

Rine Drilling Co. #2 Joe
NW/NW/SW; 33-26S-13W
Pratt County, Kansas
Elevation: 1965 derrick floor

8 5/8" surface casing 793'; 400 sacks; 400# c.c.
5 1/2" casing 4432'; 250 sacks

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

Depth	Formation Description	Remarks
0 - 185	Sand	Drillers log 0 - 3500'
185 - 500	Sand & shale	
500 - 770	Shale & sand	
770 - 797	Shale	
797 - 1350	Red bed, shale & shells	
1350 - 1540	Salt	
1540 - 2080	Shale	
2080 - 2730	Limestone & shale	
2730 - 2830	Sand	
2830 - 2980	Shale	
2980 - 3135	Limestone & shale	Sample log 3500 to total depth
3135 - 3280	Limestone	
3280 - 3400	Shale	Some porosity
3400 - 3500	Limestone & shale	
3500 - 3572	Limestone: light gray to tan, finely crystalline.	Some porosity; possible trace stain. Porous; no show.
3572 - 3577	Limestone: tan, finely crystalline	
3577 - 3608	Limestone: white, crystalline	Heebner Leavenworth.
3608 - 3612	Shale: black, gray	
3612 - 3628	Limestone: gray, dense	Snyderville Dodge
3628 - 3633	Shale: black	
3633 - 3637	Limestone: brown, finely crystalline to dense	Trace porosity & stain
3637 - 3647	Shale: green-gray, some silty	
3647 - 3650	Limestone: white to cream, crystalline to finely crystalline	Douglas
3650 - 3655	Limestone: as above	
3655 - 3669	Limestone: as above	Brown Lansing
3669 - 3716	Sand: fine, gray, micaceous; some shale.	
3716 - 3722	Shale: gray	Lansing
3722 - 3726	Sand: as above	
3726 - 3778	Shale: gray, as above, some sandy shale	Good vugular porosity, good odor, fair show free oil & stain
3778 - 3784	Limestone: dark brown, dense	
3784 - 3794	Shale: gray	
3794 - 3798	Limestone: as above	
3798 - 3802	Shale: gray	
3802 - 3826	Limestone: gray to brown, finely crystalline to sub-crystalline; some black oolites, some chert; gray, opaque with black oolites; streak gray shale.	
3826 - 3843	Limestone: gray, sub-crystalline to finely crystalline.	

<u>Depth</u>	<u>Formation Description</u>	<u>Remarks</u>
3843 - 3855	Limestone: gray, finely crystalline to chalky; streak brown shale.	
3855 - 3867	Limestone, gray to tan, finely crystalline.	Fair vugular porosity, good odor, fair stain, small show free oil, looks like water.
3867 - 3901	Limestone, gray to brown, sub-crystalline to finely crystalline; trace chert; gray & green shale streaks.	
3901 - 3904	Limestone: gray, sucrose	Some porosity, possibly some odor & trace stain
3904 - 3913	Limestone: as above	No porosity.
3913 - 3916	Limestone: gray to brown, finely crystalline	Possibly some odor, fair dark stain, possible trace free oil.
3916 - 3951	Limestone: gray to brown, sucrose to dense; some oolites; some dirty gray chert; streaks green-gray shale.	
3951 - 3954	Limestone, tan to brown, sub-crystalline to dense, oolitic	Good porosity; fair odor; good stain, fair show free oil.
3954 - 3970	Limestone, tan to brown, dense, some gray, opaque chert; streaks gray shale.	
3970 - 3974	Limestone: gray, sub-crystalline	Fair vugular porosity; fair odor & stain.
3974 - 3989	Limestone: brown, crystalline, fossiliferous and oolitic.	
3989 - 3994	Limestone: gray to brown, sub-crystalline.	Fair vugular porosity; fair stain & some odor and free oil.
3994 - 4000	Limestone, gray-brown, sub-crystalline to dense.	
4000 - 4007	Limestone: as above, oolitic and oolitic	Good oolitic and vugular porosity, good stain; fair odor & free oil
4007 - 4019	Limestone: gray, dense	
4019 - 4024	Limestone: gray, sub-crystalline to dense; chert, brown translucent	Possible pin-point porosity with spotted stain
4024 - 4034	Limestone: gray, dense; mostly shale, gray green & brown.	
4034 - 4037	Limestone, gray, dense	Possible trace pin-point porosity & spotted stain
4037 - 4203	Limestone: tan to gray, finely crystalline to dense; chert, gray to brown, vitreous, opaque to translucent, some oolitic; great increase in chert in bottom 50'; streaks gray shale	
4203 - 4214	Shale: brown & green; trace limestone	
4214 - 4228	Chert, white, vitreous, opaque, some spots of red, amber & citron	Conglomerate; some spots dead oil, no odor or live oil.
4228 - 4240	Silver gray-green shale; Possibly some chert.	Kinderhook.
4240 - 4256	Chert, white, brown & amber, translucent to opaque.	Viola.

<u>Depth</u>	<u>Formation Description</u>	<u>Remarks</u>
4256 - 4288	Shale: green, gray, dolomitic; Limestone green-brown, dense, shaly.	
4288 - 4292	Chert: amber, translucent	
4292 - 4299	Shale: as above	
4299 - 4327	Chert: white, vitreous, opaque	Very slight odor, trace free oil; some fair stain
4327 - 4338	Chert: as above; much green shale	
4338 - 4342	Limestone: tan, very finely sucrose, rounded sand inclusions	
4342 - 4345	Shale: green; trace sand	Simpson
4345 - 4347	Sand, green, very hard, with streaks brown, stained sand.	
4347 - 4364	Sand: brown, medium angular to sub-rounded.	Porous, good stain
4364 - 4368	Dolomite, dark brown, sandy & dolomitic sand	
4368 - 4375	Dolomite: tan to light brown, finely crystalline	
4375 - 4378	Shale: green	
4378 - 4384	Sand: brown to white, coarser than above; poorly sorted	Good porosity & good show oil
4384 - 4430	Shale: green & gray; green, occasional streak white glassy sand & dark brown, finely crystalline dolomite.	some black oil stain at bottom in sand
4430 - 4434	Dolomite: very finely sucrose to dense; some chert; white, opaque, oolitic.	Arbuckle Fair odor; trace pin-point porosity; show oil
4434		ROTARY TOTAL DEPTH
D.S.T.	3830-50: open 1 hour/ good blow throughout test; no gas at surface/ recovered 55' gas cut mud; very slight trace oil, no water Bottom hole pressure 125#	
D.S.T.	3950-76: open 1/2 hour; very fair blow for 25 min./ recovered 30' mud, slightly gas cut, no oil or water. Bottom hole pressure 0	
D.S.T.	4296 - 4329: open 1/2 hour; very good blow; gas in 7 min./ recovered 100' oil and gas cut mud and 1260' oil/ bottom hole pressure 1385#	
Cored:	4346-47: recovered 8" sand, medium to fine, sub-angular to rounded, light green; very thin green shale streaks and intercalated brown sand streaks. Saturated, fair porosity.	
Cored:	4350-54: recovered 3' sand, brown, medium rounded to sub-angular, fair porosity, some calcareous cement, thin streaks green shale. Good odor & stain, considerable free oil.	
D.S.T.	4341-54: open 45 min.; good blow throughout, gas did not come to surface/ recovered 210' oil cut mud and very muddy oil and 120' salt water. Bottom hole pressure 1455#	

TIME LOG

WENDELL C. JOHNS

Rine Drilling Co. #2 J9e
NW/NE/SE; 33-26S-13E
Pratt County, Kansas
Elevation: 1965 Derrick floor

Note: all measurements are from the top of the rotary bushing which is two feet above the derrick floor.

Depth	Time	Remarks
3500 - 10	2-2-3-2-3-4-2-3-3-2	S.R. 3506-07 & 3509 - 10
20	3-3-1-4-2-2-3-3-3-4	S.R. 3511-15
30	3-3-3-2-2-3-2-2-3-3	S.R. 3523-24
40	2-3-3-4-3-5-4-4-4-4	
50	5-5-4-5-4-3-4-4-3-3	
60	4-4-4-4-4-4-4-6-5-4-5	
70	6-5-6-5-5-4-4-4-4-4	
80	4-4-4-3-3-3-3-5-4-5	
90	4-5-4-4-4-3-3-3-4-4	
90 - 3600	3-4-2-2-2-2-2-2-2-2	
3600 - 10	3-3-3-3-3-3-4-5-4-4	
20	4-4-5-4-4-4-4-4-4-4	
30	3-4-5-6-6-5-5-4-3-3	
40	2-2-2-6-8-5-5-4-4-4	Heebner 3628-33
50	3-4-3-4-4-4-4-6-3-4	
60	6-4-5-5-5-6-7-6-6-5	
70	5-6-7-8-7-7-7-7-7-5	
80	5-4-4-4-3-4-3-6-6-5	
90	3-3-3-3-3-4-4-3-4-4	
90 - 3700	4-4-4-3-4-4-5-4-4-4	
3700 - 10	4-5-5-4-4-4-4-3-4-4	
20	3-3-3-2-3-4-4-6-5-5	
30	5-5-3-3-3-4-5-5-5-5	
40	5-5-5-6-5-7-7-5-3-4	
50	4-5-4-4-4-4-3-5-4-4	
60	4-4-4-4-4-5-3-4-5-3	
70	3-4-3-3-3-3-3-3-3-3	
80	3-4-3-3-3-3-3-4-5	
90	5-5-6-6-5-4-6-4-4-4	Top Brown Lansing 3778
90 - 3800	5-5-4-4-5-6-4-4-3-4	S.R. 3787 - 88
3800 - 10	4-3-4-3-4-4-3-4-4-4	
20	4-5-9-8-5-7-6-7-5-7	Top White Lansing 3802
30	8-7-6-8-7-8-6-6-6-6	
40	5-5-5-6-5-4-6-6-6-5	
50	5-5-6-8-10-10-9-9-10-9	
60	3-3-2-2-3-2-2-2-2-2	
70	1-1-2-3-2-1-3-4-6-6	
80	5-4-6-6-6-5-6-6-7-8	
90	6-4-7-6-9-10-10-12-10-11	
90 - 3900	7-8-4-10-11-10-9-4-6-4	
3900 - 10	6-4-2-3-5-6-4-5-5-5	
20	5-5-7-4-3-6-6-5-7-6	
30	9-9-10-8-8-7-8-7-7-7	
40	6-5-7-10-12-12-12-10-10-8	
50	9-9-10-10-12-14-10-11-10-7	
		Circ. 3850, 1½ hrs.; D.S.T.
		Circ. 3869; 1½ hrs
		Circ. 3929; 1½ hrs.
		S.R. 3930-32
		Trip 3946

<u>Depth</u>	<u>Time</u>	<u>Remarks</u>
3950 - 60	6-5-5-6-9-9-4-5-11-11	
70	11-10-8-10-10-8-9-10-7-6	
80	3-5-7-6-8-11-5-7-9-5	Circ. 3976, 1½ hrs.; D.S.T.; New H-#7R @ 3976
90	9-7-5-5-4-5-7-8-9-6	
90 - 4000	4-4-5-5-8-10-9-9-8-5	
4000 - 10	4-5-3-2-2-2-3-4-6-6	
20	8-8-9-9-9-10-10-12-12-10	Circ. 4010, 1½ hrs.; Rough 4006-07
30	9-7-8-9-11-12-12-11-11-9	
40	8-9-7-9-8-8-6-9-9-9	
50	5-5-7-8-8-8-8-8-7-7	
60	6-6-6-6-6-7-7-7-7-7	
70	7-6-6-6-6-6-6-7-8-8	
80	7-6-5-5-6-8-7-8-8-7	
90	7-8-7-7-7-7-7-8-7-8	
90 - 4100	8-7-7-8-7-10-10-8-10-8	
4100 - 10	7-7-7-5-5-7-9-8-10-9	
20	7-9-11-9-9-3-8-6-6-7	Trip 4115
30	9-6-8-7-8-6-6-6-5-4	
40	4-4-3-3-3-6-7-8-5-6	
50	7-9-8-9-8-6-4-6-6-6	
60	6-8-10-12-10-8-7-9-10-10	
70	9-8-8-8-7-8-8-9-9-8	
80	9-9-8-5-4-6-7-7-9-10	
90	12-12-12-12-12-12-12-12-12	
90 - 4200	11-12-10-8-8-8-11-11-10-10	Trip 4192
4200 - 10	10-10-10-8-8-7-9-9-8-6	
20	6-6-6-6-4-4-4-3-3-3	Top Conglomerate 4214
30	2-2-3-3-2-3-2-2-3-6	Circ. 4230, 1½ hrs.; Top Kinderhook 4228
40	5-9-11-11-13-11-10-10-14-11	Top Viola 4240
50	9-7-9-6-4-3-4-3-4-6	
60	4-3-5-5-6-6-8-10-15-15	
70	6-10-9-10-9-10-11-10-10-10	Trip 4260
80	10-10-10-9-10-10-9-8-8-9	
90	11-9-9-10-10-10-10-9-6-7	
90 - 4300	7-7-8-9-9-10-9-7-6-4	
4300 - 10	4-3-3-3-3-3-3-4-3-4	
20	5-5-4-5-4-4-4-3-3-5	
30	5-4-4-4-4-3-4-6-7-6	
40	4-3-4-4-3-4-4-4-6-11	
50	12-12-9-10-11-8-4-7-5-5-3	
60	6-5-11-9-5-4-6-6-7-6	
70	6-7-6-7-13-12-12-10-9-10	
80	11-12-11-11-12-10-8-8-6-4	
90	3-3-4-6-10-7-8-9-8-10	
90 - 4400	9-9-9-8-8-8-8-10-8-9	
4400 - 10	8-9-10-9-8-9-10-10-9-9	
20	9-10-9-8-9-10-10-11-11-9	
30	10-9-11-10-9-10-8-9-10-7	
34	9-10-9-9	Circ. 4420, 1½ hrs. Top Arbuckle 4430 <u>ROTARY TOTAL DEPTH</u>