

Schafer & Ross #1 Bergner
 NW NW NE; 19-27S-12W
 Pratt County, Kansas
 Elevation: 1876 derrick floor

WINDELL S. JOHN 3

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

<u>Depth</u>	<u>Formation Description</u>	<u>Remarks</u>
0 - 130	Surface sand	Drillers log 0-3400'
130 - 652	Red bed	
652 - 670	Anhydrite	Stone Corral (Electric log)
670 - 835	Red bed	
835 - 1650	Red bed and shale	
1650 - 1840	Limestone and shale	
1840 - 1960	Limestone	
1960 - 2030	Limestone and shale	
2030 - 2080	Limestone	
2080 - 2670	Limestone and shale	
2670 - 2835	Shale	
2835 - 3325	Shale and limestone	
3325 - 3400	Limestone	
3400 - 09	Shale, gray-green and pale green; limestone, gray to buff, sub-crystalline	Sample log 3400' to T.D.
3409 - 14	Limestone, as above	Porous on electric log. No porosity in samples
3414 - 25	Limestone and shale, as above	
3425 - 64	Limestone, gray to buff, medium crystalline, fair vugular porosity; some tan to brown sub-crystalline limestone with poor vugular porosity	No show
3464 - 97	Limestone, gray to brown, sub-crystalline to dense; shale, gray and gray-black	
3497 - 3515	Limestone, tan to buff, medium to finely crystalline, good vugular porosity	No show
3515 - 27	Limestone and shale, as above	
3527 - 31	Shale, brown-black, soft, micaceous	Heebner
3531 - 36	Limestone, gray-blue, sub-crystalline to dense	Leavenworth
3536 - 41	Shale, gray and gray-green, some brown	Snyderville
3541 - 60	Limestone, white to cream, sub-crystalline to finely crystalline; chert, white, opaque, vitreous; shale, gray-black and gray-brown	Toronto

(2) Formation Log: Schafer & Ross #1 Bergner

<u>Depth</u>	<u>Formation Description</u>	<u>Remarks</u>
3560 - 3610	Mostly shale, dark gray, some gray-green; streaks sand, gray to tan, fine, sub-angular, micaceous	Top Douglas 3560
3610 - 57	Mostly sand, as above; some dirty gray-blue, quartzitic sand; streaks shale	
3657 - 3700	Increase in gray to gray-green shale; much soft, friable sand	
3700 - 07	Limestone, dark gray to dark brown, dense	Top Brown Lansing 3700
3707 - 23	Limestone, as above; much gray shale	
3723 - 51	Limestone, white to gray, sub-crystalline, mottled; streaks gray and brown shale at bottom	Top Lansing 3723
3751 - 67	Limestone, gray to tan, sub-crystalline, some dense; fair vugular porosity	Fair show free oil D.S.T.
3767 - 77	Limestone, brown, dense, fossiliferous; shale streaks, as above	
3777 - 92	Limestone, gray, finely crystalline, calcitic, fair vugular porosity	Trace gilsonitic stain
3792 - 3823	Limestone, buff to gray, sub-crystalline; streaks gray shale	
3823 - 26	Limestone, dirty gray-brown sub-crystalline, fossiliferous; fair vugular porosity	Trace stain
3826 - 32	Limestone and shale streaks	
3832 - 39	Limestone, brown to dark gray, mottled, finely crystalline, fossiliferous; chert, white, opaque, semi-devitrified	
3839 - 49	Limestone, gray-brown, finely crystalline, poor pinpoint porosity; chert, brown to white, opaque	No show
3849 - 55	Limestone and shale streaks	
3855 - 61	Limestone, brown, sub-crystalline, fossiliferous, cherty; fair vugular porosity	No show
3861 - 65	Limestone, as above; no porosity	
3865 - 70	Limestone, porous, as above	No show
3870 - 83	Limestone, as above; streaks shale	
3883 - 86	Limestone, buff, sub-crystalline, resinous, good honeycomb porosity	Slight stain
3886 - 3902	Limestone, brown to tan, dense; Shale, as above	
3902 - 05	Limestone, buff to tan, oolitic; finely crystalline; good vugular and oolitic porosity	Slight stain, much gilsonite
3905 - 20	Limestone, gray-white, mottled, sub-crystalline; streaks shale	

(3) Formation Log: Schafer & Ross #1 Bergner

<u>Depth</u>	<u>Formation Description</u>	<u>Remarks</u>
3920 - 24	Limestone, buff, sub-crystalline, oolitic; good oolitic porosity	Trace stain
3924 - 30	Limestone, sub-crystalline	
3930 - 39	Limestone, cream to tan, sub-crystalline, fossiliferous; poor spotted vugular porosity	Slight stain
3939 - 62	Limestone, gray, sub-crystalline to brown, dense, lithographic; shale, gray and brown	
3962 - 78	Limestone, gray, sub-crystalline, oolitic; spotted good oolitic porosity	Good show free oil; D.S.T.
3978 - 4061	Limestone, gray to brown, sub-crystalline to dense, some lithographic; some gray to brown to olive limestone, dense; much gray and brown shale; streaks black carbonaceous shale	Base Kansas City 4061
4061 - 66	Shale, gray-green, brown and red	Top Marmaton 4061
4066 - 84	Mostly limestone, brown to red, sub-crystalline; some shale, gray and gray-green, lumpy	
4084 - 4101	Limestone, tan, dense, resinous; chert, gray to tan to salmon, translucent, vitreous	
4101 - 26	Much shale, gray and gray-green; much chert, as above; limestone, white to gray, sub-crystalline, some silty	
4126 - 36	Chert, white, vitreous, translucent; Chert, salmon to gray, opaque; some gray to white, finely crystalline limestone	Top Mississippi 4126; Mistersippi Zone; trace light stain
4136 - 45	Shale, gray and gray-green, Chert, pale amber to salmon, vitreous, translucent	
4145 - 62	Chert, white, translucent, vitreous; Chert, white, opaque, vitreous, some salmon to amber; Chert, blue-white to white, semi-devitrified	Main Chert Zone; trace light brown stain, some gilsonite
4162 - 65	Shale, gray-gray-green and silver-gray, micaceous; much gray-black fine, micaceous, argillaceous sand	Top Kinderhook 4162
4165 - 86	Much limestone, brown, nodular, sub-crystalline; streaks shale, as above	
4186 - 4206	Chert, salmon to tan, translucent, vitreous, some white translucent to opaque, vitreous; Chert, white, devitrified, some pale yellow, vitreous, translucent	Some gilsonite, possible trace light stain

(4) Formation Log: Schafer & Ross #1 Bergner

<u>Depth</u>	<u>Formation Description</u>	<u>Remarks</u>
4206 - 10	Shale, as above	
4210 - 22	Limestone, dirty gray to brown, sub-crystalline, nodular to dense; some chert, as above	
4222 - 33	Limestone, as above; increase in Chert, as above	Possible light trace stain
4233 - 46	Limestone, less Chert, as above	
4246 - 53	Shale, gray-green to dark gray	
4253 - 4306	Mostly Chert, white, opaque, vitreous; Chert, tan to salmon, translucent, vitreous; Chert, brown to black to white, semi-devitrified, mottled; much limestone, gray to tan to brown, sub-crystalline to dense; Thin streaks porosity throughout	Top Viola 4253. Light brown stain, no free oil
4306 - 10	Shale, gray to gray-black, waxy, some pale green shale	
4310 - 24	Limestone, white to cream, sub-crystalline with clear rounded, included sand grains	
4324 - 32	Shale, pale green to gray-green, slightly sandy; some sand, gray, sub-angular, dolomitic, medium, fairly well sorted	Top Simpson 4324
4332 - 33	Limestone, light gray to white, mottled, sub-crystalline, very sandy; inclusions of brown, dense, dolomite	
4333 - 35	Sand, gray to green-gray to white, dolomitic; small phosphate inclusions; vertical fracturing	Good saturation. Bleeding along fractures
4335 - 38	Dolomite, brown, dense to finely crystalline, sandy. Some light tan very sandy spots which have odor	No free oil
4338 - 41	Limestone, brown, dense, very hard, weathered in appearance; looks brecciated; streaks white to blue-white amorphous silica, some of which contains clear to frosted, sub-angular to rounded sand grains; fractures contain light brown stain	Slight odor, no free oil
4341 - 45	Limestone, chocolate brown, dense, lithographic; scattered sand inclusions	
4345 - 46	Shale, brown to black, well compacted, sandy; thin, inter-fingered streaks brown to gray angular, dolomitic sand	
4346 - 47	Siltstone, gray to brownish, very sandy, many poorly sorted, frosted to clear, calcareous to dolomitic sand inclusions	

(5) Formation Log: Schafer & Ross #1 Bergner

<u>Depth</u>	<u>Formation Description</u>	<u>Remarks</u>
4347 - 50	Shale, gray-green, well compacted, shiny; a few phosphate inclusions	
4350 - 56	Sand, fine, sub-angular, well sorted, gray to pale green	Few spots with light brown stain, slight odor, no free oil
4356 - 59	Shale, dull green, sandy; white, medium angular, dolomitic sand inclusions	
4359 - 67	Sand, medium to fine, sub-angular, white to pale green, slightly dolomitic; many pale green shale inclusions; many white amorphous silica inclusions	
4367 - 71	Sand, white, angular to sub-angular, very shaly; shale dull earthy brown	
4371 - 75	Sand, white to brown, angular to sub-angular, very argillaceous; streaks brown waxy shale; Some white to blue-white pure quartzite	
4375 - 81	Hard white quartzite; inclusions brown waxy shale	
4381 - 87	Sand, white to blue-white, hard, tight, quartzitic, angular, clean; many small phosphate inclusions; some glauconite	
4387 - 94	Sand, blue-white to light gray, angular to sub-angular, quartzitic; thin interfingering streaks brown earthy shale	
4394 - 98	Shale, dark olive to gray-green; thin interfingering streaks sand, as above	
4398	Total Depth	
4256	5½" Casing	175 Sacks cement

D.S.T. 3746-70; Open 1 hour; Good blow throughout test.
Recovered 3130' gas
90' heavily oil and gas out mud
60' muddy oil
Bottom hole pressure 1095# (20 minutes)

D.S.T. 3955-72; Open 1 hour; weak blow throughout test.
Recovered 90' thin mud - trace oil
Bottom hole pressure 1095# (15 minutes)

Samples examined and log compiled by Willis Jack Magathan

T I M E L O G

WENDELL S. JOHNS

Schafer and Ross #1 Bergner
 NW/NW/NE; 19-27S-12W
 Pratt County, Kansas
 Elevation: 1876 derrick floor

Note: All measurements are from the top of the rotary bushing which is 3' above the derrick floor.

<u>Depth</u>	<u>Time</u>	<u>Remarks</u>
3400 - 10	6-6-8-7-5-13-11-10-9-7	
20	7-9-6-7-6-6-7-10-6-7	
30	8-7-6-4-6-5-3-3-2-2	
40	1-1-1-2-2-4-3-2-3-2	
50	3-3-2-2-3-2-2-4-2-3	
60	2-3-2-3-2-3-2-2-2-3	
70	2-3-2-2-3-3-3-4-5-5	
80	5-5-6-8-9-10-7-10-8-13	
90	3-4-3-4-3-3-3-3-2	
90 - 3500	2-2-8-7-8-9-9-8-6-5	
3 500-10	3-3-4-4-4-4-3-4-3-2	
20	3-4-3-4-2-3-4-5-4-9	
30	11-10-9-4-6-7-13-10-10-8	Top Heebner 3527
40	3-3-3-2-1-15-14-11-4-4	
50	4-5-5-5-5-8-5-4-3-3	
60	5-6-6-4-3-4-3-2-2-4	
70	3-5-6-5-3-4-4-4-5-4	
80	4-4-5-5-5-5-5-5-4-6	
90	5-5-5-4-4-3-4-5-5-5	
90 - 3600	4-3-6-4-6-2-3-2-3-2	Trip @ 3595
3600 - 10	2-2-2-2-1-2-3-1-2-2	
20	3-3-2-2-1-1-1-1-1-1	
30	2-2-2-1-3-2-2-1-3-2	
40	2-2-2-2-1-2-2-2-1-2	
50	2-2-1-2-3-2-2-3-4-3	
60	3-3-3-2-3-3-3-4-6-3	
70	4-3-4-2-3-3-3-3-4-3	
80	3-3-3-3-3-4-3-4-3-3	
90	5-6-4-4-3-4-3-6-5-4	
90 - 3700	6-4-4-5-4-5-5-5-6-4	Top Brown Lansing 3700
3700 - 10	5-7-13-10-8-6-6-5-7-6	
20	6-9-6-5-5-6-7-6-3-6	
30	9-9-6-10-6-8-8-8-8-7	Top Lansing 3723
40	8-7-8-9-9-9-7-9-8-9	
50	10-9-10-11-12-12-8-11-12-11	
60	10-8-12-10-8-6-7-9-5-4	
70	6-5-4-5-5-5-8-10-10-10	
80	3-7-8-9-8-8-5-4-3-5	
90	4-5-4-5-7-10-7-8-6-8	
90 - 3800	7-7-8-9-8-7-8-7-9-6	
3800 - 10	7-8-8-9-9-10-10-13-15-15	
20	14-14-12-17-17-13-12-13-15-9-	
30	11-12-13-6-5-4-3-3-4-6	
40	5-9-14-11-8-8-9-10-10-9	
50	9-6-5-5-5-5-4-4-5-4	
		Circ. 1 1/2 hr @ 3770; new bit 3770
		Trip @ 3823

(2) Time log; Schafer & Ross & Bergner.

<u>Depth</u>	<u>Time</u>	<u>Remarks</u>
3850 - 60	8-9-7-7-7-4-3-3-3-2	
70	3-4-4-6-7-5-4-4-5-6	
80	9-9-12-14-13-14-14-8-5-5	
90	5-7-10-6-2-2-3-8-9-11	
90 - 3900	10-8-8-11-13-10-7-5-4-4	
3900 - 10	4-5-6-5-7-8-7-9-8-11	
20	7-10-5-8-5-6-5-8-6-7	
30	5-5-5-6-8-6-8-7-8-6	
40	4-4-3-4-3-6-5-5-7-8	
50	9-4-8-9-7-8-8-11-6-8	
60	8-7-9-10-9-9-5-5-5-7	
70	11-7-5-3-2-3-3-3-3-6	
80	10-7-2-2-2-3-2-5-7-13	
90	11-10-14-11-9-10-12-10-9-10	Circ. 1½ hr. 3972; new bit 3972
90 - 4000	9-9-10-10-10-8-10-10-11-11	
4000 - 10	12-12-8-8-7-5-11-9-11-11	
20	12-10-10-11-10-7-10-8-11-7	
30	8-8-9-7-7-8-8-8-10-7	
40	8-9-7-6-9-9-6-6-6-6	
50	12-9-10-9-12-9-10-7-8-5	
60	7-7-8-9-9-11-10-10-9-9	Base Kansas City 4061
70	9-8-4-7-4-5-4-4-4-4	Top Marmaton 4061
80	3-4-5-5-5-7-12-8-9-6	
90	8-5-4-5-8-9-10-11-10-13	
90 - 4100	10-12-10-11-12-9-13-10-10-11	
4100 - 10	12-12-10-8-11-14-15-10-12-13	Trip 4107
20	15-12-9-13-11-10-15-15-11-12	
30	13-11-13-13-12-15-13-9-9-11	Top Mississippi 4126
40	11-12-15-16-15-16-14-16-9-14	
50	16-16-14-18-16-10-13-10-9-7	
60	13-3-3-6-5-8-7-6-6-8	
70	6-9-10-11-15-17-23-19-21-18	Top Kinderhook 4162
80	22-25-12-11-10-8-9-7-9-9	Trip 4175
90	13-14-12-14-13-12-7-6-5-3	
90 - 4200	5-4-5-4-4-5-5-3-4-5	
4200 - 10	4-5-4-6-5-6-7-7-7-6	
20	7-15-16-15-15-16-18-18-20-22	
30	23-20-23-21-25-25-19-20-15-16	Trip 4226
40	15-17-15-15-14-17-12-14-14-14	
50	13-8-11-11-8-9-8-8-10-10	
60	8-8-10-8-7-6-7-8-8-7	Top Viola 4253
70	8-8-8-9-7-11-11-13-14-18	Circ. 1½ hr. 4265
80	15-14-19-21-19-10-15-21-23-23	Circ. 1½ hr. 4275
90	19-12-10-20-16-12-15-12-15-10	
90 - 4300	17-15-17-16-15-16-15-15-16-12	Circ. 1 hr. 4281; rerun bit 4281; circ. 1½ hr. 4290
4300 - 10	17-16-15-14-11-14-11-11-9-6	Circ. 1½ hr. 4300
20	16-18-17-14-16-16-19-12-16-14	Circ. 1½ hr. 4320
30	16-16-14-15-13-12-11-11-12-12	
40	30-26-35-55-66-81-41-29-25-28	Top Simpson 4322; circ. 1½ hr 4330; cored 4330-59
50	30-22-25-27-28-36-37-40-37-32	

(3) Time log; Schafer & Ross #1 Bergner.

<u>Depth</u>	<u>Time</u>	<u>Remarks</u>
4350 - 60	20-42-41-29-19-30-48-55-36-15	
70	10-14-15-12-22-19-20-20-23-16	Cored 4359-98
80	12-13-13-13-15-27-13-21-26-59	
90	34-25-22-20-20-27-31-24-22-24	
98	29-37-43-35-32-34-51-72	Rotary total depth 4398.

(Time log condensed by Willis Jack Magathan)