

OPERATOR

Company: Thomas Garner, Inc.
Address: 305 E. 7th Avenue
St. John, KS 67576

Contact Geologist:
Contact Phone Nbr: 620-793-0766
Well Name: Jennifer #1
Location: Sec. 18 - T24S - R13W
API: 15-185-24099-0000
Pool:
State: Kansas

Field: Rattlesnake SE
Country: USA



Scale 1:240 Imperial

Well Name: Jennifer #1
Surface Location: Sec. 18 - T24S - R13W
Bottom Location:
API: 15-185-24099-0000
License Number: 33406
Spud Date: 11/26/2021
Region: Stafford County
Drilling Completed: 12/3/2021
Surface Coordinates: 479' FNL & 3030' FEL
Bottom Hole Coordinates:
Ground Elevation: 1928.00ft
K.B. Elevation: 1941.00ft
Logged Interval: 3400.00ft
Total Depth: 4375.00ft
Formation: Arbuckle
Drilling Fluid Type: Chemical/Fresh Water Gel

Time: 2:00 PM
Time: 12:00 AM
To: 4375.00ft

SURFACE CO-ORDINATES

Well Type: Vertical
Longitude: -98.795058
Latitude: 37.969505
N/S Co-ord: 479' FNL
E/W Co-ord: 3030' FEL

LOGGED BY

Keith Reavis
Consulting Geologist

Company: Keith Reavis, Inc.
Address: 3420 22nd Street
Great Bend, KS 67530

Phone Nbr: 620-617-4091
Logged By: KLG #136

Name: Keith Reavis

CONTRACTOR

Contractor: Duke Drilling Company
Rig #: 7

Rig Type: mud rotary
Spud Date: 11/26/2021
TD Date: 12/3/2021

Time: 2:00 PM
Time: 12:00 AM

ELEVATIONS

K.B. Elevation: 1941.00ft
K.B. to Ground: 13.00ft

Ground Elevation: 1928.00ft

NOTES

Drill stem testing and electrical log analysis indicated that the Jennifer #1 would be non-commercial. The operator elected to drill deeper into the Arbuckle and set 5 1/2" casing and completed this well as a salt water disposal.

A Bloodhound gas detection system operated by Bluestem Labs was deployed during the drilling of this well. ROP and gas data from the Bloodhound was imported into this log.

The gamma ray and caliper curves were imported from Midwest Wireline log suite. The electrical log tops were consistently 3 to 5 ft. low to ROP sample tops throughout the well. The drill time was not shifted to provide an exact match with the gamma curve but instead left as recorded in the field.

Samples were collected and will be available for review at the KGS Sample Library located in Wichita, KS.

Respectfully submitted,
Keith Reavis

daily drilling report

DATE	7:00 AM DEPTH	REMARKS
11/29/2021		Geologist Keith Reavis on location @ 2230 hrs, 3420 ft, drilling ahead
11/30/2021	3668	drilling Heebner, Toronto, Douglas, Lansing, Base KC, wiper trip (tight) resume drilling, Marmaton, Conglomerate, Mississippian Chert, show and gas kick warrant test
12/01/2021	3990	TOH w/bit and in w/tools, conduct DST #1, successful test, TIH w/bit, resume drilling, Kinderhook, Viola, gas kick and show in Viola warrants test, TOH w/bit, in w/tools, conducting DST #2
12/02/2021	4086	complete DST #2, successful test, TIH w/bit, drilling Simpson, show and gas kick in Simpson Sand warrants test, conduct DST #3, successful test TIH w/bit, rathole ahead, Arbuckle
12/03/2022	4375	TD in Arbuckle @ 0420 hrs, ctch, TOH w/bit, conduct open hole logging. complete logs @ 1200 hrs, geologist off location 1300 hrs

well comparison sheet

DRILLING WELL					COMPARISON WELL			
Jennifer #1					Aylward - Engle #1			
479' FNL & 3030' FEL					NW NW SE			
Sec 18-T24S-R13W					Sec 18-T24S-R13W			
1941 KB					1934 KB		Structural Relationship	
Formation	Sample	Sub-Sea	Log	Sub-Sea	Log	Sub-Sea	Sample	Log
Heebner	3444	-1503	3448	-1507	3447	-1513	10	6
Toronto	3465	-1524	3470	-1529	3468	-1534	10	5
Douglas	3483	-1542	3486	-1545	3486	-1552	10	7
Brown Lime	3579	-1638	3584	-1643	3584	-1650	12	7
Lansing	3610	-1669	3614	-1673	3614	-1680	11	7
Lansing H	3736	-1795	3741	-1800	3741	-1807	12	7
BKC	3871	-1930	3870	-1929	3874	-1940	10	11
Mississippian	3948	-2007	3954	-2013	3974	-2040	33	27
Kinderhook Sh.	4001	-2060	4007	-2066	4012	-2078	18	12
Viola	4052	-2111	4056	-2115	4074	-2140	29	25
Simpson	4120	-2179	4124	-2183	4130	-2196	17	13
Simpson Sand	4137	-2196	4140	-2199	4146	-2212	16	13
Arbuckle	4172	-2231	4178	-2237	4190	-2256	25	19
Total Depth	4375	-2434	4380	-2430	4336	-2303	133	137

Total Depth 4375 -2434 4380 -2439 4236 -2302 -132 -137

Drill Stem Test #1



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Thomas Garner Inc.

305 E 7th St John KS. 67576

ATTN: Keith Reavis

Jennifer 1

Job Ticket: 67212

DST#: 1

Test Start: 2021.12.01 @ 02:22:07

GENERAL INFORMATION:

Formation: **Miss**

Deviated: No Whipstock ft (KB)

Time Tool Opened: 04:25:07

Time Test Ended: 10:02:22

Interval: **3922.00 ft (KB) To 3990.00 ft (KB) (TVD)**

Total Depth: 3990.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches -hole Condition: Fair

Test Type: Conventional Bottom Hole (hits)

Tester: Matt Smith

Unit No: 68

Reference Elevations: 1941.00 ft (KB)

1928.00 ft (CF)

KB to GR/CF: 13.00 ft

Serial #: 8788

Inside

Press@RunDepth: 48.88 psig @ 3923.00 ft (KB)

Start Date: 2021.12.01 End Date: 2021.12.01

Start Time: 02:22:12 End Time: 10:02:21

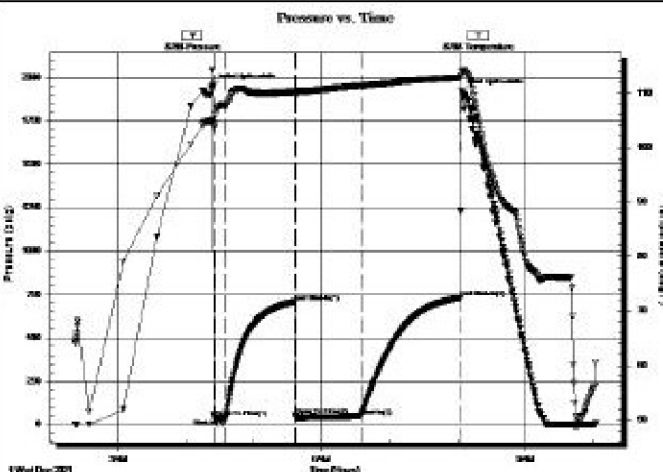
Capacity: 8000.00 psig

Last Calib.: 2021.12.01

Time On Btm: 2021.12.01 @ 04:23:37

Time Off Btm: 2021.12.01 @ 08:03:22

TEST COMMENT: IF: Strong Blow, B.O.B. in one minute built to 94.01"
 IS: Weak blow built to 14" died back to surface
 FF: Strong blow B.O.B. immediate Built to 180" decreased w. choke open
 FS: no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1947.32	104.49	Initial Hydro-static
2	41.65	104.05	Open To Flow(1)
11	31.81	107.86	Shut-In(1)
73	707.79	110.28	End Shut-In(1)
73	50.54	109.77	Open To Flow(2)
131	48.88	111.31	Shut-In(2)
219	730.41	112.87	End Shut-In(2)
220	1916.45	113.77	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
74.00	GOSCM 10%G 90%M	1.04
0.00	960" GIP	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (M cfd)
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Drill Stem Test #2



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Thomas Garner Inc.

305 E 7th St John KS. 67576

18-24s-13w Stafford Co Ks

Jennifer 1

Job Ticket: 67213

DST#: 2



ATTN: Keith Reavis

Test Start: 2021.12.01 @ 20:35:51

GENERAL INFORMATION:Formation: **Viola**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:17:21

Time Test Ended: 04:00:36

Test Type: Conventional Bottom Hole (Reset)

Tester: Matt Smith

Unit No: 68

Interval: 4054.00 ft (KB) To 4086.00 ft (KB) (TVD)

Total Depth: 4086.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 1941.00 ft (KB)

1928.00 ft (CF)

KB to GR/CF: 13.00 ft

Serial #: 8788

Inside

Press@RunDepth: 80.74 psig @ 4055.00 ft (KB)

Start Date: 2021.12.01

End Date:

2021.12.02

Start Time: 20:35:56

End Time:

04:00:35

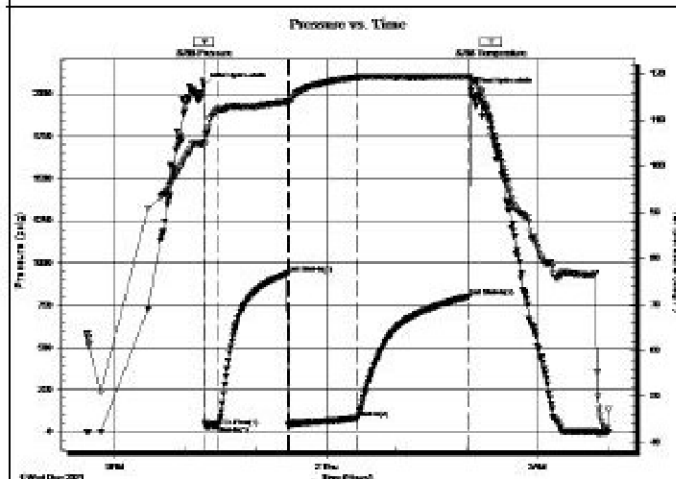
Capacity: 8000.00 psig

Last Calib.: 2021.12.02

Time On Btm: 2021.12.01 @ 22:15:36

Time Off Btm: 2021.12.02 @ 02:03:36

TEST COMMENT: IF: Strong Blow . B.O.B. in 9 mins. Built to 12.52', (10)
 IS: No Blow . (60)
 FF: Strong Blow . B.O.B. in 18 mins. Built to 21.80', (60)
 FS: No Blow . (90)

**PRESSURE SUMMARY**

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2052.92	105.11	Initial Hydro-static
2	30.93	106.74	Open To Flow (1)
12	38.32	112.36	Shut-In (1)
72	938.44	113.91	End Shut-In (1)
72	42.63	113.62	Open To Flow (2)
131	80.74	119.33	Shut-In (2)
227	804.92	119.44	End Shut-In (2)
228	2020.58	118.28	Final Hydro-static

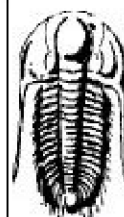
Recovery

Length (ft)	Description	Volume (bbl)
64.00	GMCW 5%g 40%r 55%w	0.90
64.00	GOSMCW 5%g 45%r 50%w	0.90
4.00	WCM 1%w 99%r	0.06
0.00	288' GIP 100%g	0.00

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (M d/d)
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Drill Stem Test #3**TRILOBITE
TESTING, INC.****DRILL STEM TEST REPORT**

Thomas Garner Inc.

305 E 7th St John KS. 67576

ATTN: Keith Reavis

18-24s-13w Stafford Co Ks

Jennifer 1

Job Ticket: 67214

DST#: 3

Test Start: 2021.12.02 @ 13:41:48

GENERAL INFORMATION:Formation: **Simpson**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:26:18

Time Test Ended: 20:12:33

Test Type: Conventional Bottom Hole (Reset)

Tester: Matt Smith

Unit No: 68

Interval: 4118.00 ft (KB) To 4160.00 ft (KB) (TVD)

Total Depth: 4160.00 ft (KB) (TVD)

Reference Elevations: 1941.00 ft (KB)

1928.00 ft (CF)

Hole Diameter: 7.85 inches Hole Condition: Fair

KB to GR/CP: 13.00 ft

Serial #: 8788

Inside

Press@RunDepth: 39.21 psig @ 4119.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2021.12.02

End Date:

2021.12.02

Last Calib.:

2021.12.02

Start Time: 13:41:53

End Time:

20:12:32

Time On Btm:

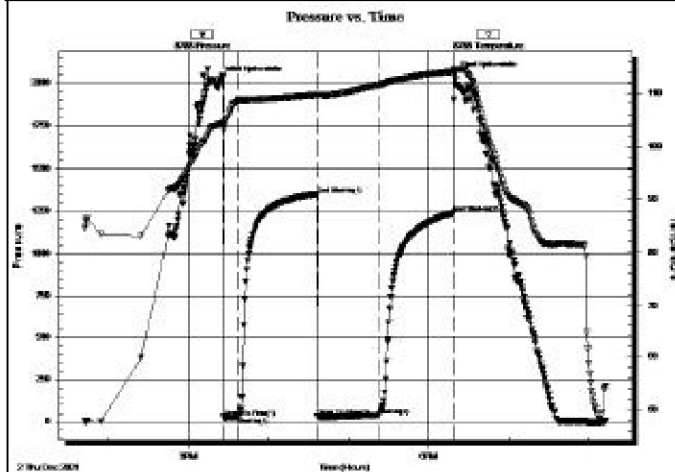
2021.12.02 @ 15:22:18

Time Off Btm:

2021.12.02 @ 18:19:18

TEST COMMENT: IF: Weak Blw built to 1.25" in bucket @ 10 min.
 IS: No Blow 60 minutes
 FF: Fair Blow built to 4.25" in bucket (45)
 FSI: No Blow (60)

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2022.01	104.13	Initial Hydro-static
4	24.80	103.87	Open To Flow (1)
15	27.30	108.37	Shut-In (1)
74	1348.88	109.62	End Shut-In (1)
75	30.46	109.39	Open To Flow (2)
120	39.21	111.49	Shut-In (2)
176	1241.41	114.14	End Shut-In (2)
177	2048.29	114.49	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
47.00	GV SOWOM 2% G 2% O 5% W 9 1% M	0.66
0.00	50' GIP 100% G	0.00

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mc/d)
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ROCK TYPES

	Cht		Lmst fw<7		shale, gry		Shcol
	Cht vari		Lmst fw>7		Carbon Sh		Ss
	Dolprim		shale, grn		shale, red		

ACCESSORIES

MINERAL

▲ Chert, dark
 P Pyrite
 • Sandy
 • Silty
 △ Chert White
 Mc Mica

FOSSIL

∩ Bioclastic or Fragments
 F Fossils < 20%
 φ Oolite
 ∅ Pellets
 ⚬ Oomoldic

STRINGER

••• Sandstone
 ••• Siltstone

TEXTURE

C Chalky
 L Lithogr
 MX Microxln

OTHER SYMBOLS

Oil Show

● Good Show
 ● Fair Show
 ● Poor Show
 ○ Spotted or Trace
 ○ Questionable Stn
 D Dead Oil Stn
 ■ Fluorescence
 * Gas

DST

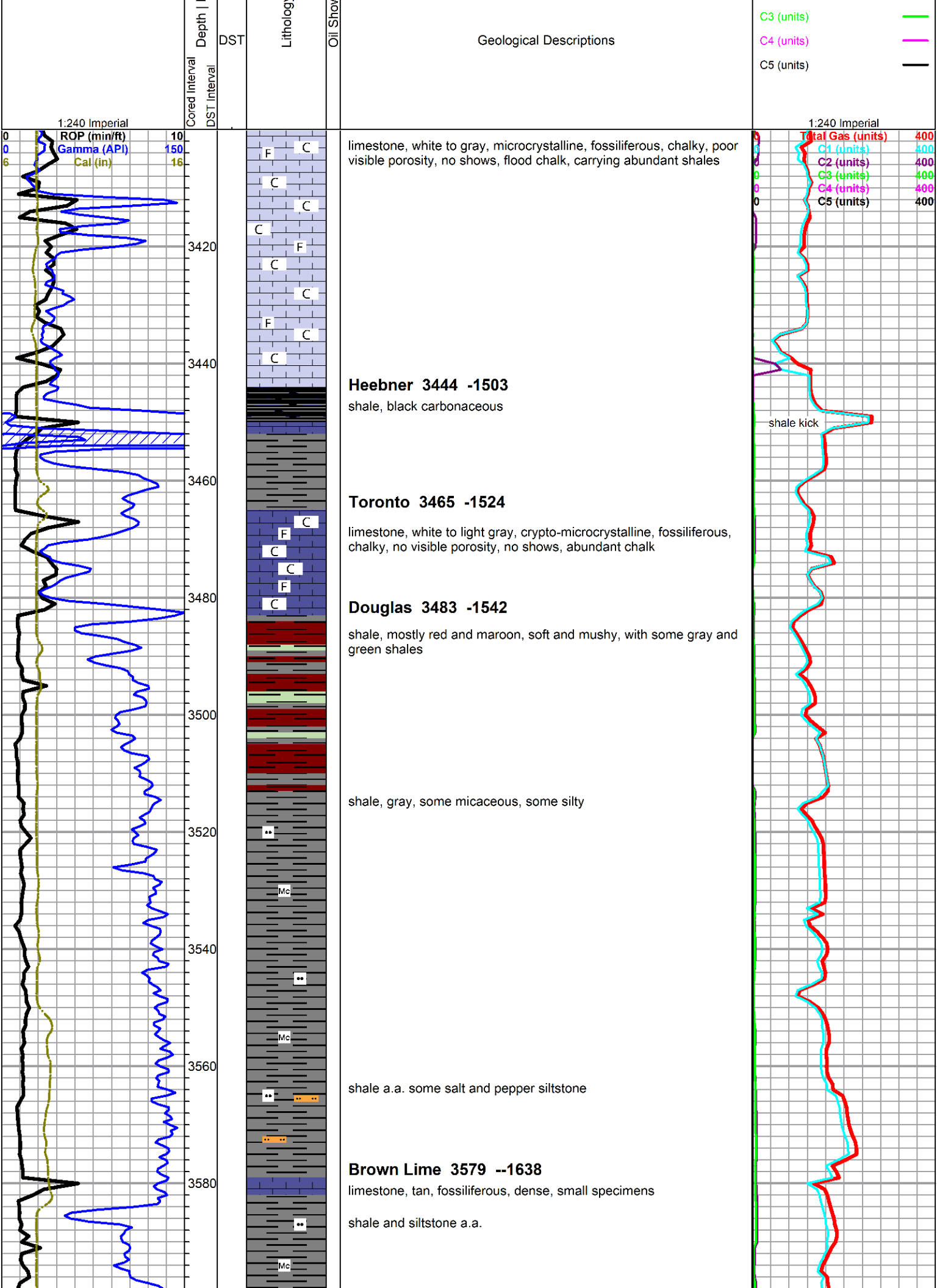
■ DST Int
 ■ DST alt
 ■ Core
 ■ tail pipe

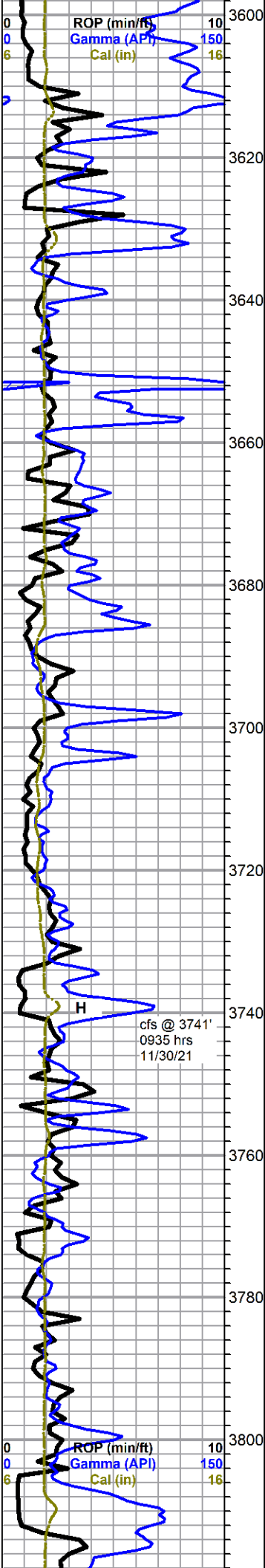
Curve Track #1

ROP (min/ft)		Intervals
Gamma (API)		
Cal (in)		

TG, C1 - C5

Total Gas (units)	
C1 (units)	
C2 (units)	





Lansing 3610 -1669

poor samples, having pump problems, abundant chalk mixed with shales from above

still poor samples, from pump problems, however, some small specimens of limestone, mottled white and gray, fossiliferous to pelletal, poor visible porosity, no shows, abundant chalk

limestone, white to tan, some gray, micro-cryptocrystalline, fossiliferous, chalky, poor visible porosity, no shows, abundant chalk

limestone, gray to light gray, some mottled gray, fossiliferous, some large clasts, some grainy (bioclastic/oolitic mix), poor visible porosity, no shows, abundant chalk

limestone, white to gray and cream, grainy fossiliferous to dense oolitic, poor visible porosity, abundant chalk in samples, scattered white and gray fossiliferous cherts, no shows

limestone, gray to cream, microcrystalline, fossiliferous, mostly dense, mixed gray cherts, some chalk, no shows

limestone, gray to cream, microcrystalline, fossiliferous, mostly dense, abundant chalk, no shows

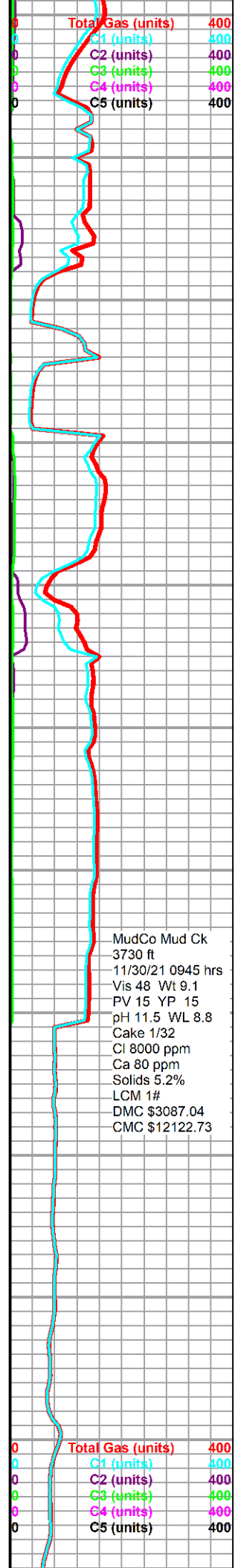
limestone, gray to cream, microcrystalline, fossiliferous, some scattered poorly developed oolitic, very abundant chalk in samples, no shows

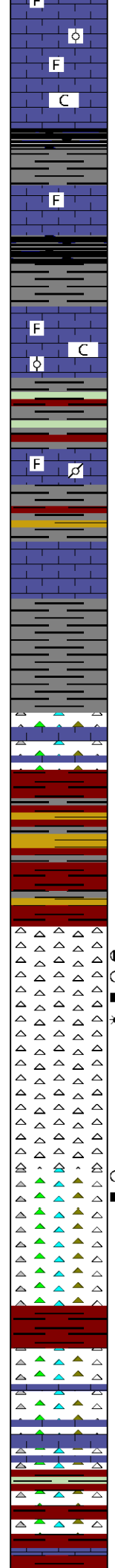
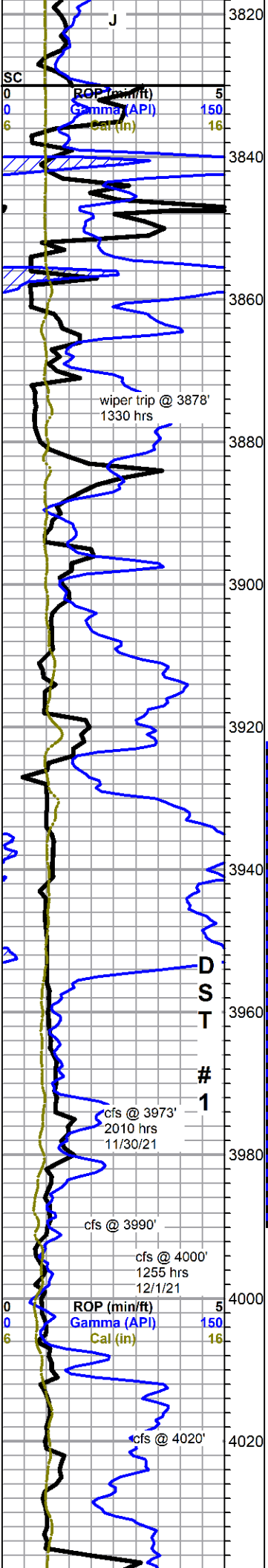
limestone, mixed white, gray and some brown, crypto-microcrystalline, fossiliferous, some scattered oolitic, mostly dense, abundant chalk in samples, no shows

gray shale

limestone, cream, oomoldic, good porosity, barren

limestone, light gray to cream, cryptocrystalline, fossiliferous, trace





oolitic, dense, some chalk, no shows

shale, black carbonaceous

limestone, cream to gray, cryptocrystalline, fossiliferous, dense, no shows

shale, black carbonaceous

limestone a.a. with, cream to gray, cryptocrystalline fossiliferous to oolitic, poor visible porosity, no show, some chalk

Base Kansas City 3871 -1930

multi-color shales

limestone, white and gray, some mottled, chalky fossiliferous to pelletal, no shows

limestone, light gray to gray, some pale green, some red streaks, fossiliferous, chalky to dense, poor visible porosity, no shows

limestone a.a. with chert, cream to tan, gray and pale green, fossiliferous, no shows

3970 sample, flood red, gray and lavender shale conglomerate, red wash

Mississippian Chert 3948 -2007

chert, boney white, mostly fresh, sharp, trace stain with some etching, scattered soft rotten chert with fair show oil on break, scattered slightly tripolitic with light stain, bleeding some gas and oil, oil is light and more discernable under black light, no odor, excellent fluorecence, poor cut

Possible Kinderhook Chert 3980'

chert, boney white to cream and tan, trace gray/green, some fossiliferous, some scattered good vuggy chert, some slightly tripolitic, increase in stain and overall fluorecence from chert above, very slight show free oil, no odor, some chalk in samples

4000 cfs 30 min some light gray translucent, sharp, fresh, 60 min, increase in translucent chert, influx yellow chert, sharp, fresh, no show

Kinderhook Shale 4001

4020 cfs 30 min - shale, pink/maroon, with green mottles, soft mushy, red wash - 60 min, limestone, pale greenish yellow, cryptocrystalline, fossiliferous in part, soft to dense, chert, battleship gray, pale yellow to tan, light gray translucent, no show

shale, primarily maroon to lavender, a lot very mushy, with green, some with black mottles, green argillaceous limestone, some brown limestone, mixed chert, few pieces with black stain, heavy pink wash

maroon shales, with some olive and green, mixed cherts, some

