

Computer Invented

F. Kirk Johnson #1 Salser
 SW SW NW; 12-26S-16W
 Edwards County, Kansas
 Elevation: 2066 Kelly Bushing

8 5/8" Surface Casing: 275
 5 1/2" Casing:
 Comm: 11-23-55
 Comp:

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

<u>Depth</u>	<u>Formation Description</u>	<u>Remarks</u>
0 - 275	Shale	Drillers log 0-3500'
275 - 735	Red Bed	
735 - 1023	Red bed and shale	
1023 - 1044	Anhydrite	Stone Corral; Electric log top
1044 - 1365	Shale	
1365 - 2000	Shale and shells	
2000 - 2640	Limestone and shale	
2640 - 3040	Shale and limestone	
3040 - 3500	Limestone and shale	
3500 - 32	Limestone, tan to gray, sub-crystalline; spotted vugular porosity	Sample log 3500 to T.D. No show
3532 - 67	Limestone, tan to gray, sub-crystalline to finely crystalline, fossiliferous; streaks gray shale	
3567 - 3606	Limestone, gray to buff, sub-crystalline to sucrose, fossiliferous, some oolitic; fair vugular porosity	No show
3606 - 18	Limestone, gray, subcrystalline, fossiliferous to tan, dense; chert, gray to buff, subvitreous to devitrified, figured; streaks gray and brown shale	
3618 - 37	Limestone, gray to buff, finely sucrose, crypto-oolitic, dolomitic; fair spotted vugular porosity, trace oolitic porosity	No show
3637 - 58	Mostly shale, dark gray; some cream to gray subcrystalline limestone, very shaly	
3658 - 80	Limestone, cream to buff, sucrose, dolomitic to white, chalky; fair vugular porosity	No show
3680 - 92	Limestone, buff to tan, subcrystalline, dolomitic, porous; chert, gray, opaque, vitreous to subvitreous, figured	No show

-2- F. Kirk Johnson #1 Salser, Formation Log.

<u>Depth</u>	<u>Formation Description</u>	<u>Remarks</u>
3692 - 3741	Limestone, cream to tan, finely crystalline, fossiliferous, some chalky; spotted vugular porosity	No show
3741 - 63	Mostly limestone, cream to buff, finely crystalline to medium crystalline; streaks gray-black to brown-black shale	
3763 - 69	Shale, brown-black, finely micaceous, carbonaceous	Heebner
3769 - 73	Limestone, gray to brown-gray, subcrystalline	Leavenworth
3773 - 83	Shale, gray to gray-green	Snyderville
3783 - 3804	Limestone, cream to white, subcrystalline to finely crystalline, very shaly	Toronto
3804 - 3918	Shale, gray to green-gray to gray-black; thin streaks sand, very fine, gray, silty, micaceous	Douglas
3918 - 23	Limestone, gray-brown, subcrystalline to dense, fossiliferous	Top Brown Lime 3918
3923 - 33	Shale, gray; plates limestone as above	
3933 - 35	Limestone, gray to gray-brown, subcrystalline	Top Lansing 3933
3935 - 39	Limestone, cream to buff, sucrose, very good oolitic porosity	Good odor, good show free oil; D.S.T. 3933-50
3939 - 55	Limestone, gray to brown, subcrystalline, fossiliferous; streaks gray and brown shale	
3955 - 65	Limestone, tan to gray, subcrystalline to finely crystalline, calcitic; spotted vugular porosity	No show
3965 - 76	Limestone, tan, subcrystalline to dense; streaks gray and brown shale	
3976 - 80	Limestone, cream, finely crystalline; trace pinpoint and poor vugular porosity; chert, gray, opaque, subvitreous	No show
3980 - 4008	Mostly limestone, dark gray to brown, mottled, finely crystalline to subcrystalline; chert, gray, translucent, smoky and gray to tan, subvitreous, opaque; streaks gray and brown shale	
4008 - 12	Limestone, gray to tan, finely crystalline to subcrystalline, very	No show

-3- Formation Log: F. Kirk Johnson #1 Salser.

<u>Depth</u>	<u>Formation Description</u>	<u>Remarks</u>
4012 - 25	cherty; chert, as above Limestone, tan to brown, sub-crystalline, resinous; much chert, as above; streaks shale, as above	
4025 - 35	Limestone, cream to tan, sucrose to subcrystalline; fair oolitic porosity, poor permeability	Fair odor, fair spotted show free oil; D.S.T. 4025-35
4035 - 39	Limestone, tan to dark brown, dense to subcrystalline; chert, blue-gray, subvitreous	
4039 - 60	Limestone and chert, as above	Porous on electric log, no porosity detected in samples
4060 - 71	Limestone and gray and brown shale streaks	
4071 - 79	Mostly limestone, light gray-tan, dense to chalky, very oolitic and fossiliferous; very porous 4071-72, 4075-77 and 4078-79; streaks gray and brown shale	Slight odor, fair stain, good show rather dead free oil; D.S.T. 4075-4103
4079 - 95	Limestone, gray-tan, dense; streaks gray and brown shale	
4095 - 4101	Limestone, tan to brown, dense, very oolitic and fossiliferous; fair oolitic porosity	Trace stain, trace free oil, no odor;
4101 - 11	Limestone, tan, dense	
4111 - 43	Limestone, tan, oolitic and fossiliferous; good porosity 4111-14, 4115-17, 4123-28 and 4130-34	Trace spotted stain
4143 - 52	Limestone, brown, dense and shale brown to gray	
4152 - 58	Limestone, tan, dense to chalky; good oolitic porosity, shaly	No show
4158 - 62	Shale, brown and gray	
4162 - 83	Limestone, brown, dense	
4183 - 89	Limestone, brown, dense, oolitic; trace oolitic porosity	No show
4189 - 4255	Limestone, cream to tan, sub-crystalline to dense; streaks dark gray to brown-black shale	Trace porosity on electric log 4205-10, no porosity detected in samples. Base Kansas City 4255
4255 - 75	Shale, brownish-maroon to gray-green	
4275 - 89	Limestone, gray to pinkish-tan,	No show

-4- Formation Log: F. Kirk Johnson #1 Salser.

<u>Depth</u>	<u>Formation Description</u>	<u>Remarks</u>
	subcrystalline, fossiliferous; some pale green subcrystalline limestone; chert, gray, opaque; spotted vugular porosity	
4289 - 4314	Shale, dark gray to maroon; streaks tan, subcrystalline, fossiliferous, resinous, shaly limestone	
4314 - 20	Limestone, as above, very little shale	
4320 - 36	Shale, dark gray to gray-green to silver-gray	Possible Top Cherokee 4320
4336 - 51	Limestone, tan to light gray-green, subcrystalline, resinous; trace gray, opaque, figured chert	
4351 - 68	Shale, streaks limestone, as above	
4368 - 74	Limestone tan to gray, subcrystalline to dense	
4374 - 89	Shale, dark gray to dark earthy brown; trace tan, dense, fossiliferous limestone near base	
4389 - 4437	Chert, white to citrine to amber, vitreous, translucent to opaque; chert, white, opaque, devitrified, chert, citrine to red, jasperoid; chert, white, subvitreous, slightly sandy; trace clear, well sorted, subangular glassy sand	Top Mississippi 4389; Fair show free oil, no odor; D.S.T. 4388-4420; D.S.T. 4420-40
4437 - 43	Shale, gray-green, some maroon-brown and variegated, pyritic	Top Kinderhook 4437
4443 - 48	Chert, pink, yellow and red, opaque, semi-devitrified; trace quartzitic, pyritic sand	Good stain; D.S.T. 4443-60
4448 - 72	Sand, white, fine, angular, well sorted; much chert, white, devitrified to very tripolitic. Much sandy chert and cherty sand 4456-72	Fair to good show free oil, slight odor; D.S.T. 4460-77
4472 - 93	Shale, as above; streaks light brown to green dense limestone	
4493 - 4527	Shale, as above; possible streaks white sand	
4527 - 35	Limestone, tan to brown, finely crystalline; chert, red to white, vitreous,; much silicified limestone	Top Viola 4527
4535 - 68	Limestone, brown, black and brown, red and white, some silicified; increase in chert, as above; some chert, white, granular, tripolitic	Some stain, no odor or free oil; D.S.T. 4530-4610
4568 - 81	Much white, tripolitic chert; some dolomite, white, granular, tight	
4581 - 99	Limestone, brown, subcrystalline to dense, cherty; some dark brown	

-5- Formation Log: F. Kirk Johnson #1 Salser.

<u>Depth</u>	<u>Formation Description</u>	<u>Remarks</u>
4599 - 4606	finely sucrose dolomite Much white, finely crystalline to subcrystalline silicified limestone; much cream to white to buff, vitreous to subvitreous, opaque chert; porous	No show
4606 - 16	Limestone, tan to brown, subcrystal- line to dense; chert, brown, sub- vitreous	
4616 - 21	Much dark gray to gray-green, earthy chert	
4621 - 31	Limestone, tan, dense	
4631 - 51	Limestone, cream to brown, finely crystalline to subcrystalline, some sandy; thin streaks pale green sandy shale; trace tan, gritty, sub- crystalline dolomite	
4651 - 54	Shale, gray-green to pale green, slightly sandy	Top Simpson 4651
4654 - 57	Sand, gray to white, subrounded, quartzitic	
4657 - 58	Shale, as above	
4658 - 61	Sand, as above	
4661 - 79	Shale, gray to green, some sandy	
4679 - 93	Sand, gray, medium, subrounded to subangular, well sorted, shaly	
4693 - 98	Shale, as above	
4698 - 4704	Shaly sand, as above	
4704 - 36	Shale, as above; streaks brown coarsely crystalline, rhombohedral, sandy dolomite, grading into dolomitic sand	
4736 - 38	Dolomite, cream to buff, finely crystalline to medium crystalline, rhombohedral	Top Arbuckle 4736
4738 - 39	Shale, dark green	
4739 - 46	Dolomite, as above; spotted vugular porosity 4740-44	No show
4746 - 50	Shale, as above	
4750 - 55	Dolomite, as above, some oolitic; spotted vugular and oolitic porosity 4753-55	
4755 - 59	Shale, as above	
4759 - 65	Dolomite, buff, medium crystalline, rhombohedral; fair vugular porosity	No show
4765	Total Depth	

-6- Formation Log: F. Kirk Johnson #1 Salser.

Drill Stem Test Data: The following drill stem tests were run on the #1 Salser:

Lansing-Kansas City:

- (1) D.S.T. 3933-50; Open 1 hour - good blow throughout test.
Recovered 800' gas
110' slightly oil and gas cut mud.
Initial flow pressure: 28 p.s.i.
Final flow pressure: 42 p.s.i.
Shut in pressure: 590 p.s.i. (30 min. - still building rapidly).
- (2) D.S.T. 4025-35; open 1 hour - good blow throughout.
Recovered 610' salt water, no oil or gas
Initial flow pressure: 20 p.s.i.
Final flow pressure: 250 p.s.i.
Shut in pressure: 1450 p.s.i. (30 min. - static).
- (3) D.S.T. 4075-4103; open 1 hour - small blow throughout.
Recovered 80' muddy salt water, no oil or gas.
Initial flow pressure: 16 p.s.i.
Final flow pressure: 48 p.s.i.
Shut in pressure: 1475 p.s.i. (30 min. - static).

Mississippi:

- (4) D.S.T. 4388-4420; open 1 hour - strong blow throughout test.
Gas to surface in 8 minutes, not enough to gauge.
Recovered 95' very oily mud.
60' muddy oil.
60' slightly muddy oil
60' clean oil.
Initial flow pressure: 32 p.s.i.
Final flow pressure: 98 p.s.i.
Shut in pressure: 1475 p.s.i. (30 min. - static).
- (5) D.S.T. 4420-40; open 1 hour - weak blow for 52 minutes. Flushed anchor at 30 minutes. Blow remained unchanged after flushing.
Recovered 25' mud.
Initial flow pressure: 50 p.s.i.
Final flow pressure: 60 p.s.i.
Shut in pressure: 830 p.s.i. (30 min. - still building rapidly).

-7- Formation Log: F. Kirk Johnson #1 Salsar.

Drill Stem Test Data (continued).

Kinderhook:

- (6) D.S.T. 4443-60; open 1 hour - weak blow throughout test.
Recovered 60' slightly oil cut mud.
Initial flow pressure: 10 p.s.i.
Final flow pressure: 20 p.s.i.
Shut in pressure: 60 p.s.i. (30 min. - still building rapidly).
- (7) D.S.T. 4460-77; open 1 hour - weak blow throughout test.
Recovered 30' mud.
Initial flow pressure: 25 p.s.i.
Final flow pressure: 55 p.s.i.
Shut in pressure: 940 p.s.i. (30 min. - still building rapidly).

Viola:

- (8) D.S.T. 4530-4610; open 1 hour - good blow throughout test.
Recovered 460' salt water - no oil or gas.
Initial flow pressure: 90 p.s.i.
Final flow pressure: 320 p.s.i.
Shut in pressure: 1440 p.s.i. (30 min. - still building slowly).

Samples examined and log compiled by

WENDELL S. JOHNS and WILLIS JACK MAGATHAN.

WENDELL S. JOHNS

TIME LOG

F. Kirk Johnson #1 Salser
SW SW NW; 12-26S-16W
Edwards County, Kansas
Elevation: 2066 Kelly Bushing

Note: All measurements are from the top of the Kelly Bushing.

<u>Depth</u>	<u>Time</u>	<u>Remarks</u>
3500 - 3510	5-5-5-5-5-7-5-5-6-7	
3510 - 20	6-7-5-5-6-6-6-5-6-3	
3520 - 30	4-5-5-5-6-6-5-6-7-6	
3530 - 40	6-6-8-10-8-7-8-8-8-7	
3540 - 50	8-7-11-11-10-13-5-5-5-5	Trip 3546
3550 - 60	5-6-5-5-6-5-5-7-7-5	
3560 - 70	7-4-3-2-2-2-2-3-4-2	
3570 - 80	3-2-3-4-4-3-3-4-3-3	
3580 - 90	3-3-2-3-2-3-2-3-2-3	
3590 - 3600	2-2-2-3-2-2-3-3-4-4	
3600 - 10	3-6-8-5-4-7-10-10-5-5	
3610 - 20	6-12-11-10-10-9-13-8-4-4	
3620 - 30	5-5-5-5-3-4-4-5-5-5	
3630 - 40	5-4-3-4-5-11-6-4-3-4	
3640 - 50	3-6-6-6-5-7-10-7-6-5	
3650 - 60	5-5-5-3-4-5-4-4-6-4	
3660 - 70	4-4-2-5-5-5-5-6-4-5	
3670 - 80	4-6-5-4-6-6-5-7-8-7	
3680 - 90	5-7-6-8-5-6-6-6-5-6	
3690 - 3700	4-5-4-5-5-6-6-6-7-6	
3700 - 10	6-7-6-9-6-7-5-5-6-7	
3710 - 20	6-6-8-6-5-6-7-6-5-5	
3720 - 30	5-5-7-6-6-5-6-4-4-5	
3730 - 40	4-5-6-6-5-9-7-6-5-5	
3740 - 50	7-5-8-5-8-8-8-11-12-13	
3750 - 60	13-10-7-7-5-6-8-12-12-14	
3760 - 70	14-14-12-8-7-7-6-5-9-16	Top Heebner 3763
3770 - 80	17-18-9-5-5-4-4-5-6-7	
3780 - 90	6-5-6-9-13-6-5-6-6-10	
3790 - 3800	8-10-10-8-9-7-7-6-6-7	
3800 - 10	7-6-8-8-8-9-9-6-7-6	
3810 - 20	6-6-6-5-5-4-6-4-5-4	
3820 - 30	4-3-4-4-5-4-4-5-4-5	
3830 - 40	6-4-4-5-5-5-5-7-8-7	Trip 3835; OWV
3840 - 50	7-10-8-7-6-3-3-5-6-7	
3850 - 60	5-6-6-7-5-5-6-6-7-4	
3860 - 70	3-5-5-4-3-3-3-4-4-3	

-2- Time Log:F. Kirk Johnson #1 Salsar.

<u>Depth</u>	<u>Time</u>	<u>Remarks</u>
3870 - 3880	4-4-3-5-3-3-3-3-4-4	
3880 - 90	3-4-3-3-3-3-3-2-3	
3890 - 3900	3-4-4-4-4-3-4-4-3-4	
3900 - 10	3-3-4-3-4-4-2-3-4-3	
3910 - 20	3-3-3-4-2-3-3-3-7-7	Top Brown Lime 3918
3920 - 30	6-6-4-5-6-7-7-7-7-6	
3930 - 40	8-7-8-9-2-2-1-1-3-7	Top Lansing 3933
3940 - 50	11-10-15-10-10-9-11-14-13-8	Circ. 1 1/2 Hrs. 3950 D.S.T. 3933 - 50 New OWV @ 3950
3950 - 60	5-6-13-11-10-9-10-9-6-6	
3960 - 70	6-5-7-7-6-6-7-10-5-11	
3970 - 80	8-7-13-10-7-7-6-7-10-12	
3980 - 90	10-13-15-15-15-18-17-17-15-15	
3990 - 4000	17-18-15-18-21-13-12-21-25-16	
4000 - 10	14-25-22-13-11-10-10-9-16-10	
4010 - 20	13-13-14-14-17-24-31-27-3-9	Trip @ 4018; W7
4020 - 30	7-8-8-8-8-5-2-1-1-3	
4030 - 40	3-5-5-6-5-9-9-11-10-7	Circ. 1 Hr. 4035; D.S.T. 4025 - 35
4040 - 50	8-7-6-7-6-7-7-8-6-5	
4050 - 60	6-11-10-7-7-7-8-8-9-10	
4060 - 70	10-9-12-13-11-12-13-9-9-9	
4070 - 80	11-10-9-9-11-3-1-1-3-12	Circ. 1 1/2 Hrs. @ 4080
4080 - 90	16-17-15-16-14-10-19-14-17-10	
4090 - 4100	15-16-7-6-14-6-6-10-8-7	
4100 - 10	5-13-15-10-14-13-10-10-9-9	Circ. 1 1/2 Hrs. 4103; D.S.T. 4075-4103; New OWS @ 4103
4110 - 20	8-1-1-1-7-3-3-4-5-3	
4120 - 30	2-4-3-3-4-2-2-3-5-10	Circ. 1 1/2 Hrs. 4130
4130 - 40	4-4-3-5-10-12-13-13-11-18	
4140 - 50	16-17-14-11-13-11-13-16-17-13	
4150 - 60	11-12-6-2-2-4-5-11-8-7	
4160 - 70	8-13-17-16-14-15-17-14-14-14	
4170 - 80	15-14-16-15-18-11-15-16-10-13	
4180 - 90	13-11-11-6-13-8-11-9-11-11	
4190 - 4200	7-9-10-12-10-9-10-10-10-8	
4200 - 10	7-10-9-10-12-8-6-7-8-10	
4210 - 20	14-10-10-10-8-8-8-10-10-8	
4220 - 30	9-15-13-8-8-6-7-7-13-9	
4230 - 40	10-10-11-9-11-11-8-12-10-9	
4240 - 50	11-11-11-11-9-12-11-14-12-13	
4250 - 60	15-11-11-10-9-10-11-10-15-12	Base Kansas City 4255 Top Marmaton 4255 Trip 4258; W7

-3- Time Log: F. Kirk Johnson #1 Salser.

<u>Depth</u>	<u>Time</u>	<u>Remarks</u>
4260 - 4270	10-10-7-6-6-8-5-6-6-5	
4270 - 80	6-5-7-7-11-11-17-16-16-14	
4280 - 90	13-12-12-12-10-10-12-12-11-8	
4290 - 4300	8-7-8-6-9-9-8-8-10-8	
4300 - 10	7-7-11-7-8-8-12-8-10-14	
4310 - 20	10-10-8-10-11-14-13-13-17-16	
4320 - 30	11-9-3-12-14-13-8-7-4-6	
4330 - 40	10-6-5-6-7-7-10-14-13-13	
4340 - 50	14-14-13-15-12-11-10-11-13-10	
4350 - 60	11-11-9-9-10-9-7-11-11-14	
4360 - 70	10-9-9-9-9-7-9-10-10-10	
4370 - 80	15-16-14-13-12-12-11-13-11-9	
4380 - 90	10-10-11-12-16-15-15-15-13-6	Top Mississippi 4389
4390 - 4400	3-2-3-2-2-2-2-2-4-3	
4400 - 10	2-2-2-2-4-3-3-3-4-4	Circ. 30 Min. @ 4405
4410 - 20	4-4-4-4-3-4-4-5-4-4	Circ. 1 1/2 Hrs. 4420; D.S.T. 4388-4420 New W7 @ 4420
4420 - 30	5-5-3-4-3-4-5-4-5-4	
4430 - 40	4-6-6-4-5-5-5-8-10-13	Circ. 1 1/2 Hrs. 4440; D.S.T. 4420-40
4440 - 50	10-11-9-8-3-3-3-3-6-6	
4450 - 60	7-5-6-5-5-8-5-5-5-4	Circ. 1 1/2 Hrs. 4460; D.S.T. 4443-60
4460 - 70	3-2-1-2-4-3-2-6-3-4	
4470 - 80	3-6-6-11-12-14-20-13-11-11	Circ. 1 Hr. 4477; D.S.T. 4460 -77; New W7 4477
4480 - 90	10-11-14-14-10-10-10-8-10-9	
4490 - 4500	9-10-9-6-10-8-9-8-6-10	
4500 - 10	9-9-11-8-9-9-8-9-8-8	
4510 - 20	8-8-8-7-8-11-13-14-9-9	
4520 - 30	8-10-11-14-13-14-14-19-17-18	Top Viola 4527
4530 - 40	17-16-14-19-18-16-3-5-8-19	
4540 - 50	15-8-8-2-3-3-2-7-8-6	
4550 - 60	16-11-4-6-3-2-3-3-3-3	
4560 - 70	1-11-13-10-18-17-13-12-10-7	
4570 - 80	6-8-11-11-11-13-11-15-18-21	Trip 4580; W7R
4580 - 90	15-10-6-10-10-10-12-12-13-12	
4590 - 4600	13-10-11-11-11-9-10-15-12-12	
4600 - 10	9-10-13-15-12-8-13-17-18-19	Circ. 1 1/2 Hrs. 4610; D.S.T. 4530-4610; New W7R 4610
4610 - 20	11-18-14-19-16-17-17-18-12-16	

-4- Time Log: F. Kirk Johnson #1 Salsar.

<u>Depth</u>	<u>Time</u>	<u>Remarks</u>
4620 - 4630	14-19-21-18-17-17-18-16-17-16	
4630 - 40	13-16-18-15-18-15-15-19-17-14	
4640 - 50	13-16-12-14-14-15-15-13-15-17	
4650 - 60	18-14-13-13-13-14-14-25-14-15	Top Simpson 4651
4660 - 70	15-11-13-16-14-13-13-11-12-14	Lost Circ. @ 4670
4670 - 80	12-18-13-14-15-15-16-16-14-14	
4680 - 90	11-12-11-12-12-11-14-11-10-10	
4690 - 4700	7-7-9-8-8-10-14-14-8-19	
4700 - 10	9-13-13-13-19-19-20-9-6-8	Trip @ 4707; W7
4710 - 20	10-7-11-8-6-6-11-10-10-9	
4720 - 30	11-8-9-6-8-12-9-12-12-8	
4730 - 40	10-9-11-10-10-7-13-11-11-10	Top Arbuckle 4436
4740 - 50	11-11-12-12-13-11-11-14-12-10	
4750 - 60	13-7-9-8-10-13-14-13-10-7	
4760 - 65	6-8-10-8-9	Circ. 1 1/2 Hrs. 4765 Total Depth 4765

Time Log condensed by Johns and Magathan