

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

Customer:  
 DARRAH OIL  
 C/O JOHN JAY DARRAH JR  
 PO BOX 2786  
 WICHITA, KS 67201-2786

Invoice Date: 10/4/2022  
 Invoice #: 0363826  
 Lease Name: Fanshier  
 Well #: 1-4  
 County: Stafford, Ks  
 Job Number: WP3461  
 District: Pratt

Date/Description	HRS/QTY	Rate	Total
Surface	0.000	0.000	0.00
H-325	225.000	22.500	5,062.50
Heavy Eq Mileage	80.000	4.000	320.00
Light Eq Mileage	40.000	2.000	80.00
Ton Mileage	424.000	1.500	636.00
Cement Blending & Mixing	225.000	1.400	315.00
Depth Charge 0'-500'	1.000	1,000.000	1,000.00
Cement Data Acquisition	1.000	250.000	250.00
Service Supervisor	1.000	275.000	275.00

**Total** 7,938.50

**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.

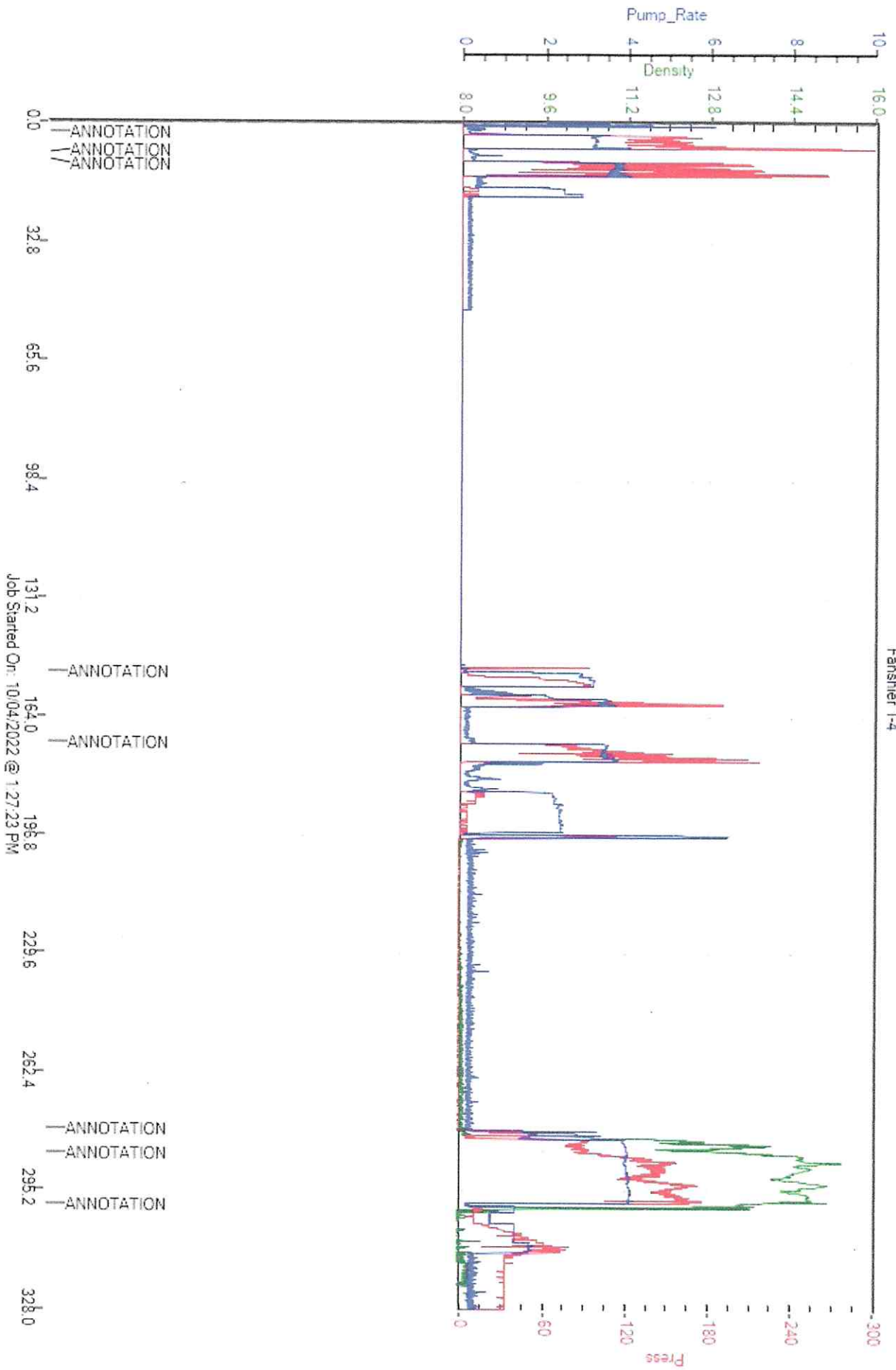
**SALES TAX:** Services performed on oil, gas and water wells in Kansas are subject to sales tax, with certain exceptions. HSI relies on the well information provided by the customer in identifying whether the services performed on wells qualify for exemption.

**WE APPRECIATE YOUR BUSINESS!**





Darrah  
Fanshler 1-4





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

Customer:  
 DARRAH OIL  
 C/O JOHN JAY DARRAH JR  
 PO BOX 2786  
 WICHITA, KS 67201-2786

Invoice Date: 10/11/2022  
 Invoice #: 0364015  
 Lease Name: Fanshier  
 Well #: 1-4  
 County: Stafford, Ks  
 Job Number: WP3479  
 District: Pratt

Date/Description	HRS/QTY	Rate	Total
Plug	0.000	0.000	0.00
H-Plug	210.000	14.000	2,940.00
Light Eq Mileage	40.000	2.000	80.00
Heavy Eq Mileage	80.000	4.000	320.00
Ton Mileage	362.000	1.500	543.00
Cement Blending & Mixing	210.000	1.400	294.00
Depth Charge 3001'-4000'	1.000	2,250.000	2,250.00
Cement Data Acquisition	1.000	250.000	250.00
Service Supervisor	1.000	275.000	275.00

Net Invoice	6,952.00
Sales Tax:	419.97
<b>Total</b>	<b>7,371.97</b>

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**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!**



Customer	DARRAH OIL COMPANY		Lease & Well #	FANSHIER 1-4		Date	10/11/2022	
Service District	PRATT		County & State	STAFFORD KS		Legals S/T/R	4-21S-13W	
Job Type	PLUG	<input checked="" type="checkbox"/> PROD	<input type="checkbox"/> INJ	<input type="checkbox"/> SWD	New Well?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> No	Job #
Equipment #	Driver	Job Safety Analysis - A Discussion of Hazards & Safety Procedures						

Equipment #	Driver	<input checked="" type="checkbox"/> Hard hat	<input checked="" type="checkbox"/> Gloves	<input type="checkbox"/> Lockout/Tagout	<input type="checkbox"/> Warning Signs & Flagging
912	MATTAL	<input checked="" type="checkbox"/> H2S Monitor	<input checked="" type="checkbox"/> Eye Protection	<input type="checkbox"/> Required Permits	<input type="checkbox"/> Fall Protection
179/521	CLIFTON	<input checked="" type="checkbox"/> Safety Footwear	<input type="checkbox"/> Respiratory Protection	<input type="checkbox"/> Slip/Trip/Fall Hazards	<input type="checkbox"/> Specific Job Sequence/Expectations
523/533	TREVINO	<input checked="" type="checkbox"/> FRC/Protective Clothing	<input type="checkbox"/> Additional Chemical/Acid PPE	<input type="checkbox"/> Overhead Hazards	<input type="checkbox"/> Muster Point/Medical Locations
		<input type="checkbox"/> Hearing Protection	<input type="checkbox"/> Fire Extinguisher	<input type="checkbox"/> Additional concerns or issues noted below	

**Comments**

Product/ Service Code	Description	Unit of Measure	Quantity	Net Amount
CP055	H-Plug A	sack	210.00	\$2,940.00
M015	Light Equipment Mileage	mi	40.00	\$80.00
M010	Heavy Equipment Mileage	mi	80.00	\$320.00
M020	Ton Mileage	tn	362.00	\$543.00
C060	Cement Blending & Mixing Service	sack	210.00	\$294.00
D014	Depth Charge: 3001'-4000'	job	1.00	\$2,250.00
C035	Cement Data Acquisition	job	1.00	\$250.00
R061	Service Supervisor	day	1.00	\$275.00

Customer Section: On the following scale how would you rate Hurricane Services Inc.?

Based on this job, how likely is it you would recommend HSI to a colleague?

Unlikely 1 2 3 4 5 6 7 8 9 10 Extremely Likely

Total Taxable	\$ -	Tax Rate:		Net:	\$6,952.00
				Sale Tax:	\$ -
				Total:	\$ 6,952.00

HSI Representative: *Mike Mattal*

**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 1/2% 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 Jim Dwell **CUSTOMER AUTHORIZATION SIGNATURE**



**CEMENT TREATMENT REPORT**

Customer:	DARRAH OIL COMPANY	Well:	FANSHIER 1-4	Ticket:	WP3479
City, State:	GREAT BEND KS	County:	STAFFORD KS	Date:	10/11/2022
Field Rep:		S-T-R:	4-21S-13W	Service:	PLUG

Downhole Information	
Hole Size:	in
Hole Depth:	ft
Casing Size:	in
Casing Depth:	ft
Tubing / Liner:	in
Depth:	ft
Tool / Packer:	
Tool Depth:	ft
Displacement:	bbls

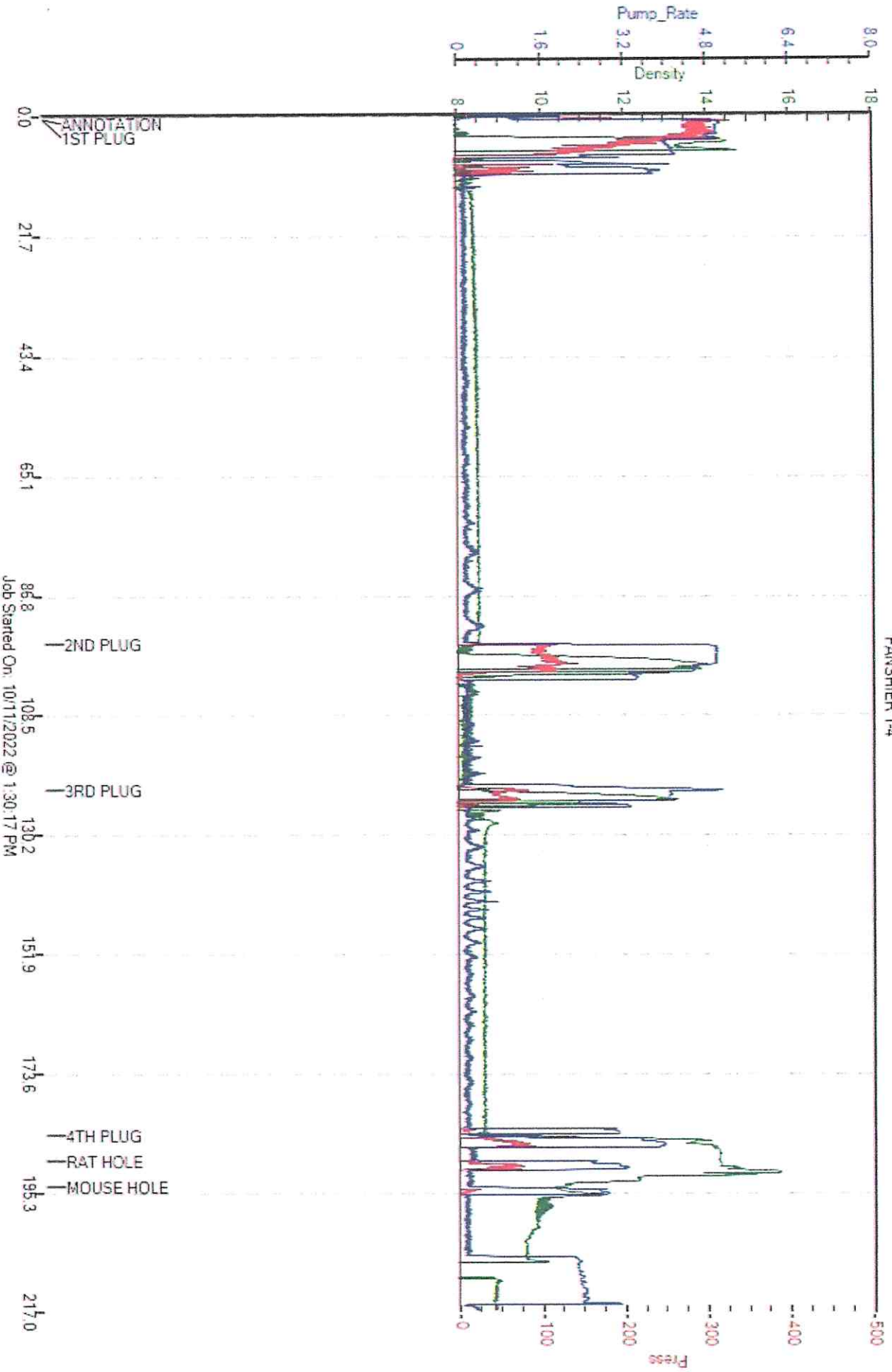
Calculated Slurry - Lead	
Blend:	H-PLUG
Weight:	13.8 ppg
Water / Sx:	6.9 gal / sx
Yield:	1.43 ft <sup>3</sup> / sx
Annular Bbls / Ft.:	bbs / ft.
Depth:	ft
Annular Volume:	0.0 bbls
Excess:	
Total Slurry:	53.5 bbls
Total Sacks:	210 sx

Calculated Slurry - Tail	
Blend:	
Weight:	ppg
Water / Sx:	gal / sx
Yield:	ft <sup>3</sup> / sx
Annular Bbls / Ft.:	bbs / ft.
Depth:	ft
Annular Volume:	0 bbls
Excess:	
Total Slurry:	0.0 bbls
Total Sacks:	#DIV/0! sx

TIME	RATE	PSI	STAGE BBLs	TOTAL BBLs	REMARKS
2:40 AM			-	-	ON LOCATION
				-	1ST PLUG AT 3500'
5:11 AM	5.0	290.0	20.0	20.0	PUMP 20 BBL WATER
5:15 AM	5.0	300.0	12.7	32.7	MIX 50 SKS H-PLUG
5:18 AM	5.0	150.0	5.0	37.7	PUMP 5 BBL WATER
5:23 AM	7.0	300.0	35.0	72.7	PUMP 35 BBL MUD
				72.7	2ND PLUG AT 780
6:45 AM	5.0	100.0	10.0	82.7	PUMP 10 BBL WATER
6:48 AM	5.0	100.0	12.7	95.4	MIX 50 SKS H-PLUG
6:50 AM	3.0	40.0	3.0	98.4	PUMP 3 BBL WATER
7:10 AM	5.0	100.0	3.0	101.4	3RD PLUG AT 270' PUMP 5 BBL WATER
7:12 AM	5.0	100.0	10.0	111.4	MIKX 40 SKS H-PLUG
7:15 AM	3.0	25.0	0.5	111.9	PUMP .5 BBL WATER
				111.9	4TH PLUG AT 50'
8:10 AM	2.0	25.0	5.0	116.9	MIX 20 SKS H-PLUG
				116.9	CEMENT TO SURFACE
8:15 AM	2.0	25.0	7.0	123.9	MIX 30 SKS H-PLUG FOR RAT HOLE
8:20 AM	2.0	25.0	5.0	128.9	MIX 20 SKS H-PLUG FOR MOUSE HOLE
				-	
				-	
				-	
				-	JOB COMPLETE, THANK YOU!
				-	MIKE MATTAL
				-	AUSTIN & JOSE
				-	
				-	

CREW		UNIT	SUMMARY		
Cementer:	MATTAL	912	Average Rate	Average Pressure	Total Fluid
Pump Operator:	CLIFTON	179/521	4.2 bpm	122 psi	129 bbls
Bulk #1:	TREVINO	523/533			
Bulk #2:					

DARRAH  
FANSHIER 1-4





## DRILL STEM TEST REPORT

Prepared For: **Darrah Oil Company**

125N Market STE 1425  
Wichita, KS 67202

ATTN: Jim, Musgrove

### **Fanshier #1-4**

#### **4-21S-13W/ Stafford,KS**

Start Date: 2022.10.07 @ 13:04:00

End Date: 2022.10.07 @ 22:40:30

Job Ticket #: 65066                      DST #: 1

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

Printed: 2022.10.14 @ 09:21:26

Darrah Oil Company  
4-21S-13W/ Stafford,KS  
Fanshier #1-4  
DST # 1  
2022.10.07



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Darrah Oil Company  
125N Market STE 1425  
Wichita, KS 67202  
ATTN: Jim, Musgrove

**4-21S-13W/ Stafford,KS**  
**Fanshier #1-4**  
Job Ticket: 65066 **DST#: 1**  
Test Start: 2022.10.07 @ 13:04:00

## GENERAL INFORMATION:

Formation:

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:18:30

Time Test Ended: 22:40:30

**Interval: 3307.00 ft (KB) To 3396.00 ft (KB) (TVD)**

Total Depth: 3396.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Test Type: Conventional Bottom Hole (Initial)

Tester: Richard Samora

Unit No: 66

Reference Elevations: 1901.00 ft (KB)

1888.00 ft (CF)

KB to GR/CF: 13.00 ft

## Serial #: 8355

Press@RunDepth: 307.92 psig @ ft (KB)

Start Date: 2022.10.07 End Date: 2022.10.07

Start Time: 13:04:05 End Time: 22:40:30

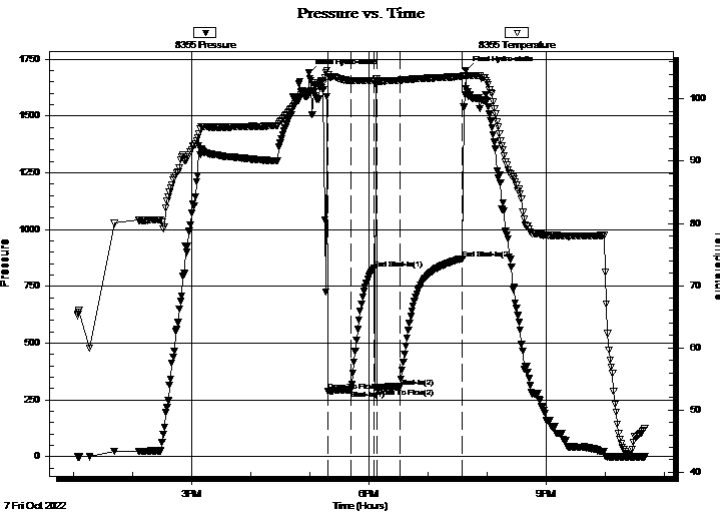
Capacity: 8000.00 psig

Last Calib.: 1899.12.30

Time On Btm: 2022.10.07 @ 16:58:45

Time Off Btm: 2022.10.07 @ 19:38:00

**TEST COMMENT:** IF:Weak blow built to half inch  
IS:No blow back  
FF: flushed tool Strong blow BOB Built to 15"  
FS:Blow back built to 4"



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1688.31	100.86	Initial Hydro-static
20	286.89	103.91	Open To Flow (1)
43	294.34	103.01	Shut-In(1)
66	828.46	103.02	End Shut-In(1)
69	303.35	102.91	Open To Flow (2)
93	307.92	103.02	Shut-In(2)
156	871.91	103.62	End Shut-In(2)
160	1700.63	103.80	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
63.00	OSM 10%O 90%M	0.88
252.00	GOSM 30%G 5%O 65%M	3.53
252.00	Mud 100%M	3.53

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Darrah Oil Company

**4-21S-13W/ Stafford,KS**

125N Market STE 1425  
Wichita, KS 67202

**Fanshier #1-4**

Job Ticket: 65066

**DST#: 1**

ATTN: Jim, Musgrove

Test Start: 2022.10.07 @ 13:04:00

## Tool Information

Drill Pipe:	Length: 3311.00 ft	Diameter: 3.80 inches	Volume: 46.44 bbl	Tool Weight: 2100.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 3.25 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 55000.00 lb
			<u>Total Volume: 46.44 bbl</u>	Tool Chased 13.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	3307.00 ft			Final 51000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	89.02 ft			
Tool Length:	115.02 ft			
Number of Packers:	2	Diameter: 675.00 inches		
Tool Comments:				

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	4.00			3285.00	
Hydraulic tool	4.00			3289.00	
Sampler	4.00			3293.00	
EM	5.00			3298.00	
Safety Joint	2.00			3300.00	
Packer	4.00			3304.00	26.00 Bottom Of Top Packer
Packer	3.00			3307.00	
Stubb	1.00			3308.00	
Perforations	5.00			3313.00	
Change Over Sub	1.00			3314.00	
Drill Pipe	63.00			3377.00	
Change Over Sub	1.00			3378.00	
Recorder Carrier	5.00			3383.00	
Recorder	0.01	6839	Inside	3383.01	
Recorder	0.01	8355	Outside	3383.02	
Perforations	10.00			3393.02	
Bullnose	3.00			3396.02	89.02 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>115.02</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Darrah Oil Company

**4-21S-13W/ Stafford,KS**

125N Market STE 1425  
Wichita, KS 67202

**Fanshier #1-4**

Job Ticket: 65066

**DST#: 1**

ATTN: Jim, Musgrove

Test Start: 2022.10.07 @ 13:04:00

### 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:

ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.57 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 0.20 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
63.00	OSM 10%O 90%M	0.884
252.00	GOSM 30%G 5%O 65%M	3.535
252.00	Mud 100%M	3.535

Total Length: 567.00 ft

Total Volume: 7.954 bbl

Num Fluid Samples: 0

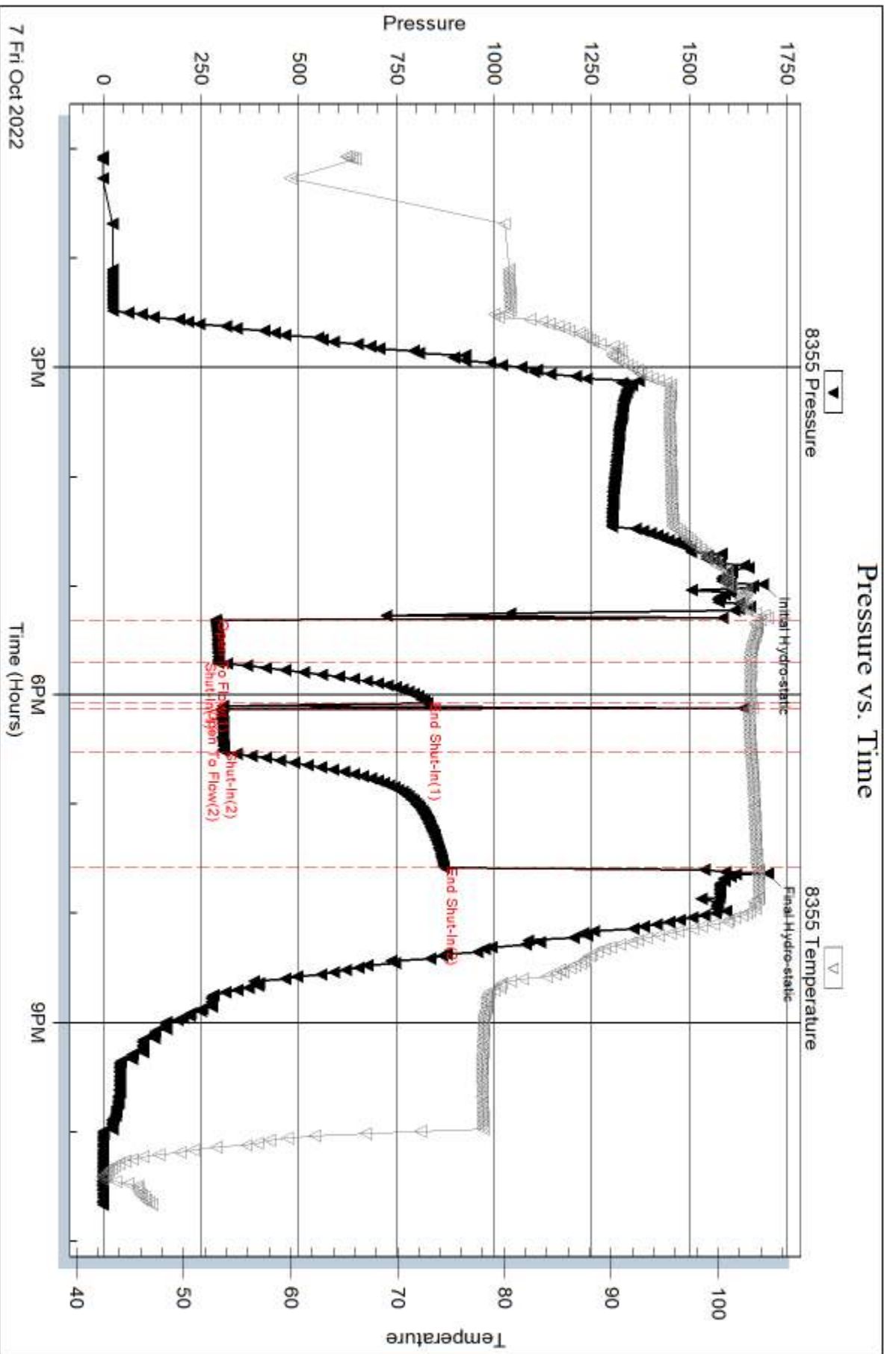
Num Gas Bombs: 0

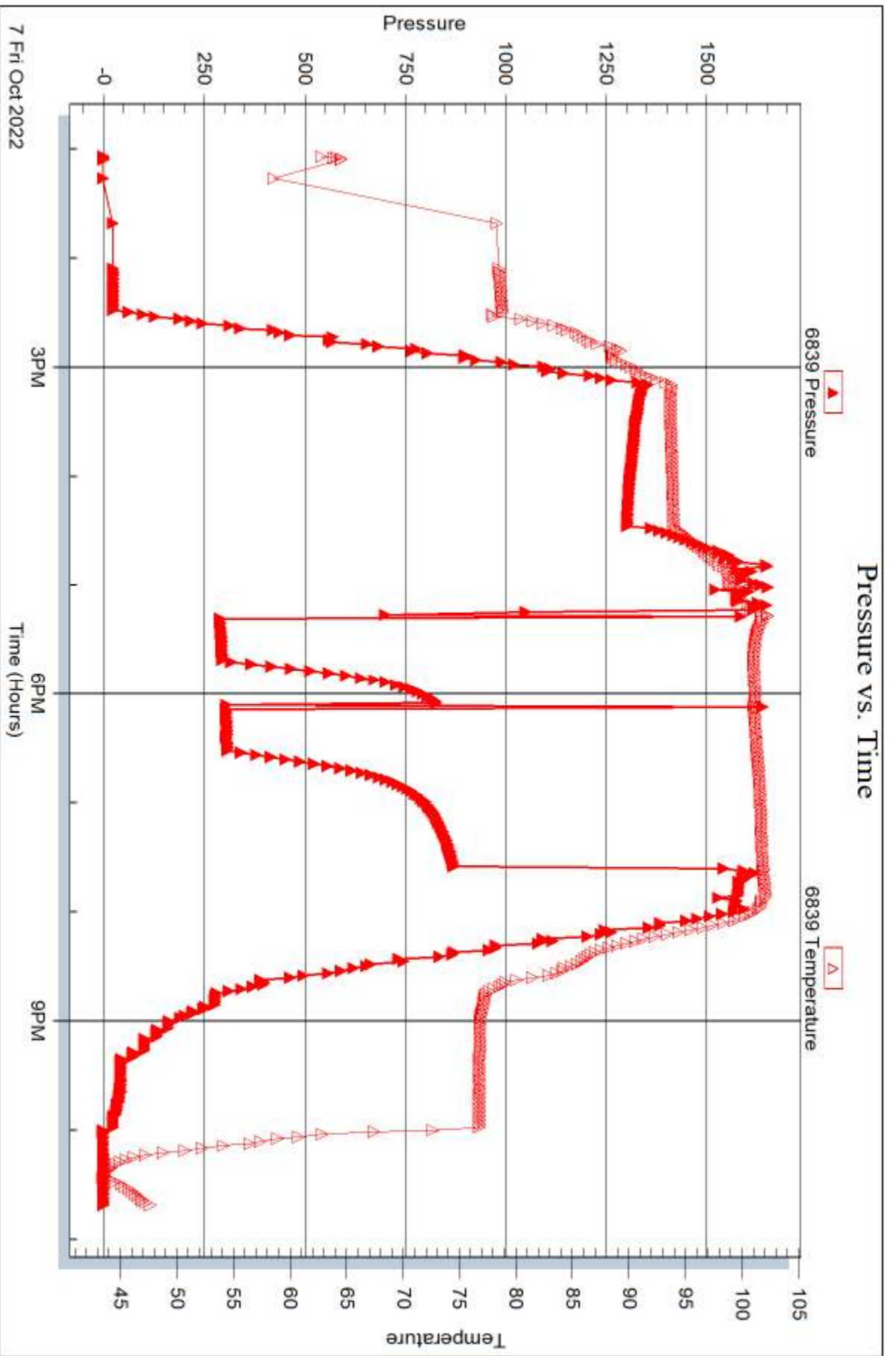
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







## DRILL STEM TEST REPORT

Prepared For: **Darrah Oil Company**

125N Market STE 1425  
Wichita, KS 67202

ATTN: Jim, Musgrove

### **Fanshier #1-4**

#### **4-21S-13W/ Stafford,KS**

Start Date: 2022.10.08 @ 14:50:00

End Date: 2022.10.08 @ 21:31:00

Job Ticket #: 65067                      DST #: 2

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

Printed: 2022.10.14 @ 09:20:58



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Darrah Oil Company  
125N Market STE 1425  
Wichita, KS 67202  
ATTN: Jim, Musgrove

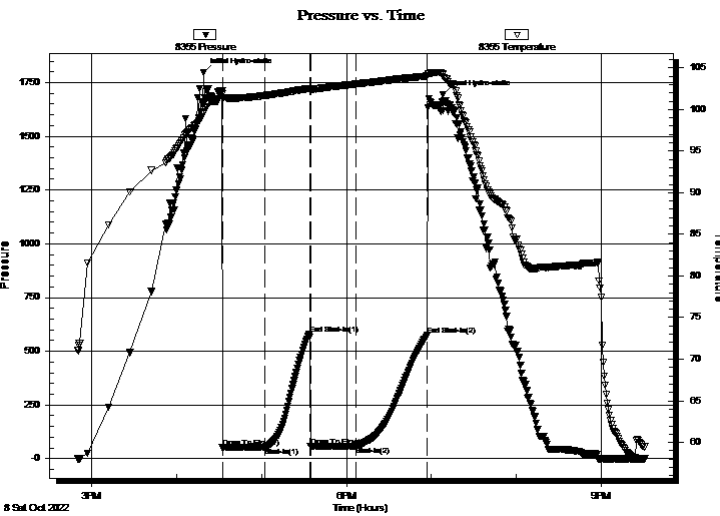
**4-21S-13W/ Stafford,KS**  
**Fanshier #1-4**  
Job Ticket: 65067      **DST#: 2**  
Test Start: 2022.10.08 @ 14:50:00

## GENERAL INFORMATION:

Formation: **H-L**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 16:32:15  
Time Test Ended: 21:31:00  
Interval: **3428.00 ft (KB) To 3532.00 ft (KB) (TVD)**  
Total Depth: 3396.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Good  
Reference Elevations: 1901.00 ft (KB)  
1888.00 ft (CF)  
KB to GR/CF: 13.00 ft  
Test Type: Conventional Bottom Hole (Reset)  
Tester: Richard Samora  
Unit No: 66

**Serial #: 8355      Outside**  
Press@RunDepth: 57.95 psig @ 3506.02 ft (KB)      Capacity: 8000.00 psig  
Start Date: 2022.10.08      End Date: 2022.10.08      Last Calib.: 1899.12.30  
Start Time: 14:50:05      End Time: 21:30:59      Time On Btm: 2022.10.08 @ 16:19:15  
Time Off Btm: 2022.10.08 @ 19:08:15

## TEST COMMENT:



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1797.37	99.55	Initial Hydro-static
13	51.56	101.41	Open To Flow (1)
43	54.43	101.67	Shut-In(1)
75	579.83	102.51	End Shut-In(1)
76	56.19	102.37	Open To Flow (2)
108	57.95	103.05	Shut-In(2)
158	572.98	104.01	End Shut-In(2)
169	1692.88	104.25	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Darrah Oil Company

**4-21S-13W/ Stafford,KS**

125N Market STE 1425  
Wichita, KS 67202

**Fanshier #1-4**

Job Ticket: 65067

**DST#: 2**

ATTN: Jim, Musgrove

Test Start: 2022.10.08 @ 14:50:00

## Tool Information

Drill Pipe:	Length: 3409.00 ft	Diameter: 3.80 inches	Volume: 47.82 bbl	Tool Weight:	2100.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 3.25 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	51000.00 lb
			<u>Total Volume: 47.82 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	7.00 ft			String Weight: Initial	49000.00 lb
Depth to Top Packer:	3428.00 ft			Final	49000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	104.02 ft				
Tool Length:	130.02 ft				
Number of Packers:	2	Diameter: 675.00 inches			
Tool Comments:					

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	4.00			3406.00	
Hydraulic tool	4.00			3410.00	
Sampler	4.00			3414.00	
EM	5.00			3419.00	
Safety Joint	2.00			3421.00	
Packer	4.00			3425.00	26.00 Bottom Of Top Packer
Packer	3.00			3428.00	
Stubb	1.00			3429.00	
Perforations	7.00			3436.00	
Change Over Sub	1.00			3437.00	
Drill Pipe	63.00			3500.00	
Change Over Sub	1.00			3501.00	
Recorder Carrier	5.00			3506.00	
Recorder	0.01	6839	Inside	3506.01	
Recorder	0.01	8355	Outside	3506.02	
Perforations	23.00			3529.02	
Bullnose	3.00			3532.02	104.02 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>130.02</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Darrah Oil Company

**4-21S-13W/ Stafford,KS**

125N Market STE 1425  
Wichita, KS 67202

**Fanshier #1-4**

Job Ticket: 65067

**DST#: 2**

ATTN: Jim, Musgrove

Test Start: 2022.10.08 @ 14:50:00

### 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:

ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.57 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 0.20 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbbl

Total Length:                      ft

Total Volume:                      bbl

Num Fluid Samples: 0

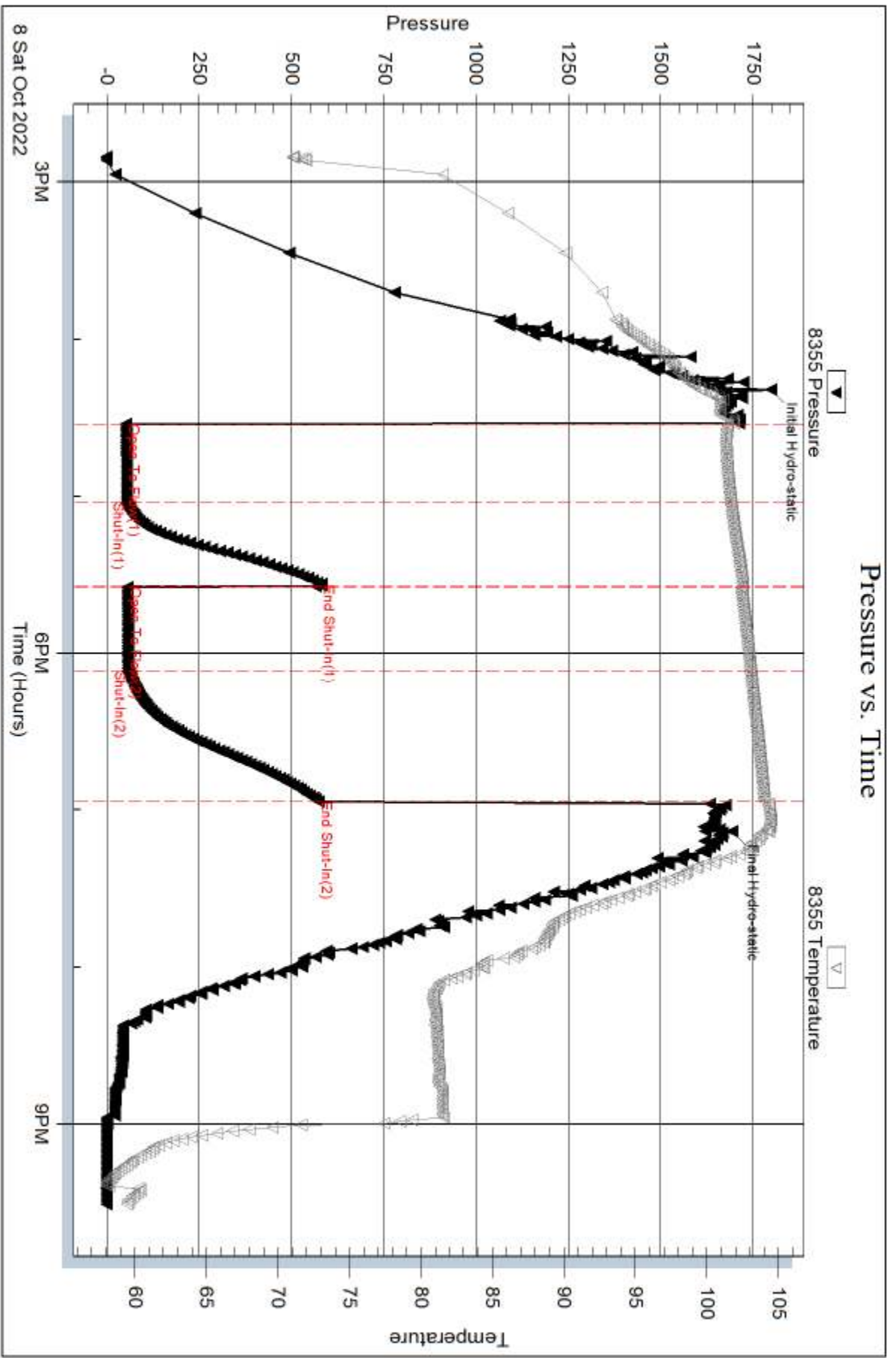
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



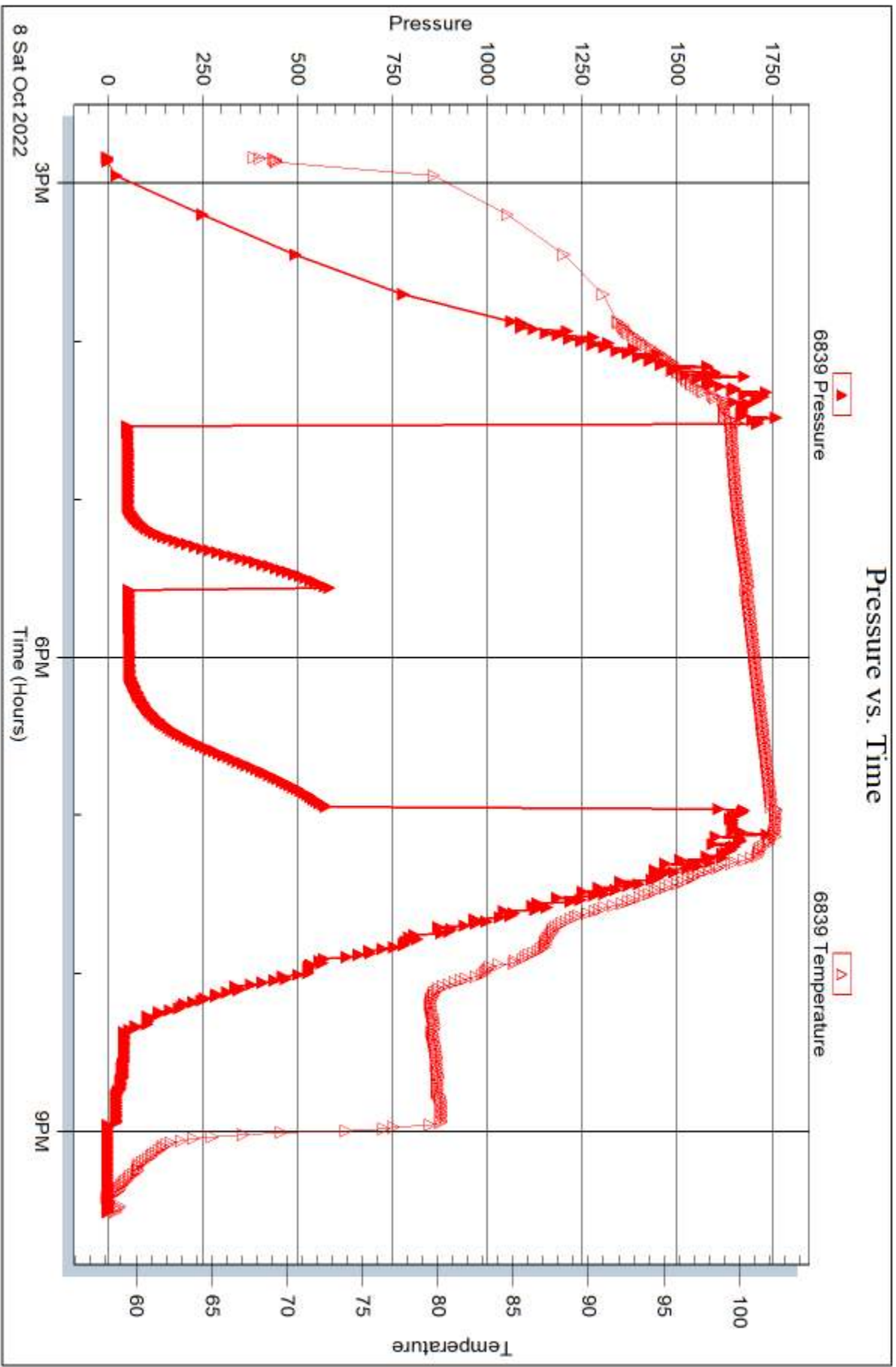
Serial #: 6839

Inside

Darrah Oil Company

Fanshier #1-4

DST Test Number: 2





## DRILL STEM TEST REPORT

Prepared For: **Darrah Oil Company**

125N Market STE 1425  
Wichita, KS 67202

ATTN: Jim, Musgrove

### **Fanshier #1-4**

#### **4-21S-13W/ Stafford,KS**

Start Date: 2022.10.09 @ 05:09:00

End Date: 2022.10.09 @ 11:17:45

Job Ticket #: 65068                      DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2022.10.14 @ 09:20:16



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Darrah Oil Company  
125N Market STE 1425  
Wichita, KS 67202  
ATTN: Jim, Musgrove

**4-21S-13W/ Stafford,KS**  
**Fanshier #1-4**  
Job Ticket: 65068 **DST#: 3**  
Test Start: 2022.10.09 @ 05:09:00

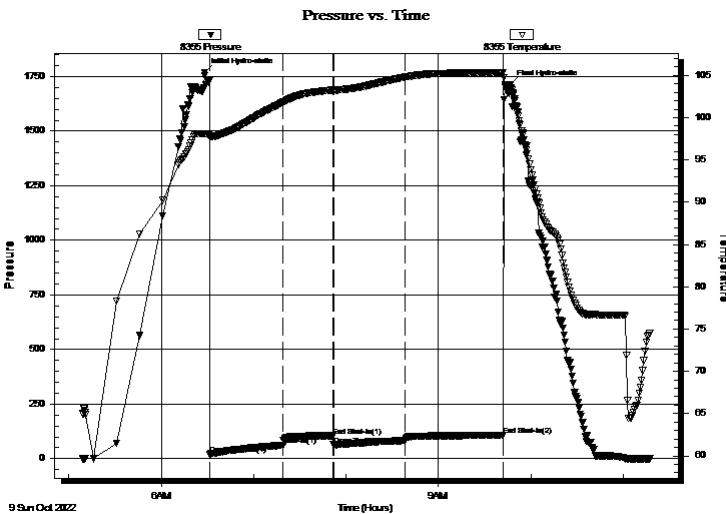
## GENERAL INFORMATION:

Formation: **Conglomerate**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 06:31:45  
Time Test Ended: 11:17:45  
Interval: **3524.00 ft (KB) To 3562.00 ft (KB) (TVD)**  
Total Depth: 3562.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Good  
Test Type: Conventional Bottom Hole (Reset)  
Tester: Richard Samora  
Unit No: 66  
Reference Elevations: 1901.00 ft (KB)  
1888.00 ft (CF)  
KB to GR/CF: 13.00 ft

**Serial #: 8355 Outside**  
Press@RunDepth: 83.27 psig @ 3536.02 ft (KB) Capacity: 8000.00 psig  
Start Date: 2022.10.09 End Date: 2022.10.09 Last Calib.: 1899.12.30  
Start Time: 05:09:05 End Time: 11:17:44 Time On Btm: 2022.10.09 @ 06:28:15  
Time Off Btm: 2022.10.09 @ 09:46:30

**TEST COMMENT:** 45-IF: Fair blow built to 9.24"  
30-ISI: No blow back  
45-FF: Fair Blow built to 4"  
60-FSI: No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1768.71	98.14	Initial Hydro-static
4	20.70	97.69	Open To Flow (1)
51	62.90	101.84	Shut-In(1)
84	104.56	103.26	End Shut-In(1)
84	63.11	103.25	Open To Flow (2)
131	83.27	104.80	Shut-In(2)
194	106.41	105.35	End Shut-In(2)
199	1712.35	103.80	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
65.00	WM 70%W 30%M	0.91
85.00	MW 60%W 40%M	1.19

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Darrah Oil Company

**4-21S-13W/ Stafford,KS**

125N Market STE 1425  
Wichita, KS 67202

**Fanshier #1-4**

Job Ticket: 65068

**DST#: 3**

ATTN: Jim, Musgrove

Test Start: 2022.10.09 @ 05:09:00

## Tool Information

Drill Pipe:	Length: 3503.00 ft	Diameter: 3.80 inches	Volume: 49.14 bbl	Tool Weight:	2100.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 3.25 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	59000.00 lb
			<u>Total Volume: 49.14 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial	50000.00 lb
Depth to Top Packer:	3524.00 ft			Final	50500.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	38.02 ft				
Tool Length:	64.02 ft				
Number of Packers:	2	Diameter: 6.75 inches			
Tool Comments:					

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	4.00			3502.00	
Hydraulic tool	4.00			3506.00	
Sampler	4.00			3510.00	
EM	5.00			3515.00	
Safety Joint	2.00			3517.00	
Packer	4.00			3521.00	26.00 Bottom Of Top Packer
Packer	3.00			3524.00	
Stubb	1.00			3525.00	
Perforations	6.00			3531.00	
Recorder Carrier	5.00			3536.00	
Recorder	0.01	6839	Inside	3536.01	
Recorder	0.01	8355	Outside	3536.02	
Perforations	23.00			3559.02	
Bullnose	3.00			3562.02	38.02 Bottom Packers & Anchor

**Total Tool Length: 64.02**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Darrah Oil Company

**4-21S-13W/ Stafford,KS**

125N Market STE 1425  
Wichita, KS 67202

**Fanshier #1-4**

Job Ticket: 65068

**DST#: 3**

ATTN: Jim, Musgrove

Test Start: 2022.10.09 @ 05:09:00

### 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:

ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.57 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 0.20 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
65.00	WM 70%W 30%M	0.912
85.00	MW 60%W 40%M	1.192

Total Length: 150.00 ft

Total Volume: 2.104 bbl

Num Fluid Samples: 0

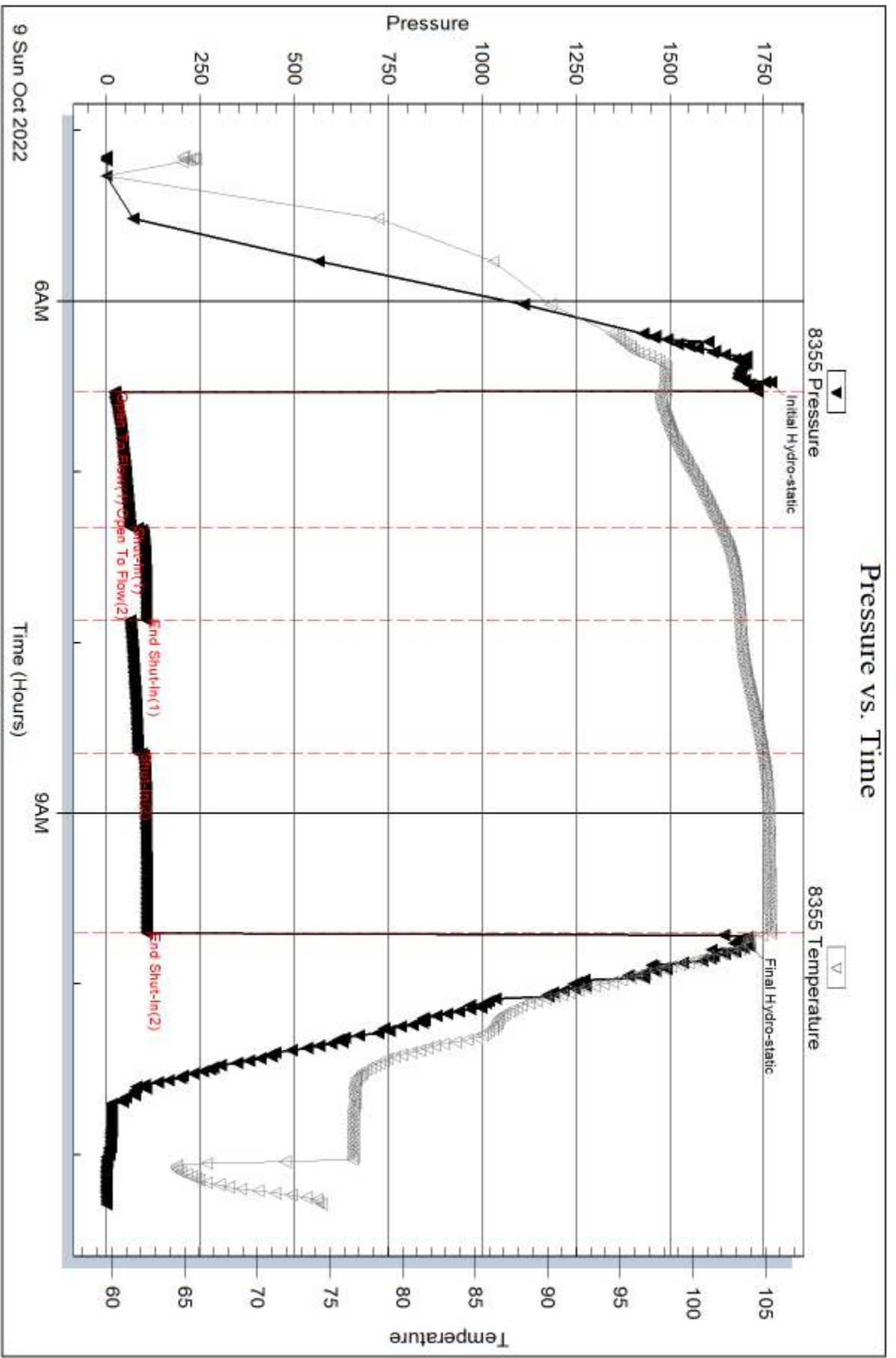
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



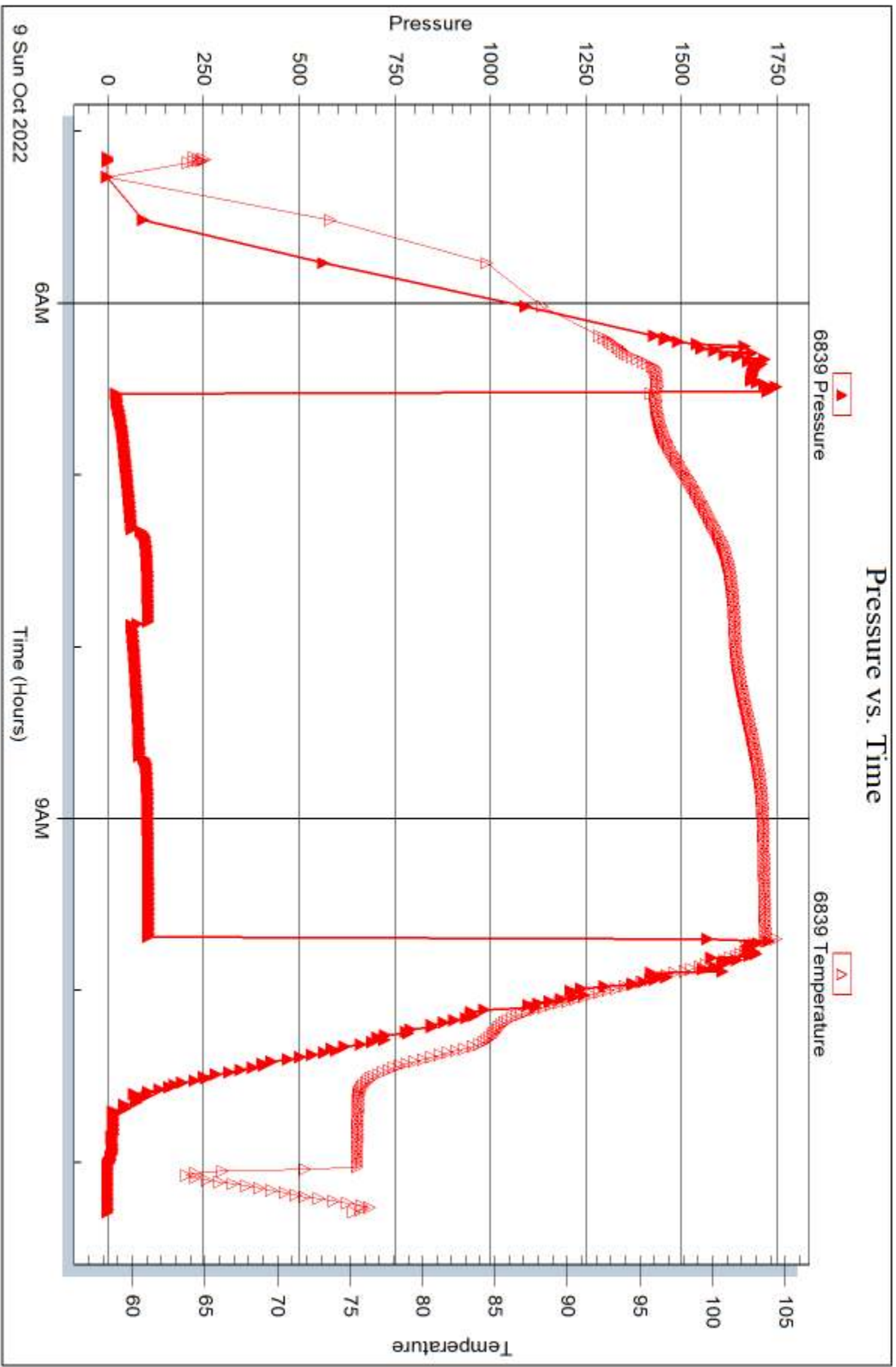
Serial #: 6839

Inside

Darrah Oil Company

Fanshier #1-4

DST Test Number: 3





## DRILL STEM TEST REPORT

Prepared For: **Darrah Oil Company**

125N Market STE 1425  
Wichita, KS 67202

ATTN: Jim, Musgrove

### **Fanshier #1-4**

#### **4-21S-13W/ Stafford,KS**

Start Date: 2022.10.09 @ 22:58:00

End Date: 2022.10.10 @ 04:23:15

Job Ticket #: 65069                      DST #: 4

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

Printed: 2022.10.14 @ 09:19:32



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Darrah Oil Company  
125N Market STE 1425  
Wichita, KS 67202  
ATTN: Jim, Musgrove

**4-21S-13W/ Stafford,KS**  
**Fanshier #1-4**  
Job Ticket: 65069 **DST#: 4**  
Test Start: 2022.10.09 @ 22:58:00

## GENERAL INFORMATION:

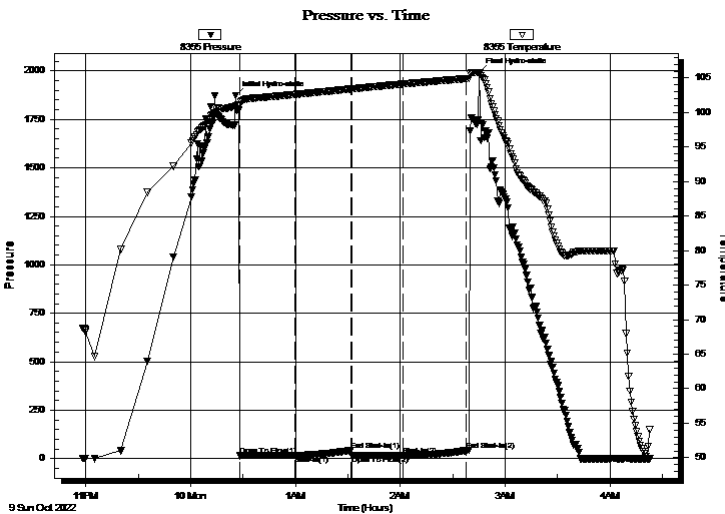
Formation: **Arbuckle**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 00:28:00  
Time Test Ended: 04:23:15  
Interval: **3617.00 ft (KB) To 3629.00 ft (KB) (TVD)**  
Total Depth: 3396.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Good  
Test Type: Conventional Bottom Hole (Reset)  
Tester: Richard Samora  
Unit No: 66  
Reference Elevations: 1901.00 ft (KB)  
1888.00 ft (CF)  
KB to GR/CF: 13.00 ft

## Serial #: 8355

Press@RunDepth: 16.18 psig @ ft (KB) Capacity: 8000.00 psig  
Start Date: 2022.10.09 End Date: 2022.10.10 Last Calib.: 1899.12.30  
Start Time: 22:58:05 End Time: 04:23:14 Time On Btm: 2022.10.10 @ 00:25:45  
Time Off Btm: 2022.10.10 @ 02:45:15

TEST COMMENT: 30-IF: Weak surface blow built to .5"  
30-ISI: No blow back  
30-FF: No blow  
30-ISI: No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1873.04	100.97	Initial Hydro-static
3	14.68	101.01	Open To Flow (1)
34	16.11	102.62	Shut-In(1)
66	42.11	103.41	End Shut-In(1)
67	15.22	103.42	Open To Flow (2)
96	16.18	104.13	Shut-In(2)
132	41.53	104.90	End Shut-In(2)
140	1992.41	105.65	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
3.00	mud	0.04

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Darrah Oil Company  
125N Market STE 1425  
Wichita, KS 67202  
ATTN: Jim, Musgrove

**4-21S-13W/ Stafford,KS**  
**Fanshier #1-4**  
Job Ticket: 65069      **DST#: 4**  
Test Start: 2022.10.09 @ 22:58:00

**Tool Information**

Drill Pipe:	Length: 3629.00 ft	Diameter: 3.80 inches	Volume: 50.91 bbl	Tool Weight: 2100.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 3.25 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 53000.00 lb
		Total Volume: 50.91 bbl		Tool Chased 0.00 ft
Drill Pipe Above KB:	29.00 ft			String Weight: Initial 51000.00 lb
Depth to Top Packer:	3617.00 ft			Final 51000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	12.00 ft			
Tool Length:	29.00 ft			
Number of Packers:	2	Diameter: 675.00 inches		

Tool Comments: tool still on walk possible straddle after log

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Shut In Tool	3.00			3603.00	
Hydraulic tool	4.00			3607.00	
EM	3.00			3610.00	
Safety Joint	1.00			3611.00	
Packer	3.00			3614.00	17.00      Bottom Of Top Packer
Packer	3.00			3617.00	
Stubb	1.00			3618.00	
Recorder Carrier	5.00			3623.00	
Recorder	0.00		Outside	3623.00	
Recorder	0.00		Outside	3623.00	
Perforations	3.00			3626.00	
Bullnose	3.00			3629.00	12.00      Bottom Packers & Anchor

**Total Tool Length: 29.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Darrah Oil Company

**4-21S-13W/ Stafford,KS**

125N Market STE 1425  
Wichita, KS 67202

**Fanshier #1-4**

Job Ticket: 65069

**DST#: 4**

ATTN: Jim, Musgrove

Test Start: 2022.10.09 @ 22:58:00

### 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:

ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.37 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5000.00 ppm

Filter Cake: 0.20 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
3.00	mud	0.042

Total Length: 3.00 ft      Total Volume: 0.042 bbl

Num Fluid Samples: 0

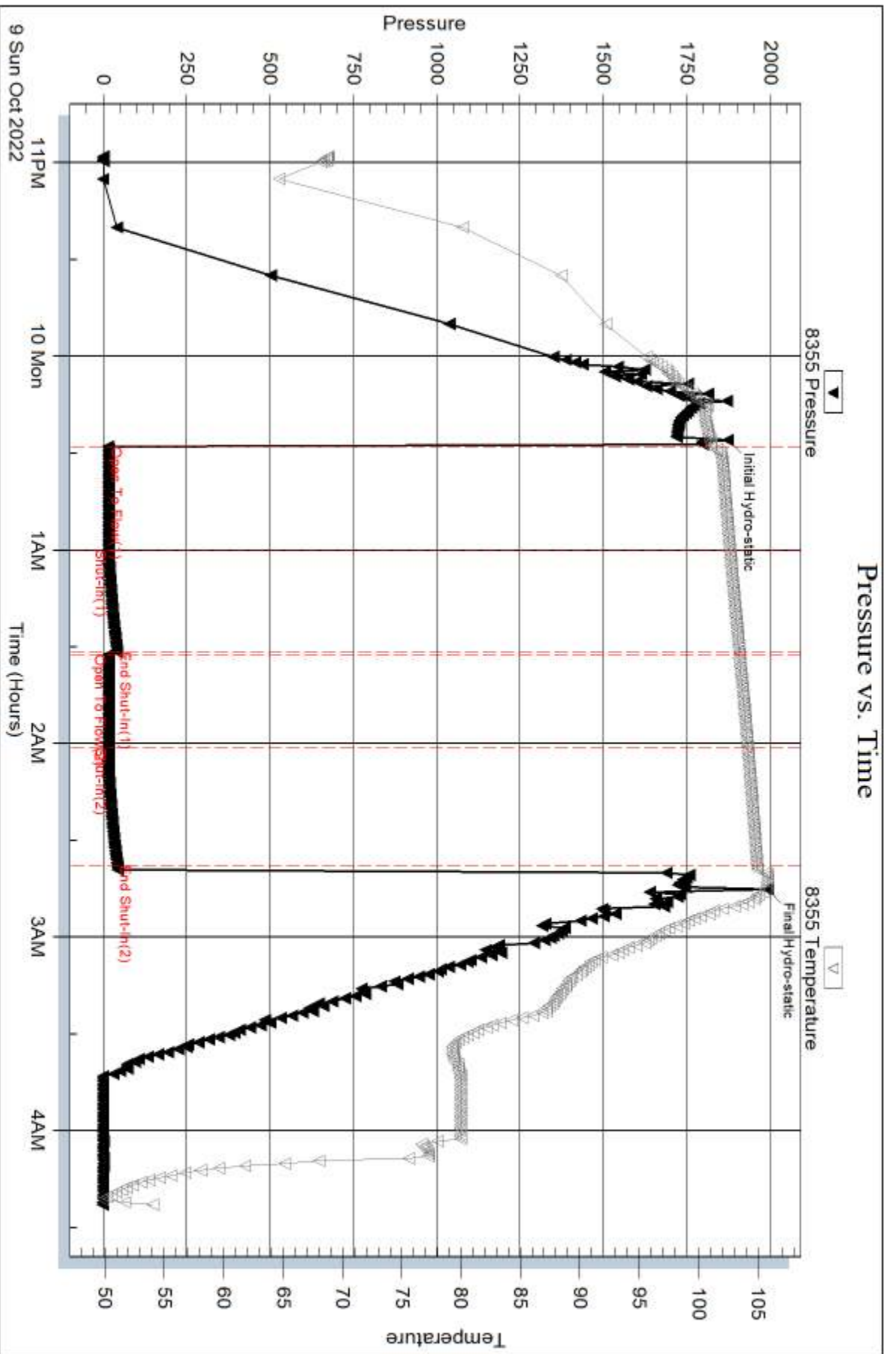
Num Gas Bombs: 0

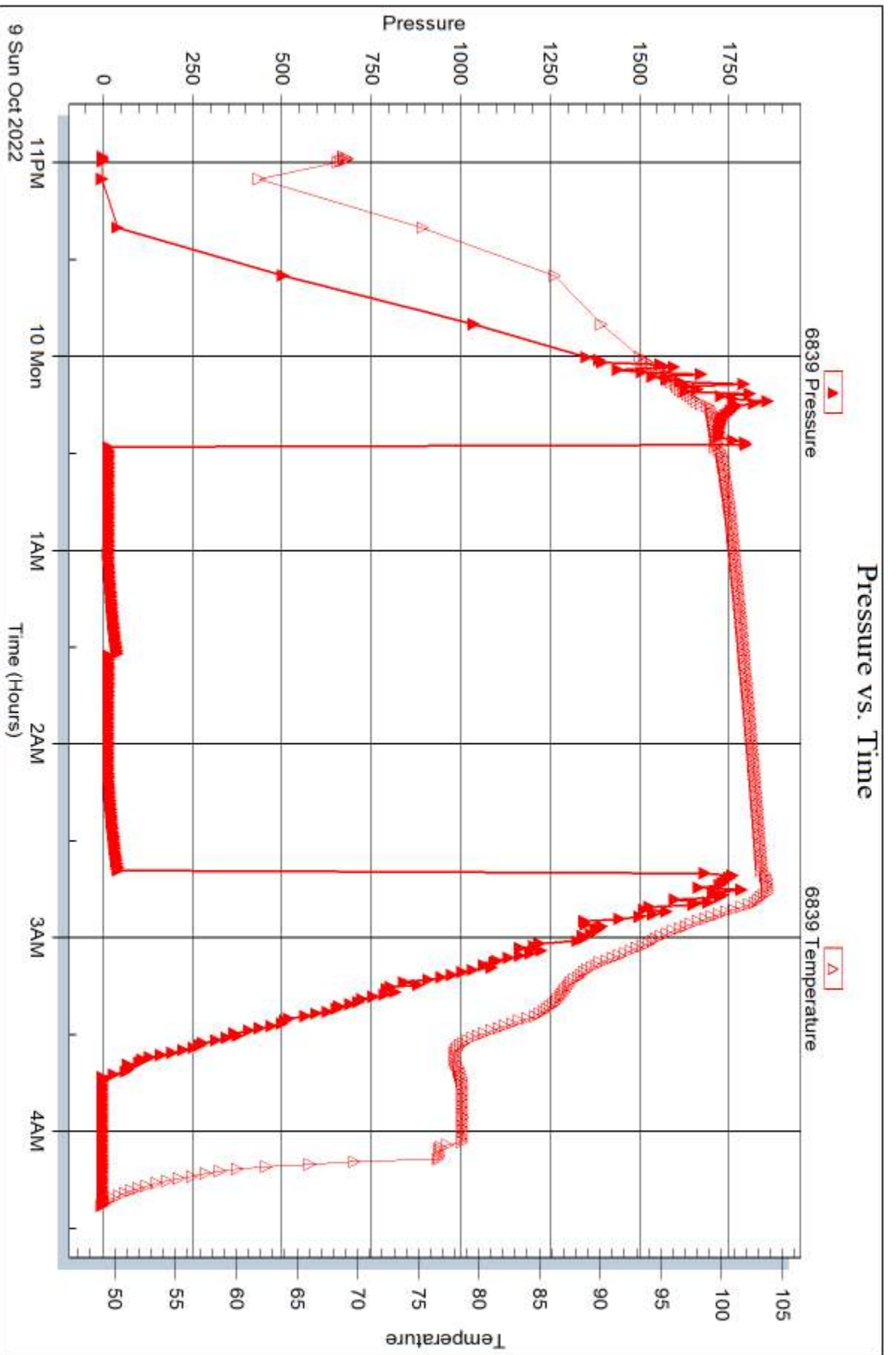
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







## DRILL STEM TEST REPORT

Prepared For: **Darrah Oil Company**

125N Market STE 1425  
Wichita, KS 67202

ATTN: Jim, Musgrove

### **Fanshier #1-4**

#### **4-21S-13W/ Stafford,KS**

Start Date: 2022.10.10 @ 18:39:00

End Date: 2022.10.10 @ 23:50:45

Job Ticket #: 65070                      DST #: 5

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

Printed: 2022.10.14 @ 09:17:49



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Darrah Oil Company  
125N Market STE 1425  
Wichita, KS 67202  
ATTN: Jim, Musgrove

**4-21S-13W/ Stafford,KS**

**Fanshier #1-4**

Job Ticket: 65070

**DST#: 5**

Test Start: 2022.10.10 @ 18:39:00

## GENERAL INFORMATION:

Formation: **LKC**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 19:59:15  
 Time Test Ended: 23:50:45  
 Interval: **3390.00 ft (KB) To 3424.00 ft (KB) (TVD)**  
 Total Depth: 3396.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Straddle (Reset)  
 Tester: Richard Samora  
 Unit No: 66  
 Reference Elevations: 1901.00 ft (KB)  
 1888.00 ft (CF)  
 KB to GR/CF: 13.00 ft

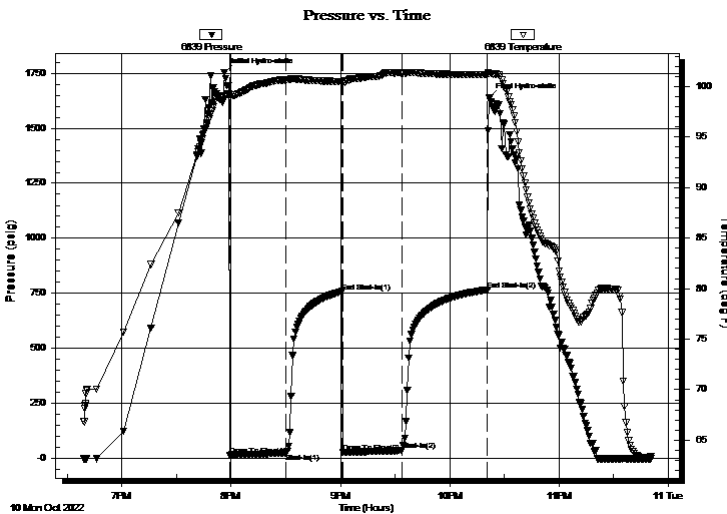
## Serial #: 6839

Inside

Press@RunDepth: 36.28 psig @ 3396.01 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2022.10.10 End Date: 2022.10.10 Last Calib.: 2022.10.10  
 Start Time: 18:39:05 End Time: 23:50:44 Time On Btm: 2022.10.10 @ 19:56:15  
 Time Off Btm: 2022.10.10 @ 22:21:45

TEST COMMENT: 30-IF: Fair blow built to 3"  
 30-ISI: No blow back  
 30-FF: Fair blow built to 2.3"  
 45-FSI: No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1753.46	99.05	Initial Hydro-static
3	15.07	98.93	Open To Flow (1)
34	25.15	100.67	Shut-In(1)
65	758.40	100.52	End Shut-In(1)
66	28.42	100.28	Open To Flow (2)
98	36.28	101.34	Shut-In(2)
145	766.48	101.19	End Shut-In(2)
146	1637.66	101.30	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	mud	0.07

\* Recovery from multiple tests

## Gas Rates

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







**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Darrah Oil Company

**4-21S-13W/ Stafford,KS**

125N Market STE 1425  
Wichita, KS 67202

**Fanshier #1-4**

Job Ticket: 65070

**DST#: 5**

ATTN: Jim, Musgrove

Test Start: 2022.10.10 @ 18:39:00

## Tool Information

Drill Pipe:	Length: 3373.00 ft	Diameter: 3.80 inches	Volume: 47.31 bbl	Tool Weight:	2100.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 3.25 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	61000.00 lb
			<u>Total Volume: 47.31 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial	54000.00 lb
Depth to Top Packer:	3390.00 ft			Final	54000.00 lb
Depth to Bottom Packer:	3424.02 ft				
Interval between Packers:	34.02 ft				
Tool Length:	337.02 ft				
Number of Packers:	3	Diameter: 6.75 inches			
Tool Comments:					

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Shut In Tool	4.00			3371.00	
Hydraulic tool	4.00			3375.00	
Sampler	4.00			3379.00	
EM	5.00			3384.00	
Safety Joint	2.00			3386.00	
Packer	4.00			3390.00	23.00 Bottom Of Top Packer
Stubb	1.00			3391.00	
HS	5.00			3396.00	
Recorder	0.01	6839	Inside	3396.01	
Recorder	0.01	8355	Outside	3396.02	
Perforations	27.00			3423.02	
Blank Off Sub	1.00			3424.02	34.02 Tool Interval
Packer	5.00			3429.02	
Packer - Shale	7.00			3436.02	
Stubb	1.00			3437.02	
Change Over Sub	1.00			3438.02	
Recorder	0.00	8289	Below	3438.02	
Drill Pipe	252.00			3690.02	
Change Over Sub	1.00			3691.02	
Perforations	10.00			3701.02	
Bullnose	3.00			3704.02	280.00 Bottom Packers & Anchor

**Total Tool Length: 337.02**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Darrah Oil Company

**4-21S-13W/ Stafford,KS**

125N Market STE 1425  
Wichita, KS 67202

**Fanshier #1-4**

Job Ticket: 65070

**DST#: 5**

ATTN: Jim, Musgrove

Test Start: 2022.10.10 @ 18:39:00

### 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:

ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.57 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 0.20 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	mud	0.070

Total Length: 5.00 ft      Total Volume: 0.070 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

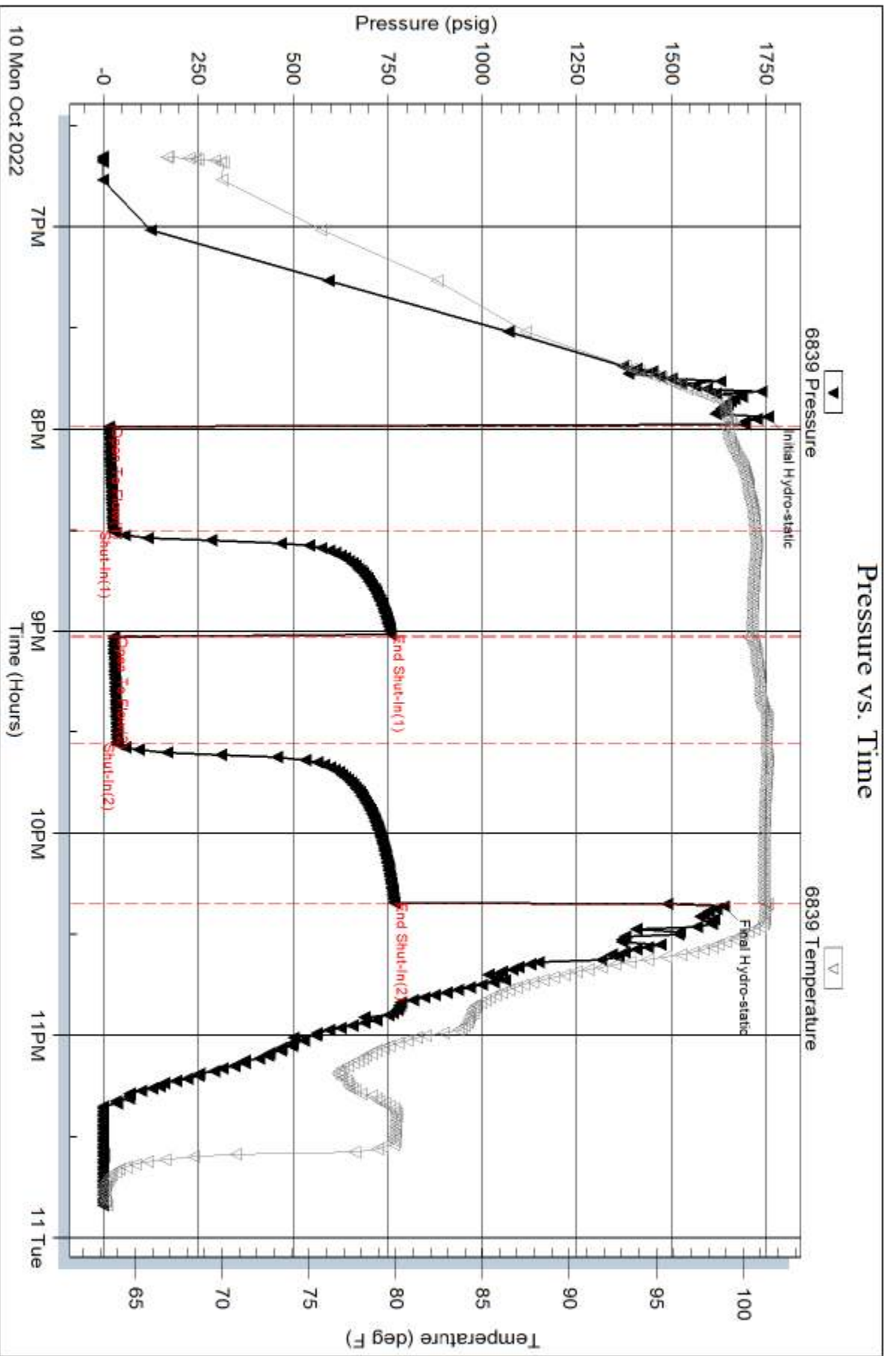
Serial #: 6839

Inside

Darrah Oil Company

Fanshler #1-4

DST Test Number: 5



Trilobite Testing, Inc

Ref. No: 65070

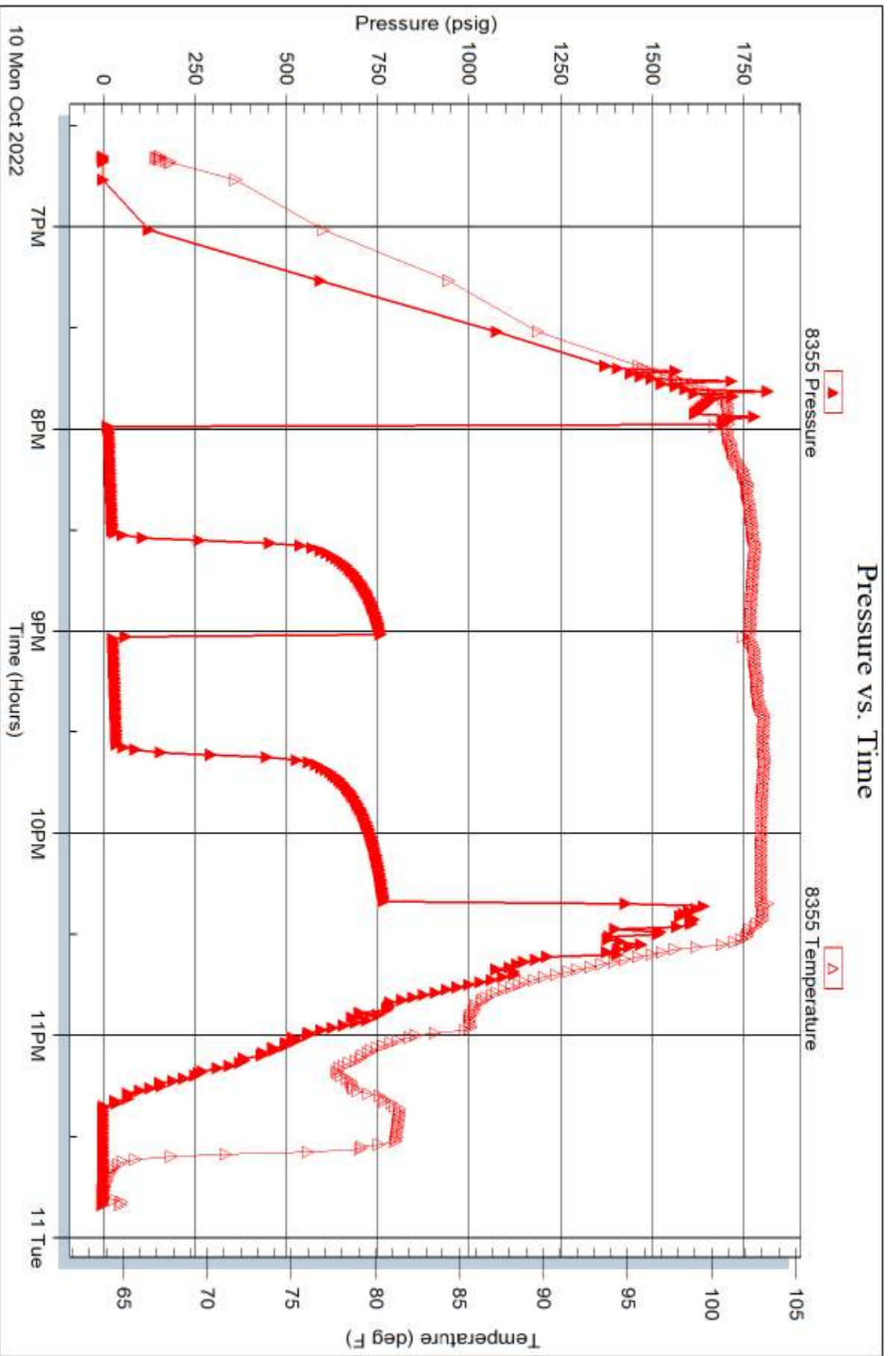
Printed: 2022.10.14 @ 09:17:50

Serial #: 8355

Outside Darrah Oil Company

Fanshler #1-4

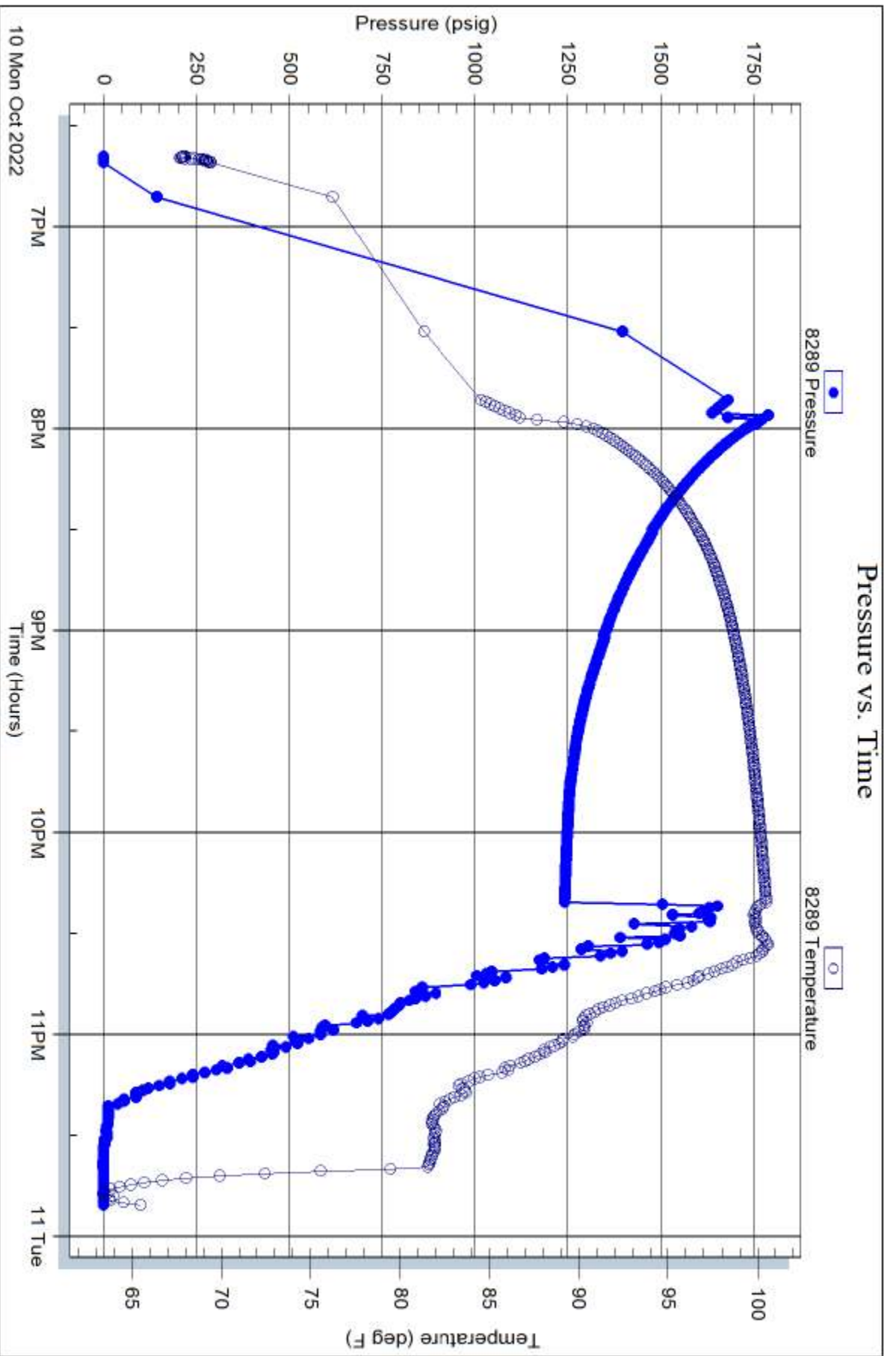
DST Test Number: 5



Tribble Testing, Inc

Ref. No: 65070

Printed: 2022.10.14 @ 09:17:50





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 65066

Well Name & No. Fanshier 1-4 Test No. 1 Date 10-7-22  
 Company Dorrah Oil Company Elevation 1901 KB 1588 GL  
 Address 125 N Market Ave STE 1425 Wichita KS 67202  
 Co. Rep / Geo. Jim Musgrove Rig Duke J  
 Location: Sec. 4 Twp 21s Rge. 13w Co. Stafford State KS

Interval Tested 3307-3396 Zone Tested A-F Lansing  
 Anchor Length 89' Drill Pipe Run 3311 Mud Wt. 9.1  
 Top Packer Depth 3308 Drill Collars Run 0 Vis 54  
 Bottom Packer Depth 3307 Wt. Pipe Run 0 WL 7.6  
 Total Depth 3356 Chlorides 3000 ppm System LCM 2#

Blow Description IF: work bby built to half inch  
IS: No blow back  
FF: flushed tool string blow BOB built to 15"  
FSI: Blowback built to 4'

Rec	Feet of	%gas	%oil	%water	%mud
<u>252</u>	<u>Mud</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>100</u>
<u>26</u>	<u>MBO GOSM</u>	<u>25</u>	<u>5</u>	<u>0</u>	<u>70</u>
<u>126</u>	<u>GOSM</u>	<u>30</u>	<u>5</u>	<u>0</u>	<u>65</u>
<u>63</u>	<u>OSM</u>	<u>0</u>	<u>10</u>	<u>0</u>	<u>90</u>

Rec Total 567 BHT LOTH Gravity NA API RW NA °F Chlorides NA ppm

(A) Initial Hydrostatic	<u>11085</u>
(B) First Initial Flow	<u>287</u>
(C) First Final Flow	<u>294</u>
(D) Initial Shut-In	<u>628</u>
(E) Second Initial Flow	<u>303</u>
(F) Second Final Flow	<u>308</u>
(G) Final Shut-In	<u>672</u>
(H) Final Hydrostatic	<u>1701</u>

Initial Open	<u>30</u>
Initial Shut-In	<u>20</u>
Final Flow	<u>20</u>
Final Shut-In	<u>60</u>

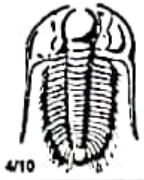
- Test 1800
- Jars
- Safety Joint
- Circ Sub
- Hourly Standby
- Mileage (9) 18rt 27
- Sampler
- Straddle
- Shale Packer
- Extra Packer
- Extra Recorder
- Day Standby
- Accessibility

T-On Location	<u>13:00</u>
T-Started	<u>14:04</u>
T-Open	<u>18:18</u>
T-Pulled	<u>20:20</u>
T-Out	<u>23:30</u>

Comments \_\_\_\_\_  
 EM Tool -175  
 Ruined Shale Packer \_\_\_\_\_  
 Ruined Packer \_\_\_\_\_  
 Extra Copies \_\_\_\_\_  
 Sub Total -175  
 Total 1652

Approved By \_\_\_\_\_ Our Representative Richard Sammons

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 65067

Well Name & No. Fanshier 1-4 Test No. 2 Date 10-8-22  
 Company Darcach Oil Company Elevation 1901 KB 1888 GL  
 Address 125 N Market Suite 1425 Wichita KS 67202  
 Co. Rep / Geo. Jim Musgrave Rig Duke 7  
 Location: Sec. 4 Twp 21s Rge. 13W Co. Stafford State Ks

Interval Tested 3428-3532 Zone Tested H-L Lansing Kc  
 Anchor Length 104' Drill Pipe Run 3409 Mud Wt. 9.1  
 Top Packer Depth 3423 Drill Collars Run 0 Vls 54  
 Bottom Packer Depth 3428 Wl. Pipe Run 0 WL 7.59  
 Total Depth 3532 Chlorides 3000 ppm System LCM 2#

Blow Description IF: Fair surface blow built to 1.53"  
IS1: No blow back  
FF: Weak surface blow built to 1"  
FS1: ~~Fair surface blow~~ No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>15</u>	<u>OSM</u>	<u>2</u>	<u>0</u>	<u>98</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 15 BHT NA Gravity NA API RW NA °F Chlorides NA ppm  
 (A) Initial Hydrostatic 1797  Test 1800 T-On Location 1420  
 (B) First Initial Flow 52  Jars T-Started 1450  
 (C) First Final Flow 54  Safety Joint T-Open 16:20  
 (D) Initial Shut-In 580  Circ Sub T-Pulled 18:44  
 (E) Second Initial Flow 56  Hourly Standby T-Out 21:00  
 (F) Second Final Flow 58  Mileage 27 Comments \_\_\_\_\_  
 (G) Final Shut-In 573  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1693  Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_

Initial Open 30  EM Tool -350  
 Initial Shut-In 30  Ruined Shale Packer \_\_\_\_\_  
 Final Flow 30  Ruined Packer \_\_\_\_\_  
 Final Shut-In 45  Extra Copies \_\_\_\_\_  
 Sub Total -350  
 Total 1477

Sub Total 1827 MP/DST Disc't  
 Approved By \_\_\_\_\_ Our Representative Patricia Sommar

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 65068

Well Name & No. Fanshier 1-4 Test No. 3 Date 10-9-72  
 Company Danah Oil Company Elevation 1901 KB 1888 GL  
 Address 125 N Market suite 1425 Wichita KS 67202  
 Co. Rep / Geo. Jim Musgrave Rig Duke 7  
 Location: Sec. 4 Twp 21s Rge. 13w Co. Stafford State KS

Interval Tested 3524-3562 Zone Tested conglomerate  
 Anchor Length 38' Drill Pipe Run 3503 Mud Wt. 9.2  
 Top Packer Depth 3521 Drill Collars Run 0 Vis 55  
 Bottom Packer Depth 3524 Wt. Pipe Run 0 WL 7.59  
 Total Depth 3562 Chlorides 3000 ppm System LCM 1#

Blow Description LF: Fair blow, built to 924"  
151: No blow back  
FF: Fair blow, built to 4"  
FS1: No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>85</u>	<u>MW</u>	<u>0</u>	<u>0</u>	<u>60</u>	<u>40</u>
<u>65</u>	<u>WM</u>	<u>0</u>	<u>0</u>	<u>70</u>	<u>30</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 150 BHT NC Gravity NC API RW NC @ NC °F Chlorides NC ppm

(A) Initial Hydrostatic 1767  Test 1800 T-On Location 0415  
 (B) First Initial Flow 21  Jars \_\_\_\_\_ T-Started 05:09  
 (C) First Final Flow 63  Safety Joint \_\_\_\_\_ T-Open 06:34  
 (D) Initial Shut-In 10.5  Circ Sub \_\_\_\_\_ T-Pulled 09:41  
 (E) Second Initial Flow 63  Hourly Standby \_\_\_\_\_ T-Out 12:00  
 (F) Second Final Flow 83  Mileage 9 27 Comments \_\_\_\_\_  
 (G) Final Shut-In 106  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1712  Straddle \_\_\_\_\_  EM Tool -175  
 Shale Packer \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Day Standby \_\_\_\_\_ Sub Total -175  
 Accessibility \_\_\_\_\_ Total 1652

Initial Open 45  
 Initial Shut-In 30  
 Final Flow 45  
 Final Shut-In 60  
 Sub Total 1827 MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative Richie Simon

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 65069

Well Name & No. Fanshier 1-4 Test No. 4 Date 10-9-22  
 Company Darrah Oil Company Elevation 1901 KB 1888 GL  
 Address 125 N Market suite 1425 Wichita KS 67202  
 Co. Rep / Geo. Jim Musgrave Rig Duke 7  
 Location: Sec. 4 Twp 21s Rge. 13w Co. Stafford State KS

Interval Tested 3617-3629 Zone Tested Arbuckle  
 Anchor Length 12' Drill Pipe Run 3629 Mud Wt. 9.3  
 Top Packer Depth 3602 Drill Collars Run 0 Vls 50  
 Bottom Packer Depth 3617 Wt. Pipe Run 0 WL 8.4  
 Total Depth 3629 Chlorides 5000 ppm System LCM 2.5

Blow Description IF: WEAK SURFACE blow built half inch  
IS: No blow back  
FF: No blow  
FSI: No blow back

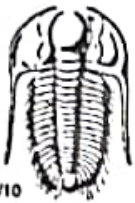
Sec	Feet of	%gas	%oil	%water	%mud
<u>3</u>	<u>Mud</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>100</u>
	Feet of	%gas	%oil	%water	%mud
	Feet of	%gas	%oil	%water	%mud
	Feet of	%gas	%oil	%water	%mud
	Feet of	%gas	%oil	%water	%mud

Sec Total 3 BHT 102 Gravity NA API RW NA @ NA °F Chlorides NA ppm  
 Initial Hydrostatic 1873  Test 1800 T-On Location 22:30  
 First Initial Flow 15  Jars \_\_\_\_\_ T-Started 02:58  
 First Final Flow 16  Safety Joint \_\_\_\_\_ T-Open 00:27  
 Initial Shut-In 42  Circ Sub \_\_\_\_\_ T-Pulled 02:24  
 Second Initial Flow 15  Hourly Standby \_\_\_\_\_ T-Out 04:20  
 Second Final Flow 16  Mileage 9 27 Comments \_\_\_\_\_  
 Final Shut-In 42  Sampler \_\_\_\_\_  
 Final Hydrostatic 1992  Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  EM Tool \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Day Standby \_\_\_\_\_ Sub Total 0  
 Accessibility \_\_\_\_\_ Total 1827  
 Sub Total 1827 MP/DST Disc't \_\_\_\_\_

Open 30  
 Shut-In 30  
 Flow 30  
 Shut-In 30

By \_\_\_\_\_ Our Representative Rishi Samra

ing 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 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. 65070

Well Name & No. Foster 1-4 Test No. 5 Date 10-10-22  
 Company Darrah Oil Company Elevation 1901 KB 1888 GL  
 Address 125 N Market Suite 1425 Wichita KS 67202  
 Co. Rep / Geo. Jim Musgrave Rig Duke 7 State KS  
 Location: Sec. 4 Twp 21S Rge. 13W Co. Stafford

Interval Tested 3390-3424 Zone Tested Lansing G Mud Wt. 9.1  
 Anchor Length 34' Drill Pipe Run 3373 Vis 34  
 Top Packer Depth 3385 Drill Collars Run 0 WL 8.1  
 Bottom Packer Depth 3428 Wt. Pipe Run 0 LCM 2.5  
 Total Depth 3701 Chlorides 8000 ppm System

Blow Description 1F: Fair blow built to 3'  
1S1: No blow back  
FF: Fair blow built to 2.3"  
F51: No blow back

Rec	Feet of	%gas	%oil	%water	%mud
5	Mud				100

Rec Total 5 BHT NC Gravity NA API RW NA F Chlorides NA ppm  
 Test 1800 T-On Location 1545  
 Jars T-Started 18:39  
 Safety Joint T-Open 19:59  
 Circ Sub T-Pulled 22:20  
 Hourly Standby T-Out 20:00  
 Mileage 27 Comments \_\_\_\_\_  
 Sampler \_\_\_\_\_  
 Straddle 600  PM Tool -350  
 Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_  
 Sub Total 2427 Total 2077

Initial Open 30  
 Initial Shut-In 30  
 Final Flow 30  
 Final Shut-In 45

Approved By \_\_\_\_\_ Our Representative Richard Cooper  
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**OPERATOR**

Company: Darrah Oil Company, LLC  
 Address: 125 N Market Ste1425  
 Wichita, KS 67202-1700

Contact Geologist: Seth Evenson  
 Contact Phone Nbr: 316-219-3390  
 Well Name: Fanshier #1-4  
 Location: 4-21s-13w NW-NE-SE-SW  
 API: 15-185-24120-00-00  
 Pool:  
 State: Kansas

Field: Shaeffer-Rothgam  
 Country: USA

**Scale 1:240 Imperial**

Well Name: Fanshier #1-4  
 Surface Location: 4-21s-13w NW-NE-SE-SW  
 Bottom Location:  
 API: 15-185-24120-00-00  
 License Number: 35615  
 Spud Date: 10/3/2022 Time: 12:00 AM  
 Region: Stafford Time: 12:00 AM  
 Drilling Completed: 10/10/2022  
 Surface Coordinates: 1019' FSL & 2241' FWL  
 Bottom Hole Coordinates:  
 Ground Elevation: 1888.00ft  
 K.B. Elevation: 1901.00ft  
 Logged Interval: 2700.00ft To: 0.00ft  
 Total Depth: 3700.00ft  
 Formation: Arbuckle  
 Drilling Fluid Type: Chemical/Fresh Water Gel

**CASING SUMMARY**

	Surface	Intermediate	Main		
Bit Size					
Hole Size					
	Size	Set At	Type	# of Joints	Drilled Out At
Surf Casing	8 5/8" in	225 ft			
Int Casing					
Prod Casing	None in	None ft			

**CASING SEQUENCE**

Type	Hole Size	Casing Size	At
	0.00 in	0.00	0.00 ft

**OPEN HOLE LOGS**

Logging Company: Midwest Wireline  
 Logging Engineer: D Schmidt  
 Truck #:  
 Logging Date: 10/10/2022 Time Spent:  
 # Logs Run: 0 # Logs Run Successful: 0

**LOGS RUN**

Tool	Logged Interval	Logged Interval	Hours	Remarks	Run #
	0.00ft	0.00ft	0.00		0

**LOGGING OPERATION SUMMARY**

Date	From	To	Description Of Operation
10/10/2022	0.00ft	0.00ft	

**SURFACE CO-ORDINATES**

Well Type: Vertical  
 Longitude:  
 Latitude:  
 N/S Co-ord: 1019' FSL

## LOGGED BY



**Musgrove**  
Petroleum Geology  
212 Main Street, Claflin KS

Company: James C Musgrove Petroleum LLC  
Address: 212 Main Street/PO Box 215  
Claflin, KS 67525

Phone Nbr: 620-588-4250 620-786-0839  
Logged By: KLG #307

Name: James C Musgrove

## CONTRACTOR

Contractor: Duke Drilling  
Rig #: 7  
Rig Type: mud rotary  
Spud Date: 10/3/2022  
TD Date: 10/10/2022  
Rig Release:

Time: 12:00 AM  
Time: 12:00 AM  
Time:

## ELEVATIONS

K.B. Elevation: 1901.00ft  
K.B. to Ground: 13.00ft

Ground Elevation: 1888.00ft

## NOTES

Remarks:

The Darrah Oil Company, LLC.; was plugged and abandoned at the Rotary Depth 3700.

Respectfully Submitted,

James C Musgrove  
Petroleum Geologist

## well comparison sheet

Formation	FANSHIER #1-4 DARRAH OIL COMPANY LLC NW-NE-SE-SW 4-21s-13w				CD KOOPMAN #1 TEXAS COMPANY NE-NE-SW 4-21s-13w				KOOPMAN #1 TEXACO NW-SE-SW 4-21s-13w			
	1901 KB		Sample	Sub-Sea	1891 KB		Relationship	Log	1902 KB		Structural Relationship	
	Log	Sub-Sea			Log	Sub-Sea			Log	Sub-Sea	Sample	Log
Anhydrite			769	1132								
Base Anhydrite			791	1110								
Heebner			3184	-1283								
Toronto			3203	-1302								
Douglas			3223	-1322								
Brown Lime			3304	-1403	3291	-1400		-3				
Lansing			3316	-1415	3304	-1413		-2	3329	-1427		12
Base Kansas City			3527	-1626								
Conglomerate Sand			3546	-1645	3534	-1643		-2	3556			
Arbuckle			3617	-1716	3586	-1695		-21	3598	-1696		-20
Rotary Total Depth			3700	-1799								
Total Depth			3701	-1800	3604	-1713		-87	3601	-1699		-101



**TRILOBITE**  
TESTING, INC.

## DRILL STEM TEST REPORT

Darrah Oil Company

4-218-13W/ Stafford

125N Market STE 1426

Fanshier 1-4



Wichita KS 67202

ATTN: Jim Musgrove

Job Ticket: 66066

DST#: 1

Test Start: 2022.10.07 @ 13:04:00

GENERAL INFORMATION:

Formation:

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:16:30

Time Test Ended: 22:40:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Richard Samora

Unit No: 66

Interval: 3307.00 ft (KB) To 3396.00 ft (KB) (TVD)

Total Depth: 3396.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 1901.00 ft (KB)

1886.00 ft (CP)

KB to GR/CP: 13.00 ft

Serial #: 8366

Outside

Press@RunDepth: 307.92 psig @ 3383.02 ft (KB)

Start Date: 2022.10.07

End Date:

2022.10.07

Start Time: 13:04:05

End Time:

22:40:30

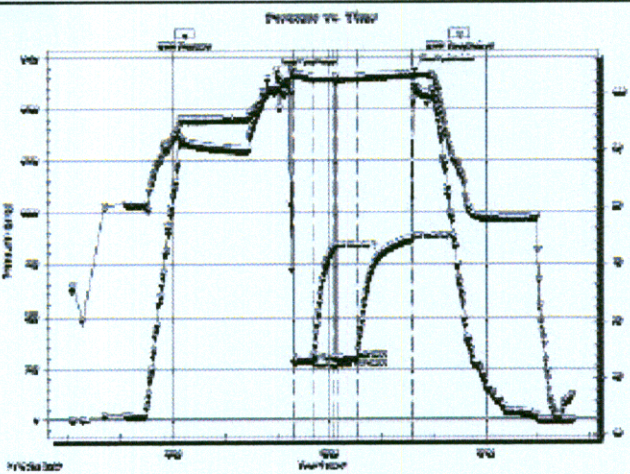
Capacity: 8000.00 psig

Last Calib.: 2022.10.07

Time On Btm: 2022.10.07 @ 16:56:46

Time Off Btm: 2022.10.07 @ 19:36:00

TEST COMMENT: F: Tool slid 13' poked up mud Weak blow built to half inch  
S: No blow back  
FF: Flushed tool Strong blow BOB Built to 16'  
FS: Blow back built to 4'



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1688.31	100.86	Initial Hydro-static
20	286.69	103.91	Open To Flow (1)
43	294.34	103.01	Shut-In (1)
66	628.46	103.02	End Shut-In (1)
69	303.35	102.91	Open To Flow (2)
93	307.92	103.02	Shut-In (2)
166	671.91	103.62	End Shut-In (2)
160	1700.63	103.80	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
63.00	OSM 10%O 90%M	0.88
262.00	GOSM 30%G 5%O 65%M	3.63
262.00	Mud 100%M	3.63

Gas Rates

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



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Derrah Oil Company

4-21S-13W/ Stafford

122N Market STE 1426  
Wichita KS 67202

Fanshler 1-4

ATTN: Jim Musgrove

Job Ticket: 66067

DST#: 2

Test Start: 2022.10.06 @ 14:00:00

GENERAL INFORMATION:

Formation: H-L

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:32:16

Time Test Ended: 21:31:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Richard Samora

Unit No: 66

Interval: 3428.00 ft (KB) To 3832.00 ft (KB) (TVD)

Total Depth: 3396.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 1901.00 ft (KB)

1886.00 ft (CP)

KB to GR/CP: 13.00 ft

Serial #: 8366

Press@RunDepth: 67.95 psig @ ft (KB)

Start Date: 2022.10.06

End Date:

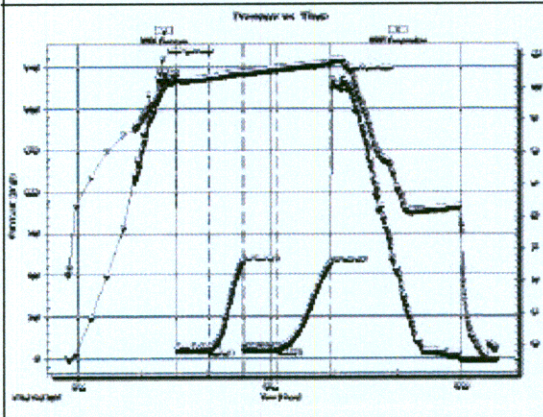
2022.10.06

Capacity: 8000.00 psig

Last Calib.: 1999.12.30

Start Time: 14:30:05 End Time: 21:30:59 Time On Blm: 2022.10.09 @ 16:19:16  
 Time Off Blm: 2022.10.09 @ 19:05:16

TEST COMMENT: F 30 blow built to 1.8"  
 IS 30 no blow  
 FF 30 weak surface blow built to 1"  
 FSI 49 no blow

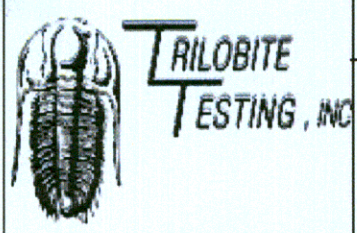


Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1797.37	99.28	Initial Hydro-static
13	81.88	101.41	Open To Flow (1)
53	101.67	101.67	Shut-In (1)
78	102.51	102.51	End Shut-In (1)
78	102.37	102.37	Open To Flow (2)
108	103.08	103.08	Shut-In (2)
168	104.01	104.01	End Shut-In (2)
169	104.26	104.26	Final Hydro-static

Length (ft)	Description	Volume (bbl)
18.00	ODM 2%O 98%M	0.21

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

Recovery from multiple tests  
 Trilobite Testing, Inc Ref. No: 86067 Printed: 2022.10.09 @ 22:45:23

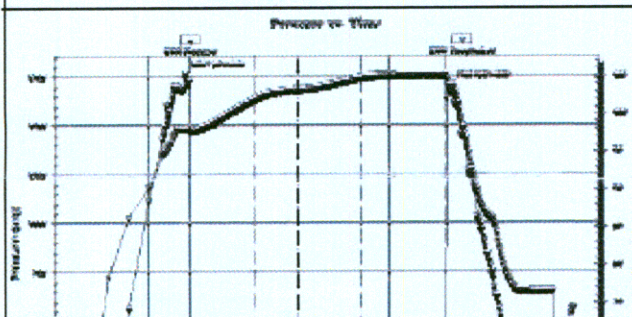


**DRILL STEM TEST REPORT**  
 Derrah Oil Company 4-219-13W/ Stafford  
 Fanshler 1-4  
 125N Market STE 1425 Job Ticket: 86068 DST#: 3  
 Wichita KS 67202 Test Start: 2022.10.09 @ 05:09:00  
 ATTN: Jim Musgrove

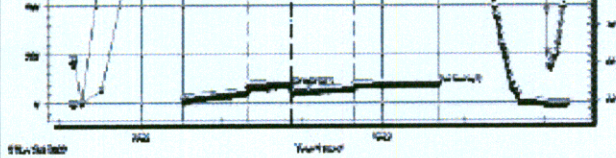
**GENERAL INFORMATION:**  
 Formation: Conglomerate  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 06:31:45  
 Time Test Ended: 11:17:45  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Richard Samora  
 Unit No: 66  
 Interval: 3524.00 ft (KB) To 3562.00 ft (KB) (TVD)  
 Total Depth: 3562.00 ft (KB) (TVD)  
 Reference Elevations: 1801.00 ft (KB)  
 1898.00 ft (CF)  
 Hole Diameter: 7.88 inches-Hole Condition: Good KB to GR/CF: 13.00 ft

Serial #: 8355  
 Press@RunDepth: 53.27 psig @ ft (KB)  
 Start Date: 2022.10.09 End Date: 2022.10.09  
 Start Time: 05:09:05 End Time: 11:17:44  
 Capacity: 8000.00 psig  
 Last Calib.: 1699.12.30  
 Time On Blm: 2022.10.09 @ 05:28:16  
 Time Off Blm: 2022.10.09 @ 09:46:30

TEST COMMENT: 46-F: Fair blow built to 9.24"  
 30-IS: No blow back  
 46-FF: Fair Blow built to 4"  
 60-FSI: No blow back



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1768.71	98.14	Initial Hydro-static
4	20.70	97.89	Open To Flow (1)
51	62.90	101.84	Shut-In (1)
64	104.66	103.26	End Shut-In (1)
64	63.11	103.26	Open To Flow (2)
131	63.27	104.80	Shut-In (2)
164	106.41	106.36	End Shut-In (2)
169	1712.35	103.80	Final Hydro-static



Recovery		
Length (ft)	Description	Volume (bbl)
66.00	WM 70%W 30%M	0.01
66.00	MW 60%W 40%M	1.19

\* Recovery from multiple tests

Gas Rates		
Chop (inches)	Pressure (psig)	Gas Rate (Mcf/D)



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

Demrah Oil Company

125N Market STE 1426  
Wichita KS 67202

ATTN: Jim Musgrove

4-219-13W / Stafford

Fanshier 1-4

Job Ticket: 65069

DST#: 4

Test Start: 2022.10.09 @ 22:58:00

### GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:28:00

Time Test Ended: 04:23:15

Test Type: Conventional Bottom Hole (Reset)

Tester: Richard Samora

Unit No: 66

Interval: 3617.00 ft (KB) To 3629.00 ft (KB) (TVD)

Total Depth: 3396.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 1901.00 ft (KB)

1888.00 ft (CF)

KB to BRDF: 13.00 ft

Serial #: 8355

Press@RunDepth: 16.18 psig @ ft (KB)

Start Date: 2022.10.09 End Date: 2022.10.10

Start Time: 22:58:05 End Time: 04:23:14

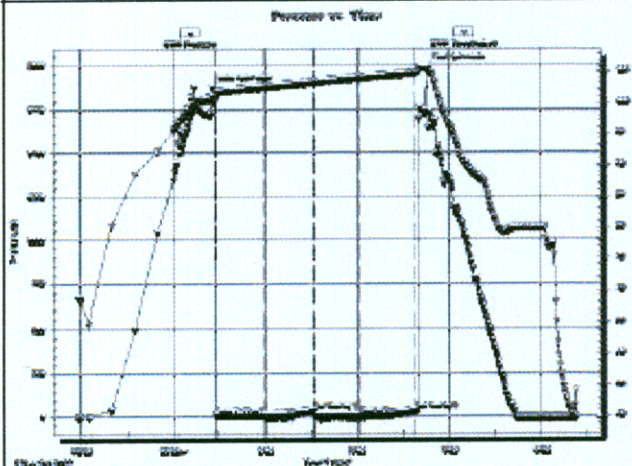
Capacity: 8000.00 psig

Last Calib.: 1899.12.30

Time On Blm: 2022.10.10 @ 00:26:45

Time Off Blm: 2022.10.10 @ 02:46:15

TEST COMMENT: 30-F: Weak surface blow built to 5"  
30-51: No blow back  
30-FF: No blow  
30-51: No blow back



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1873.04	100.97	Initial Hydro-static
3	14.68	101.01	Open To Flow (1)
34	16.11	102.62	Shut-In(1)
66	42.11	103.41	End Shut-In(1)
67	15.22	103.42	Open To Flow (2)
96	16.18	104.13	Shut-In(2)
132	41.53	104.90	End Shut-In(2)
140	1992.41	105.65	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
3.00	mud	0.04

Gas Rates		
Chop (inches)	Pressure (psig)	Gas Rate (Mcf/D)

\* Recovery from multiple tests



**TRIOBITE TESTING, INC**

## DRILL STEM TEST REPORT

Demrah Oil Company

4-218-13W/ Stafford

125N Market STE 1425  
Wichita KS 67202

Fanshler 1-4

Job Ticket: 65070

DST#: 5

ATTN: Jim Musgrove

Test Start: 2022.10.10 @ 18:39:00

### GENERAL INFORMATION:

Formation:

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:59:15

Time Test Ended: 23:00:45

Test Type: Conventional Straddle (Reset)

Tester: Richard Samora

Unit No: 66

Interval: 3396.00 ft (KB) To 3424.00 ft (KB) (TVD)

Total Depth: 3396.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 1901.00 ft (KB)

1686.00 ft (CF)

KB to GR/CF: 15.00 ft

Serial #: 6639

Inside

Press@RunDepth: 36.28 psig @ 3396.01 ft (KB)

Start Date: 2022.10.10

End Date: 2022.10.10

Start Time: 18:39:05

End Time: 23:00:44

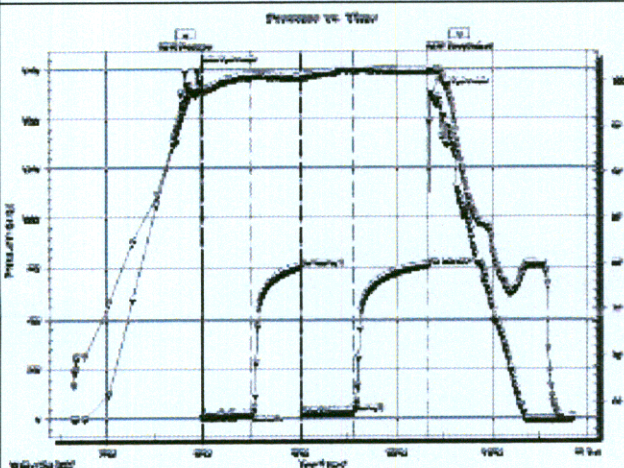
Capacity: 8000.00 psig

Last Call: 1699.12.30

Time On Btm: 2022.10.10 @ 19:56:15

Time Off Btm: 2022.10.10 @ 22:21:45

TEST COMMENT: 30-F: Fair blow built to 5"  
30-F1: No blow back  
30-F2: Fair blow built to 2.3"  
45-F1: No blow back



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1753.46	99.06	Initial Hydro-static
3	15.07	98.95	Open To Flow (1)
34	25.15	100.67	Shut-In (1)
65	798.40	100.52	End Shut-In (1)
66	28.42	100.26	Open To Flow (2)
98	36.28	101.34	Shut-In (2)
145	766.46	101.19	End Shut-In (2)
146	1637.66	101.30	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
6.00	mud	0.07

\* Recovery from multiple tests

### Gas Rates

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

### ROCK TYPES

	Cht vari		Lmst fw7>		Carbon Sh		Slst
	Dolprim		shale, grn		shale, red		
	Dolsec		shale, gry		Ss		

### OTHER SYMBOLS

INTERVALS

Oil Show

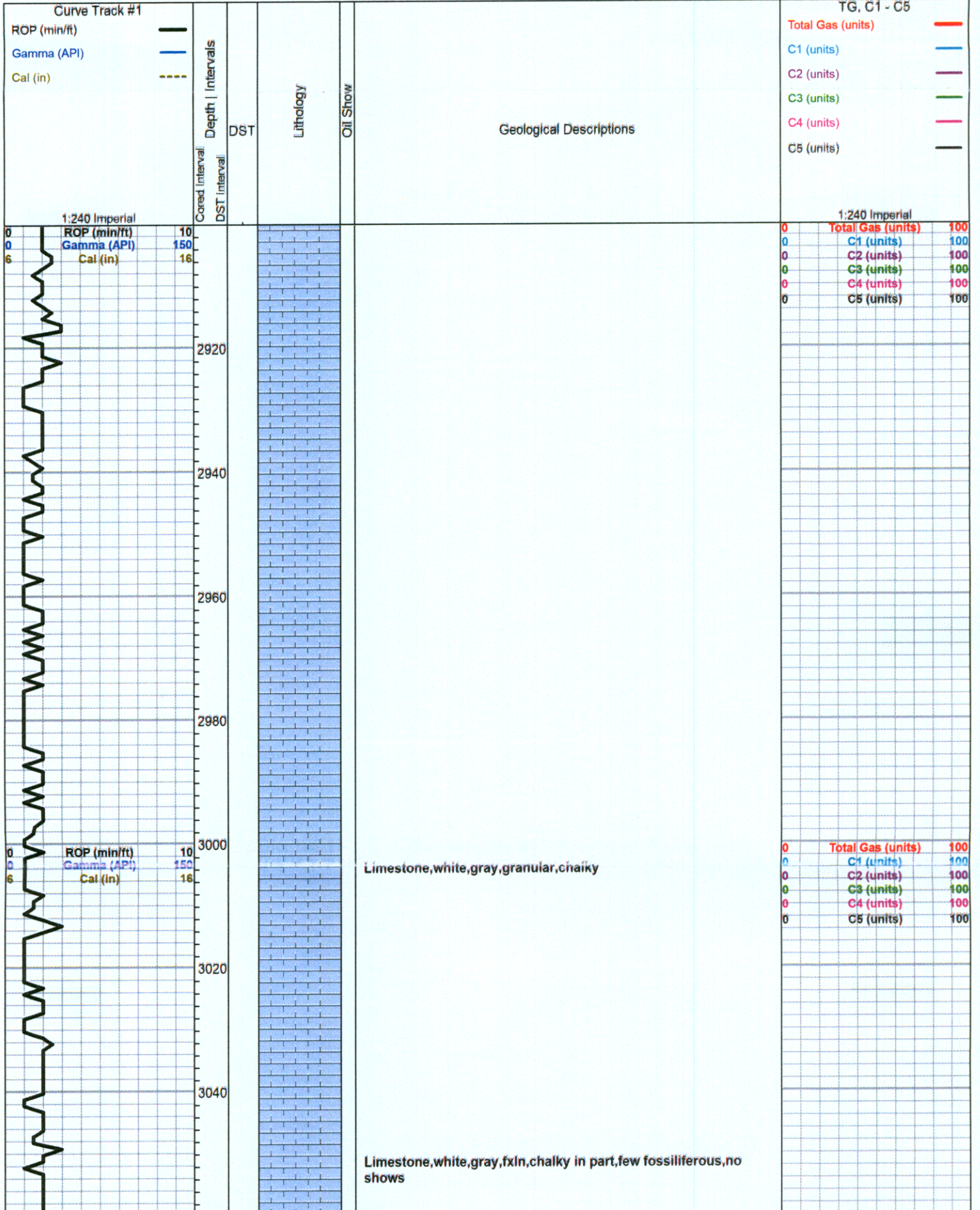
DST

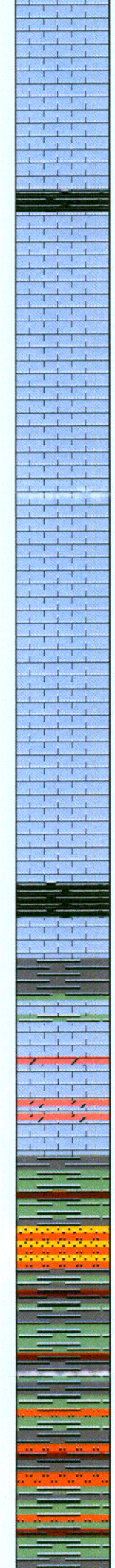
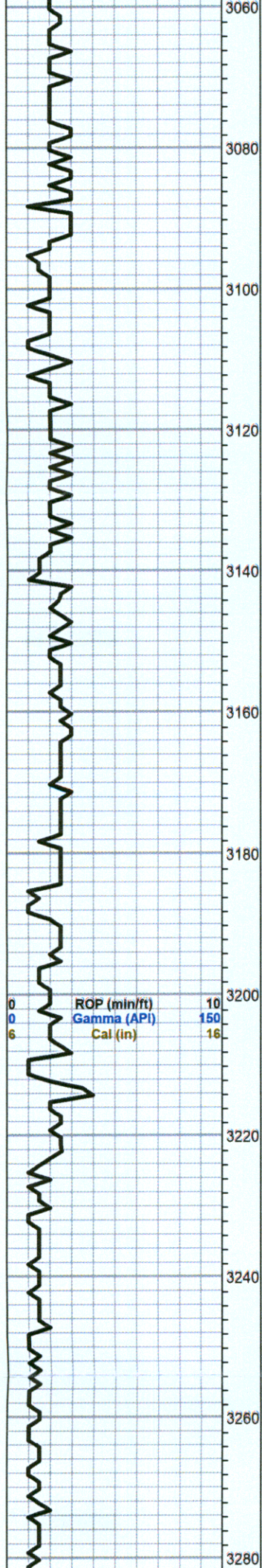
**INTERVALS**

- Core
- Good Show
- Fair Show
- Poor Show
- Spotted or Trace
- Questionable Str
- D Dead Oil Str
- Fluorescence
- \* Gas

**Oil Show**

- DST Int
- DST alt
- Core
- || tail pipe





as above

Shale,black,carbonaceous

Limestone,gray,tan,micro-crystalline,chalky,poorly developed porosity,no shows

Limestone,tan,fxln,foss,chalky,poor porosity

Limestone,tan,fxln,chalky with Chert,gray,smokey gray,boney

Limestone,tan,brown,fxln,slightly cherty,poor visible porosity,no shows

Limestone,as above,with white,chalky Limestone and gray,boney Chert

**HEEBNER 3184(-1283)**

Shale,black,carbonaceous

Shale,gray,green,soft

**TORONTO 3207(-1306)**

Limestone,tan,fxln,slightly foss.,dolomitic,no shows

Limestone,white,dolomitic,medium crystalline,poorly developed porosity,no shows

**DOUGLAS 3223(-1322)**

Shale,gray,grayish green,maroon,silty

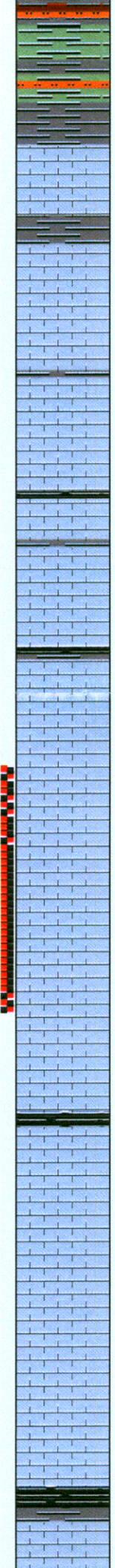
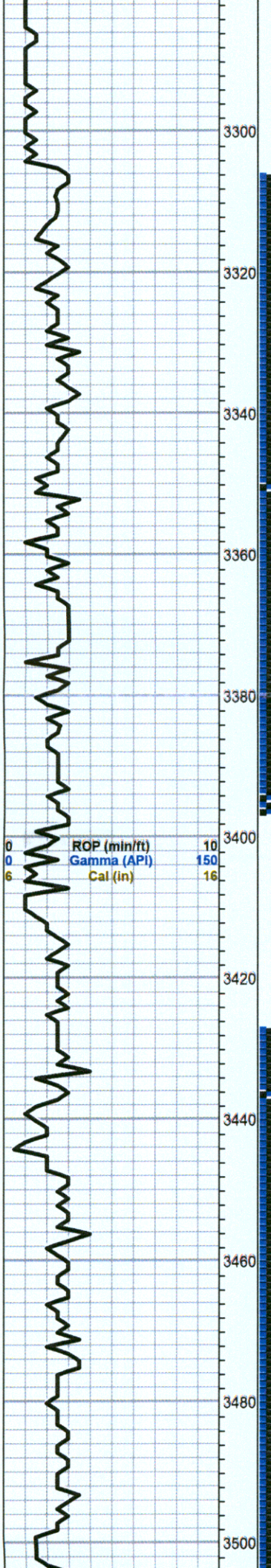
Sand,gray,very fine grained,micaeous,silty,poor visible porosity,no shows

Shale,gray,grayish green,rusty brown,maroon, soft

shale as above ,micaeous, soft

increase gray,dark gray,silty shale

0	Total Gas (units)	100
0	C1 (units)	100
0	C2 (units)	100
0	C3 (units)	100
0	C4 (units)	100
0	C5 (units)	100



as above

**BROWN LIME 3304**

Limestone,tan,brown,fxln,slightly cherty, dense

**LANSING 3316**

Limestone,tan,gray,fxln,slightly foss.,poor visible porosity

as above

Limestone,white,gray,fxln,chalky,scattered pinpoint type porosity,brown spotted stain,trace of free oil and no odor

Limestone,white,gray,dense

Limestone,tan,oolitic,chalky,fair porosity,golden brown stain,trace of free oil and no odor

Shale,black,gray

Limestone,gray,white,oolitic,chalky,dark brown to brown spotted stain,show of free oil and questionable odor in fresh samples.

Limestone,tan,gray,cream,oomoldic, fair oomoldic porosity,trace poor spotty stain,no free oil and no odor

Limestone,tan,fxln,cherty in part, few chalky,dense,trace gray, boney, Chert

Limestone,white,gray,oomoldic,fair oomoldic porosity, dark brown stain, fair show of free oil and faint odor

Limestone,white,gray,oolitic,chalky in part,light brown stain no free oil and no odor

Limestone,gray,white,oolitic,sub oomoldic,fair porosity,gray,black and brown staining, trace of free oil and no odor

Shale,black,carbonaceous,with gray soft shale

Limestone,white,gray,finely oolitic,fair pinpoint to fine vuggy type porosity,slightly chalky,brown and black stain and

DST #1 3307-3396  
20-20-30-60

Blow Weak ,tool,slid 13' picked up mud. 2nd Open;Flushed tool,good blow 15 inches

Recovery, 252'Mud,252'Slightly oil cut gassy mud(5% oil,30%gas,65% mud)

65'Oil cut mud(10% oil,90% mud)

BHP 828-872 psi  
FP 286-294,303-308 psi(flow pressures questionable..

HSH 1683-1700 psi

DST#5 3390-3424 (Straddle Test)

30-30-30-45

Blow,Weak  
Recovery 5' Mud

BHP 758-766 psi  
FP 15-25,28-36 psi  
HSH 1753-1638 psi

0	Total Gas (units)	100
0	C1 (units)	100
0	C2 (units)	100
0	C3 (units)	100
0	C4 (units)	100
0	C5 (units)	100

DST#2 3428-3532

30-30-30-45

Blow,weak  
Recovery, 15' very slightly oil cut mud(2% oil,98% mud)

BHP 580-573 psi  
FP 52-54,56-58 psi  
HSH 1797-1693 psi

saturation, show of free oil and faint odor

Limestone, white, gray, fossiliferous, chalky, poorly developed porosity, no shows

### BASE KANSAS CITY 3527

Shale, gray, green, soft  
Limestone, white, gray, tan, fxl, dense

shale, red, green, black

### CONGLOMERATE SAND 3547

Sand, white, clear, quartzitic, very fine grained, sub-rounded, rounded, good sorting, friable, fair intergranular porosity, calcareous in part, golden brown and light brown stain and saturation, show of free oil and questionable odor with Sand, white, calcareous (barren)

Shale, maroon, green, black, purple/gray, soft silty

Trace Sand, gray, sub-rounded, poor porosity, black dead stain, no free oil and no odor

Chert, orange, red, gray and white, boney, trace black staining, no free oil and no odor

Chert, varied colored, boney, black edge staining, no free oil and no odor

Shale, red, green, soft

### ARBUCKLE 3612(-1711)

Dolomite, white, gray, fxl, sucrosic, fair porosity, gray and black stain, show of free oil (50% dead appearing) and fair odor in fresh samples

Dolomite, gray, tan, as above, increase in porosity, black and gray and brown stain, show of free oil (50% dead) and faint odor in fresh samples

Dolomite, white, gray, sucrosic, fair pinpoint type porosity black, gray and brown staining, trace of free oil and faint odor in fresh samples

Dolomite, as above, with Dolomite, white, gray, medium crystalline, fair intercrystalline porosity, black stain, no free oil and faint odor

Dolomite, gray, tan, medium crystalline, fair intercrystalline porosity, black and gray to brown stain, no free oil and questionable odor

Dolomite, tan, fine and medium crystalline, few sucrosic, fair porosity, no show of free oil with questionable odor with Chert, white and gray, boney

### ROTARY TOTAL DEPTH 3700(-1799)

DST#3 3524-3562  
45-30-45-60

Blow Fair ( 9.25 " decrease to 4" end of 2nd flow period)

Recovery, 150' muddy water

BHP 105-106 psi  
Fp 21-63, 63-83 psi  
HSH 1769-1712 psi

0	Total Gas (units)	100
0	C1 (units)	100
0	C2 (units)	100
0	C3 (units)	100
0	C4 (units)	100
0	C5 (units)	100

DST#4 3617-3629

30-30-30-45

Blow, weak

Recovery 5' mud

BHP 42-42 psi

FP 15-16, 15-16 psi

HSH 1873-1992 psi

