-8-8-7-5-5-4-4	
90	3-4-4-4-3-4-3-3-3-3	
90 - 4300	3-3-4-4-3-3-3-3-4-3	
4300 - 10	3-3-3-2-3-3-3-3-3-4	Circ. 1½ hr. = 4310
20	3-3-3-4-3-4-3-5-6-6	
30	8-10-12-16-13-11-10-9-12-5	Top Simpson 4326
40	15-9-8-7-6-8-6-6-6-6	
50	5-6-7-6-7-3-3-3-3-3	Circ. 4345; New bit = 4345
60	4-4-4-3-4-4-4-4-4-5	
70	4-5-5-3-3-1-1-1-1-2	
80	2-4-6-6-6-6-6-4-4-5	Circ. 1½ hr. = 4375
90	5-6-8-7-7-6-6-6-7-6	
90 - 4400	8-6-8-7-8-10-8-9-6-7	
4400 - 10	6-9-4-3-8-7-7-10-8-8	
20	7-8-9-3-7-8-7-7-9-8	Circ. 4420 1½ hrs.
30	7-7-8-7-7-7-7-7-6-6	Circ. 4425 1½ hrs.; Top Arbuckle 4428;
31	6	Circ. 4431; 1½ hrs.
		REPLY TOTAL DEPTH 4431

(Time log condensed by W. J. Magathan)