

Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION  
OIL & GAS CONSERVATION DIVISION

Form ACO-1

January 2018

Form must be Typed

Form must be Signed

All blanks must be Filled

**WELL COMPLETION FORM**  
**WELL HISTORY - DESCRIPTION OF WELL & LEASE**

OPERATOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Address 1: \_\_\_\_\_

Address 2: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ + \_\_\_\_\_

Contact Person: \_\_\_\_\_

Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

CONTRACTOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Wellsite Geologist: \_\_\_\_\_

Purchaser: \_\_\_\_\_

Designate Type of Completion:

New Well  Re-Entry  Workover

Oil  WSW  SWD

Gas  DH  EOR

OG  GSW

CM (Coal Bed Methane)

Cathodic  Other (Core, Expl., etc.): \_\_\_\_\_

If Workover/Re-entry: Old Well Info as follows:

Operator: \_\_\_\_\_

Well Name: \_\_\_\_\_

Original Comp. Date: \_\_\_\_\_ Original Total Depth: \_\_\_\_\_

Deepening  Re-perf.  Conv. to EOR  Conv. to SWD

Plug Back  Liner  Conv. to GSW  Conv. to Producer

Commingled Permit #: \_\_\_\_\_

Dual Completion Permit #: \_\_\_\_\_

SWD Permit #: \_\_\_\_\_

EOR Permit #: \_\_\_\_\_

GSW Permit #: \_\_\_\_\_

Spud Date or Date Reached TD Completion Date or Recompletion Date

API No.: \_\_\_\_\_

Spot Description: \_\_\_\_\_

\_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

\_\_\_\_\_ Feet from  North /  South Line of Section

\_\_\_\_\_ Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

NE  NW  SE  SW

GPS Location: Lat: \_\_\_\_\_, Long: \_\_\_\_\_  
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum:  NAD27  NAD83  WGS84

County: \_\_\_\_\_

Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Field Name: \_\_\_\_\_

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total Vertical Depth: \_\_\_\_\_ Plug Back Total Depth: \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at: \_\_\_\_\_ Feet

Multiple Stage Cementing Collar Used?  Yes  No

If yes, show depth set: \_\_\_\_\_ Feet

If Alternate II completion, cement circulated from: \_\_\_\_\_

feet depth to: \_\_\_\_\_ w/ \_\_\_\_\_ sx cmt.

**Drilling Fluid Management Plan**

*(Data must be collected from the Reserve Pit)*

Chloride content: \_\_\_\_\_ ppm Fluid volume: \_\_\_\_\_ bbls

Dewatering method used: \_\_\_\_\_

Location of fluid disposal if hauled offsite:

Operator Name: \_\_\_\_\_

Lease Name: \_\_\_\_\_ License #: \_\_\_\_\_

Quarter \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

County: \_\_\_\_\_ Permit #: \_\_\_\_\_

**AFFIDAVIT**

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

**KCC Office Use ONLY**

Confidentiality Requested

Date: \_\_\_\_\_

Confidential Release Date: \_\_\_\_\_

Wireline Log Received  Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

Operator Name: \_\_\_\_\_ Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West County: \_\_\_\_\_

**INSTRUCTIONS:** Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i>  Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No  Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No Geologist Report / Mud Logs <input type="checkbox"/> Yes <input type="checkbox"/> No  List All E. Logs Run:	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name Top Datum
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CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

1. Did you perform a hydraulic fracturing treatment on this well?  Yes  No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons?  Yes  No *(If No, skip question 3)*
3. Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry?  Yes  No *(If No, fill out Page Three of the ACO-1)*

Date of first Production/Injection or Resumed Production/Injection:	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____			
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: Top Bottom
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Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

TUBING RECORD:	Size:	Set At:	Packer At:	
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## DRILL STEM TEST REPORT

Prepared For: **Thomas Garner Inc.**

305 E 7th  
St John, KS. 67576

ATTN: Keith Reavis

### **Jennifer #1**

#### **18-24s-13w Stafford,KS**

Start Date: 2021.12.01 @ 02:22:07

End Date: 2021.12.01 @ 10:02:22

Job Ticket #: 67212                      DST #: 1

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2021.12.08 @ 16:22:18





**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Thomas Garner Inc.

**18-24s-13w Stafford,KS**

305 E 7th  
St John, KS. 67576

**Jennifer #1**

Job Ticket: 67212

**DST#: 1**

ATTN: Keith Reavis

Test Start: 2021.12.01 @ 02:22:07

## GENERAL INFORMATION:

Formation: **Mississippi**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:25:07

Time Test Ended: 10:02:22

Test Type: Conventional Bottom Hole (Initial)

Tester: Matt Smith

Unit No: 68

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

Reference Elevations: 1941.00 ft (KB)

Total Depth: 3990.00 ft (KB) (TVD)

1928.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 13.00 ft

**Serial #: 8788**

**Inside**

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

Capacity: 8000.00 psig

Start Date: 2021.12.01 End Date: 2021.12.01

Last Calib.: 2021.12.01

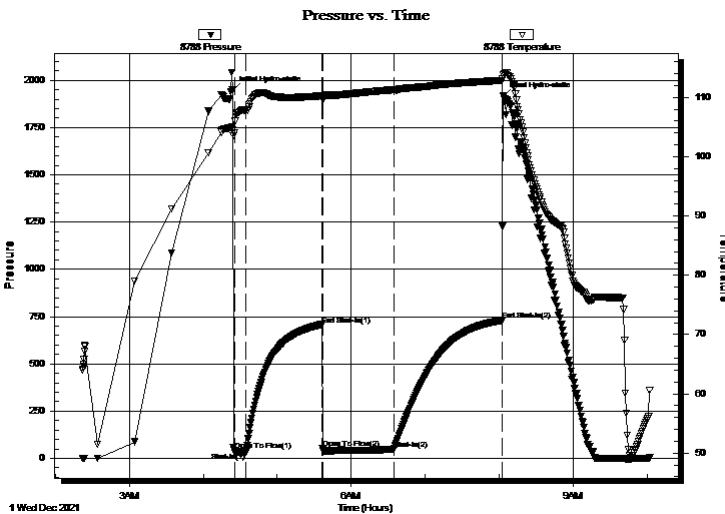
Start Time: 02:22:12 End Time: 10:02:21

Time On Btm: 2021.12.01 @ 04:23:37

Time Off Btm: 2021.12.01 @ 08:03:22

**TEST COMMENT:** IF: BOB in one minute built to 94.01"  
IS: Weak blow built to 1/4" died back to surface  
FF: BOB immediately 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 (Mcf/d)





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Thomas Garner Inc.

**18-24s-13w Stafford,KS**

305 E 7th  
St John, KS. 67576

**Jennifer #1**

Job Ticket: 67212

**DST#: 1**

ATTN: Keith Reavis

Test Start: 2021.12.01 @ 02:22:07

## Tool Information

Drill Pipe:	Length: 3898.00 ft	Diameter: 3.80 inches	Volume: 54.68 bbl	Tool Weight:	2100.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	22000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.80 inches	Volume: 0.00 bbl	Weight to Pull Loose:	56000.00 lb
			<u>Total Volume: 54.68 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	4.00 ft			String Weight: Initial	52000.00 lb
Depth to Top Packer:	3922.00 ft			Final	52000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	68.00 ft				
Tool Length:	96.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments: Shale Packer in string.

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3895.00	
Shut In Tool	5.00			3900.00	
Hydraulic tool	5.00			3905.00	
Jars	5.00			3910.00	
Safety Joint	3.00			3913.00	
Packer	4.00			3917.00	28.00 Bottom Of Top Packer
Packer	5.00			3922.00	
Stubb	1.00			3923.00	
Recorder	0.00	8788	Inside	3923.00	
Recorder	0.00	8737	Outside	3923.00	
Perforations	3.00			3926.00	
Change Over Sub	1.00			3927.00	
Blank Spacing	32.00			3959.00	
Change Over Sub	1.00			3960.00	
Perforations	27.00			3987.00	
Bullnose	3.00			3990.00	68.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>96.00</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Thomas Garner Inc.

**18-24s-13w Stafford,KS**

305 E 7th  
St John, KS. 67576

**Jennifer #1**

Job Ticket: 67212

**DST#: 1**

ATTN: Keith Reavis

Test Start: 2021.12.01 @ 02:22:07

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

8000 ppm

Viscosity: 48.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.78 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 8000.00 ppm

Filter Cake: 0.20 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
74.00	GOSCM 10%G 90%M	1.038
0.00	960' GIP	0.000

Total Length: 74.00 ft      Total Volume: 1.038 bbl

Num Fluid Samples: 0

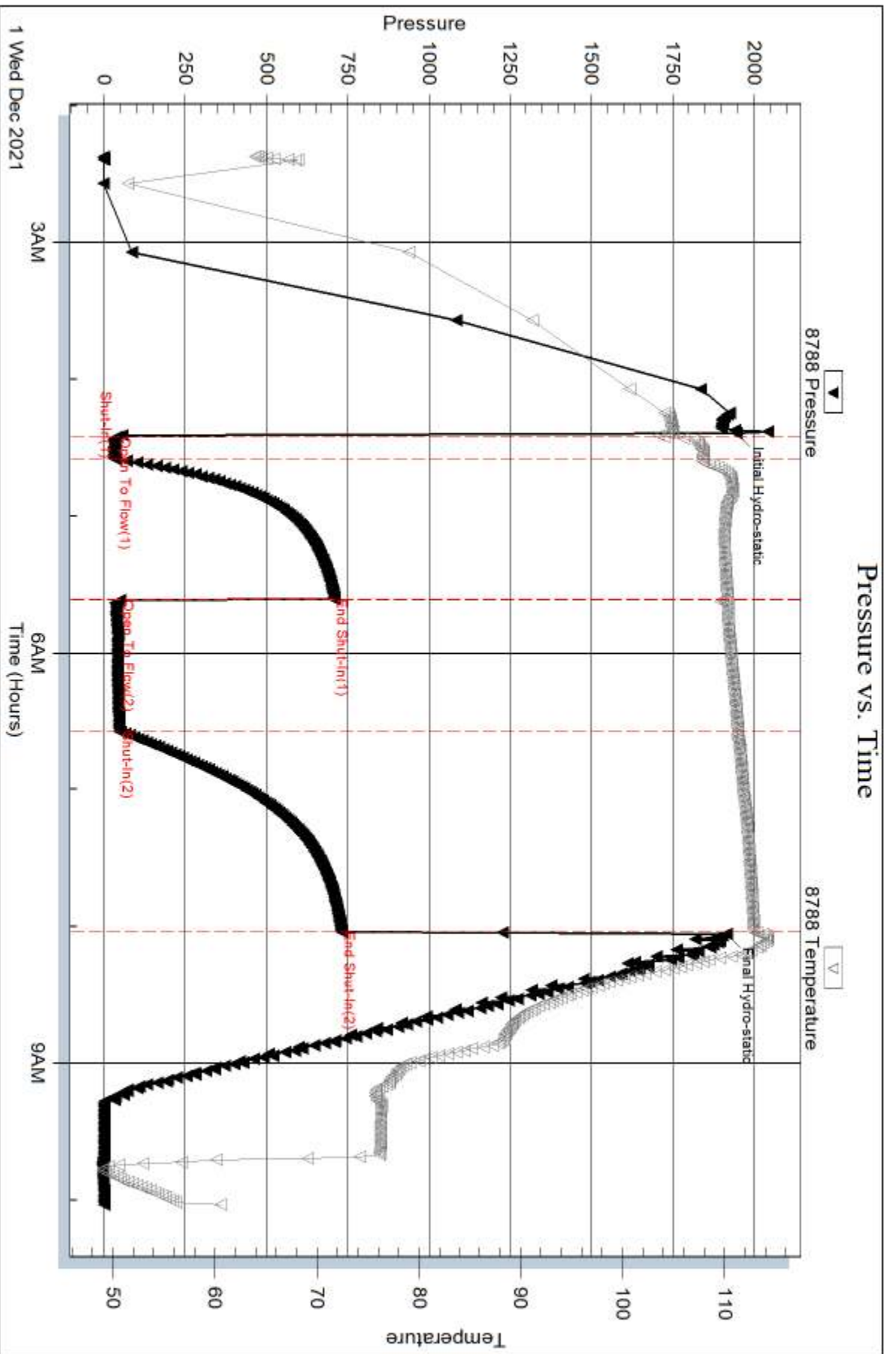
Num Gas Bombs: 0

Serial #: none

Laboratory Name:

Laboratory Location:

Recovery Comments: 960 FT of Gas In Pipe.

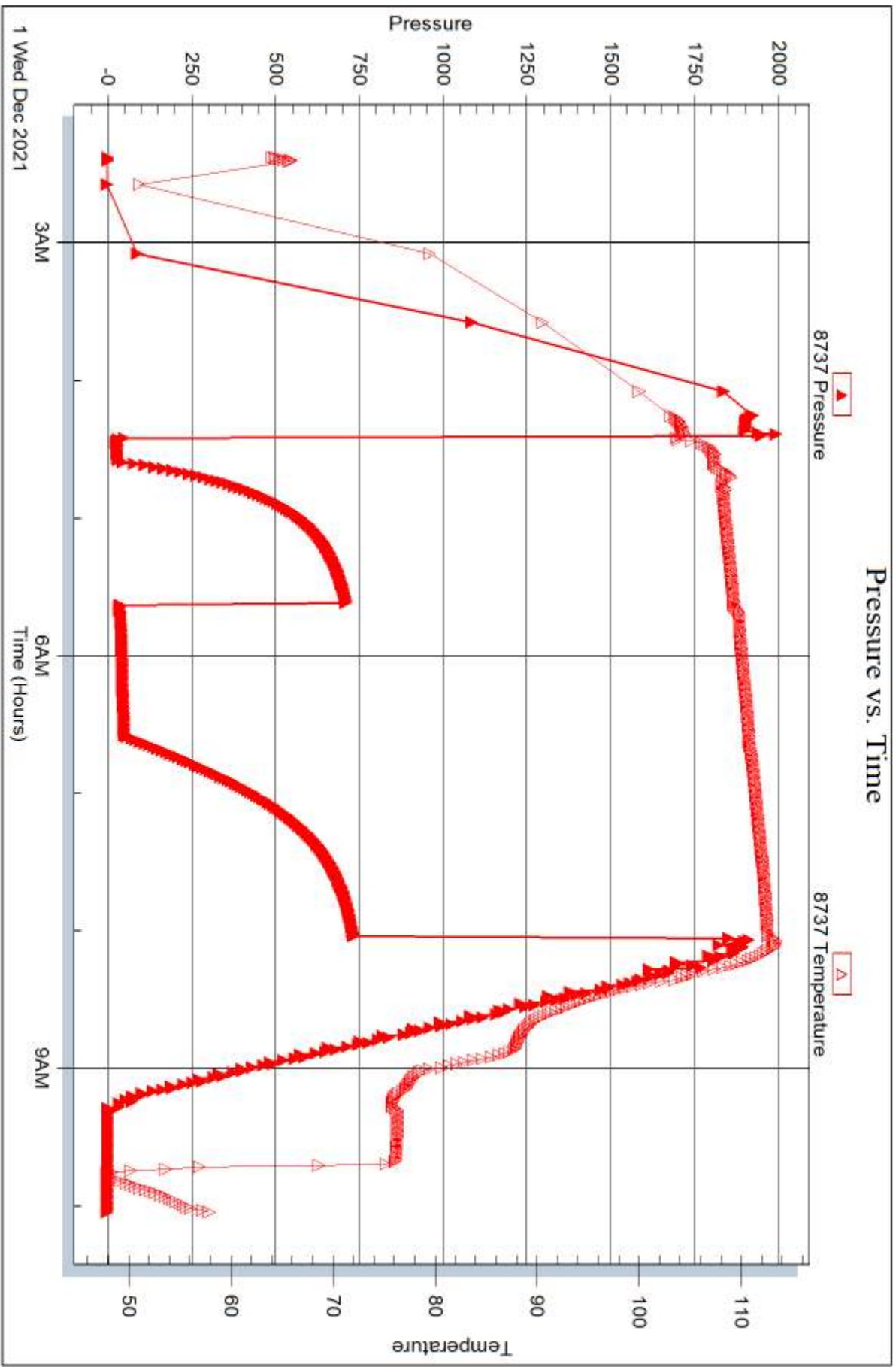


Serial #: 8737

Outside Thomas Garner Inc.

Jennifer #1

DST Test Number: 1





## DRILL STEM TEST REPORT

Prepared For: **Thomas Garner Inc.**

305 E 7th  
St John, KS. 67576

ATTN: Keith Reavis

### **Jennifer #1**

#### **18-24s-13w Stafford,KS**

Start Date: 2021.12.01 @ 20:35:51

End Date: 2021.12.02 @ 04:00:36

Job Ticket #: 67213                      DST #: 2

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2021.12.08 @ 16:21:13



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Thomas Garner Inc.  
305 E 7th  
St John, KS. 67576  
ATTN: Keith Reavis

**18-24s-13w Stafford, KS**

**Jennifer #1**

Job Ticket: 67213

**DST#: 2**

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  
 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  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Matt Smith  
 Unit No: 68  
 Reference Elevations: 1941.00 ft (KB)  
 1928.00 ft (CF)  
 KB to GR/CF: 13.00 ft

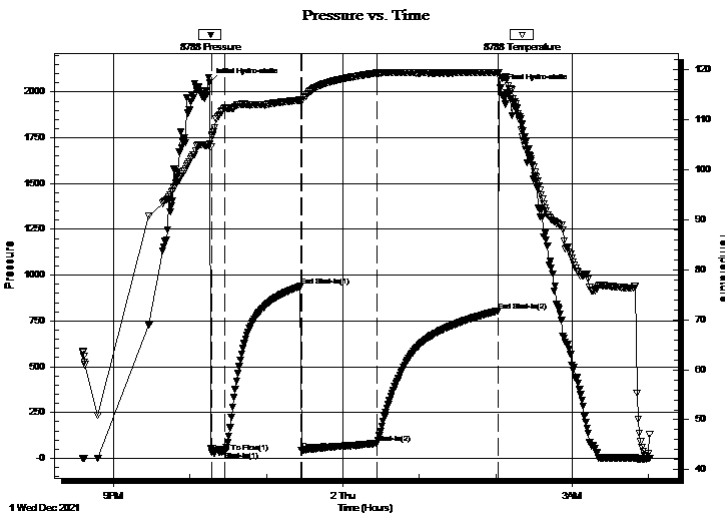
## Serial #: 8788

Inside

Press@RunDepth: 80.74 psig @ 4055.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2021.12.01 End Date: 2021.12.02 Last Calib.: 2021.12.02  
 Start Time: 20:35:56 End Time: 04:00:35 Time On Btm: 2021.12.01 @ 22:15:36  
 Time Off Btm: 2021.12.02 @ 02:03:36

TEST COMMENT: IF: BOB in 9 mins. Built to 12.52". (10)  
 IS: No Blow. (60)  
 FF: BOB 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%m 55%w	0.90
64.00	GOSMCW 5%g 45%m 50%w	0.90
4.00	WCM 1%w 99%m	0.06
0.00	288' GIP 100%g	0.00

\* Recovery from multiple tests

## Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)







**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Thomas Garner Inc.

**18-24s-13w Stafford,KS**

305 E 7th  
St John, KS. 67576

**Jennifer #1**

Job Ticket: 67213

**DST#: 2**

ATTN: Keith Reavis

Test Start: 2021.12.01 @ 20:35:51

## Tool Information

Drill Pipe:	Length: 4054.00 ft	Diameter: 3.80 inches	Volume: 56.87 bbl	Tool Weight: 2100.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 22000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.80 inches	Volume: 0.00 bbl	Weight to Pull Loose: 58000.00 lb
			<u>Total Volume: 56.87 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	4054.00 ft			Final 54000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	32.00 ft			
Tool Length:	60.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments: Requested Shale Packer again.

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4027.00	
Shut In Tool	5.00			4032.00	
Hydraulic tool	5.00			4037.00	
Jars	5.00			4042.00	
Safety Joint	3.00			4045.00	
Packer	4.00			4049.00	28.00 Bottom Of Top Packer
Packer	5.00			4054.00	
Stubb	1.00			4055.00	
Recorder	0.00	8788	Inside	4055.00	
Recorder	0.00	8737	Outside	4055.00	
Perforations	28.00			4083.00	
Bullnose	3.00			4086.00	32.00 Bottom Packers & Anchor

**Total Tool Length: 60.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Thomas Garner Inc.

**18-24s-13w Stafford,KS**

305 E 7th  
St John, KS. 67576

**Jennifer #1**

Job Ticket: 67213

**DST#: 2**

ATTN: Keith Reavis

Test Start: 2021.12.01 @ 20:35:51

## Mud and Cushion Information

Mud Type: Gel Chem  
Mud Weight: 9.00 lb/gal  
Viscosity: 59.00 sec/qt  
Water Loss: 8.78 in<sup>3</sup>  
Resistivity: ohm.m  
Salinity: 10000.00 ppm  
Filter Cake: 0.20 inches

Cushion Type:  
Cushion Length: ft  
Cushion Volume: bbl  
Gas Cushion Type:  
Gas Cushion Pressure: psig

Oil API: deg API  
Water Salinity: 65000 ppm

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
64.00	GMCW 5%g 40%m 55%w	0.898
64.00	GOSMCW 5%g 45%m 50%w	0.898
4.00	WCM 1%w 99%m	0.056
0.00	288' GIP 100%g	0.000

Total Length: 132.00 ft      Total Volume: 1.852 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #: None

Laboratory Name:

Laboratory Location:

Recovery Comments: RW is .21 @ 44 Degres = 65,000 Chlorides.

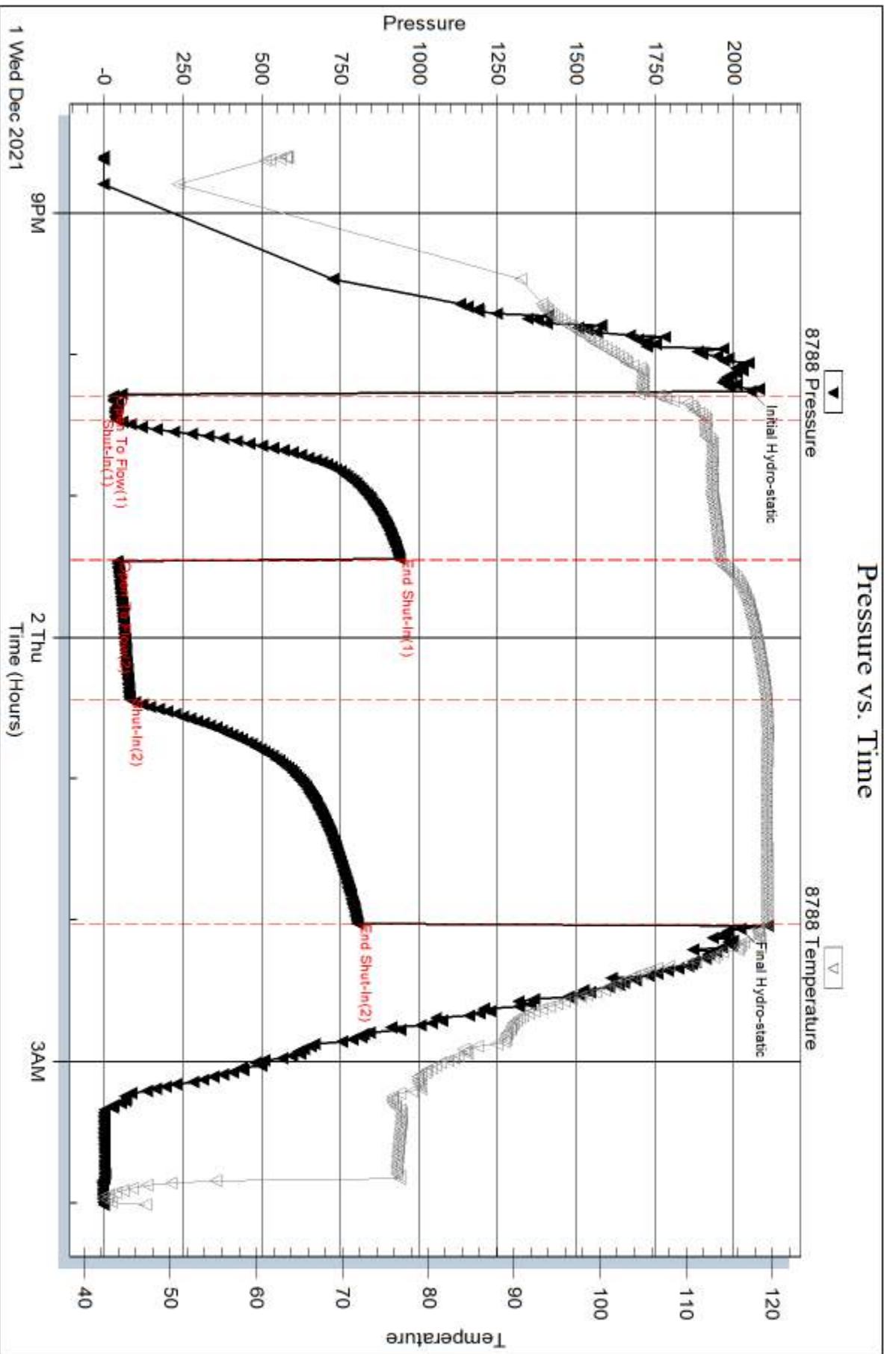
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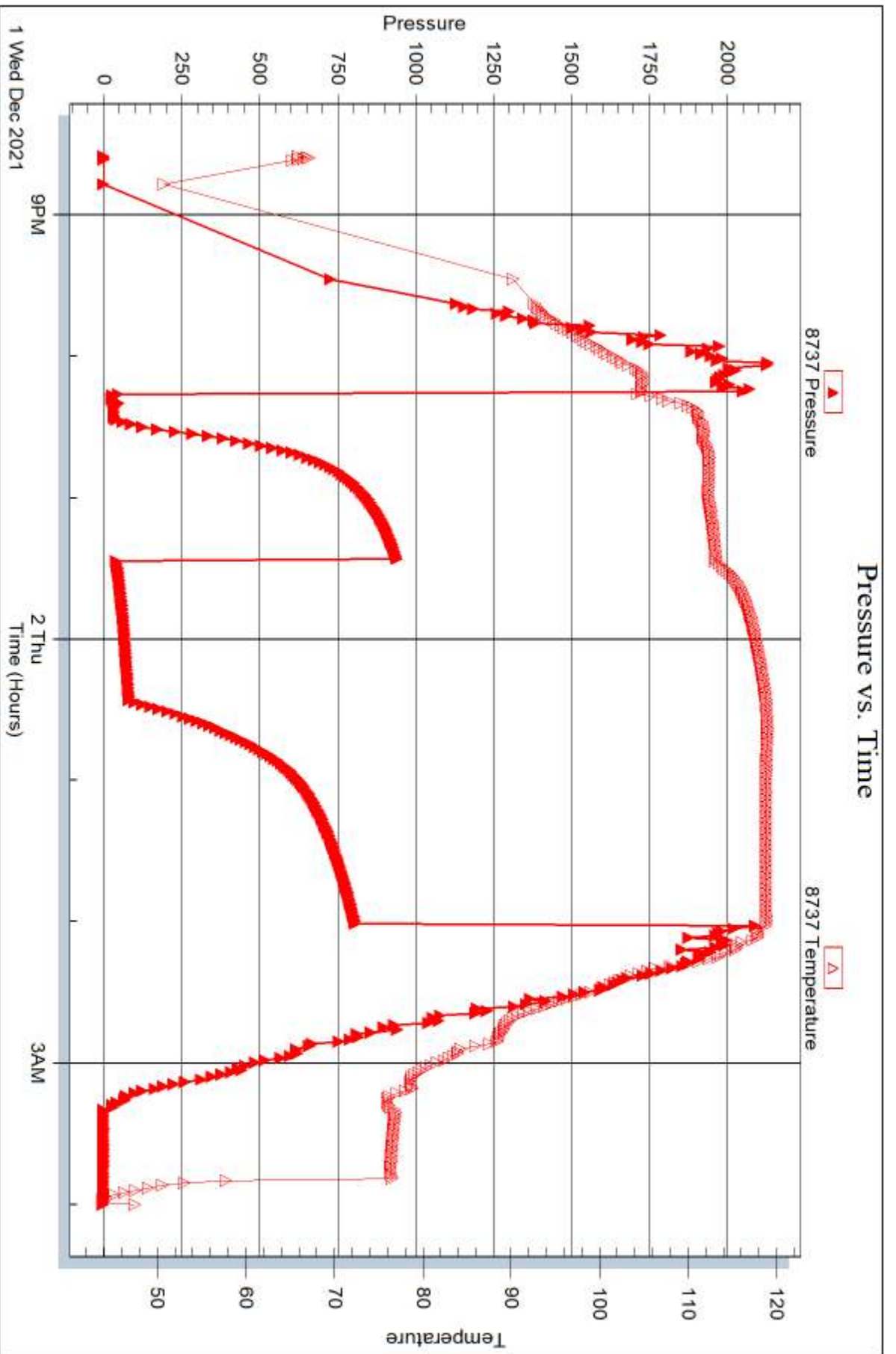
Inside

Thomas Garner Inc.

Jennifer #1

DST Test Number: 2







## DRILL STEM TEST REPORT

Prepared For: **Thomas Garner Inc.**

305 E 7th  
St John, KS. 67576

ATTN: Keith Reavis

**Jennifer #1**

**18-24s-13w Stafford,KS**

Start Date: 2021.12.02 @ 13:41:48

End Date: 2021.12.02 @ 20:12:33

Job Ticket #: 67214                      DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2021.12.08 @ 16:20:11



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Thomas Garner Inc.

**18-24s-13w Stafford,KS**

305 E 7th  
St John, KS. 67576

**Jennifer #1**

Job Ticket: 67214

**DST#: 3**

ATTN: Keith Reavis

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)**

Reference Elevations: 1941.00 ft (KB)

Total Depth: 4160.00 ft (KB) (TVD)

1928.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 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:

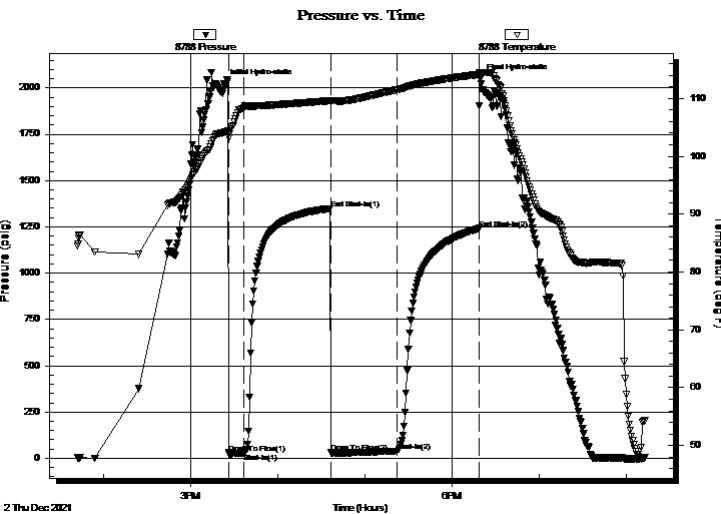
2021.12.02 @ 18:19:18

**TEST COMMENT:** IF: Weak Blow built to 1.25" in bucket @ 10 min.

IS: No Blow 60 minutes

FF: Fair Blow built to 4.25" in bucket (45)

FS: 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/SOWCM 2%G 2%O 5%W 91%M	0.66
0.00	50' GIP 100%G	0.00

\* Recovery from multiple tests

## Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)







**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Thomas Garner Inc.

**18-24s-13w Stafford,KS**

305 E 7th  
St John, KS. 67576

**Jennifer #1**

Job Ticket: 67214

**DST#: 3**

ATTN: Keith Reavis

Test Start: 2021.12.02 @ 13:41:48

## Tool Information

Drill Pipe:	Length: 4116.00 ft	Diameter: 3.80 inches	Volume: 57.74 bbl	Tool Weight: 2100.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 23000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.80 inches	Volume: 0.00 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 57.74 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	26.00 ft			String Weight: Initial 53000.00 lb
Depth to Top Packer:	4118.00 ft			Final 54000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	42.00 ft			
Tool Length:	70.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4091.00	
Shut In Tool	5.00			4096.00	
Hydraulic tool	5.00			4101.00	
Jars	5.00			4106.00	
Safety Joint	3.00			4109.00	
Packer	4.00			4113.00	28.00 Bottom Of Top Packer
Packer	5.00			4118.00	
Stubb	1.00			4119.00	
Recorder	0.00	8788	Inside	4119.00	
Recorder	0.00	8737	Outside	4119.00	
Perforations	38.00			4157.00	
Bullnose	3.00			4160.00	42.00 Bottom Packers & Anchor

**Total Tool Length: 70.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Thomas Garner Inc.

**18-24s-13w Stafford,KS**

305 E 7th  
St John, KS. 67576

**Jennifer #1**

Job Ticket: 67214

**DST#: 3**

ATTN: Keith Reavis

Test Start: 2021.12.02 @ 13:41:48

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

9300 ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.59 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 9300.00 ppm

Filter Cake: 0.20 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
47.00	GVSOWCM 2%G 2%O 5%W 91%M	0.659
0.00	50' GIP 100%G	0.000

Total Length: 47.00 ft      Total Volume: 0.659 bbl

Num Fluid Samples: 0

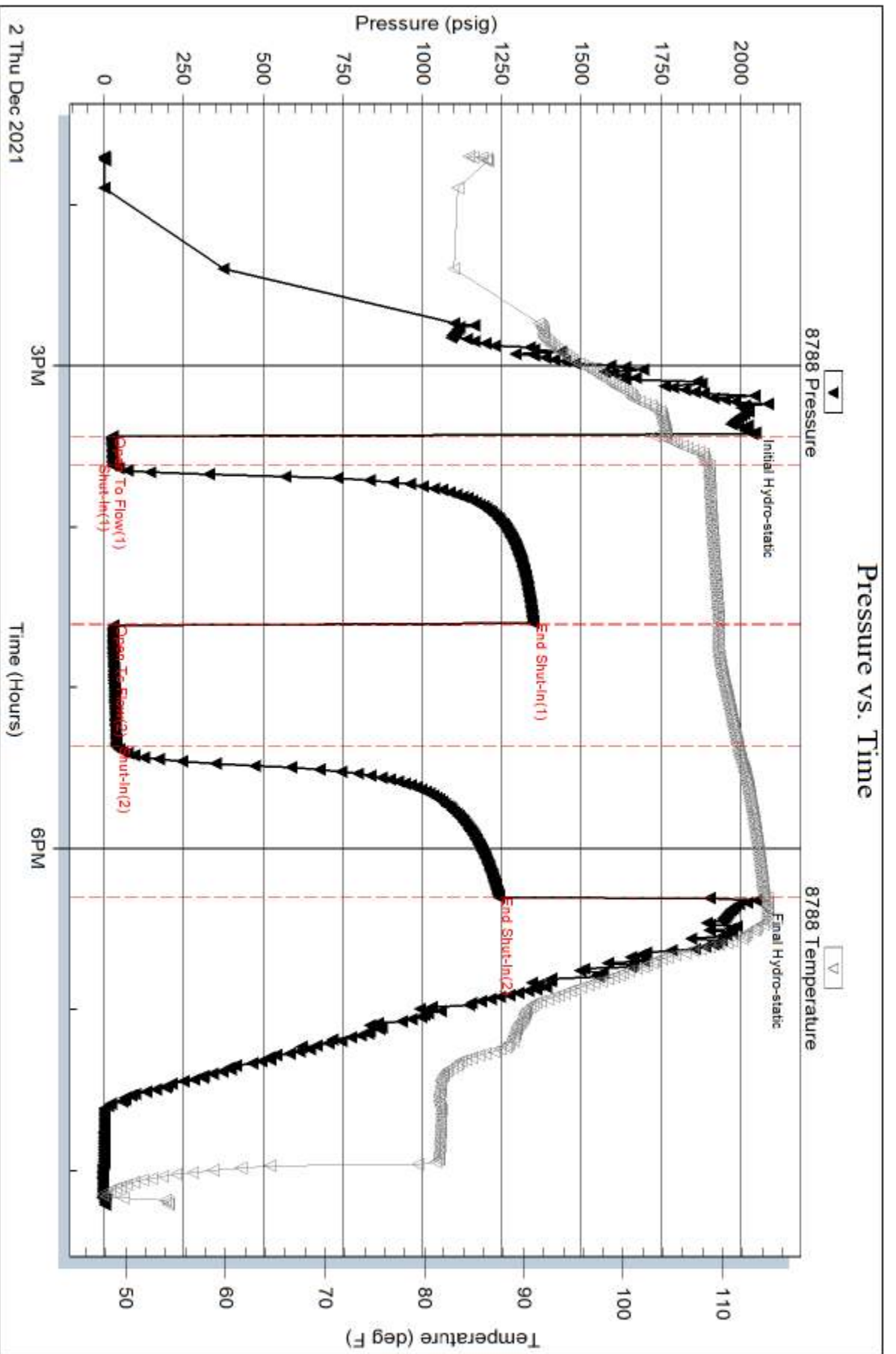
Num Gas Bombs: 0

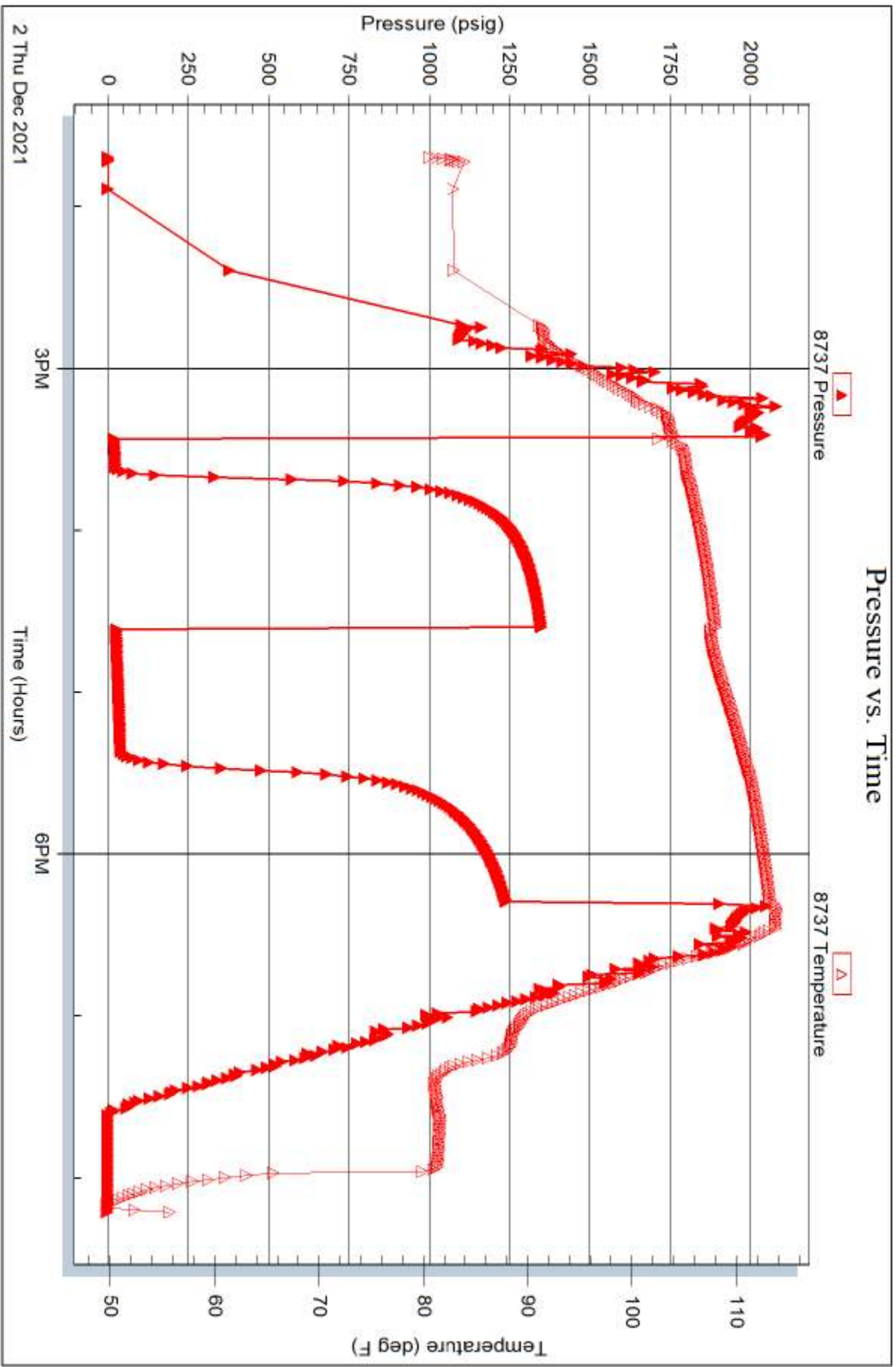
Serial #: none

Laboratory Name:

Laboratory Location:

Recovery Comments: 50FT of Gas in Pipe.







# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 67212

Well Name & No. Jennifer #1 Test No. 1 Date 12/1/21  
 Company Thomas Garner Inc Elevation 1971 KB 1928 <sup>1928</sup> GL  
 Address 305 E 7th St. John KS. 67576  
 Co. Rep / Geo. Kaiti Reay Rig DUKE 7  
 Location: Sec. 18 Twp 24 Rge. 13 Co. St. Francis State KS

Interval Tested 3922-3990 Zone Tested MISS  
 Anchor Length 68' Drill Pipe Run 3898 Mud Wt. 9.1  
 Top Packer Depth 3917 Drill Collars Run 0 Vis 48  
 Bottom Packer Depth 3922 Wt. Pipe Run 0 WL 8.8  
 Total Depth 3990 Chlorides 8000 ppm System LCM 1

Blow Description IF: Strong Blow. B.O.B. in 1 min. Built to 94.01 in.  
ISI: weak Blow Built to 14 in died back to surface  
FF: Strong Blow B.O.B. in 1 min. Built to 180" decreased w. choke open  
FSI: no Blow

Rec	Feet of	%gas	%oil	%water	%mud
960	GIP	100			
74	GOSCM	10		70	

Rec Total 74 BHT 104 Gravity NA API RW NA @ — °F Chlorides 8000 ppm

(A) Initial Hydrostatic 1947  Test 1300 T-On Location 0021  
 (B) First Initial Flow 42  Jars 250 T-Started 0222  
 (C) First Final Flow 32  Safety Joint 75 T-Open 0425  
 (D) Initial Shut-In 708  Circ Sub \_\_\_\_\_ T-Pulled 0809  
 (E) Second Initial Flow 51  Hourly Standby \_\_\_\_\_ T-Out 1002  
 (F) Second Final Flow 49  Mileage 36 <sup>45</sup> Comments Requested state  
 (G) Final Shut-In 730  Sampler \_\_\_\_\_ BEKER & ERIC more in  
 (H) Final Hydrostatic 1916  Straddle \_\_\_\_\_ load of test.  
 Shale Packer 250  EM Tool \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Day Standby \_\_\_\_\_ Sub Total 0  
 Accessibility \_\_\_\_\_ Total 1920  
 Sub Total 1920 MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative Matt Smith 213

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 67213

Well Name & No. Jennifer #1 Test No. 2 Date 12/01/21  
 Company Thomas Carver Inc Elevation 1941 KB 1928 GL  
 Address 305 E 7th St. John, ks. 67576  
 Co. Rep / Geo. Keith Reavis Rig Duke 7  
 Location: Sec. 18 Twp 24s Rge. 13w Co. Stafford State KS

Interval Tested 4059 - 4086 Zone Tested Viola  
 Anchor Length 32' Drill Pipe Run 4054 Mud Wt. 9.2  
 Top Packer Depth 4049 Drill Collars Run 0 Vis 59  
 Bottom Packer Depth 4054 Wt. Pipe Run 0 WL 8.8  
 Total Depth 4086 Chlorides 10,000 ppm System LCM 4"

Blow Description FF! Strong Blow. B.O.B. in 9 mins. Built to 12.52"  
ISI! NO Blow.  
FF! Strong Blow. B.O.B. in 18 mins. Built to 21.80"  
FSI! NO Blow.

Rec	Feet of	%gas	%oil	%water	%mud
<u>288</u>	<u>GIP</u>	<u>100</u>			
<u>4</u>	<u>WCM</u>			<u>1</u>	<u>99</u>
<u>64</u>	<u>GOSMCW</u>	<u>5</u>		<u>50</u>	<u>45</u>
<u>64</u>	<u>GMCW</u>	<u>5</u>		<u>55</u>	<u>40</u>
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 132' Fluid BHT 105° Gravity N/A API RW .21 @ 44 °F Chlorides 65000 ppm

- (A) Initial Hydrostatic 2053
- (B) First Initial Flow 31
- (C) First Final Flow 38
- (D) Initial Shut-In 938
- (E) Second Initial Flow 43
- (F) Second Final Flow 81
- (G) Final Shut-In 805
- (H) Final Hydrostatic 2021

- Test 1450
- Jars 250
- Safety Joint 75
- Circ Sub
- Hourly Standby
- Mileage (36) Pratt 45
- Sampler
- Straddle
- Shale Packer 250
- Extra Packer
- Extra Recorder
- Day Standby
- Accessibility
- Sub Total 2070

- T-On Location 2018
- T-Started 2035
- T-Open 2317
- T-Pulled 0207
- T-Out 0400
- Comments \* Exit More in BHT of test. Shale Packer requested.
- EM Tool
- Ruined Shale Packer
- Ruined Packer
- Extra Copies
- Sub Total 0
- Total 2070
- MP/DST Disc't

Initial Open 10  
 Initial Shut-In 60  
 Final Flow 60  
 Final Shut-In 90

Approved By \_\_\_\_\_ Our Representative Matt Smea / Eric Burgess

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# TRIOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 67214

Well Name & No. Jennifer #1 Test No. 3 Date 12/02/21  
 Company Thomas Corner Inc. Elevation 1941 KB 1928 GL  
 Address 305 E 7th St. Jbha, KS. 67521  
 Co. Rep / Geo. Keith Reavis Rig Duke 7  
 Location: Sec. 18 Twp 24S Rge. 13W Co. Stafford State KS

Interval Tested 4118-4160 Zone Tested SIMPSON  
 Anchor Length 42 Drill Pipe Run 4116 Mud Wt. 9.25  
 Top Packer Depth 4113 Drill Collars Run Ø Vis 56  
 Bottom Packer Depth 4118 Wt. Pipe Run Ø WL 9.6  
 Total Depth 4160 Chlorides 9,300 ppm System LCM 2

Blow Description IF: Wax building blow built to 1.25" in bucket @ 10 min

ISI: NO BLOW 60 mins.

FF: Built to 4.25" in bucket + 45 mins.

FSI: NO BLOW

Rec	Feet of	%gas	%oil	%water	%mud
<u>50</u>	<u>GFP</u>	<u>100</u>			
<u>47</u>	<u>GVSONCM</u>	<u>2</u>	<u>2</u>	<u>5</u>	<u>91</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 47' BHT 104 Gravity NA API RW NA @ — °F Chlorides 9300 ppm

(A) Initial Hydrostatic 2022  
 (B) First Initial Flow 25  
 (C) First Final Flow 27  
 (D) Initial Shut-In 1349  
 (E) Second Initial Flow 30  
 (F) Second Final Flow 39  
 (G) Final Shut-In 1241  
 (H) Final Hydrostatic 2048

Test 1450  
 Jars 250  
 Safety Joint 75  
 Circ Sub  
 Hourly Standby  
 Mileage 637 Prato 45  
 Sampler  
 Straddle  
 Shale Packer 250  
 Extra Packer  
 Extra Recorder  
 Day Standby  
 Accessibility  
 Sub Total 2070

T-On Location 1307  
 T-Started 1341  
 T-Open 1526  
 T-Pulled 1830  
 T-Out 2012  
 Comments Shale Packer. Epic  
more in lead of test.  
 EM Tool  
 Ruined Shale Packer  
 Ruined Packer  
 Extra Copies  
 Sub Total 0  
 Total 2070  
 MP/DST Disc't

Initial Open 10  
 Initial Shut-In 60  
 Final Flow 45  
 Final Shut-In 60

Approved By \_\_\_\_\_ Our Representative Matt Smith 192

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## HURRICANE SERVICES INC

Remit To: Hurricane Services, Inc.  
250 N. Water, Suite 200  
Wichita, KS 67202  
316-303-9515

Customer:

THOMAS GARNER INC  
305 E 7TH AVE  
SAINT JOHN, KS 67576-1652

Invoice Date: 11/26/2021  
Invoice #: 0357144  
Lease Name: Jennifer  
Well #: 1 (New)  
County: Stafford, Ks  
Job Number: WP2123  
District: Pratt

Date/Description	HRS/QTY	Rate	Total
Surface	0.000	0.000	0.00
Cement Pozmix 60/40	400.000	11.700	4,680.00
Calcium Chloride	1,032.000	0.675	696.60
Cello Flake	100.000	1.575	157.50
8 5/8" Top rubber plug	1.000	157.500	157.50
Light Eq Mileage	25.000	1.800	45.00
Heavy Eq Mileage	25.000	3.600	90.00
Ton Mileage	430.000	1.350	580.50
Depth Charge 0'-500'	1.000	900.000	900.00
Cement Plug Container	1.000	225.000	225.00

**Total** 7,532.10

**TERMS:** Net 30 days. Interest may be charged on past due invoice at rate of 1 ½% per month or maximum allowed by applicable state or federal laws. HSI has right to revoke any discounts applied in arriving at net invoice price if invoice is past due. If revoked, full invoice price without discount plus additional sales tax, as applicable, is due immediately and subject to interest charges. Customer agrees to pay all collection costs directly or indirectly incurred by HSI in the event HSI engages a third party to pursue collection of past due invoice.

**SALES TAX:** Services performed on oil, gas and water wells in Kansas are subject to sales tax, with certain exceptions. HSI relies on the well information provided by the customer in identifying whether the services performed on wells qualify for exemption.

**WE APPRECIATE YOUR BUSINESS!**











## HURRICANE SERVICES INC

Remit To: Hurricane Services, Inc.  
250 N. Water, Suite 200  
Wichita, KS 67202  
316-303-9515

Customer:  
THOMAS GARNER INC  
305 E 7TH AVE  
SAINT JOHN, KS 67576-1652

Invoice Date: 12/3/2021  
Invoice #: 0357496  
Lease Name: Jennifer  
Well #: 1 (New)  
County: Stafford, Ks  
Job Number: WP2167  
District: Pratt

Date/Description	HRS/QTY	Rate	Total
5 1/2" Production Casing	0.000	0.000	0.00
H-Long	175.000	25.200	4,410.00
GYP Seal	825.000	0.900	742.50
Cement Fluid Loss 2	9.000	13.500	121.50
Gas Block	495.000	2.700	1,336.50
Type A Packer shoe 5 1/2"	1.000	1,413.000	1,413.00
5 1/2" LD Plug & Baffle	1.000	315.000	315.00
Cement baskets 5 1/2"	2.000	270.000	540.00
5 1/2" Turbolizers	12.000	72.000	864.00
Mud flush	1,000.000	0.900	900.00
Light Eq Mileage	25.000	1.800	45.00
Heavy Eq Mileage	25.000	3.600	90.00
Ton Mileage	259.000	1.350	349.65
Depth Charge 4001'-5000'	1.000	2,250.000	2,250.00
Cement Plug Container	1.000	225.000	225.00
Cement Data Acquisition	1.000	225.000	225.00
H-Plug	50.000	11.700	585.00
Credit 5 hours of rig time	1.000-	1,875.000	1,875.00-

**Total** 12,537.15

**TERMS:** Net 30 days. Interest may be charged on past due invoice at rate of 1 ½% per month or maximum allowed by applicable state or federal laws. HSI has right to revoke any discounts applied in arriving at net invoice price if invoice is past due. If revoked, full invoice price without discount plus additional sales tax, as applicable, is due immediately and subject to interest charges. Customer agrees to pay all collection costs directly or indirectly incurred by HSI in the event HSI engages a third party to pursue collection of past due invoice.

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**WE APPRECIATE YOUR BUSINESS!**



<b>Customer</b>	Thomas Garner Inc	<b>Lease &amp; Well #</b>	Jennifer 1	<b>Date</b>	12/3/2021
<b>Service District</b>	Pratt Kansas	<b>County &amp; State</b>	Stafford Kansas	<b>Legals S/T/R</b>	18-24s-13w
<b>Job Type</b>	5 1/2 pruction casin <input checked="" type="checkbox"/> PROD <input type="checkbox"/> INJ <input checked="" type="checkbox"/> SWD	<b>New Well?</b>	<input checked="" type="checkbox"/> YES <input type="checkbox"/> No	<b>Job #</b>	
				<b>Ticket #</b>	wp2167

Equipment #	Driver	Job Safety Analysis - A Discussion of Hazards & Safety Procedures					
916	M Brungardt	<input checked="" type="checkbox"/> Hard hat	<input checked="" type="checkbox"/> Gloves	<input type="checkbox"/> Lockout/Tagout	<input type="checkbox"/> Warning Signs & Flagging		
179/521	B Brockman	<input checked="" type="checkbox"/> H2S Monitor	<input checked="" type="checkbox"/> Eye Protection	<input type="checkbox"/> Required Permits	<input type="checkbox"/> Fall Protection		
523/534	M Florez	<input checked="" type="checkbox"/> Safety Footwear	<input type="checkbox"/> Respiratory Protection	<input checked="" type="checkbox"/> Slip/Trip/Fall Hazards	<input type="checkbox"/> Specific Job Sequence/Expectations		
		<input checked="" type="checkbox"/> FRC/Protective Clothing	<input type="checkbox"/> Additional Chemical/Acid PPE	<input checked="" type="checkbox"/> Overhead Hazards	<input checked="" type="checkbox"/> Muster Point/Medical Locations		
		<input type="checkbox"/> Hearing Protection	<input checked="" type="checkbox"/> Fire Extinguisher	<input type="checkbox"/> Additional concerns or issues noted below			

**Comments**

Product/ Service Code	Description	Unit of Measure	Quantity	Net Amount
cp030	H-Long	sack	175.00	\$4,410.00
cp105	Gypsum	lb	825.00	\$742.50
cp132	Cement Fluid Loss 2	lb	9.00	\$121.50
cp155	Gas Block	lb	495.00	\$1,336.50
fe175	5 1/2" Type A Packer Shoe	ea	1.00	\$1,413.00
fe170	5 1/2" Latch Down Plug & Baffle	ea	1.00	\$315.00
fe130	5 1/2" Cement Basket	ea	2.00	\$540.00
fe135	5 1/2 Turbolizer	ea	12.00	\$864.00
cp170	Mud Flush	gal	1,000.00	\$900.00
m015	Light Equipment Mileage	mi	25.00	\$45.00
m010	Heavy Equipment Mileage	mi	25.00	\$90.00
m020	Ton Mileage	tm	259.00	\$349.65
d015	Depth Charge: 4001'-5000'	job	1.00	\$2,250.00
c050	Cement Plug Container	job	1.00	\$225.00
c035	Cement Data Acquisition	job	1.00	\$225.00
cp055	H-Plug	sack	50.00	\$585.00

<b>Customer Section: On the following scale how would you rate Hurricane Services Inc.?</b>		<b>Net:</b>	\$14,412.15
Based on this job, how likely is it you would recommend HSI to a colleague? <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Unlikely 1 2 3 4 5 6 7 8 9 10 Extremely Likely		Total Taxable \$ - Tax Rate: State tax laws deem certain products and services used on new wells to be sales tax exempt. Hurricane Services relies on the customer provided well information above to make a determination if services and/or products are tax exempt.	Sale Tax: \$ - Total: \$ 14,412.15

HSI Representative: *Mark Brungardt*

**TERMS:** Cash in advance unless Hurricane Services Inc. (HSI) has approved credit prior to sale. Credit terms of sale for approved accounts are total invoice due on or before the 30th day from the date of invoice. Past due accounts shall pay interest on the balance past due at the rate of 1 1/4% per month or the maximum allowable by applicable state or federal laws. In the event it is necessary to employ an agency and/or attorney to affect the collection, Customer hereby agrees to pay all fees directly or indirectly incurred for such collection. In the event that Customer's account with HSI becomes delinquent, HSI has the right to revoke any discounts previously applied in arriving at net invoice price. Upon revocation, the full invoice price without discount is immediately due and subject to collection. Prices quoted are estimates only and are good for 30 days from the date of issue. Pricing does not include federal, state, or local taxes, or royalties and stated price adjustments. Actual charges may vary depending upon time, equipment, and material ultimately required to perform these services. Any discount is based on 30 days net payment terms or cash. **DISCLAIMER NOTICE:** Technical data is presented in good faith, but no warranty is stated or implied. HSI assumes no liability for advice or recommendations made concerning the results from the use of any product or service. The information presented is a best estimate of the actual results that may be achieved and should be used for comparison purposes and HSI makes no guarantee of future production performance. Customer represents and warrants that well and all associated equipment in acceptable condition to receive services by HSI. Likewise, the customer guarantees proper operational care of all customer owned equipment and property while HSI is on location performing services. The authorization below acknowledges the receipt and acceptance of all terms/conditions stated above, and Hurricane has been provided accurate well information in determining taxable services.

X  CUSTOMER AUTHORIZATION SIGNATURE





**CEMENT TREATMENT REPORT**

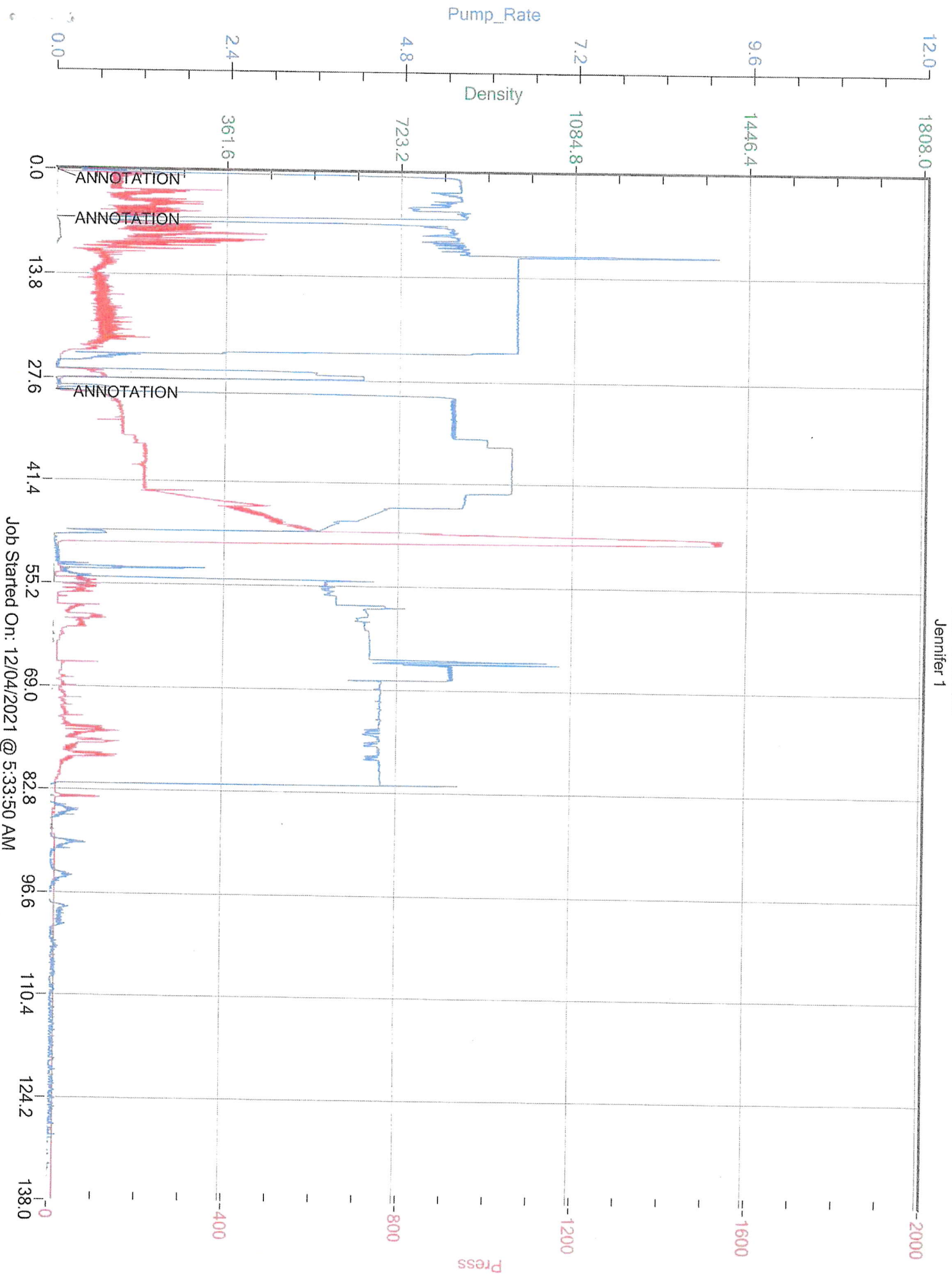
Customer:	Thomas Garner Inc	Well:	Jennifer 1	Ticket:	wp2167
City, State:	St John Kansas	County:	Stafford Kansas	Date:	12/3/2021
Field Rep:	Tom Garner	S-T-R:	18-24s-13w	Service:	5 1/2 pruction casing

Downhole Information		Calculated Slurry - Lead		Calculated Slurry - Tail	
Hole Size:	7 7/8 in	Blend:	H-long	Blend:	h - plug
Hole Depth:	ft	Weight:	15.0 ppg	Weight:	13.7 ppg
Casing Size:	5 1/2 in	Water / Sx:	6.0 gal / sx	Water / Sx:	6.9 gal / sx
Casing Depth:	4256 ft	Yield:	1.49 ft <sup>3</sup> / sx	Yield:	1.43 ft <sup>3</sup> / sx
Tubing / Liner:	in	Annular Bbls / Ft.:	bbs / ft.	Annular Bbls / Ft.:	bbs / ft.
Depth:	ft	Depth:	ft	Depth:	ft
Tool / Packer:		Annular Volume:	0.0 bbls	Annular Volume:	0 bbls
Tool Depth:	ft	Excess:		Excess:	
Displacement:	102.5 bbls	Total Slurry:	46.4 bbls	Total Slurry:	12.7 bbls
		Total Sacks:	175 sx	Total Sacks:	50 sx

TIME	RATE	PSI	STAGE BBLs	TOTAL BBLs	REMARKS
5:45 PM			-	-	on location job and safety
6:00 PM				-	spot trucks and rig up
				-	turbolizers,,,1,2,3,4,5,6,7,8,9,10,11,12
				-	baskets,,,,,1 & 12
8:00 PM				-	start casing in the hole
10:20 PM				-	on bottom circulating
				-	
5:35 AM				-	start flush
	5.0	200.0	5.0	5.0	fresh water
	5.0	200.0	24.0	29.0	mud flush
	5.0	200.0	5.0		fresh water
5:43 AM					flush in
11:35 PM	2.0	-	12.7		plug rat and mouse hole,,,,,,rat hole 30 sacks ,,,,,mouse hole 20 sacks
5:45 AM					start cement down hole
	5.5	200.0	46.0		mix 175 sacks
6:00 AM					shut down
					wash pump and lines
6:05 AM					start displacement
	6.3	210.0	50.0		
	4.4	450.0	90.0		
6:30 AM	3.0	600.0	102.5		plug down at 6:30 am.....600 to 1500 psi,,,,,plug did hold and close in the well
					12/3/2021,,,,,pump truck went down at 12:30 am and had to go to pratt shop and work on pump and returned at 5
					and finished the job

CREW		UNIT	SUMMARY		
Cementer:	M Brungardt	916	Average Rate	Average Pressure	Total Fluid
Pump Operator:	B Brockman	179/521	4.5 bpm	258 psi	335 bbls
Bulk #1:	M Florez	523/534			
Bulk #2:					

Tom Garner  
Jennifer 1



Custom Service, LLC

766 NW 30th St.  
St. John, KS 67576

# Invoice

Date	Invoice #
12/5/2021	2385

Bill To
Tom Garner 305 E 7th Ave St. John, KS 67576

*Deanna Se*

P.O. No.	Terms	Project
HARRISON	Due on receipt	

Item	Quantity	Description	Rate	Amount
Water Truck	2.5	12/01/2021: 160 BBLS FROM RESERVE PIT TO TOLAND SWD	87.50	218.75
Disposal Fee	160	160 BBLS TO TSWD	0.30	48.00
Water Truck	2.5	12/04/2021: 160 BBLS FROM RESERVE PIT TO TOLAND SWD	87.50	218.75
Disposal Fee	160	160 BBLS TO SWD	0.30	48.00
Water Truck	3.5	12/04/2021: 240 BBLS FROM RESERVE PIT TO TOLAND SWD	87.50	306.25
Disposal Fee	240	240 BBLS TO SWD	0.30	72.00

Thank you for your business. For any questions and concerns please contact Aric at (620)546-4205

**Total**

\$911.75



**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 Time: 2:00 PM  
 Region: Stafford County  
 Drilling Completed: 12/3/2021 Time: 12:00 AM  
 Surface Coordinates: 479' FNL & 3030' FEL  
 Bottom Hole Coordinates:  
 Ground Elevation: 1928.00ft  
 K.B. Elevation: 1941.00ft  
 Logged Interval: 3400.00ft To: 4375.00ft  
 Total Depth: 4375.00ft  
 Formation: Arbuckle  
 Drilling Fluid Type: Chemical/Fresh Water Gel

**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	-2424	4380	-2420	4326	-2302	122	127

### Drill Stem Test #1



## 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

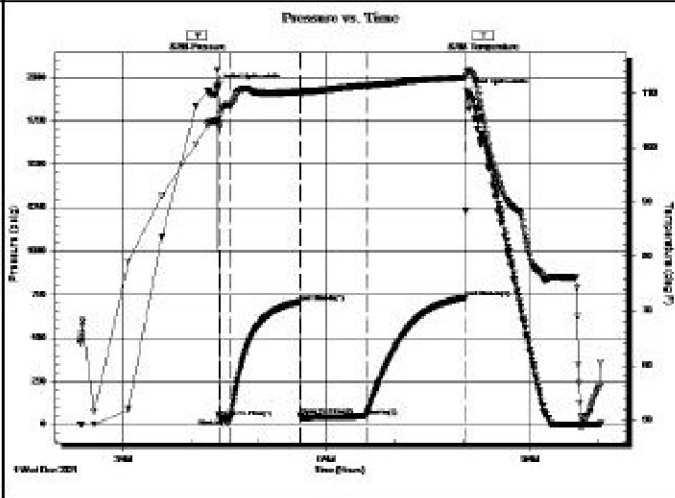
**GENERAL INFORMATION:**

Formation: <b>Miss</b>	Deviated: No Whipstock	ft (KB)	Test Type: Conventional Bottom Hole (hits)
Time Tool Opened: 04:25:07			Tester: Matt Smith
Time Test Ended: 10:02:22			Unit No: 68
Interval: <b>3922.00 ft (KB) To 3990.00 ft (KB) (TVD)</b>			Reference Elevations: 1941.00 ft (KB)
Total Depth: 3990.00 ft (KB) (TVD)			1928.00 ft (CF)
Hole Diameter: 7.88 inches	Hole Condition: Fair		KB to GR/CF: 13.00 ft

**Serial #: 8788      Inside**

Press@RunDepth: 48.88 psig @ 3923.00 ft (KB)	Capacity: 8000.00 psig
Start Date: 2021.12.01	End Date: 2021.12.01
Start Time: 02:22:12	End Time: 10:02:21
	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"  
 IST Weak blow built to 14" died back to surface  
 FF: Strong blow B.O.B. immediate Built to 180' decreased w. choke open  
 FSI: 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 Fibw(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 Fibw(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)

### Drill Stem Test #2



## 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**



**GENERAL INFORMATION:**

Formation: **Viola**  
 Deviated: No Whipstock ft (KB)  
 Test Type: Conventional Bottom Hole (Reset)  
 Time Tool Opened: 22:17:21  
 Tester: Matt Smith  
 Time Test Ended: 04:00:36  
 Unit No: 68  
 Interval: **4054.00 ft (KB) To 4086.00 ft (KB) (TVD)**  
 Reference Elevations: 1941.00 ft (KB)  
 Total Depth: 4086.00 ft (KB) (TVD) 1928.00 ft (CF)  
 Hole Diameter: 7.88 inches -hole Condition: Fair KB to GR/CF: 13.00 ft

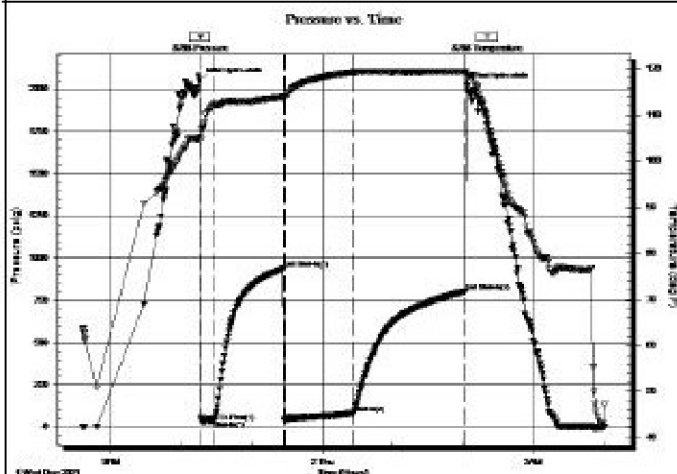
**Serial #: 8788**

Inside

Press@RunDepth: 80.74 psig @ 4055.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2021.12.01 End Date: 2021.12.02 Last Calib.: 2021.12.02  
 Start Time: 20:35:56 End Time: 04:00:35 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%w 55%w	0.90
64.00	GOSMCW 5%g 45%w 50%w	0.90
4.00	WCM 1%w 99%w	0.06
0.00	285' GIP 100%g	0.00

\* Recovery from multiple tests

**Gas Rates**

	Choke (Inches)	Pressure (psig)	Gas Rate (M d/d)

**Drill Stem Test #3**



**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

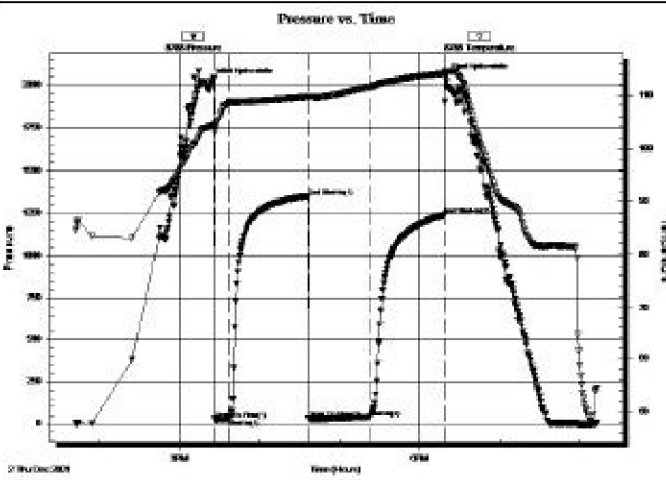
Test Start: 2021.12.02 @ 13:41:48

**GENERAL INFORMATION:**

Formation: **Simpson**  
 Deviated: No Whipstock ft (KB)  
 Test Type: Conventional Bottom Hole (Reset)  
 Time Tool Opened: 15:26:18  
 Tester: Matt Smith  
 Time Test Ended: 20:12:33  
 Unit No: 68  
 Interval: **4118.00 ft (KB) To 4160.00 ft (KB) (TVD)**  
 Reference Elevations: 1941.00 ft (KB)  
 Total Depth: 4160.00 ft (KB) (TVD) 1928.00 ft (CF)

**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 Blw (60)



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

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

\* Recovery from multiple tests

	Choke (inches)	Pressure (psig)	Gas Rate (McFE)

### ROCK TYPES

Cht	Lmst fw<7	shale, gry	Shcol
Cht vari	Lmst fw7>	Carbon Sh	Ss
Dolprim	shale, grn	shale, red	

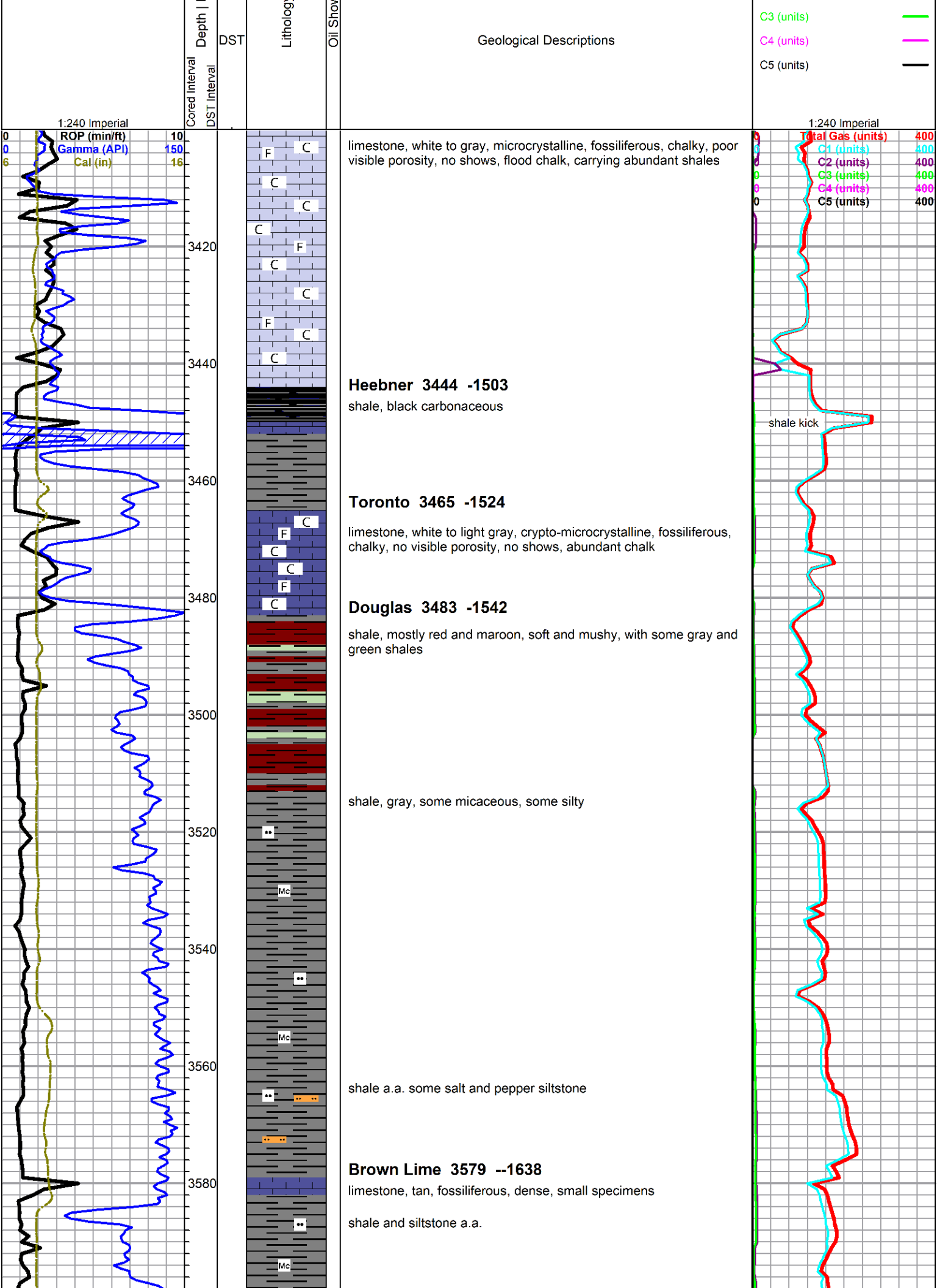
### ACCESSORIES

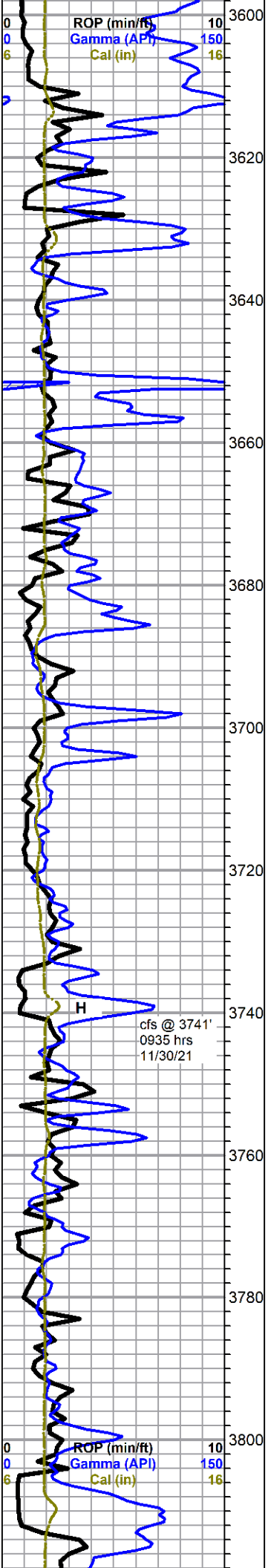
<b>MINERAL</b>	<b>FOSSIL</b>	<b>STRINGER</b>	<b>TEXTURE</b>
▲ Chert, dark	∩ Bioclastic or Fragments	● Sandstone	C Chalky
P Pyrite	F Fossils < 20%	■ Siltstone	L Lithogr
• Sandy	⊕ Oolite		MX Microxln
• Silty	⊗ Pellets		
△ Chert White	⊗ Oomoldic		
Mc Mica			

### OTHER SYMBOLS

<b>Oil Show</b>	<b>DST</b>
● Good Show	■ DST Int
● Fair Show	■ DST alt
● Poor Show	■ Core
○ Spotted or Trace	tail pipe
○ Questionable Stn	
D Dead Oil Stn	
■ Fluorescence	
* Gas	

Curve Track #1					
ROP (min/ft)		intervals			TG, C1 - C5
Gamma (API)					Total Gas (units)
Cal (in)					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

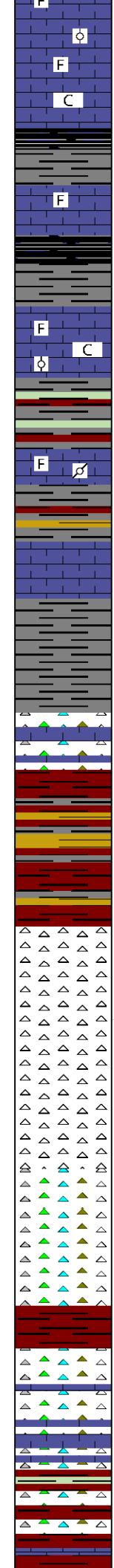
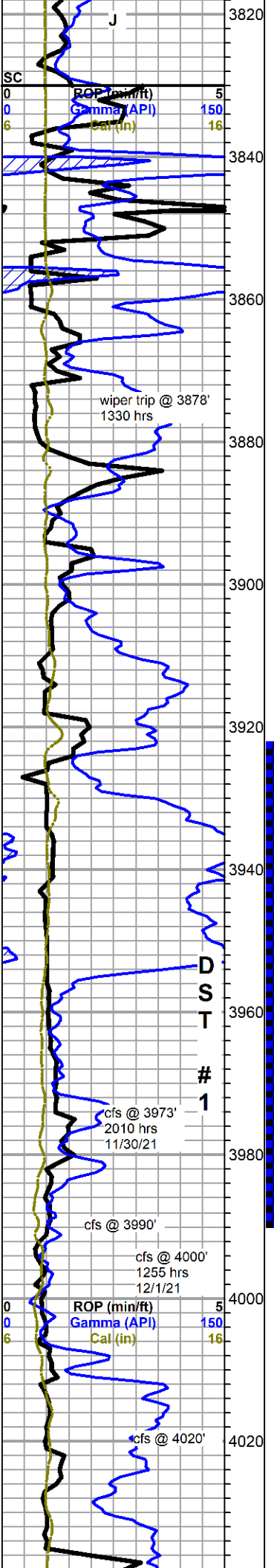
limestone, light gray to cream, cryptocrystalline, fossiliferous, trace

Total Gas (units)	400
C1 (units)	400
C2 (units)	400
C3 (units)	400
C4 (units)	400
C5 (units)	400

MudCo Mud Ck  
3730 ft  
11/30/21 0945 hrs  
Vis 48 Wt 9.1  
PV 15 YP 15  
pH 11.5 WL 8.8  
Cake 1/32  
Cl 8000 ppm  
Ca 80 ppm  
Solids 5.2%  
LCM 1#  
DMC \$3087.04  
CMC \$12122.73

Total Gas (units)	400
C1 (units)	400
C2 (units)	400
C3 (units)	400
C4 (units)	400
C5 (units)	400





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

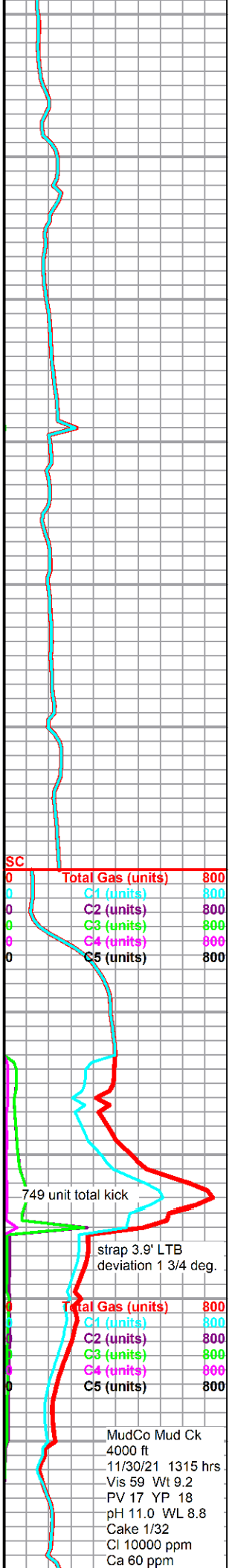
4000 cfs 30 min some light gray translucent, sharp, fresh, 60 min, increase in translucent chert, influx yellow chert, sharp, fresh, no show

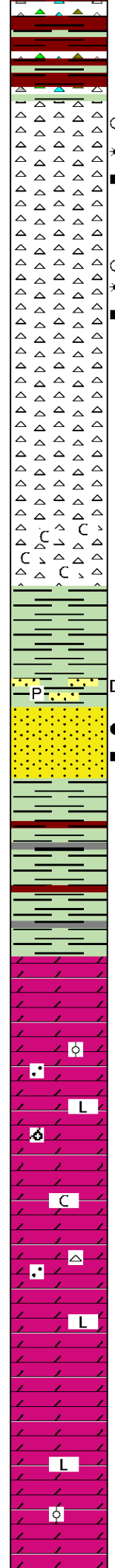
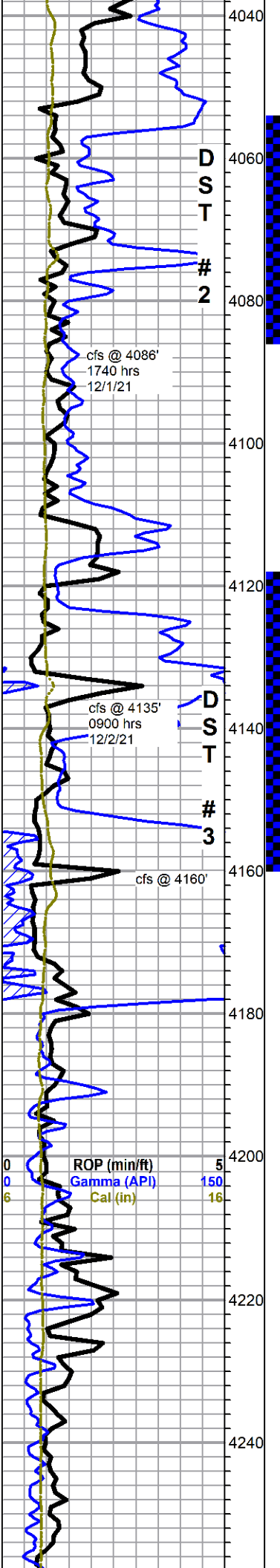
**Kinderhook Shale 4001**

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





brown limestones, 80 sample much chalk

**Viola 4052 -2111**

chert, mostly boney white, some tan and light gray, scattered light brown to black stain, scattered stained tripolitic, few pieces gassy with slight show bleeding light oil droplets, no odor, good fluorescence

chert a.a.

chert a.a., flood chalk at base 4130 and 4135 stop samples

**Simpson 4120 -2179**

4135 - 30 & 60 min. shale, green, waxy, with scattered sandstone, green/gray, fine to very fine grain, very argillaceous and pyritic, some micaceous, poor sorting, rounded to angular, well cemented in part, some black gilsonite, no odor or oil

**Simpson Sand 4137 -2196**

sandstone (beginning @ 3137'), gray, quartz, fine to very fine grain, fair sorting, sub-round to sub-angular, fairly friable, argillaceous, trace visible stain, each cluster contains good show heavy black oil, no odor or fluorescence, good cut

shale, green, some maroon and gray

**Arbuckle 4172 -2231**

4180-4200 sample all trip trash

samples clean up in 4210 sample - dolomite, cream to tan, mixed, crypto-fine crystalline, lithographic to sub-rhombic to oolitic/oomoldic, some chalky sandy present, some very fine oomoldic porosity, otherwise poor visible porosity, barren

dolomite a.a., increase in cryptocrystalline lithographic, white boney and light gray translucent cherts, marked increase from the up-hole sluff we've been carrying, no shows

dolomites, mixed, tan to cream, crypto-microcrystalline, mostly lithographic with oolitic, some sub-rhombic, scattered vuggy inter-oolite porosity, no shows

Solids 5.8%  
LCM 4#  
DMC \$1281.31  
CMC \$13404.04

624 units total kick

MudCo Mud Ck  
4128 ft  
12/2/21 0835 hrs  
Vis 56 Wt 9.2  
PV 18 YP 16  
pH 11.0 WL 9.6  
Cake 1/32  
Cl 9300 ppm  
Ca 5 ppm  
Solids 5.9%  
LCM 2#  
DMC \$626.50  
CMC \$14030.54

449 unit total kick

Total Gas (units) 800  
C1 (units) 800  
C2 (units) 800  
C3 (units) 800  
C4 (units) 800  
C5 (units) 800



