15-007-00519 35-10W

WENDELL S. JOHNS

Computer Inventoried

FORMATION LOG

Ambassador #1 Page
CN1/2 NE SW, 36-33S-10W
Barber County, Kansas
Elevation: 1366 Kelly Bushing
1364 Derrick Floor
1361 Ground

8 5/8" Casing 343'
5 1/2" Casing 4670'
Comm: 7-4-56
Comp:

Note: All measurements are from the top of the kelly bushing.

Depth	Formation Description	Remarks
0 - 40	Sand	Drillers log 0-3000
40 - 125	Shale	
125 - 1160	Shale and shells	
1160 - 1493	Shale and limestone	
1493 - 1660	Limestone and shale	
1660 - 1805	Limestone	
1805 - 2185	Limestone and shale	
2185 - 2450	Shale and limestone	
2450 - 2805	Shale and limestone streaks	
2805 - 2925	Limestone and shale	
2925 - 3000	Limestone and shale streaks	
3000 - 34	Limestone white to tan, chalky to dense. Some pin-point porosity	Sample log 3000-T.D. No show
3034 - 69	Limestone light tan finely crystalline	
3069 - 75	Limestone, gray to dark gray, subcrystalline	
3075 - 90	Limestone as above with much shale	
3090 - 92	Limestone as above	
3092 - 3170	Shale gray; brown to dark gray with some siltstone at bottom	Severy
3170 - 81	Limestone, tan to light brown, subcrystalline	Topeka 3170-3212
3180 - 96	Shale, gray to dark gray	
3196 - 3212	Limestone tan to gray, dense to subcrystalline	
3212 - 19	Shale, gray	
3219 - 40	Limestone, tan to dark gray mottled, subcrystalline. Some dark brown to dense	

Depth	Formation Description	Remarks
3240 - 3245	Shale, dark gray to black	
3245 - 56	Limestone as above	
3256 - 62	Shale, gray	
3262 - 71	Limestone, gray to tan, sandy. Sand gray, medium, calcareous	
3271 - 74	Shale, gray, and sand as above	
3274 - 87	Limestone light tan dense	
3287 - 3320	Shale, gray, some brown. Streaks sand as above	Kanawaka 3287-3482
3320 - 49	Shale, as above, with thin streaks limestone, dark gray to brown subcrystalline, dirty	
3349 - 54	Shale gray to black	
3354 - 91	Shale, gray and brown, streaks sand, white to gray, medium, angular, calcareous	Elgin zone 3354-3435
3391 - 3435	Sand, gray, medium to coarse, angular, micaceous. Calcareous at top. Good porosity	Elgin sand No show
3435 - 82	Shale, dark gray to brown, some thin sand streaks. Some thin streaks limestone in bottom part	
3482 - 85	Limestone, dirty gray, shale fossiliferous	Oread 3482-3574
3485 - 93	Shale, gray; some limestone streaks as above	
3493 - 3501	Limestone as above	
3501 - 05	Shale gray to black	
3505 - 09	Limestone as above	
3509 - 17	Shale, black to dark gray	Heumader
3517 - 26	Limestone, tan, gray, brown, dense to subcrystalline	Plattsmouth
3526 - 30	Shale, black, soft fissile	Heebner
3530 - 36	Limestone, dark brown to gray brown, dense to sub-crystalline	Leavenworth
3536 - 40	Shale, gray and green-gray	Snyderville
3540 - 60	Limestone, tan to light tan dense. Some white, sub-crystalline to finely crystal-line	Toronto 3540-74
3560 - 66	Shale, gray	
3566 - 74	Limestone as above	

Depth	Formation Description	Remarks
3574 - 3579	Shale, gray	Douglas 3574-3940
3579 - 85	Limestone, white to tan, chalky to finely crystalline	Amazonia 3579-95
3585 - 90	Shale, gray	
3590 - 95	Limestone as above	
3595 - 3602	Shale, gray to red-maroon. Trace sand, fine, gray, shaly	
3602 - 06	Sand, medium, angular, gray, silty	
3606 - 52	Shale, as above, streaks sand fine to medium, gray, shaly	Possibly Ireland
3652 - 3726	Shale as above, slightly less sand	
3726 - 55	Shale as above, slight increase in sand as above	
3755 - 3854	Shale, gray to brown, little if any sand	
3854 - 3940	Shale, as above, some thin streaks limestone brown dense, possibly trace of fine gray sand	
3940 - 65	Shale, black soft fissile with a brown streak	Probably Lansing in age
3965 - 69	Limestone, dark gray to dark brown, subcrystalline	Lansing
3969 - 4070	Shale, gray, trace dark maroon, possibly a few thin limestone streaks	Bonner Springs (Kansas City)
4070 - 74	Shale, black, coaly	
4074 - 81	Shale, gray	
4081 - 90	Limestone, gray, dark gray, white, chalky to subcrystalline	Top Kansas City Limestone
4090 - 96	Shale, dark gray to black	
4096 - 4120	Limestone, gray, white and tan, chalky to finely crystalline. Some chert, white to gray, vitreous opaque, spicular. Some vugular porosity	No show
4120 - 30	Limestone as above, slightly oolicastic. Some porosity	No show
4130 - 45	Limestone white to tan, chalky to dense. Chert as above	
4145 - 60	Limestone as above, trace oolicastic and vugular porosity	No show

Depth	Formation Description	Remarks
4160 - 4190	Limestone tan dense to finely crystalline. Trace porosity 4172-84	No show
4190 - 94	Limestone brown, coarsely oolicastic. Porous	No show
4194 - 4202	Limestone, tan dense, some chert. Possible porosity 4198-4202	No show
4202 - 03	Shale, gray	
4203 - 21	Limestone, brown, dense, chert, gray to brown, vitreous	
4221 - 22	Shale gray	
4222 - 24	Limestone, as above	
4224 - 28	Shale, black	
4228 - 34	Limestone as above	
4234 - 40	Shale, gray	
4240 - 42	Limestone, tan dense	
4242 - 49	Limestone, tan, sucrose to finely crystalline. Some fine vugular and oolicastic porosity	No show
4249 - 60	Limestone, gray-tan, dense to subcrystalline. Trace chert gray opaque	
4260 - 62	Shale, gray	
4262 - 65	Limestone as above	
4265 - 67	Shale, black	
4267 - 91	Limestone, as above, with some gray shale streaks. Trace resinous brown limestone at bottom	Base Kansas City 4291
4291 - 99	Shale, gray, trace maroon, trace soft green-gray silty shale. Possibly streaks shaly limestone	Pleasanton 4291-4358
4299 - 4302	Shale, black	
4302 - 11	Limestone dark brown to dark gray, dense to finely crystalline, fossiliferous	
4311 - 28	Shale gray and black	
4328 - 38	Shale as above with thin streaks limestone	
4338 - 58	Shale as above, blacker at bottom. Possible trace sand, fine shaly, green-gray	

Depth	Formation Description	Remarks
4358 - 4367	Limestone, gray to tan, finely crystalline, fossiliferous	Marmaton 4358-4495
4367 - 74	Shale, gray	
4374 - 4408	Limestone, tan dense	
4408 - 18	Shale, dark gray to black	
4418 - 42	Limestone, tan to gray, to dark brown, dense to finely crystalline, trace of fossils	
4442 - 47	Shale, dark maroon to green-gray	
4447 - 59	Limestone as above	
4459 - 64	Shale, maroon, and green, to black	
4464 - 85	Limestone, as above	
4485 - 88	Shale, gray	
4488 - 95	Limestone, as above	
4495 - 98	Shale, light green-gray, silty. Trace green-gray sand, fine shaly	Cherokee 4495-4541
4498 - 4501	Limestone, green, shaly, some dark gray dense	
4501 - 17	Shale, as above	
4517 - 20	Shale, green, sandy. Trace green shaly sand	
4520 - 23	Limestone brown, tan and gray-green	
4523 - 33	Shale, gray	
4533 - 41	Sand, green-gray, fine shaly. Some hard green sand	No show
4541 - 70	Chert, blue, gray, white, tan, trace brown, vitreous opaque, figured. Some porosity	Mississippi 4541-4784 Trace gas bubbles. Slight odor & show free oil
4570 - 79	Limestone, tan, dense, glauconitic; chert white, vitreous to devitrified, calcareous	Probable top Reed Springs 4570; slight trace free oil
4579 - 4610	Limestone, white to light tan, sucrose, dolomitic, cherty; trace sucrose dolomite; much white, sub-vitreous to devitrified chert; some blue speckled chert	Very slight show free oil 4579-4610
4610 - 56	Limestone, light tan, chalky to finely crystalline, dolomitic, cherty; possible increase in tan dolomitic limestone	No show

Depth	Formation Description	Remarks
4656 - 4672	Limestone, tan, sucrose, dolomitic, cherty; spotted pinpoint porosity	No show
4672 - 93	Limestone, gray, subcrystalline, cherty	
4693 - 4708	Limestone, dark gray, dolomitic, sucrose; chert, dark gray to blue, opaque, vitreous	
4708 - 84	Samples very poor; chert and limestone, as above; much dark blue-gray speckled chert	Lost circulation 4707
4784 - 97	Shale, brownish green	Top Kinderhook 4784
4797 - 4807	Limestone, green, argillaceous; trace brown, dense limestone	
4807 - 39	Shale, gray-green	
4839 - 68	Shale, dark maroon to green-gray; trace green-gray, finely sucrose dolomite	
4868 - 4901	Shale, brown-black, fissile, many black and orange spores	Top Chattanooga 4868
4901 - 08	Limestone, light gray to light buff to white, very chalky to dense	Top Viola 4901
4908 - 12	Dolomite, white to light blue-gray, coarsely crystalline; some white, coarsely crystalline limestone with good vugular porosity	Trace odor and free oil
4912 - 36	Dolomite, as above; white chalky limestone; some chert, white, vitreous, translucent; dolomite, white, crystalline to brown, finely crystalline and sucrose	
4936 - 68	Dolomite, gray to brown, finely crystalline; some chert, gray, opaque to translucent, vitreous to subvitreous; much gray, dense to chalky limestone	
4968 - 88	Limestone, gray to brown, dense to subcrystalline, platy; chert, gray to brown, opaque, sub-vitreous to non-vitreous	
4988 - 96	Limestone, tan, coarsely crystalline	
4996 - 5000	Sand, white, medium, rounded, slightly shaly; shale, green, sandy	Top Simpson 4996; No show

Depth	Formation Description	Remarks
5000 - 5011	Sand, white, poorly sorted, very calcareous, angular; some coarsely crystalline, gray to white sandy limestone	No show
5011 - 46	Sand, white, clean, angular to rounded, fairly well sorted; some thin interfingered green shale streaks	No show
5046 - 47	Shale, green to gray-green	
5047 - 56	Sand, gray, coarse to medium, poorly sorted	No show
5056 - 58	Shale, dark gray-green	
5058 - 70	Sand, as above; trace brown, sucrose sandy dolomite	No show
5070 - 5110	Shale, as above; some thin streaks dirty gray sand, dolomitic and pyritic	
5110 - 18	Sand, green-gray, very poorly sorted, very shaly, dolomitic	
5118 - 32	Shale, dark green	
5132 - 65	Sand, gray to white, fairly well sorted, glassy, some quartzitic; toward bottom-sand, fine, well sorted, quartzitic; streak dark green shale 5161-63	No show
5165 - 75	Dolomite, dark brown, sucrose to finely crystalline	Top Arbuckle 5165; No show in Arbuckle
5175 - 76	Shale, dark green	
5176 - 82	Dolomite, as above	
5182 - 88	Dolomite, dark brown, finely crystalline to sucrose, very sandy; trace porosity	
5188 - 90	Shale, as above	
5190 - 5200	Dolomite, light tan, very finely sucrose, very sandy	
5200 - 02	Shale, as above	
5202 - 09	Dolomite, tan to light brown, finely crystalline to crystalline; some sandy dolomite; trace porosity	
5209 - 10	Shale, as above	
5210 - 15	Dolomite, as above	
5215	Total Depth	

Ran electric log 7-26-56.

Drill Stem Test Data:

The following drill stem tests were taken on the #1 Page.

(1) D.S.T. 4543-68 (4540-65 drilling measurements) - Mississippi - 7-17-56 - Johnston - Double packer.
Open 1 hour - gas to surface in 5 minutes.
Gauged 310,000 c.f. in 5 minutes.
310,000 c.f. in 10 minutes.
362,000 c.f. in 15 minutes.
380,000 c.f. in 20 minutes.
380,000 c.f. in 25 minutes.
350,000 c.f. in 30 minutes.
330,000 c.f. in 45 minutes.
295,000 c.f. in 60 minutes.
Recovered 125' gas cut mud. No oil or water.
Initial Bottom Hole Pressure: 2100 p.s.i. Shut in 30 minutes- this pressure is incorrect - not sufficient air chamber.
Initial Flow Pressure: 150 p.s.i.
Final Flow Pressure: 160 p.s.i.
Final Bottom Hole Pressure: 1570 p.s.i. (Shut in 30 minutes).
Bottom Hole Temperature: 122 degrees.

(2) D.S.T. 4565-4603 (4562-4600 drilling measurements) - Mississippi - 7-18-56 - Johnston - Double packer-Jars.
Open 1 hour - gas to surface in 4 minutes.
Gauged 90,000 c.f. in 5 minutes.
80,000 c.f. in 30 minutes.
76,000 c.f. in 60 minutes.
Recovered 120' slightly oil cut and heavily gas cut mud.
60' heavily oil and gas cut mud.
30' muddy oil.
Initial Bottom Hole Pressure: 1855 p.s.i. (Shut in 30 minutes).
Initial Flow Pressure: 150 p.s.i.
Final Flow Pressure: 160 p.s.i.
Final Bottom Hole Presssure: 1640 p.s.i. (Shut in 30 minutes).

Bottom Hole Temperature: 122 degrees.

(3) D.S.T. 4906-18 (4903-15 drilling measurements) Viola - 7-22-56.
Johnston - Double packer - Jars.
Open 1 hour. Fair blow throughout test.
Recovered 125' gas.
54' slightly gas cut watery mud - slight rainbow but no oil spots
60' very salty water.

Drill Stem Test Data Contd.:

(3) D.S.T. Contd.
Initial Bottom Hole Pressure: 1965 p.s.i. (Shut in 30 minutes).
Initial Flow Pressure: 50 p.s.i.
Final Flow Pressure: 80 p.s.i.
Final Bottom Hole Pressure: 1900 p.s.i. (Shut in 30 minutes).
Bottom Hole Temperature: 122 degrees.

Samples examined and log compiled by

WENDELL S. JOHNS