

FORMATION LOG

Tatlock #1 Curtis
 SS/SE/NS, 21-263-15W
 Pratt County, Kansas
 Elevation: 2050 derrick floor
 2053 rotary bushing

8 5/8" casing 842
 5 1/2" casing 4457
 Conn: 3-9-53
 Comp: 5-5-53

WENEILL & SONS

Note: All measurements are from the top of the rotary bushing

<u>Depth</u>	<u>Formation Description</u>	<u>Remarks</u>
0 - 40	No log	Drillers log 0 - 865
40 - 350	Sand, clay and shale	
350 - 835	Red beds	
835 - 854	Anhydrite	Probably not Anhydrite
854 - 865	Red beds	
865 - 1004	Shale, red, streaks gray bentonite shale, some fine red sand, much coarse sand in samples - probably surface sand.	Sample log 865 to T.D.
1004 - 1025	Some white finely crystalline gypsum	Stone Corral 1004-25
1015 - 1025	Anhydrite, gray to white	
1025 - 1160	Shale, red, gray and green, some streaks gypsum and anhydrite	
1160 - 1190	Shale, gray-green, and purple maroon, trace gypsum and anhydrite.	
1190 - 1230	Shale, green and red	
1230 - 1240	Shale, dark maroon, trace red sand	
1240 - 1305	Shale, as above, increase in green shale	
1305 - 1315	Increase in anhydrite and gypsum, some good Iceland spar	
1315 - 1430	Shale, mostly red, some green, traces of gypsum and anhydrite	
1430 - 1490	Shale, gray-green, much anhydrite, gray to black, some red and white; trace salt casts.	Top Wellington 1430
1490 - 1510	Shale, blue-gray to green-gray, much dark blue-gray dense anhydrite	
1510 - 1520	Mostly shale, gray-green	
1520 - 1720	Anhydrite black to dark gray, some gray, anhydritic shale, some salt casts, few streaks red shale	Top Salt section 1520
1720 - 1770	Anhydrite, light gray to light tan to white, much gypsum, many salt casts	
1770 - 1820	Section as above, much dark gray very finely crystalline anhydrite	
1820 - 1890	Shale, gray and brick red, much light tan gypsum; salt casts	
1890 - 1900	Increase in dark gray anhydrite	
1900 - 1955	Shale and anhydrite, as above, a few salt casts	Base Salt section 1955
1955 - 2113	Anhydrite, light gray to tan finely crystalline, streaks red-brown and gray shale.	
2113 - 2127	Dolomite, earthy, gray sub-crystalline dark brown spots	Carlton?

<u>Depth</u>	<u>Formation Description</u>	<u>Remarks</u>
2127 - 2175	Anhydrite, as above, many streaks shale, green and brown.	
2175 - 2185	Dolomite, tan sub-crystalline, black oolites, some brown crystalline dolomite.	Top Chase group 2175 Harrington 2175-95
2185 - 2195	Dolomite, as above, few if any oolites, possibly some shale.	
2195 - 2220	Dolomite, gray sub-crystalline, trace gray translucent chert. Some Dolomite, dark gray and brown mottled finely crystalline.	
2220 - 2235	Shale, green-gray	
2235 - 2255	Dolomite, as above	
2255 - 2265	Shale, gray and green	
2265 - 2285	Dolomite, dark brown, dense to sub-crystalline; dark gray-brown crystalline dolomite, trace chert.	
2285 - 2290	Shale, as above	
2290 - 2303	Dolomite, as above, some anhydrite	
2303 - 2310	Shale, as above	
2310 - 2323	Dolomite, as above, trace fine green shaly sand.	
2323 - 2330	Shale, as above	
2330 - 2345	Dolomite, dark brown crystalline, some limestone at top, tan to gray crystalline, long black inclusions	
2345 - 2355	Shale, as above	
2355 - 2370	Limestone, gray sub-crystalline, to finely crystalline oolitic.	Top Ft. Riley?
2370 - 2380	Limestone, as above, very oolitic and oolitic, very porous	No show
2380 - 2405	Limestone, as above, few if any, oolites.	
2405 - 2435	Limestone, gray nodular, oolitic, trace oolitic, very little porosity.	
2435 - 2445	Limestone, gray finely crystalline, some sucrose, good porosity, some chert gray, opaque, mottled.	No show
2445 - 2535	Limestone, as above, considerable chert, white and gray, vitreous opaque, some thin streaks shale, gray, green and brown.	
2535 - 2555	Shale, mostly gray	
2555 - 2635	Limestone and chert as above, some streaks gray and gray green shale.	
2635 - 2645	Limestone, as above, some porosity	No show
2645 - 2684	Limestone and chert, as above, shale streaks as above	
2684 - 2700	Limestone, chert, and shale, as above, some porosity.	No show
2700 - 2715	Limestone, chert and shale, as above	
2715 - 2722	Shale, green and brown	
2722 - 2760	Limestone and chert as above, little or no shale	
2760 - 2815	Limestone as above, no chert, some shale streaks.	
2815 - 2845	Limestone, as above, with black oolites	

(3) Formation log; Tatlock #1 Curtis.

<u>Depth</u>	<u>Formation Description</u>	<u>Remarks</u>
2845 - 2852	Shale, gray, calcareous	
2852 - 2902	Limestone, as above, with some black oolites.	
2902 - 2944	Streaks of limestone, dirty gray, sub-crystalline and shale, gray and green	
2944 - 2988	Limestone, as above, thin gray shale streaks	
2988 - 2997	Shale, gray	
2997 - 3020	Limestone, as above, a few streaks gray and brown shale	
3020 - 3062	Shale, gray to brown, silty to sandy. Streak limestone 3040-41.	
3062 - 3068	Limestone, gray sub-crystalline	
3068 - 3120	Silty shale as above	
3120 - 3165	Limestone, gray to buff, sub-crystalline to finely crystalline, fossiliferous, argillaceous.	Top Tarkio?
3165 - 3170	Shale, gray, green, micaceous, very silty to sandy	
3170 - 3213	Shale, brown to pale-green silty, streaks earthy limestone	
3213 - 3231	Limestone, gray to buff sub-crystalline to granular	
3231 - 3250	Limestone, as above; some sandy, some oolites	
3250 - 3260	Shale, gray-black to brown-black fissile.	
3260 - 3268	Limestone, gray, sub-crystalline, fossiliferous.	
3268 - 3277	Limestone, gray to white granular chalky, scattered vugular porosity	No show
3277 - 3295	Limestone tan to brown, finely crystalline, fossiliferous.	
3295 - 3305	Limestone, as above, with streaks dark gray shale.	
3305 - 3310	Limestone, gray mottled oolitic argillaceous.	
3310 - 3335	Shale, gray to black, silty, micaceous.	
3335 - 3351	Limestone, gray to tan argillaceous, fossiliferous, some brown dense	
3351 - 3357	Shale, gray to gray-black, micaceous	
3357 - 3379	Limestone, as above	
3379 - 3412	Shale, gray to gray black, silty, some fine gray argillaceous sand at bottom.	Severy
3412 - 3428	Limestone tan to cream, finely sacrose, slightly dolomitic, good oolitic porosity.	Top Topeka, no show
3428 - 3431	Shale, gray and brown	
3431 - 3438	Limestone, gray to brown, finely crystalline, argillaceous, fossiliferous	
3438 - 3441	Shale, gray and brown	
3441 - 3490	Limestone, tan to cream, oolitic, good oolitic porosity.	No show

<u>Depth</u>	<u>Formation Description</u>	<u>Remarks</u>
3490 - 3500	Limestone, tan, dolomitic and calcitic, finely crystalline scattered vugular porosity	No show
3500 - 3502	Shale, gray	
3502 - 3533	Limestone, tan to brown, sub-crystalline to finely crystalline, streaks vugular porosity.	No show
3533 - 3537	Shale, gray	
3537 - 3540	Limestone, as above	
3540 - 3544	Shale gray	
3544 - 3557	Limestone, light gray, finely crystalline, some fair vugular porosity 3544 - 51. Chert, gray, opaque	No show
3557 - 3565	Shale gray	
3565 - 3570	Limestone, cream, sub-crystalline, oolitic fair oolitic porosity.	No show
3570 - 3599	Limestone, gray, granular, to sub-crystalline, some vugular porosity 3575-83. Some gray chert.	No show
3599 - 3601	Shale, gray and brown	
3601 - 3621	Limestone, white, finely crystalline, dolomitic, some vugular porosity 3602-13, chert, gray, opaque.	
3621 - 3623	Shale, black	
3623 - 3647	Limestone, brown to gray, sub-crystalline chert as above, possibly some porosity 3630-39	No show
3647 - 3667	Limestone, tan to buff, sub-crystalline, oolitic, fair oolitic porosity.	No show
3667 - 3686	Limestone, white to tan finely crystalline granular.	
3686 - 3707	Limestone as above, scattered vugular porosity.	No show
3707 - 3716	Limestone, tan to brown, finely crystalline.	
3716 - 3747	Limestone tan, sub-crystalline, granular fossiliferous, dolomitic, fair vugular porosity.	No show
3747 - 3750	Shale, black, fissile	
3750 - 3763	Limestone, brown dense	
3763 - 3769	Shale, brown-black, micaceous, fissile	Heebner
3769 - 3773	Limestone, brown-gray, sub-crystalline to dense.	Leavenworth
3773 - 3781	Shale, gray-green to gray-black.	Snyderville
3781 - 3805	Limestone, cream to white, chalky	Toronto
3805 - 3851	Shale, gray to gray-green, silty micaceous some streaks fine sand	Douglas
3851 - 3859	Sand gray micaceous angular, clean	Trace brown stain
3859 - 3908	Shale, as above, streaks fine silty sand	
3908 - 3912	Trace tan limestone	
3912 - 3920	Shale, as above, sand submedium, angular micaceous	Brown stain
3920 - 3926	Limestone, brown to gray-brown dense	Brown Lansing
3926 - 3929	Shale, gray	
3929 - 3933	Limestone, dark gray, dense	
3933 - 3940	Shale, as above	

(5) Formation log; Tatlock #1 Curtis.

<u>Depth</u>	<u>Formation Description</u>	<u>Remarks</u>
3940 - 3947	Limestone, tan, finely crystalline	Top Lansing
3947 - 3951	Limestone, tan, sucrose, oolitic, very good oolitic porosity.	Good show free oil; fair odor, D.S.T.
3951 - 3954	Limestone, brown dense	
3954 - 3956	Limestone, as above, slight trace porosity.	Slight oil show; D.S.T.
3956 - 3959	Limestone, as above, no porosity	
3959 - 3965	Shale, gray and brown	
3965 - 3969	Limestone, gray, finely crystalline, oolitic.	
3969 - 3974	Limestone, as above, possibly some oolitic porosity; electric log indicates very little porosity; this is Lansing zone #1 of the Chance Pool area.	Possibly some oil show
3974 - 3977	Limestone, cream to tan, sub-crystalline	
3977 - 3979	Shale, gray	
3979 - 3990	Limestone, as above	
3990 - 3996	Limestone, white to tan, sucrose, oolitic, good oolitic porosity	Fair show free oil; no odor. DST
3996 - 4011	Limestone, gray to brown, dense, chert, white to gray devitrified.	
4011 - 4013	Shale, gray	
4013 - 4018	Limestone, as above	
4018 - 4023	Limestone, gray, granular, earthy, oolitic, fair inter-oolite and vugular porosity.	No show
4023 - 4027	Limestone, brown, dense, resinous	
4027 - 4031	Shale, gray	
4031 - 4044	Limestone, gray, sub-crystalline, some poor vugular porosity 4032-34	No show
4044 - 4047	Shale, gray	
4047 - 4060	Limestone, tan, very finely sucrose, oolitic; very good oolitic porosity.	No show
4060 - 4093	Limestone, gray to tan, dense, resinous, chert, white to blue-gray, opaque to semi-translucent.	
4093 - 4096	Shale, gray to black	
4096 - 4099	Limestone, gray to tan, finely sucrose, oolitic.	
4099 - 4111	Limestone, as above, very good oolitic porosity	No show
4111 - 4126	Limestone, gray to buff, sub-crystalline, thin streaks brown and black shale	
4126 - 4128	Limestone, as above, possibly some oolites and trace oolitic porosity	No show
4128 - 4140	Limestone, tan to brown, dense	
4140 - 4145	Limestone, brown to light gray, sub-crystalline, finely oolitic, fine oolitic honeycomb porosity.	No show
4145 - 4155	Limestone, light gray, dense to lithographic.	
4155 - 4158	Shale, gray	

(6) Formation log; Tatlock #1 Curtis

<u>Depth</u>	<u>Formation Description</u>	<u>Remarks</u>
4158 - 4164	Limestone, light gray sub-crystalline oolitic, good oolitic porosity. Probably poor permeability.	Possible light stain, no odor or free oil.
4164 - 4173	Limestone, gray, sub-crystalline	
4173 - 4176	Limestone, as above, possible trace vugular porosity	No show
4176 - 4180	Limestone, as above	
4180 - 4184	Shale, gray to black, soft	
4184 - 4187	Limestone, as above	
4187 - 4192	Limestone, gray to brown, sub-crystalline, irregular oolites; good honeycomb porosity.	No show
4192 - 4209	Limestone, gray to tan, dense	
4209 - 4220	Limestone, light gray to white, dense to finely crystalline, some oolites, some chert, gray opaque.	
4220 - 4222	Shale, black	
4222 - 4232	Limestone, tan dense, much chert, vitreous opaque	
4232 - 4235	Limestone, as above, possible trace porosity	No show
4235 - 4244	Limestone, as above	
4244 - 4250	Limestone, as above with streaks of black shale	
4250 - 4256	Limestone, tan to brown, dense to finely crystalline	
4256 - 4263	Limestone as above, possible trace vugular porosity	No show
4263 - 4271	Shale, green, gray and black, some maroon, some green siltstone, probably some limestone streaks	
4271 - 4278	Limestone, light tan to light gray, dense, some chert	Base Kansas City 4178
4278 - 4291	Some green siltstone, some purple shale, some chert, trace red limestone	Warmaton
4291 - 4306	Limestone, tan to amber, dense, some chert, gray opaque oolitic	
4306 - 4317	Shale, gray and red-maroon, some green and variegated shale, some red limestone	
4317 - 4339	Limestone, tan dense	
4339 - 4353	Alternate shale and limestone streaks, shale, gray, brown and gray-green; limestone, brown-red and white to light gray, finely crystalline; many good chaetetes; trace chert, gray and red, translucent.	
4353 - 4373	Limestone, brown, gray and gray-green, dense. Some red limestone; chert red, vitreous, translucent	
4373 - 4400	Shale, brown, gray and green, streaks of limestone, as above, chert, red, amber, and brown, translucent	
4400 - 4404	Shale and limestone streaks, shale as above; limestone brown to gray dense, to finely crystalline, large oolites and oolitic, some fossils.	

<u>Depth</u>	<u>Formation Description</u>	<u>Remarks</u>
4404 - 4432	Chert, white, opaque, vitreous and devitrified; some dark maroon and green, variegated shale at base.	Mississippi; good stain and show of gas bubbles and free oil. No odor, DST Kinderhook
4432 - 4457	Shale, green-gray; some gray leached shale; some limestone, gray, brown and white finely crystalline; some chert, amber to brown, translucent, some green opaque chert.	
4457 - 4478	Shale, as above, some chert, white, brown, yellow, lemon and amber, translucent and opaque.	
4478 - 4505	Increase in green shale and chert, as above, few streaks brown dense limestone	Top Viola, no show
4505 - 4515	Chert, white, tan, gray, red and green, opaque to translucent figured. Some devitrified chert.	
4515 - 4546	Limestone, red, dense weathered, much chert.	
4546 - 4549	Shale, green	No show in limestone, trace stain in devitrified chert
4549 - 4555	Limestone, tan to white crystalline, chert, as above	
4555 - 4565	Limestone, white and red, finely crystalline, light cream, crystalline some porosity; some chert, as above, some white devitrified chert.	
4565 - 4579	Limestone and chert as above, with streaks brown sucrose dolomite, some porosity.	No show
4579 - 4591	Limestone, dirty brown-gray, dense some gray-brown opaque chert.	No show
4591 - 4601	Limestone and chert as above, some porosity	
4601 - 4633	Limestone, tan to light cream, coarsely crystalline; trace sand grains in limestone; trace white devitrified chert	
4633 - 4635	Shale, green	Simpson
4635 - 4639	Sand, gray to white, calcareous and dolomitic.	
4639 - 4653	Shale, green, sandy	No show
4653 - 4666	Sand, gray, medium and white to black sub-medium, tight	
4666 - 4692	Shale, green, some sandy shale, some thin sand streaks	
4692 - 4697	Dolomite, brown, finely crystalline to sub-crystalline, tight, much white sand	Arbuckle
4697 - 4701	Dolomite, tan to red-buff, sub-crystalline to dense, sandy to very sandy, some very large sand grains, some porosity.	No show
4701 - 4706	Dolomite, as above, little or no porosity.	No show
4706 - 4708	Some light green shale	
4708 - 4717	Dolomite, as above, some gray, finely crystalline, some fair vugular porosity	

<u>Depth</u>	<u>Formation Description</u>	<u>Remarks</u>
4717 - 4720	Dolomite, brown to tan, finely sucrose very oolitic, good porosity	Possibly very slight trace stain, no odor or free oil
4720 - 4727	Dolomite, as above, few if any oolites, or oolcasts. No porosity. Possibly some shale streaks.	
4727 - 4736	Dolomite, brown to tan, crystalline, some sandy, some tripolitic cement. Some white and gray chert, opaque, oolitic.	
4736	Total depth	Electric log total depth 4739

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Ran electric log (Schlumberger-Gamma Ray-Laterolog-Microlaterolog).
No cores were taken on the #1 Curtis.
The following drill stem tests were taken on the #1 Curtis:

- (1) 3945-68; open 1 hour
Recovered 1710' gas and 1620' gassy oil with a little mud on top.
Bottom hole pressure 600# (20 min.)
Initial flowing pressure 440#
Final flowing pressure 555#
- (2) 3980-4000; open 1 hour
Recovered 1390' salt water
Bottom hole pressure 1315# (20 min.)
- (3) 4404-15; open 1 hour
Recovered 15' mud; very slight trace oil
Bottom hole pressure 0 (20 min.)

(Samples examined and log compiled by Johns & Magathan)

TIME LOG

Tatlock #1 Curtis
SE SE NE, 21-26S-15W
Pratt County, Kansas
Elevation: 2050 derrick floor

WENDELL S. JOHNS

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

5' Time

<u>Depth</u>	<u>Time</u>	<u>Remarks</u>
765 - 800	6-6-6-6-6-17-7	
800 - 850	7-6-7-8-6-8-5-11-7-6	
850 - 900	9-3-2-2-2-3-3-3-3-3	
900 - 950	2-2-2-2-2-2-2-2-2-2	
950 - 1000	2-2-2-2-2-2-1-2-2-2	
1000 - 1050	2-2-2-13-5-3-2-5-2-3	Stone Corral Anhydrite 1004-25
1050 - 1100	2-2-3-5-2-2-3-3-3-3	
1100 - 1150	2-2-2-2-2-4-2-2-3-3	
1150 - 1200	3-4-3-2-3-2-2-1-3-2	
1200 - 1250	2-3-4-4-4-3-3-3-3-4	
1250 - 1300	2-2-2-3-2-3-3-3-3-3	
1300 - 1350	3-4-3-2-3-3-3-3-4-3	
1350 - 1400	3-3-3-3-3-4-4-3-4-4	
1400 - 1450	3-3-3-3-3-3-3-4-3-3	
1450 - 1500	4-4-3-3-3-4-4-10-10-10	Trip 1485 O.S.Q.
1500 - 1550	10-5-5-4-4-4-4-5-6-6	
1550 - 1600	5-7-6-6-8-6-5-5-5-6	
1600 - 1650	5-5-5-5-5-6-5-6-6-6	
1650 - 1700	5-6-3-3-3-4-4-4-5-6	
1700 - 1750	6-5-5-5-5-5-5-5-5-5	
1750 - 1800	5-9-5-5-7-7-6-6-5-4	
1800 - 1850	6-15-15-7-6-6-5-6-6-4	
1850 - 1900	4-4-4-5-5-4-4-4-9-6	
1900 - 1950	5-6-6-5-5-4-6-5-6-4	
1950 - 2000	5-8-14-6-8-6-5-6-18-17	Trip 1960 O.W.S.
2000 - 2050	10-7-2-6-11-13-8-7-3-16	
2050 - 2100	18-11-8-9-3-10-14-13-9-12	
2100 - 2150	3-12-8-11-11-13-11-17-13-10	
2150 - 2200	11-16-15-10-8-12-10-9-11-20	
2200 - 2250	18-21-20-15-10-10-10-12-8-8	Trip 2210 O.S.Q.
2250 - 2300	5-12-10-10-10-10-10-10-10-15	
2300 - 2350	15-12-11-6-12-15-13-14-7-9	
2350 - 2400	12-14-13-9-5-5-10-14-15-13	
2400 - 2450	13-11-9-9-6-9-6-5-5-10	Trip 2450 O.W.S.
2450 - 2500	12-16-16-10-14-10-10-10-6-5	
2500 - 2550	8-7-12-10-8-10-16-11-10-9	
2550 - 2600	8-9-14-14-17-16-13-16-11-10	
2600 - 2650	13-11-15-18-20-15-13-8-10-11	Trip 2620 O.W.S.
2650 - 2700	11-14-11-9-11-14-12-10-5-5	
2700 - 2750	6-10-7-10-6-6-11-15-16-12	
2750 - 2800	14-15-14-12-11-10-10-14-11-9	
2800 - 2850	9-15-9-12-12-8-9-6-3-7	
2850 - 2900	17-11-7-9-11-13-12-11-10-14	
2900 - 2950	12-10-9-8-11-13-14-13-8-9	
2950 - 3000	15-14-11-11-9-5-6-10-7-7	

(2) Time Log: Tatlock #1 Curtis

<u>Depth</u>	<u>Time</u>	1' time starts 3000	<u>Remarks</u>
3000 - 10	3-2-3-3-3-3-3-3-4		
20	4-3-3-3-3-2-2-4-4-2		
30	2-2-2-2-2-2-3-2-2-2		
40	2-2-3-2-3-2-3-3-2-2		
50	2-2-2-3-4-3-2-2-1-1		Trip 3050 O.W.S.
60	1-1-1-1-2-1-1-1-1-1		
70	1-1-1-1-1-1-2-3-3-3		
80	4-3-2-3-2-2-2-2-2-2		
90	2-2-2-1-1-1-1-2-1-1		
3090 - 3100	2-1-2-2-1-1-1-2-1-2		
10	1-2-1-1-2-1-1-1-1-2		
20	1-1-2-2-2-1-1-2-2-2		
30	1-1-1-1-3-3-3-2-2-3		
40	3-3-2-3-2-2-3-2-2-2		
50	2-2-2-2-2-2-2-3-3-4		
60	3-2-3-2-2-3-3-2-2-2		
70	2-3-2-2-2-2-3-2-3-2		
80	4-5-3-3-2-2-2-2-2-4		
90	4-4-4-4-4-3-3-4-4-3		
3190 - 3200	3-4-3-4-4-4-3-3-4-4		
10	4-3-4-4-4-4-5-5-3-3		
20	3-3-3-5-4-6-5-4-5-5		
30	4-4-4-4-3-5-5-5-5-5		
40	6-5-4-4-3-2-2-2-2-2		
50	3-4-4-3-3-3-3-3-3-3		Trip 3250 O.S.Q.
60	4-3-3-2-2-2-2-2-2-2		
70	3-3-2-2-2-3-4-4-2-2		
80	2-1-1-1-2-1-1-2-2-4		
90	3-3-4-3-3-4-4-4-4-4		
3290 - 3300	4-3-4-3-3-3-3-3-2-3		
10	3-2-3-2-2-3-4-4-3-4		
20	2-3-3-3-3-2-2-2-2-2		
30	2-2-2-2-2-3-2-2-2-2		
40	2-2-3-3-3-3-3-2-4-3		
50	3-3-2-2-1-3-3-3-2-3		
60	3-2-2-2-2-2-2-3-2-2		
70	3-3-5-6-4-5-3-3-3-3		
80	4-3-4-4-3-4-4-4-5-3		
90	3-3-4-3-4-3-2-5-3-3		
3390 - 3400	3-3-4-4-3-4-5-4-4-5		
10	4-3-2-4-3-4-2-3-4-3		
20	3-4-3-2-3-3-3-4-4-3		Top Topeka 3412
30	2-3-2-2-4-3-4-4-3-2		
40	2-3-3-2-2-2-2-2-2-2		
50	2-3-2-4-4-3-3-2-2-2		
60	1-1-2-1-1-1-1-1-1-2		
70	2-3-3-4-4-2-2-4-3-3		Trip 3470 O.S.C.
80	2-1-2-3-2-2-1-2-2-2		
90	2-2-2-2-2-1-1-1-2-1		
3490 - 3500	2-2-1-1-1-2-2-2-2-2		
10	2-2-2-2-2-2-2-2-2-1		
20	2-2-3-3-3-3-2-3-3-3		
30	3-4-3-4-3-3-4-3-3-3		
40	3-3-3-4-4-3-3-5-5-7		
50	5-5-4-4-5-7-6-6-5-5-		

(3) Time Log: Tatlook #1 Curtis

<u>Depth</u>	<u>Time</u>	<u>Remarks</u>
3550 - 60	5-8-9-10-10-9-10-6-3-3	Trip 3555 W-7
70	2-2-3-3-3-2-2-3-5-3	
80	3-4-4-3-3-3-3-3-3-3	
90	2-2-2-3-3-2-4-2-4-3	
3590 - 3600	4-4-5-5-4-3-3-5-5-4	
10	4-6-3-4-3-2-3-3-4-3	
20	3-3-3-4-5-3-5-4-5-6	
30	6-4-7-5-4-5-5-6-5-4	
40	3-3-3-3-3-3-3-3-3-4	
50	5-3-3-3-2-3-4-2-3-3	
60	3-3-3-3-3-3-3-3-3-2	
70	3-3-3-3-3-3-3-4-4-4	
80	3-4-3-3-3-4-3-3-3-3	
90	3-4-3-3-4-4-3-2-3-3	
3690 - 3700	3-4-3-3-2-3-3-4-3-2	
10	3-3-2-2-2-3-3-5-4-4	
20	6-5-4-4-4-5-4-3-3-3	
30	4-3-3-3-4-5-4-5-3-3	
40	4-3-3-4-3-3-4-3-3-3	
50	2-4-3-4-4-5-4-7-8-7	
60	7-8-7-5-4-4-7-8-8-7	
70	9-6-4-3-3-3-2-2-2-4	Heebner 3763-69
80	9-8-7-4-4-5-4-5-5-5	
90	5-6-5-4-6-5-4-5-4-5	
3790 - 3800	4-5-7-7-5-6-6-6-5-6	
10	5-4-6-6-6-6-6-7-7-8	Trip 3810 W-7
20	10-9-6-6-5-5-4-5-4-4	Circ. 3830 1½ hrs.
30	4-5-4-5-4-5-3-4-4-4	
40	3-4-4-5-5-6-5-4-4-5	
50	6-4-4-4-4-5-5-5-6-5	
60	4-3-3-3-3-3-2-2-2-4	
70	4-4-6-4-4-4-5-4-5-4	Kelly Correction 3870-71
80	x-3-4-5-5-5-4-4-4-4	
90	5-4-4-5-4-4-5-4-4-4	
3890 - 3900	4-5-5-4-5-4-6-4-5-4	
10	4-4-5-4-4-3-4-5-5-5	
20	5-4-4-4-4-4-4-3-4-3	Top Brown Lansing 3920
30	4-4-8-9-7-7-6-6-6-7	Top Lansing 3940
40	7-6-7-5-5-5-5-5-6-3	
50	5-7-7-6-7-6-6-1-1-1	
60	1-6-9-8-7-7-9-10-9-5	
70	5-5-4-4-7-8-8-7-8-7	Circ. 3968 1½ hrs. Drill Stem Test 3945 - 68 New O.W.S. @ 3968
80	6-8-4-5-8-9-8-5-6-8	
90	6-6-7-7-7-5-4-6-4-4	
3990 - 4000	3-3-3-2-2-2-3-3-6-5	Circ. 4000 1½ hrs. D.S.T. 3980-4000 New O.W.S. @ 4000
10	6-5-5-7-8-8-7-6-7-8	
20	8-6-6-8-6-5-3-4-3-2	
30	2-3-3-5-6-6-9-7-4-3	
40	5-7-4-4-5-8-8-8-9-7	
50	7-7-8-10-5-5-3-2-1-1	

(4) Time Log: Tatlock #1 Curtis

<u>Depth</u>	<u>Time</u>	<u>Remarks</u>
4050 - 60	1-1-2-1-1-1-1-3-2-2	
70	8-8-10-8-7-7-9-9-9-8	Circ. 4070 1 hr.
80	8-9-11-8-9-10-10-10-7-8	
90	7-7-8-8-7-9-10-10-10-8	
4090 - 4100	10-10-12-13-8-7-5-7-3-1	Trip 4096 W-7
10	1-1-1-1-1-1-1-1-1-1	
20	2-6-8-7-8-8-5-8-5-9	Circ. 4112 1 hr.
30	4-7-6-6-5-4-6-6-5-3	
40	5-7-8-8-7-5-8-7-5-7	Circ. 4125 1½ hrs.
50	5-3-1-1-1-6-3-4-4-5	
60	4-4-2-1-1-1-1-1-2-2	
70	2-3-2-2-3-4-6-4-5-9	Circ. 4167 1½ hrs
80	8-8-9-7-4-4-7-8-7-6	
90	4-6-6-5-5-5-5-4-3-3	
4190 - 4200	4-4-5-4-6-6-9-9-9-9	
10	10-10-8-9-11-9-8-8-7-11	Circ. 4210 1½ hrs.
20	10-11-8-10-10-10-7-8-6-8	Trip 4215 W-7
30	8-8-3-7-8-8-8-9-7-7	
40	6-6-5-5-5-8-7-7-6-6	
50	7-8-8-9-3-6-6-10-6-3	
60	4-7-9-8-7-8-6-7-5-6	
70	6-5-5-5-5-5-5-5-7-7	
80	9-5-8-7-7-8-7-8-7-6	Base Kansas City 4278
90	7-7-10-6-6-7-6-7-6-6	
4290 - 4300	6-5-5-8-8-11-11-5-8-6	
10	11-10-9-9-9-8-7-7-7-7	
20	7-4-7-6-6-6-5-8-8-8	Trip 4320 W-7
30	5-6-7-8-6-8-7-7-7-7	
40	9-7-8-7-8-8-8-9-8-7	
50	7-7-6-8-8-8-8-7-6-8	
60	9-5-7-6-7-7-7-7-7-6	
70	6-8-7-6-8-7-10-10-9-8	
80	8-8-7-8-9-8-7-8-6-6	
90	5-7-8-8-8-7-8-7-7-5	
4390 - 4400	9-8-9-8-8-9-7-8-8-8	Circ. 4400 1½ hrs.
10	6-7-8-8-3-4-3-4-3-4	Top Mississippi 4404 S.R. 4407
20	3-4-3-3-4-7-4-4-4-6	Circ. 4415 1½ hrs. D.S.T. 4404-15 New W 7 R @ 4415
30	5-6-5-5-5-4-5-5-6-6	
40	6-7-6-9-7-5-12-15-9-17	Top Kinderhook 4432 Circ. 4440 1½ hrs. Trip 4440 W-7
50	14-11-9-8-8-7-8-10-8-8	
60	8-8-8-8-9-8-7-9-9-8	
70	9-9-9-9-7-9-8-8-8-9	
80	8-8-9-8-8-8-8-8-8-8	
90	8-6-8-7-8-7-8-8-7-8	Circ. 4490 1 hr.
4490 - 4500	7-7-8-6-7-7-7-8-6-8	

(5) Time Log: Tatlook #1 Curtis

<u>Depth</u>	<u>Time</u>	<u>Remarks</u>
4500 - 10	6-6-6-6-6-5-5-4-5-6	Top Viola 4505 Circ. 4510 1½ hrs
20	3-4-5-6-6-15-12-6-9-10	Trip 4517 W-7
30	7-6-11-11-8-11-9-11-11-10	
40	10-14-11-11-13-15-12-11-10-13	Trip 4540 W-7R
50	13-11-8-8-8-8-7-7-7-11	
60	12-11-9-13-12-11-11-10-10-9	
70	10-10-11-10-12-9-7-9-7-7	
80	10-8-10-11-9-10-12-11-13-10	
90	9-10-10-11-11-12-14-10-12-11	
4590 - 4600	12-10-9-11-11-10-9-10-11-10	
10	10-14-13-12-17-20-15-15-17-16	
20	19-15-8-10-9-10-10-9-8-12	Trip 4612 W-7R
30	9-10-10-9-9-10-10-11-10-9	
40	8-8-9-6-7-11-10-10-8-8	Top Simpson 4633
50	6-6-8-8-9-10-8-10-9-7	Circ. 4642 1½ hrs
60	9-9-8-6-6-6-8-7-6-8	
70	8-7-4-5-6-10-9-10-9-10	Circ. 4670 40 min.
80	9-6-7-5-6-10-9-10-8-7	Circ. 4680 ½ hr.
90	9-9-11-9-11-13-10-8-9-10	
4690 - 4700	10-9-5-9-5-8-6-5-3-4	Top Arbuckle 4692 Rough 4693-95 Circ. 4697 1½ hrs. Trip 4697 W-7
4700 - 10	7-9-8-6-7-6-5-7-7-8	Circ. 4710 ½ hr.
20	7-4-5-7-6-7-7-3-1-2	
30	8-8-8-8-8-8-9-8-6-8	
4730 - 36	6-9-7-9-9-10	
T.D. 4736		Circ. 4736 1½ hrs. Ran electric log 3-25-53

Log condensed by Wendell S. Johns