

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
--	---

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
---	---	------------------------------------

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:	
----------------	-------	---------	------------	--

Form	ACO1 - Well Completion
Operator	Darrah Oil Company, LLC
Well Name	YOUNKIN 2-10
Doc ID	1670956

All Electric Logs Run

micro
sonic
dual induction
porosity





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: 7/13/2022  
 Invoice #: 0362074  
 Lease Name: Youkin  
 Well #: 2-10 (New)  
 County: Logan, Ks  
 Job Number: WP3072  
 District: Oakley

Date/Description	HRS/QTY	Rate	Total
Port Collar	0.000	0.000	0.00
H-Plug	50.000	13.440	672.00
H-Long	160.000	33.600	5,376.00
Light Eq Mileage	40.000	2.000	80.00
Heavy Eq Mileage	80.000	4.000	320.00
Ton Mileage	390.000	1.500	585.00
Service Supervisor	1.000	264.000	264.00
Cement plug container	1.000	240.000	240.00
Depth Charge 4001'-5000'	1.000	2,400.000	2,400.00
Cement Friction Reducer	60.000	7.680	460.80
KCL-CS701	5.000	28.800	144.00
Cement Blending & Mixing	210.000	1.344	282.24
5 1/2" Turbolizers	5.000	120.000	600.00
Cement baskets 5 1/2"	1.000	288.000	288.00
5 1/2" Floatshoe-Flapper AFU	1.000	360.000	360.00
5 1/2" Port Collar	1.000	3,360.000	3,360.00
5 1/2" LD Plug & Baffle	1.000	336.000	336.00

**Total** 15,768.04

**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!**



Customer	Darrah Oil CO	Lease & Well #	Younkin # 2-10	Date	7/13/2022
Service District	Oakley KS	County & State	Logan KS	Legals S/T/R	34-15S-34W
Job Type	Port Collar	<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 #
					Ticket #
					WP-3072

Equipment #	Driver	Job Safety Analysis - A Discussion of Hazards & Safety Procedures			
78	Jesse	<input checked="" type="checkbox"/> Hard hat	<input checked="" type="checkbox"/> Gloves	<input type="checkbox"/> Lockout/Tagout	<input type="checkbox"/> Warning Signs & Flagging
230	Michael	<input checked="" type="checkbox"/> H2S Monitor	<input checked="" type="checkbox"/> Eye Protection	<input type="checkbox"/> Required Permits	<input type="checkbox"/> Fall Protection
180-530	Charles	<input checked="" type="checkbox"/> Safety Footwear	<input type="checkbox"/> Respiratory Protection	<input checked="" type="checkbox"/> Slip/Trip/Fall Hazards	<input checked="" 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 checked="" type="checkbox"/> Hearing Protection	<input type="checkbox"/> Fire Extinguisher	<input type="checkbox"/> Additional concerns or issues noted below	
<b>Comments</b>					

Product/ Service Code	Description	Unit of Measure	Quantity	Net Amount
CP055	H-Plug	sack	50.00	\$672.00
CP030	H-Long	sack	160.00	\$5,376.00
M015	Light Equipment Mileage	mi	40.00	\$80.00
M010	Heavy Equipment Mileage	mi	80.00	\$320.00
M020	Ton Mileage	tm	390.00	\$585.00
R061	Service Supervisor	day	1.00	\$264.00
C050	Cement Plug Container	job	1.00	\$240.00
D015	Depth Charge: 4001'-5000'	job	1.00	\$2,400.00
CP133	Cement Friction Reducer	lb	60.00	\$460.80
AF055	Liquid KCL Substitute	gal	5.00	\$144.00
C060	Cement Blending & Mixing Service	sack	210.00	\$282.24
FE135	5 1/2 Turbolizer	ea	5.00	\$600.00
FE130	5 1/2" Cement Basket	ea	1.00	\$288.00
FE145	5 1/2" Float Shoe - AFU Flapper Type	ea	1.00	\$360.00
FE165	5 1/2" Port Collar	ea	1.00	\$3,360.00
FE170	5 1/2" Latch Down Plug & Baffle	ea	1.00	\$336.00

Customer Section: On the following scale how would you rate Hurricane Services Inc.?		Net:	\$15,768.04
		Total Taxable	\$ -
		Tax Rate:	
Based on this job, how likely is it you would recommend HSI to a colleague?		Sale Tax:	\$ -
<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"/>		Total:	\$ 15,768.04
Unlikely 1 2 3 4 5 6 7 8 9 10 Extremely Likely			
		HSI Representative: <i>Jesse Jones</i>	

**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 \_\_\_\_\_ **CUSTOMER AUTHORIZATION SIGNATURE**





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: 8/1/2022  
 Invoice #: 0362309  
 Lease Name: Younkin  
 Well #: 2-10 (New)  
 County: Logan, Ks  
 Job Number: WP3159  
 District: Oakley

Date/Description	HRS/QTY	Rate	Total
Port Collar	0.000	0.000	0.00
H-CON	325.000	25.000	8,125.00
Bagged Sand	2.000	32.000	64.00
Light Eq Mileage	40.000	2.000	80.00
Heavy Eq Mileage	80.000	4.000	320.00
Ton Mileage	612.000	1.500	918.00
Depth Charge 2001'-3000'	1.000	2,000.000	2,000.00
Cement Blending & Mixing	325.000	1.400	455.00
Service Supervisor	1.000	275.000	275.00
Cement Data Acquisition	1.000	250.000	250.00

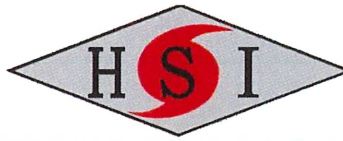
**Total** 12,487.00

**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!**





<b>Customer</b>		Darrah Oil Co.		<b>Lease &amp; Well #</b>		Younkin #2-10		<b>Date</b>		8/1/2022					
<b>Service District</b>		Oakley		<b>County &amp; State</b>		Logan		<b>Legals S/T/R</b>		34-15S-34W					
<b>Job Type</b>		Port Collar		<input checked="" type="checkbox"/> PROD <input type="checkbox"/> INJ		<input type="checkbox"/> SWD		<b>New Well?</b>		<input checked="" type="checkbox"/> YES <input type="checkbox"/> No					
<b>Equipment #</b>		<b>Driver</b>		<b>Job Safety Analysis - A Discussion of Hazards &amp; Safety Procedures</b>											
528/520		Spencer		<input checked="" type="checkbox"/> Hard hat		<input checked="" type="checkbox"/> Gloves		<input checked="" type="checkbox"/> Lockout/Tagout		<input checked="" type="checkbox"/> Warning Signs & Flagging					
527/235		Jimmie		<input checked="" type="checkbox"/> H2S Monitor		<input checked="" type="checkbox"/> Eye Protection		<input checked="" type="checkbox"/> Required Permits		<input checked="" type="checkbox"/> Fall Protection					
914		Hunter		<input checked="" type="checkbox"/> Safety Footwear		<input checked="" type="checkbox"/> Respiratory Protection		<input checked="" type="checkbox"/> Slip/Trip/Fall Hazards		<input checked="" type="checkbox"/> Specific Job Sequence/Expectations					
				<input checked="" type="checkbox"/> FRC/Protective Clothing		<input checked="" type="checkbox"/> Additional Chemical/Acid PPE		<input checked="" type="checkbox"/> Overhead Hazards		<input checked="" type="checkbox"/> Muster Point/Medical Locations					
				<input checked="" type="checkbox"/> Hearing Protection		<input checked="" type="checkbox"/> Fire Extinguisher		<input checked="" type="checkbox"/> Additional concerns or issues noted below							
<b>Comments</b>															
<b>Product/ Service Code</b>															
		<b>Description</b>			<b>Unit of Measure</b>		<b>Quantity</b>				<b>Net Amount</b>				
CP025		H-Con			sack		325.00				\$8,125.00				
CP185		Bagged Sand			sack		2.00				\$64.00				
M015		Light Equipment Mileage			mi		40.00				\$80.00				
M010		Heavy Equipment Mileage			mi		80.00				\$320.00				
M020		Ton Mileage			tm		612.00				\$918.00				
D013		Depth Charge: 2001'-3000'			job		1.00				\$2,000.00				
C060		Cement Blending & Mixing Service			sack		325.00				\$455.00				
R061		Service Supervisor			day		1.00				\$275.00				
C035		Cement Data Acquisition			job		1.00				\$250.00				
<b>Customer Section: On the following scale how would you rate Hurricane Services Inc.?</b>															
										<b>Net:</b>		\$12,487.00			
										<b>Total Taxable</b>		\$ -			
										<b>Tax Rate:</b>					
<b>Based on this job, how likely is it you would recommend HSI to a colleague?</b>										<b>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.</b>		<b>Sale Tax:</b>		\$ -	
<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												<b>Total:</b>		\$ 12,487.00	
<b>HSI Representative: Spencer Savage</b>															

**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 \_\_\_\_\_ **CUSTOMER AUTHORIZATION SIGNATURE**



**CEMENT TREATMENT REPORT**

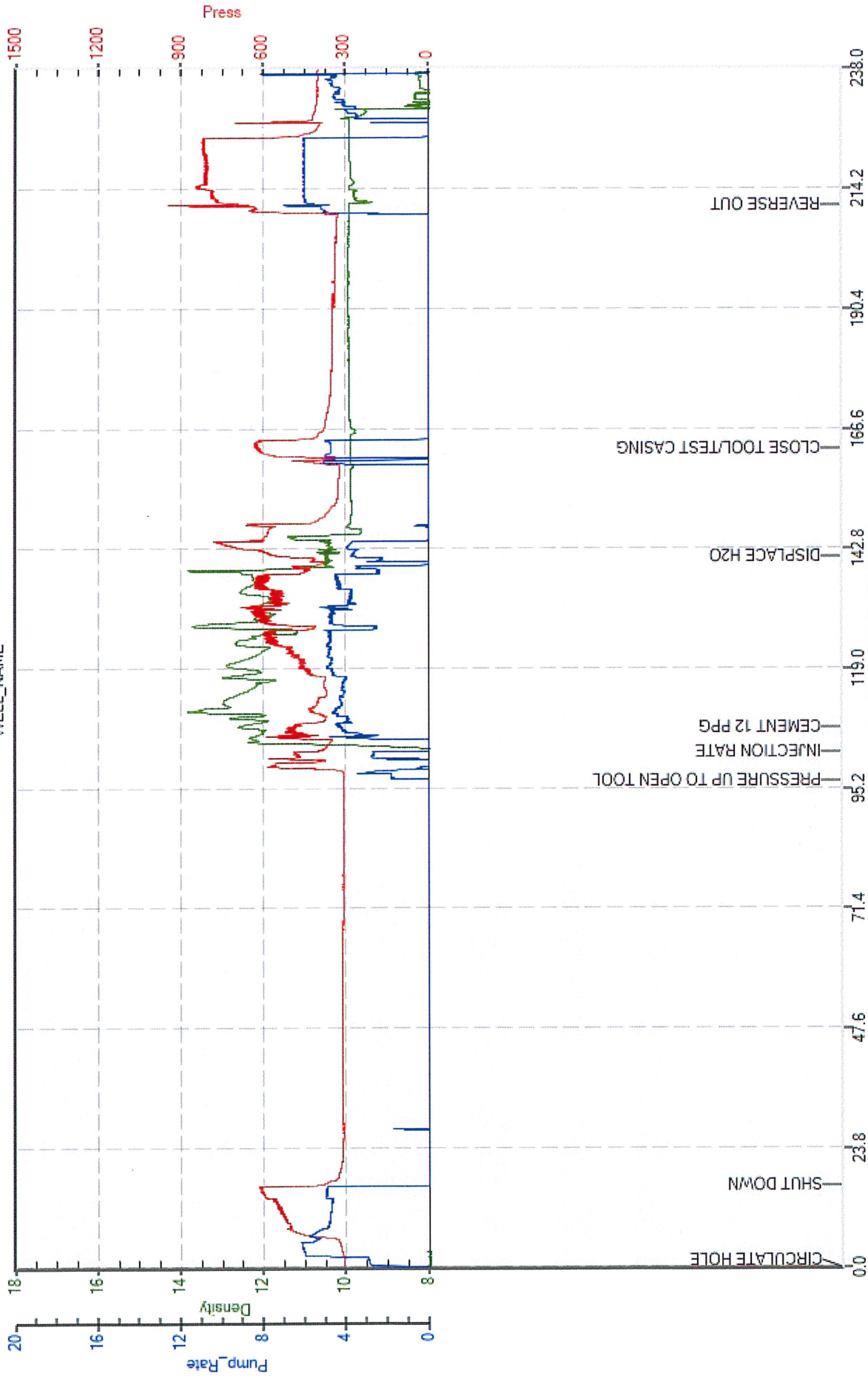
Customer:	Darrah Oil Co.	Well:	Younkin #2-10	Ticket:	WP 3159
City, State:		County:	Logan	Date:	8/1/2022
Field Rep:	Spencer Savage	S-T-R:	34-15S-34W	Service:	Port Collar

Downhole Information		Calculated Slurry - Lead		Calculated Slurry - Tail	
Hole Size:	in	Blend:	H-Con	Blend:	
Hole Depth:	ft	Weight:	12.0 ppg	Weight:	ppg
Casing Size:	5 1/2 in	Water / Sx:	5.5 gal / sx	Water / Sx:	gal / sx
Casing Depth:	2433 ft	Yield:	2.56 ft <sup>3</sup> / sx	Yield:	ft <sup>3</sup> / sx
Tubing / Liner:	in	Annular Bbls / Ft.:	bbs / ft.	Annular Bbls / Ft.:	bbs / ft.
Depth:	ft	Depth:	2433 ft	Depth:	ft
Tool / Packer:	Port Collar	Annular Volume:	bbls	Annular Volume:	bbls
Tool Depth:	2433 ft	Excess:		Excess:	
Displacement:	14.0 bbls	Total Slurry:	148.2 bbls	Total Slurry:	bbls
		Total Sacks:	325 sx	Total Sacks:	sx

TIME	RATE	PSI	BBLs	STAGE TOTAL BBLs	REMARKS
1200pm					Arrive on Location
1215pm					Safety Meeting
1230pm					Rig Up
103pm	2.8	-	1.0		Circulate Oil Out of Hole
105pm	6.0	100.0	9.0		
119pm	5.0	300.0	77.0		Shut Down
133pm	0.1		0.5		Spot Sand
240pm		500.0			Pressure up casing to open port collar
248pm	4.5	500.0	148.2		Begin cement H-Con 12ppg 325sks Circulated 5bbls of Cement to Pit
323pm	4.0	600.0	13.0		Begin Displacement
330pm					Close Port Collar
343pm	5.0	400.0	17.0		Reverse Put
433pm	6.0	500.0	87.0		Begin Pumping Down Backside to flush Sand off of Plug
448pm					Shut down
455pm					Wash Up
510pm					Rig Down
525pm					Leave Location

CREW		UNIT	SUMMARY		
Cementer:	Spencer	528/520	Average Rate	Average Pressure	Total Fluid
Pump Operator:	Jimmie	527/235	4.2 bpm	363 psi	353 bbls
Bulk #1:	Hunter	914			
Bulk #2:					

Darrah Oil Co  
WELL\_NAME



Job Started On: 08/02/2022 @ 1:05:55 PM



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: 7/3/2022  
 Invoice #: 0361877  
 Lease Name: Younkin  
 Well #: 2-10 (New)  
 County: Logan, Ks  
 Job Number: WP3033  
 District: Oakley

Date/Description	HRS/QTY	Rate	Total
Surface	0.000	0.000	0.00
Depth Charge 0'-500'	1.000	960.000	960.00
Heavy Eq Mileage	80.000	4.000	320.00
Light Eq Mileage	40.000	2.000	80.00
Ton Mileage	366.300	1.500	549.45
H-325	185.000	21.600	3,996.00
Cement Blending & Mixing	185.000	1.344	248.64
Service Supervisor	1.000	264.000	264.00

**Total** 6,418.09

**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.

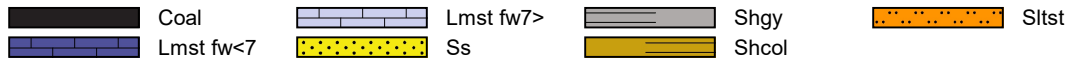
**SALES TAX:** Services performed on oil, gas and water wells in Kansas are subject to sales tax, with certain exceptions. HSI relies on the well information provided by the customer in identifying whether the services performed on wells qualify for exemption.

**WE APPRECIATE YOUR BUSINESS!**





**ROCK TYPES**



**OTHER SYMBOLS**

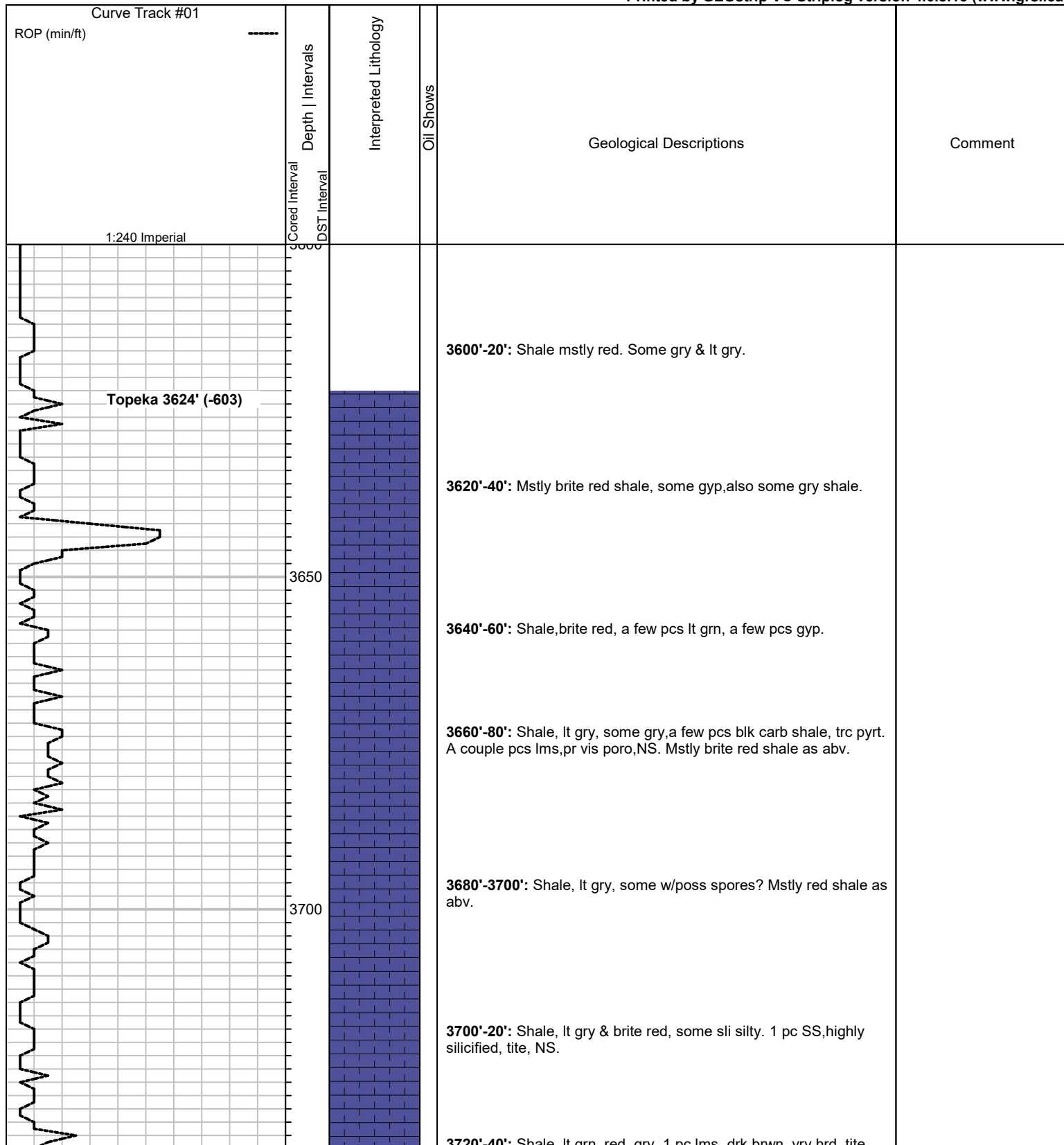
**OIL SHOWS**

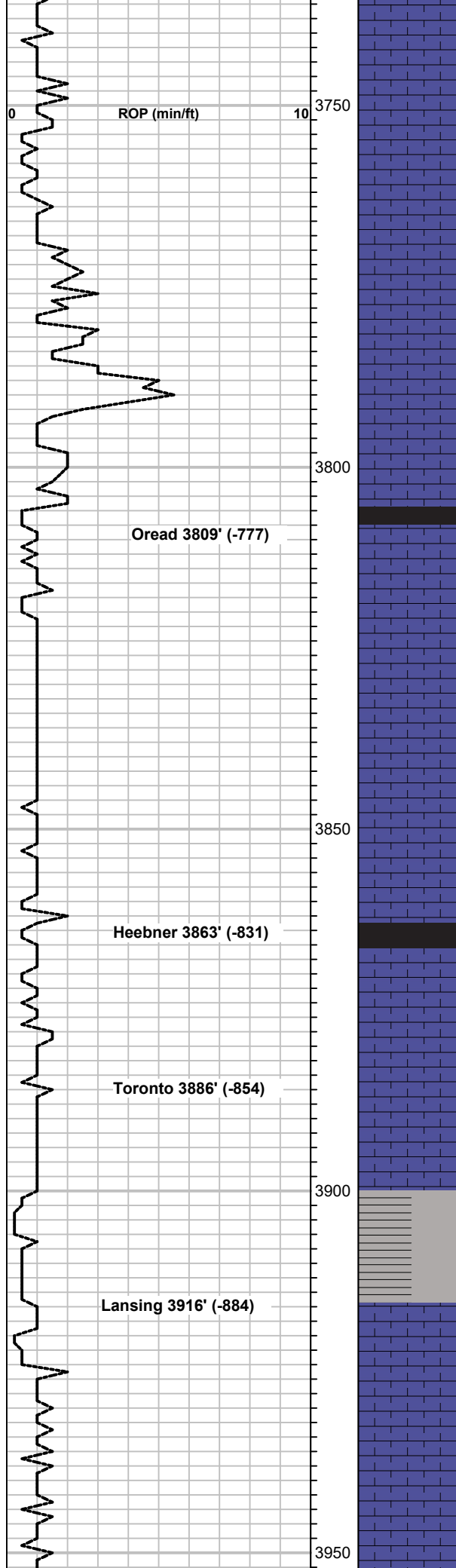
- Even Stn
- Spotted Stn 50 - 75 %
- Spotted Stn 25 - 50 %
- Spotted Stn 1 - 25 %
- Questionable Stn
- D Dead Oil Stn
- Fluorescence

**INTERVALS**

- Core
- DST

Printed by GEOstrip VC Striplog version 4.0.8.15 (www.grsi.ca)





3720-40': Shale, lt gry, red, gry. 1 pc lms, drk brwn, lte, NVP.

3740'-60': No sample.

3760'-80': Lms, micro-xtln, crm, sft-med res, vpr-no vis poro, gritty txt, poss vfn snd grains included, NS.

3780'-3800': Lms, crm-gry, micro-vfn xtln, med res, vry gritty txt, silty. Some gry, platy shaley lms to lmy, silty, shale. All vpr-no vis poro, NS.

3800'-10': Lms, crm, sli foss, vfn xtln, med res, vpr-no vis poro. Much shale, gry, maroon, red.

3810'-20': Lms, crm, micro-vfn xtln, med res, vpr-no vis poro. Trc chrt, tan, shrp & frsh. Much shale, maroon, red.

3820'-30': Lms, crm to lt gry, vfn xtln, med res, vpr-no vis poro.

3830'-40': Lms, crm, micro-vfn xtln, med res, vpr-no vis poro. Trc chrt, wht, shrp & frsh, sli foss.

3840'-50': Lms, crm to tan, micro xtln, sli foss, chrt, vpr-no vis poro.. Some chrt, off-wht shrp & frsh.

3850'-60': Lms, crm-tan, micro-vfn xtln, med res, vpr-no vis poro. Some chrt, crm to lt gry, shrp & frsh.

3860'-70': Lms, crm, vfn xtln, med res, vpr-no vis poro. Some chrt, crm to lt gry, shrp & frsh.

3870'-80': Lms, crm-tan, micro-vfn xtln, med res, sli foss (fus), vpr-no vis poro. Also some chrt, lt gry, sli foss (spic), shrp & frsh.

3880'-90': Lms, crm, some tan, vfn xtln, med res, few vis allchms. Little to no chrt. All vpr-no vis poro.

3890'-3900': Blk carb shale, some grn, gry & maroon shale. Much lms, crm, vfn xtln, med res, few-no allchms, vpr-no vis poro.

3900'-10': Lms, crm to lt gry, vfn xtln, med res, vpr-no vis poro. Trc chrt, off-wht, shrp & frsh. Some blk carb shale as abv.

3910'-20': Lms, crm- lt gry, vfn xtln, med res, few vis allchms, vpr-no vis poro. Much shale, gry, sli lmy, maroon, blk carb.

3920'-30': Lms, crm, micro-vfn xtln, med-hrd res, few vis allchms, vpr-no vis poro.

3930'-40': Lms, crm-tan, micro-vfn xtln, med res, some sli chlky, mst few-no vis allchms, vpr-no vis poro.

3940'-50': Lms, crm-tan, micro xtln, med-hrd res, a few pcs ooltc, w/abndt sub-rnd med ooids, non-vugular, all vpr-no vis poro. Some chl, wht, sft/mshy.

3950'-60': Lms, crm, micro-vfn xtln, med-hrd res, few vis allchms, vpr-no vis poro.

**CFS @ 4109' 20 min:**  
Lms, crm-gry, some chlky, micro-vfn xtln, med res, vpr-no vis poro. Much grn/gry shale. NS.

**CFS @ 4109' 40 min:**  
Lms, crm-tan, micro-vfn xtln, med res, mstly non-allchmcl, vpr-no vis poro. Much chrt, off-wht to lt gry, sli weathered.

**CFS @ 4180' 15 min:**  
1 pc w/fr scat stky drk brwn lv stn in intr-xtln, pnpnt poro, NSFO.

**CFS @ 4180' 30 min:**  
Poor quality sample, vry much gry mshy clay. Small ground up pcs of gry to tan ooltc lms, w/fr-gd scat lv drk brwn stn in int-ool & intr-xtln vugs. Difficult to tell porosity overall, some have clay in matrix and pr poro. Trc FO, vry dull, wk yell fluor, vry gd cut & gd blm, no brk. Sli odr.

**CFS @ 4180' 45 min:** Poor quality smpl, required much scndry washing due to chlky nature, also pcs ground vry fine. Ooltic lms, gry, micro-vfn xtln, much chlky/clay matrix, vpr intr-xtln poro, some pr-fr pnpnt poro, some sli foss, fr-gd lv drk brwn stn, fr sat, SSFO on brk, some ool sli stky/hvy, dull even yell fluor, sli odr.

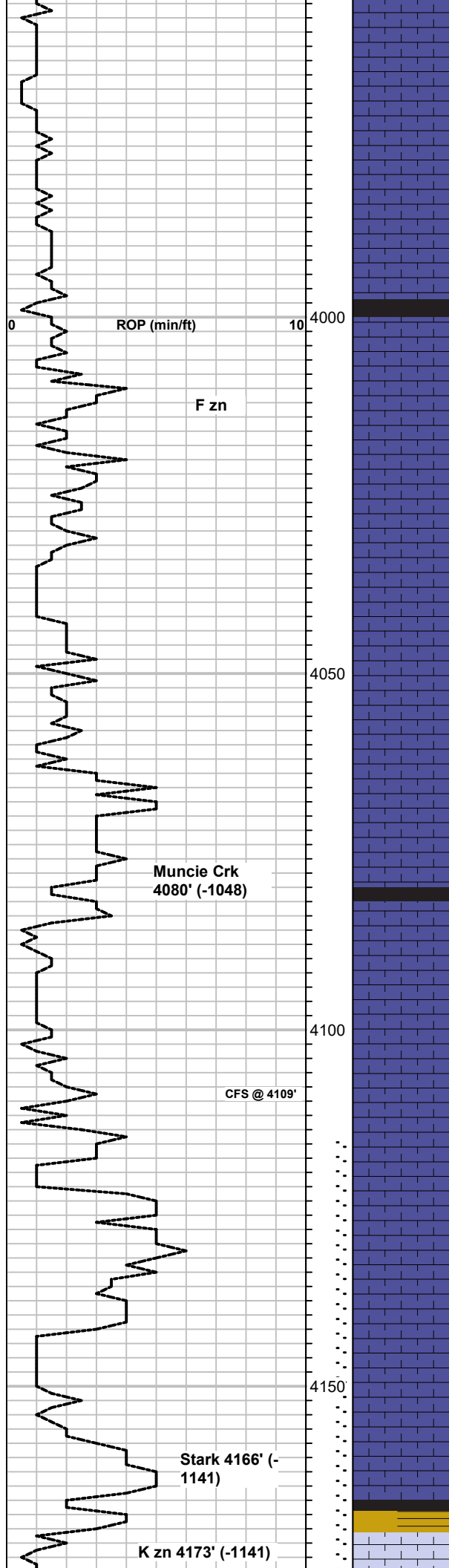
**Short sample 4295':** Shaley SS as abv, also some sndy/silty shale, gry to lt brwn, sft/mshy. Much lms, gry to lt brwn, micro-xtln, med-hrd res, vpr-no vis poro. 1pc shaly lms, sli sndy, scat lv stn in pnpnt intr-xtln poro on brk, fr strming cut, fr blm. NSFO.

**CFS @ 4295' 15 min:** Lms, crm-tan, some lt gry, micro-vfn xtln, med-hrd res vry sli foss, vpr-no vis poro.

**CFS @ 4295' 30 min:** Lms, gry, micro-vfn xtln, hrd res, trc spicules, no vis poro. Also lms, tan, micro-xtln, non-allchmcl, tite, no vis poro.

**CFS @ 4295' 45 min:** Lms, gry to brwn, vfn xtln, hrd res, sli foss (spic), mst vpr-no vis poro. 1 pc lms gry, vfn xtln, vpr poro, rare scat lv drk brwn stn in pnpnt poro. Mst pcs, lms, tan, micro-xtln, med-hrd res, few-no allchmcl, no vis poro.





3950'-60': Lms, crm, micro-vfn xtlm, sft-med res, few vis allchms, vpr-no vis poro. Some sft, wht chlk, as abv.

3960'-70': Lms, crm-lt gry, micro-vfn xtlm, med res, vfew to no allchems, vpr-no vis poro.

3970'-80': Lms, off-wht to crm, micro-vfn xtlm, med res, mst all few vis allchms, sli foss, vpr-no vis poro. A few pcs abndtly ooltc lms, tan, vpr vugular poro, vpr-no intr-ooltc matrix poro. All NS.

3980'-90': Lms, crm, micro-vfn xtlm, med res, vfew to no vis allchms, vpr-no vis poro. Much maroon shale, some grn shale.

3990'-4000': No sample.

4000'-10': Lms, crm, micro-xtlm, med res, mstly non-allchmcl, vpr-no vis poro. Some grn & maroon shale, as abv.

4010'-20': Blk carb shale. Mstly lms, crm, micro-vfn xtlm, med res, mstly non-allchmcl, vpr-no vis poro.

4020'-30': Lms, crm-tan, vfn-fn xtlm, med res, mstly vpr-no vis poro, non-allchmcl. Trc ooltc pcs w/pr poro & NS. A couple pcs w/rare scat lv brwn stn in pr intr-xtlm pnpnt poro, wk sat, VSSFO on brk, poss sli gsy, gd even yell fluor, in 1 pc, gd strming cut.

4030'-40': Lms, crm, micro-vfn xtlm, med res, mst non-allchmcl, a few slii ooltc, all vpr-no vis poro, NS. Some shale, grn, blk, maroon

4040'-50': Lms, crm-tan, micro-vfn xtlm, med res, mstly non-allchmcl, some pcs chlky, all vpr-no vis poro. Abndt chrt, off-wht to lt gry, shrp & frsh.

4050'-60': Lms, tan, oomldc vugular, micro-xtlm, med res, pr intr-xtlm & pr-fr vugular poro, NS. Much chrt, off-wht to tan, semi-frsh, vry sli weathrd. Trc ooltc chrt.

4060'-70': Lms, crm, some tan, micro xtlm, sft-med res, some sli chlky, mst non-allchmcl, vpr-novis poro. A few oomldc pcs as abv, all NS.

4070'-80': Lms, crm-tan, micro-xtlm, med res, non-allchmcl no vis poro. Much chlk, sft-med res.

4080'-90': Lms, crm-tan, micro-vfn xtlm, med-hrd res, dns, sli foss, vpr-no vis poro. Some blk carb shale.

4090'-4100': Shale, blk carb, gry, grn, brick red. Mstly lms, crm, micro xtlm, dns, mstly non-allchmcl, vpr-no vs poro.

**Short sample @ 4109':**  
Blk carb shale, Mstly lms, crm-lt gry, sli mealy, & sli chlky, micro xtlm, med res, all vpr-no vis poro.

4109'-20': Lms, crm, crypto-micro xtlm, med res, few allchms, no vis poro. A few pcs chrt, off-wht, shrp & frsh.

4120'-30': Lms, crm-lt gry, crypto-micro xtlm, med res, dns, few to no allchms, no vis poro. Some chrt, off-wht, shrp & frsh.

4130'-40': Shale, gry, some blk, sli carb. Some shaley, gry, lms, micro-vfn xtlm, dns, tite. Mstly lms, crm, tite, as abv.

4140'-50': Lms, lt gry to off-wht, ooltc, w/pr-fr intr-ooltc poro, fr scat lv brwn stn (some sli stky blk stn), in pnpnt intr-ool poro in a few pcs. Mstly lms, crm, micro xtlm, non-allchmcl, tite, no vis poro. Show in approx 1% pcs.

4150'-60': Lms, crm, micro-xtlm, med res, non-allchmcl, tite, no vis poro, mst pcs. A few pcs w/rare scat blk stn (poss dead), as abv. NSFO. Some shale, gry-blk.

4160'-70': Shale, gry, grn, grnsh/gry, some silty. Mstly, lms, tan, micro xtlm, med res, few-no allchms, tite, vpr-no vis poro.

4170'-80': Lms, tan, some lt gry, micro-vfn xtlm, med-hrd res, few allchms, vpr-no vis poro. A few pcs abndtly ooltc lms, tan, vpr vugular poro, vpr-no intr-ooltc matrix poro. All NS.

**CFS @ 4310' 15 min:**  
Conglrmrtc lms, gry, crypto-micro xtlm, med-hrd res, some w/grn shale inclsns, sli pyrtc, no vis poro. Increase in shale, gry, grn, maroon, red. Mstly lms, tan, tite, NS.

**CFS @ 4310' 30 min:** Lms, gry, brwn, tan, micro-xtlm, med-hrd res, sli foss, vpr-no vis poro. Some shale.

**Short sample @ 4325':**  
Lms, tan to brwn, micro-vfn xtlm, mstly non-allchmcl, mst no vis poro. A couple pcs w/rare scat lv brwn stn in scat pnpnt & fossiferous intr-xtlm poro, vpr pr poro. NSFO.

**CFS @ 4325' 15 min:**  
Conglrmrtc lms, yell/grn, some gry, micro-xtlm, hrd res, foss, no vis poro. Much shale, gry, drk gry, grn, trc maroon.

**CFS @ 4325' 30 min:** Lms, gry, micro-vfn xtlm, med res, fr spty scat lv blk stn in pnpnt intr-xtlm poro, FSFO on brk, wk sat, No odr.

**CFS @ 4325' 45 min:** Lms, gry, fn xtlm, some med xtls, med-hrd res, fr scat lv stn in pnpnt intr-xtlm poro, pr-fr intr-xtlm poro, wk-fr sat, SSFO on brk, 1 pc w/FSFO drk brwn FO on brk, fr sat, vry wk yell/wht fluor, fr cut & gd blm on brk. No odr.

**Short sample @ 4345':**  
Ooltc lms, tan, crypto-micro xtlm, med res, vpr-no vis poro, non-vugular, 1 pc w/scat dead blk stn, rest NS.

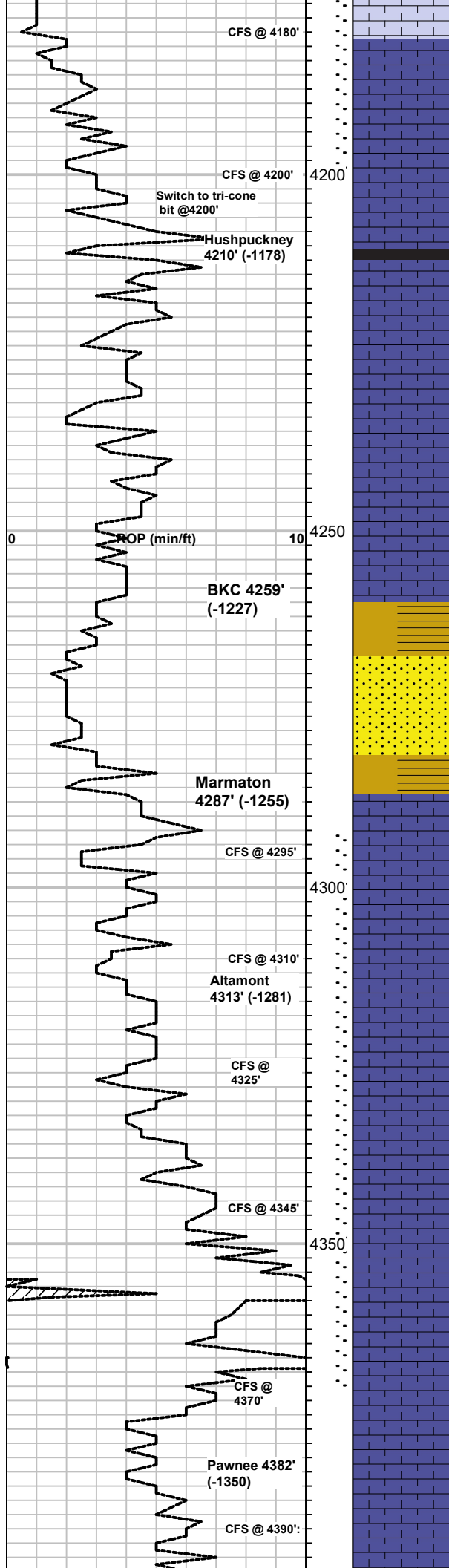
**CFS @ 4345' 15 min:** Dolo, crm sli yellowish, fn xtlm, unifrm xtls, med res, slw efrvnc, mst non-allchmcl, pr vis poro, NS. Some sft off-wht chlk.

**CFS @ 4345' 30 min:** Lms, gry, sli shaley, crypto-micro xtlm, hrd res, no vis poro. Some shale, gry, maroon earthy, and grn. Mstly, dolo crm/yellish as abv, & ooltc lms, tan, vpr vis por, NS.

**CFS @ 4345' 45 min:** Shale, gry, maroon, some grn. 1pc tan/lt gry sli chlky lms, w/fr scat lv stn in rare pnpnt poro, fr rainbw lstr on brk, pr poro, trc FO, may differ from abv. Some conglrmrtc lms, gry to tan, micro-xtlm, hrd res, sli shaley, no vis poro.

**CFS @ 4360' 15 min:** Lms, tan to gry, vfn to fn xtlm, med-hrd res, mst non-allchmcl, vpr-no vis poro. Increase in shale, mstly maroon & gry, trc red & grn. 1 pc lms, gry/tan, w/fr scat hvy blk lv stn in scat pnpnt and shallow vuggy poro, vpr -no intr-xtlm poro, pr weathrd vugular poro, NSFO.

**CFS @ 4360' 30 min:** Lms



tan-gr, vfn to fn xtl, med-mst hrd res, sli silicified, few-no allchms, 1 pc w/bi-valve shell, all vpr-no vis poro. Some shale, maroon, grn, gry.

**4180'-90'**: Oolitic lms, lt gry, abndt small rnd ooids, titely cmntd, pr intr-ooltic & pr intr-xtln poro, fr, scat lv blk stn in rare intr-ooltic poro, hrd res, SSFO on brk, sli odr. Mst pcs lms, tan-crm, chly, sft to mshy. Increase in shale, grn & gry.

**4190'-4200'**: Shale, gry, grn, maroon. Mstly lms, crm to gry, micro-vfn xtl, some chly, mst non-allchmcl & vpr-no vis poro. Some oolitic lms, gry, w/wk to fr scat lv blk stn in printr-ooltic poro (prob from abv), NSFO.

**4200'-10'**: Mstly shale, grn, red, gry, prob trip trash. Also lms, crm, micro-xtln, med res, non-allchmcl, no vis poro.

**4210'-20'**: Blk carb shale, firm. Much gry, red, grn & maroon shales. Some lms, tan, micro xtl, med res, mstly non-allchmcl, vpr-no vis poro. Also some chrt, off-wht to lt gry, shrp & frsh. 1 pc gry oolitic lms, med ooids, w/rare scat lv stn in pr intr-ooltic poro.

**4220'-30'**: Lms, tan, micro xtl, as abv. Some lms, gry to drk brwn, fn xtl, hrd res, sli oolitic in some pcs, vpr to no vis poro mst pcs, a few pcs w/rare scat lv blk stn in rare pnpnt intr-xtln poro, 1 pc w/VSSFO on brk, vpr poro overall, wk shw, sli odr.

**4230'-40'**: Lms, tan to lt gry, crypto to mivro xtl, hrd res, non-allchmcl, no vis poro.

**4240'-50'**: Lms, mstly tan, some lt gry, all crypto to micro xtl, med-hrd res, mstly non-allchmcl, vpr-no vis. Some chl. Some chrt, lt gry, shrp & frsh.

**4250'-60'**: Lms, drk brwn/gry, crypto-micro-xtln, hrd to vry hrd res, sli oolitic to sli foss, no vis poro.

**4260'-70'**: Lms, tan to gry, micfo xtl, med-hrd res, few vis allchms, some sli shaley, vpr-no vis poro.

**4270'-80'**: Lms, crm-tan some lt gry, as abv, mst micro xtl, med-hrd res, few to no vis allchms, vpr-no vis poro. 1 pc shaley SS, brwn, fri, vry fn grnd, pr intr-gran poro, NS.

**4280'-90'**: Shaley SS, gry & brwn, vfn grnd, sft-med res, vry shaley matrix, pr intr-gran poro, NS. Mstly lms, tan-gry, tite.

**4295'-4300'**: Lms, gry-brwn, some tan, micro-vfn xtl, foss (crinoids), med-hrd res, sli silicified, vpr-no vis poro. NS.

**4300'-10'**: No sample.

**4310'-20'**: Lms, tan to lt gry, some brwn, micro xtl, mstly non-allchmcl, vpr-no vis poro. 1 pc w/scat lv stn in pr scat pnpnt poro, trc FO, pr intr-xtln poro. Much mshy gry shale in smpl.

**4320'-30'**: Lms, tan to gry, crypto to micro xtl, mstly non-allchmcl, no vis poro. Increase in gry, grn & red shales. A few pcs lms, gry w/gd scat lv stn in intr-xtln pnpnt poro, as abv.

**4330'-40'**: Lms, crm-tan, some gry, micro xtl, med-hrd res, mst non-allchmcl. Much shale, gry, grn, etc.

**4340'-50'**: Lms, tan-gry, crypto-micro xtl, hrd res, non-allchmcl, no vis poro. Much shale, as abv.

**4350'-60'**: Lms, gry, vfn to fn xtl, hrd res, few-no vis allchms, some w/strks maroon clay, all no vis poro.

**4360'-70'**: Lms, gry-tan some drk gry, silicified, cypto-micro xtl, mst vry hrd res, some oolitic to poss sndy lm/lmy SS, some pc foss (foram), all vpr-no vis poro. Trc chrt, brwn, shrp & frah. Much shale, drk gry, gry, grn, maroon, etc.

**4370'-80'**: Lms, lt gry, micro-xtln, hrd res, vry pr poro, rare lv blk stn in vry rare pnpnt poro, 1 pc w/fr stn dry, trc FO, no odr. vry wk shw. A few pcs lms, brwn, micro-xtln, foss, hrd res, tite, no vis poro. Much trip trsh.

**4380'-90'**: Lms, gry, crypto-micro xtl, hrd res, mstly non-allchmcl, occ fn-med edge xtlns, mstly vpr poro, rare lv blk stn in pnpnt poro, wk shw. Trc fusilinds. Some blk carb shale, also, grn, gry, & red.

CFS @ 4360' 45 min; Lms, gry, some tan, micro-vfn xtl, med-mst hrd res, sli foss in some pcs, vpr-no vis poro. Much shale, maroon, gry, trc red & grn, a few pcs loose pyrt.

**CFS @ 4370' 15 min:** Lms, crm-tan, gry, some brwn, micro-vfn xtl, hrd res, some sli oolitic to sli foss, some sli silicified all vpr-no vis poro. Much shale, gry, grn, maroon, etc.

**CFS @ 4370' 30 min:** Lms, tan, crm, gry, some brwn, all crypto-vfn xtl, hrd-vhrd res, some gry & brwn highly silicified pcs, some sli foss to sli oolitic, all no vis poro. Some shale, grn, gry, maroon, etc.

**CFS @ 4370' 45 min:** Lms, tan, gry, some brwn, micro-vfn xtl, mst hrd res, some oolitic, some silicified lms, to brwn foss chrt, all vpr-no vis poro. Much shale, grn, gry, maroon, etc.

**CFS @ 4390' 15 min:** Lms, mstly tan, micro-xtln, med res, few allchms, vpr-no vis poro. Some lms, gry, micro-xtln, hrd res, sli foss, w/scat lv blk stn in rare pnpnt poro & fract, mstly vpr poro, VSSFO on brk, wk shw.

**CFS @ 4390' 30 min:** Lms, tan-gry, micro xtl, med-hrd res, mst few-no vis allchms, vpr-no vis poro. A few pcs lms, gry, crypto-micro xtl w/rare scat lv blk stn in rare pntnt & fract poro. Vpr poro overall & wk shw. Trc chry gry, shrp & frsh. Some shale grn, gry, bluish/grn, etc.

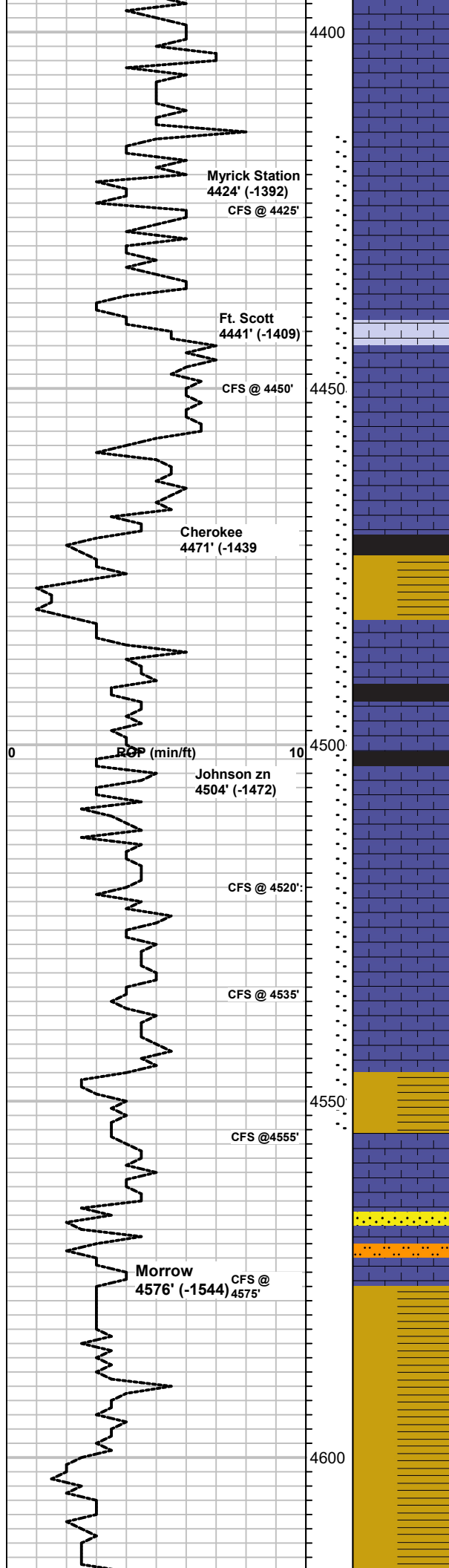
**CFS @ 4390' 45 min:** Lms, tan-gry, micro xtl, med-hrd res, mst vpr-no vis poro, 1 fus foss, a few pcs gry lms w/wk-fr scat lv stn in pnpnt poro of fractures. Wk shw. A couple pcs chrt, lt gry, shrp & frsh.

**Short sample @ 4425':** Lms, gry, some tan, micro-vfn xtl, some foss, all vpr-no vis poro. Much shale, blk carb, gry & grn.

**CFS @ 4425' 15 min:** Lms, tan, some gry and a few brwn, crypto-mst micro xtl, hrd res, a few foss, all no vis poro. Some shale, blk carb, grn & gry.

**CFS @ 4425' 30 min:** Lms, tan-crm, & gry, micro xtl, hrd res, some poss sli foss, all no vis poro. A few pcs chrt, gry, shrp & frsh. Some shale, blk carb, grn & gry.

**CFS @ 4425' 45 min:** Lms, tan & gry, micro-xtln, hrd res, few allchms, some oolitic, all vpr-no vis poro. Increase in



4390'-4400': Lms, gry, crypto-micro xtln, med-hrd res, mst non-allchmcl, vry dns, no vis poro, NS. Some chrt off-wht to gry, frsh.

4400'-10': Lms, gry to tan, crypto-micro xtln, hrd res, some foss, mst all no vis poro. Much chrt, gry to drk gry, shrp & frsh.

4410'-20': Lms, gry, some tan, micro xtln, med to mst hrd res, mst non-allchmcl, no vis poro. Much chrt, drk gry, shrp & frsh.

4425'-30': Lms, tan-gry, micro-vfn xtln, hrd res, mst non-allchmcl, all vpr-no vis poro. Much shale, grn, gry, blk carb. Trc pyrt. Some conglmrct shaley lms.

4430'-40': Lms, crm, some lt gry, micro xtln, med res, mst non-allchmcl, all vpr-no vis poro.

4440'-50': Blk carb shale, gry, grn, and trc of maroon & red shales. Much lms, tan, micro-xtln, med-hrd res, mst no vis allchms, no vis poro. 1 pc chrt, off-wht, abndtly ooltc, semi-frsh.

4450'-60': Lms, mstly, tan to lt gry, micro-xtln, med res, non-allchmcl, no vis poro. Some ooltc lms, brwn to tan/gry, abndtly ooltc mst no vis poro NS, a few w/wk-fr scat lv stn in pnprt poro, pr poro, wk shw, NSFO.

4460'-70': Lms, gry, micro xtln, med-hrd res, mst non-allchmcl, 1 pc sli foss (fus). Some lms, tan, micro-xtln, med res, non-allchmcl. All no vis poro. A few pcs chrt, drk gry to gry, 1pc abndtly oolt, all shrp & frsh. Shale, gry, grn, blk carb.

4470'-80': Shale, gry, grn, maroon, trc red & blk carb. Also lms, gry, crypto-micro xtln, some conglmrct, all hrd res, few allchms, no vis poro.

4480'-90': Shale, gry, maroon, blk carb, some red, trc grn.

4490'-4500': Lms, lt gry, tan, micro-xtln, med to hrd res, mst non-allchmcl, a few gry pcs, sli ooltc, all vpr-no vis poro. Some crm, chiky lms, sft res.

4500'-10': Lms, gry, micro-xtln, med-hrd res, sli foss, mst pcs non-allchmcl, vpr-no vis poro. Some lms, crm, chiky. A few pcs gry lms, w/rare scat lv stn in pr pnprt intr-xtln poro, VSSFO on brk, vry sli odr, wk shw overall.

4510'-20': Lms, gry micro-vfn xtln, med res, vry sli foss, mst vpr-no poro. A few pcs w/rare scat lv stn as abv, 1 pc foss gry lms, brtl, w/fr lv stn in intr-foss poro, FSFO on brk. Increase in shale, blk, gry, grn.

4520'-30': Lms gry, micro-xtln, hrd res, few vis allchms, no vis poro.

4530'-40': Lms, tan-gry-some brwn, micro xtln, hrd res, mst few-no vis allchms, trc foss. 1 pc w/wk stn in pr intr-xtln fract poro, vry wk shw, NSFO. Much shale, gry, grn, maroon.

4540'-50': Lms, tan to gry, crypto-micro xtln, med-hrd res, few vis allchms, vpr-no vis poro. 1 pc lms, ooltc, w/wk-ft lv stn in intr-ooltc/intr-xtln poro, trc FO on brk, pr poro, wk shw. 1 pc tan fn xtln lms, w/fr scat lv drk brwn stn in intr-xtln poro, pr poro, trc Hvy drk brwn FO. Much shale, gry, grn, maroon, red.

4555'-60': Probably mstly trip trash- Shale, gry, grn, red, maroon, etc. A couple pcs shaley SS gry, vpr poro, NS.

4560'-70': Shaley SS, gry, fn grained, med res, clay matrix, pr intr-gran poro, NS. Mstly, shale, gry, grn, maroon, red, brwn, some sli sndy to silty.

4570'-80': Vari-colored shale. A few clstrs SS, vfn to fn grained, mst w/highly clay matrix, hrd res, pr intr-gran poro, NS.

4580'-90': Shale, vari-colored, mstly grn & drk gry shale, trc grn chrt, shrp. A few clst SS, grt, some w/clay matrix, tite, also grn SS, vfn grnd, rnd qtz, well strtd, grn clay matrix vpr poro. All NS.

4590'-4600': Vari-colored shale, some mottled/mixed colored shale.

4600'-10': Shale, mstly gry & grn, some vari-colored. A few pcs lms, gry-drk gry, fn xtln, hrd res, sli shaley, vpr-no vis poro.

4610'-20': Vari-colored shale. A few pcs Shaley SS, grn, vfn grnd, mstly shaley, mstly gry, grn, maroon, red, brwn, some sli sndy to silty.

shale, blk & gry, and some pyrtic shale.

**CFS @ 4450' 15 min:** Ooltc Lms, tan/gry, crypto-micro xtln, med-hrd res, some abndtly ooltc, mst vpr-no vis poro, a few pcs w/rare vpr pnprt to intr-ooltc poro & wk shw scat lv blk stn. NSFO, trc mbw lstr, no odr.

**CFS @ 4450' 30 min:** Ooltc lms, tan/gry, crypto-micro xtln, med-hrd res, a few w/ rare wk-fr lv brwn stn in pnprt & intr-ooltc poro, vpr-pr poro, NSFO, sli odr, wk shw. Some lms, tan, micro xtln, some chiky, non-allchmcl, no vis poro. Also shale, gry, grn & some blk carb.

**CFS @ 4450' 45 min:** Ooltc lms, tan, micro-vfn xtln, med-hrd res, vpr-no vis poro. NS. Also lms, tan, non-allchmcl, no vis poro. A few pcs chrt, tan to gry, shrp & frsh.

**CFS @ 4520' 15 min;** Lms gry, some tan, micro-xtln, med-hrd res, sli foss, all vpr-no vis poro. Much blk carb shale, also grn & gry shales.

**CFS @ 4520' 30 min;** Lms, gry, micro-xtln, hrd res, sli foss, mst non-allchmcl, no vis poro. Some gry, blk & grn shales.

**CFS @ 4520' 45 min;** Lms, gry, vfn xtln, hrd res, sli silicified, grty txt, vfew-no vis allchms, vpr-no vis poro. Also lms, tan, sli chiky, no vis poro. Some foss lms gry, vpr-no vis poro, all NS.

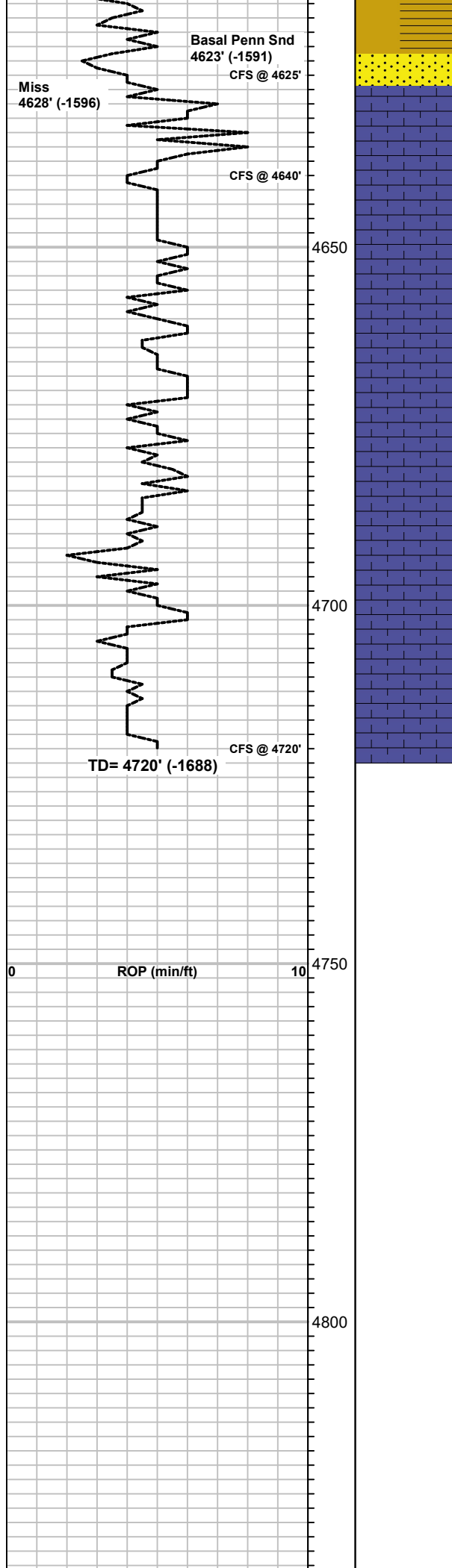
**Short sample @ 4535':** Lms, brwn-gry, micro-xtln, hrd res, sli silicified, sli foss, no vis poro. Also lms, tan, med res, sli chiky. Shale, grn, gry, blk carb.

**CFS @ 4535' 15 min:** Lms, gry to brwn, micro-xtln, hrd res, some sli silicified. Also lms tan, sli chiky, all vpr-no vis poro. Some chrt, lt gry to peach (foss), shrp & frsh.

**CFS @ 4535' 30 min:** Lms, gry-tan, some brwn, micro-xtln, med-hrd res, some gry-brwn, vry sli ooltc, mst all vpr-no vis poro & NS. 1 pc brwn, fn xtln lms, w/rare scat lv stn in intr-xtln poro, trc FO on brk. Some chrt, gry-vdrk gry, shrp & frsh. Much shale, gry, grn, maroon & red.

**CFS @ 4535' 45 min:** Lms, tan, vfn xtln, hrd res, grainy txt, sli foss, vpr-no vis poro. Some shale, grn, gry, trc blk carb, trc maroon, trc red.

**Short sample @ 4555':** Lms, tan to gry, micro-vm xtln, hrd res, sli foss, mst pcs, non-allchmcl, mst all



**4620'-30':** SS, off-wht, fn-med grained, sub-rnd, mod srted, qtz, brtl-med res, friable, fr-gd poro, NS. Mstly vari-colored shale.

**4630'-40':** SS, off-wht, sft-med res, vfn-med grnd, sub-rnd to sub-ang, prly srted, much calc cmnt to chlky matrx, vpr-no vis poro., NS. Much vari-colored shale, gry & prplsh gry, etc.

**4640'-50':** Sli Sndy Lms, off-wht to crm, vfn-fn xtln, med-hrd res, scat med sub-rnd qtz grains imbedded. Some lms, off-wht, fn xtln, vpr poro, all NS. Mstly shale, gry, grn, fissile, etc.

**4650'-60':** Lms, off-wht to crm, fn xtln, med res, some w/scat qtz grains (med,sub-rnd). Vpr intr-xtln poro. Mstly shale, as abv.

**4660'-70':** Lms, off-wht to crm, med fn xtln, med res, grny txt. A few w/rare scat med qtz grains imbedded, mst no inclnsns, and vpr vis poro. Mstly shale, gry, grn, etc

**4670'-80':** Lms, crm, micro-xtln, med res, some sli sndy, mst w/grainy txt, few-no vis allchms, pr poro.

**4680'-90':** Lms, crm-tan, micro-xtln, med res, mst sli sndy, w/scat vfn to med qtz snd grains included. 1 pc ooltc lms, sli foss,no vis poro. Mst pcs appear non-allchmcl, vpr-no vis poro.

**4690'-4700':** Lms, crm-tan, crypto-micro xtln, med-hrd res, some ooltc, non-vugular, a few sli sndy as abv, all vpr-no vis poro.

**4700'-10':** Lms, crm-lt gry, cryptoxtn, brtl-med res, mst non-allchml, a few sli foss, all no vis poro.

**4710'-20':** Lms, crm-tan, crypto-micro xtln,brtl-med res, mst non-allchmcl, some chlky lms, all vpr-no vis poro.

well srted, qtz, vpr-no vis poro. Also, sndy shale grn,& gry silty shale. vpr-no vis poro. A few pcs w/pr-fr scat lv stn in intr-xtln poro, pr intr-xtln poro. 1 pc off-wht ooltc lms, w/fr scat lv stn in pr intr-ooltc poro, VSSFO on brk. Much shale, gry, grn, blk, brick red, trc maroon. Trc conglrmtc shale.

**CFS @ 4555' 15 min:** Shale, gry, grn, maroon, etc. Lms, tan-gry, micro xtln, hrd res, sli ooltc to foss, mst no vis poro. A couple pcs, lms, gry micro-xtln, w/wk-fr scat lv stn in intr-xtln poro, pr poro, trc FO.

**CFS @ 4555' 30':** Lms, tan to gry, micro xtln, med-hrd res,mst non-allchmcl,vpr-no vis poro.A couple pcs lms gry w/rare lv stn in intr-xtln fract poro, trc FO,vpr poro, wk shw. Much shale, gry, grn,maroon,etc.

**CFS @ 4555' 45min:** Shale,gry,grn,maroon,red,etc . Some xtln pyrite. Also lms,mstly tan,hrd res, no vis poro.

**Short sample @ 4575':** Shale, gry, grn, maroon, red, etc. Trc loose pyrt.

**CFS @ 4575' 15 min:** Shale, gry, grn, blk, maroon,brwn,red, some sli silty, sli pyrtc, some conglrtc shale. A few pcs conglrtc qtz, lrg crs prnk to red tinted grains. Trc SS,clr, med grained, fr poro, NS.

**CFS @ 4575' 30 min:** Shale, gry, grn, maroon, red, earthy red/maroon, etc. Some loose xtln pyrt. 1 pc SS, drk gry, fn grained, med-hrd res, highly clay matrix, vpr poro,NS.

**CFS @ 4575' 45 min:** Shale, gry, grn, maroon, red, yellow. a few pcs loose xtln pyrt. A few lrg loose conglrmtc qtz grains.

**CFS @ 4575' 60' min:** A couple pcs Shaley SS gry, fn grnd, sub-ang qtz, well srted, clay matrx, hrd res,vpr poro. Also, a few clstrs SS,off-wht to tan,vfn-fn grained. sub-rnd qtz, mod srted, well cmntd,med-hrd res,semi-fri,pr-fr poro. A couple clst qtzitc SS, med sub-rnd qtz grains, well cmntd, pr-fr poro. All NS. Mstly vari-colored shale, and some blk carb shale.

**Short sample @ 4625':** A few clstrs SS, off-wht, fn-med grained, sub-rnd, mod srted qtz, well cmntd, calc cmnt, hrd res, pr intr-gran poro, ns. Mstly vari-colored shale, as abv.

**CFS @ 4625' 20 min:** SS, off-wht to lt gry, fn-med grnd, sub-rnd, mod srted qtz, med-hrd res, calc cmnt, mst pr intr-gran poro, NS. Mstly vari-colored shale.

**CFS @ 4625' 40 min:** SS,

off-wht, fn-med grnd, sub-rnd, mod srted, qtz, brtl-med res, prly cmntd, friable, fr intr-gran poro, NS. Mstly vari-colored shale.

**CFS @ 4625' 60 min;**

**CFS @ 4640' 20 min:** SS to sndy lms, off-wht, vfn to med grnd, sub-rnd grns imbedded in calcareous matix and vfn grains, vprly srted, med res, vpr poro, NS.  
Mstly shale, vari-colored but mst gry & grn, fissile to splntry.

**CFS @ 4640' 40 min:** Sndy lms, off-wht, fn xtltn, w/scat med sub-rnd qtz grns imbedded, med res, vpr-vis poro. Some vry lmy SS, prly srted, w/vpr poro, all NS. Mstly shale, grn & gry, fissile.

**CFS @ 4640' 60 min:** Lms, off-wht, fn-med xtltn, med res, some sli sndy, imbedded w/med qtz grns, mst w/no grains inclcd, vpr poro, & NS. Mstly shale.

**CFS @ 4720' 30 min:** Lms, tan-gry, micro-vfn xtltn, med-hrd res, mst non-allchmcl, also lms, tan to lt gry, crypto xtltn, as abv. All vpr-no vis poro.

**CFS @ 4720' 60 min:** Lms, tan-brwn, micro-vfn xtltn, med-hrd res, some ooltc to sli foss, non-vugular. Also lms tan-bwn, fn xtltn, foss. All vpr-no vis poro.

4850

4900

4950



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Darrah Oil  
 125 N Market St Ste 1015  
 Wichita, Ks 67202  
 ATTN: Seth Evenson

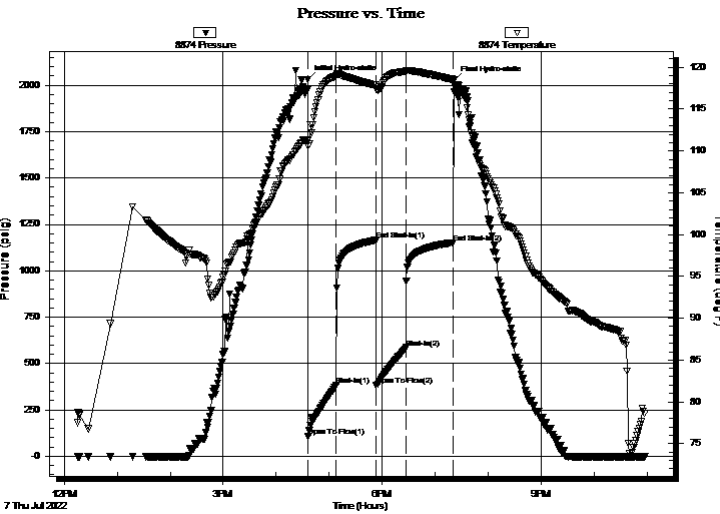
**10 14s 34w Logan Ks**  
**Younkin #2-10**  
 Job Ticket: 68128 **DST#: 1**  
 Test Start: 2022.07.07 @ 12:15:00

## GENERAL INFORMATION:

Formation: **LKC I-J-K**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 16:36:15  
 Time Test Ended: 22:58:30  
 Interval: **4115.00 ft (KB) To 4200.00 ft (KB) (TVD)**  
 Total Depth: 4200.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Bradley Walter  
 Unit No: 78  
 Reference Elevations: 3032.00 ft (KB)  
 3021.00 ft (CF)  
 KB to GR/CF: 11.00 ft

**Serial #: 8874 Outside**  
 Press@RunDepth: 585.79 psig @ 4116.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2022.07.07 End Date: 2022.07.07 Last Calib.: 2022.07.07  
 Start Time: 12:15:05 End Time: 22:58:30 Time On Btm: 2022.07.07 @ 16:36:00  
 Time Off Btm: 2022.07.07 @ 19:21:45

**TEST COMMENT:** IF: BOB @ 4 min- 58"  
 IS: No return.  
 FF: BOB @ 5 min 49"  
 FS: Surface return. 30-45-30-45



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2030.42	111.32	Initial Hydro-static
1	106.35	110.60	Open To Flow (1)
33	381.93	118.98	Shut-In(1)
77	1164.35	117.88	End Shut-In(1)
78	381.57	117.48	Open To Flow (2)
112	585.79	119.49	Shut-In(2)
164	1151.39	118.57	End Shut-In(2)
166	2027.55	117.90	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
770.00	smcw 2m 98w	9.16
300.00	mcw 20m 80w	4.21

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Darrah Oil

**10 14s 34w Logan Ks**

125 N Market St Ste 1015  
Wichita, Ks 67202

**Younkin #2-10**

Job Ticket: 68128

**DST#: 1**

ATTN: Seth Evenson

Test Start: 2022.07.07 @ 12:15:00

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

51000 ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.99 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 1.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
770.00	smcw 2m 98w	9.161
300.00	mcw 20m 80w	4.208

Total Length: 1070.00 ft      Total Volume: 13.369 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

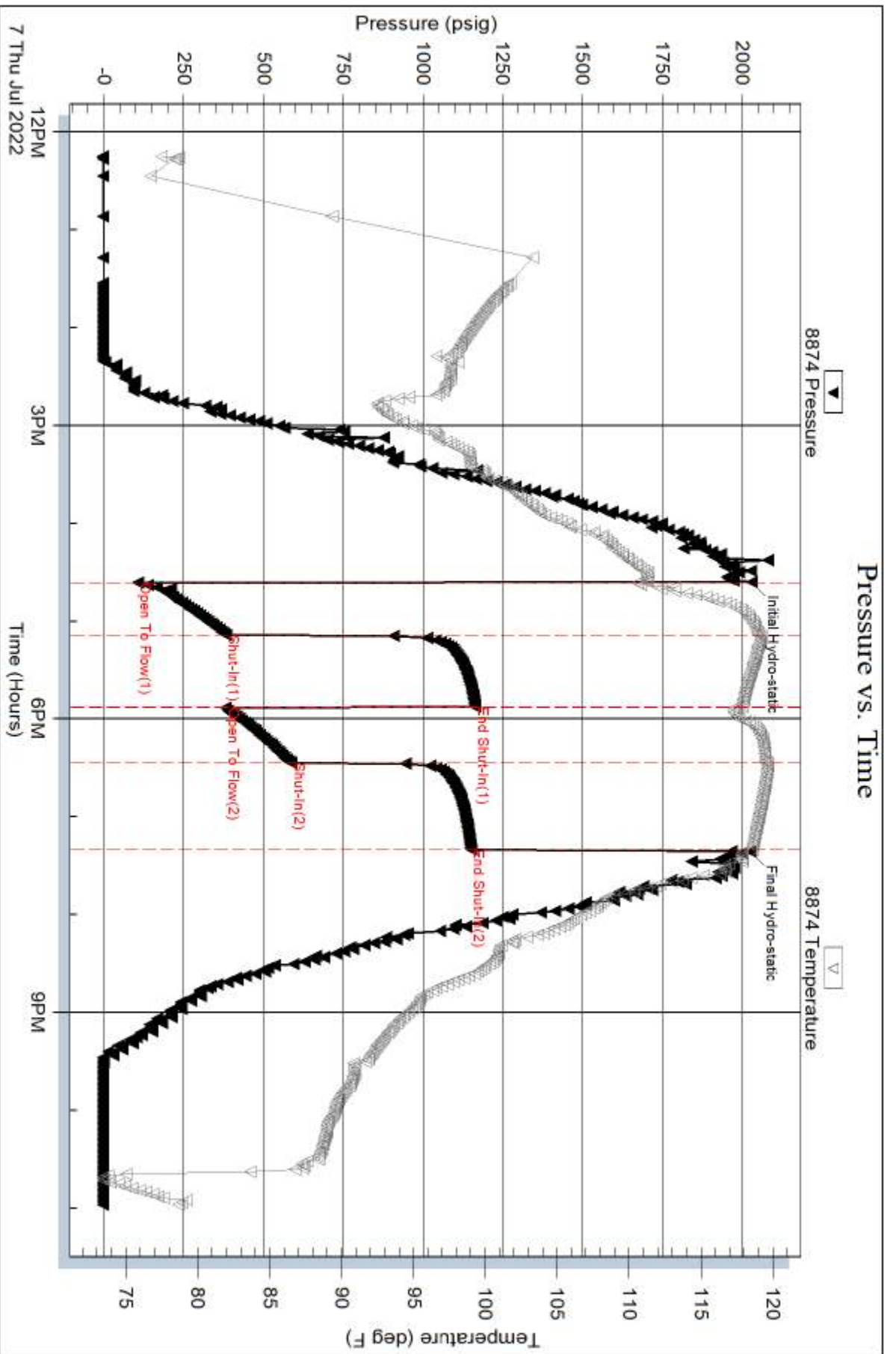
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: rw is .122 @ 81f = 51000ppm





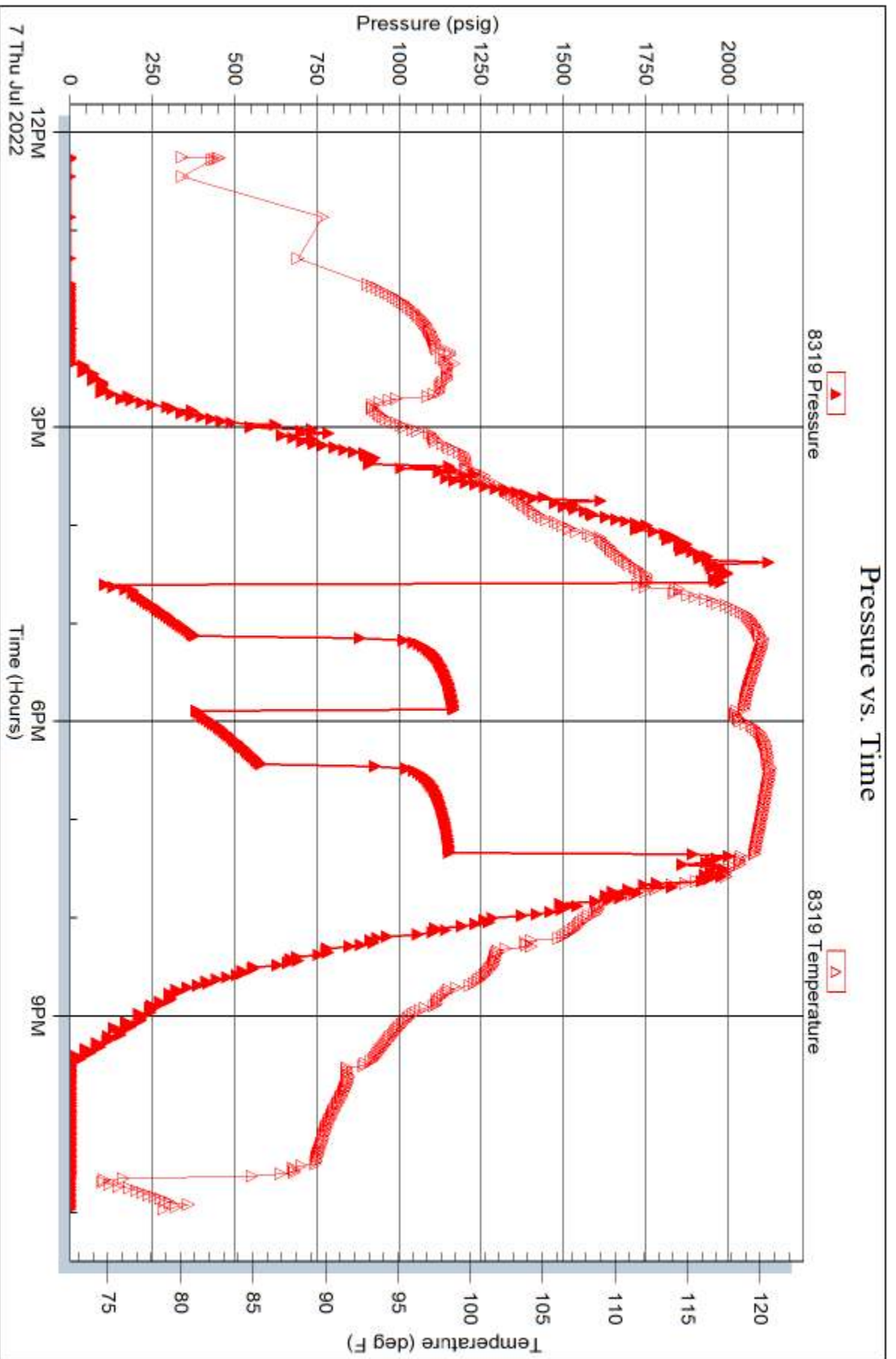
Serial #: 8319

Inside

Darrah Oil

Younkin #2-10

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 68128

Printed: 2022.07.08 @ 07:18:59



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Darrah Oil  
125 N Market St Ste 1015  
Wichita, Ks 67202  
ATTN: Seth Evenson

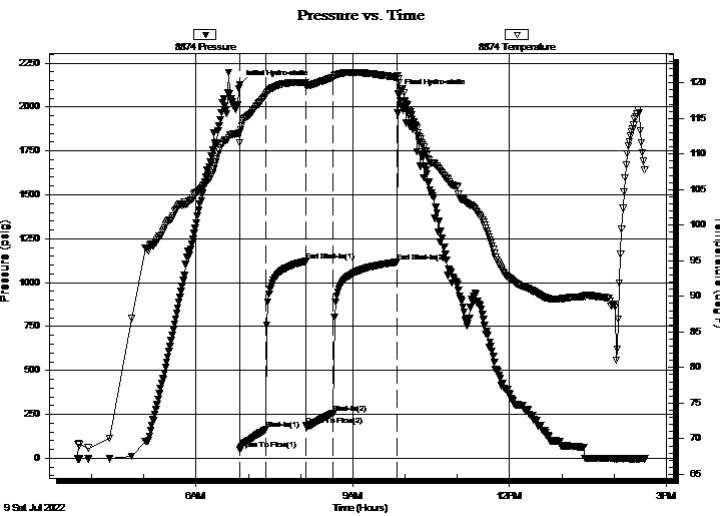
**10 14s 34w Logan Ks**  
**Younkin #2-10**  
Job Ticket: 68129 **DST#: 2**  
Test Start: 2022.07.09 @ 03:44:00

## GENERAL INFORMATION:

Formation: **Altamont**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 06:50:15  
Time Test Ended: 14:35:15  
Interval: **4292.00 ft (KB) To 4370.00 ft (KB) (TVD)**  
Total Depth: 4370.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Good  
Test Type: Conventional Bottom Hole (Reset)  
Tester: Bradley Walter  
Unit No: 78  
Reference Elevations: 3032.00 ft (KB)  
3021.00 ft (CF)  
KB to GR/CF: 11.00 ft

**Serial #: 8874 Outside**  
Press@RunDepth: 258.46 psig @ 4293.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2022.07.09 End Date: 2022.07.09 Last Calib.: 2022.07.09  
Start Time: 03:44:05 End Time: 14:35:15 Time On Btm: 2022.07.09 @ 06:50:00  
Time Off Btm: 2022.07.09 @ 09:52:30

**TEST COMMENT:** IF: BOB @ 9in. 41" blow .  
IS: 5.3" return.  
FF: BOB @ 11 min. 24" blow .  
FS: 1/2" return. 30-45-30-60



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2124.99	113.01	Initial Hydro-static
1	52.35	111.59	Open To Flow (1)
31	164.70	118.27	Shut-In(1)
76	1121.45	120.05	End Shut-In(1)
77	186.53	119.64	Open To Flow (2)
108	258.46	120.76	Shut-In(2)
181	1116.43	120.77	End Shut-In(2)
183	2077.17	120.57	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	gocm 10g 40o 50m	0.30
120.00	gmco 20g 20m 60o	0.59
420.00	go 25g 75o	5.89
0.00	320' GIP	0.00

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Darrah Oil  
125 N Market St Ste 1015  
Wichita, Ks 67202  
ATTN: Seth Evenson

**10 14s 34w Logan Ks**  
**Younkin #2-10**  
Job Ticket: 68129      **DST#: 2**  
Test Start: 2022.07.09 @ 03:44:00

## Mud and Cushion Information

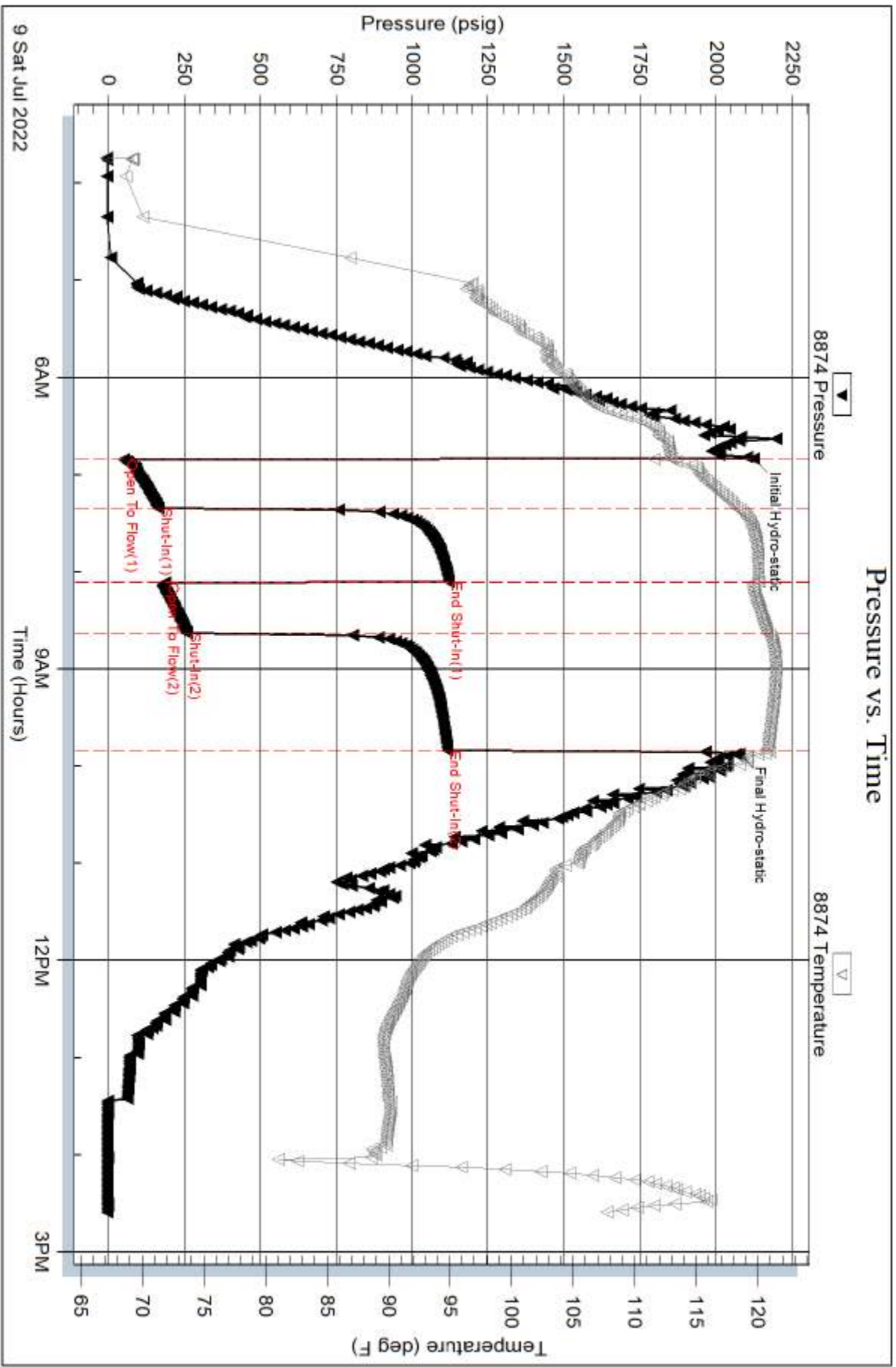
Mud Type: Gel Chem	Cushion Type:	Oil API: 36 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 0 ppm
Viscosity: 57.00 sec/qt	Cushion Volume: bbl	
Water Loss: 7.99 in <sup>3</sup>	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 4000.00 ppm		
Filter Cake: 1.00 inches		

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	gocm 10g 40o 50m	0.295
120.00	gmco 20g 20m 60o	0.590
420.00	go 25g 75o	5.891
0.00	320' GIP	0.000

Total Length: 600.00 ft      Total Volume: 6.776 bbl  
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
Laboratory Name:      Laboratory Location:  
Recovery Comments:



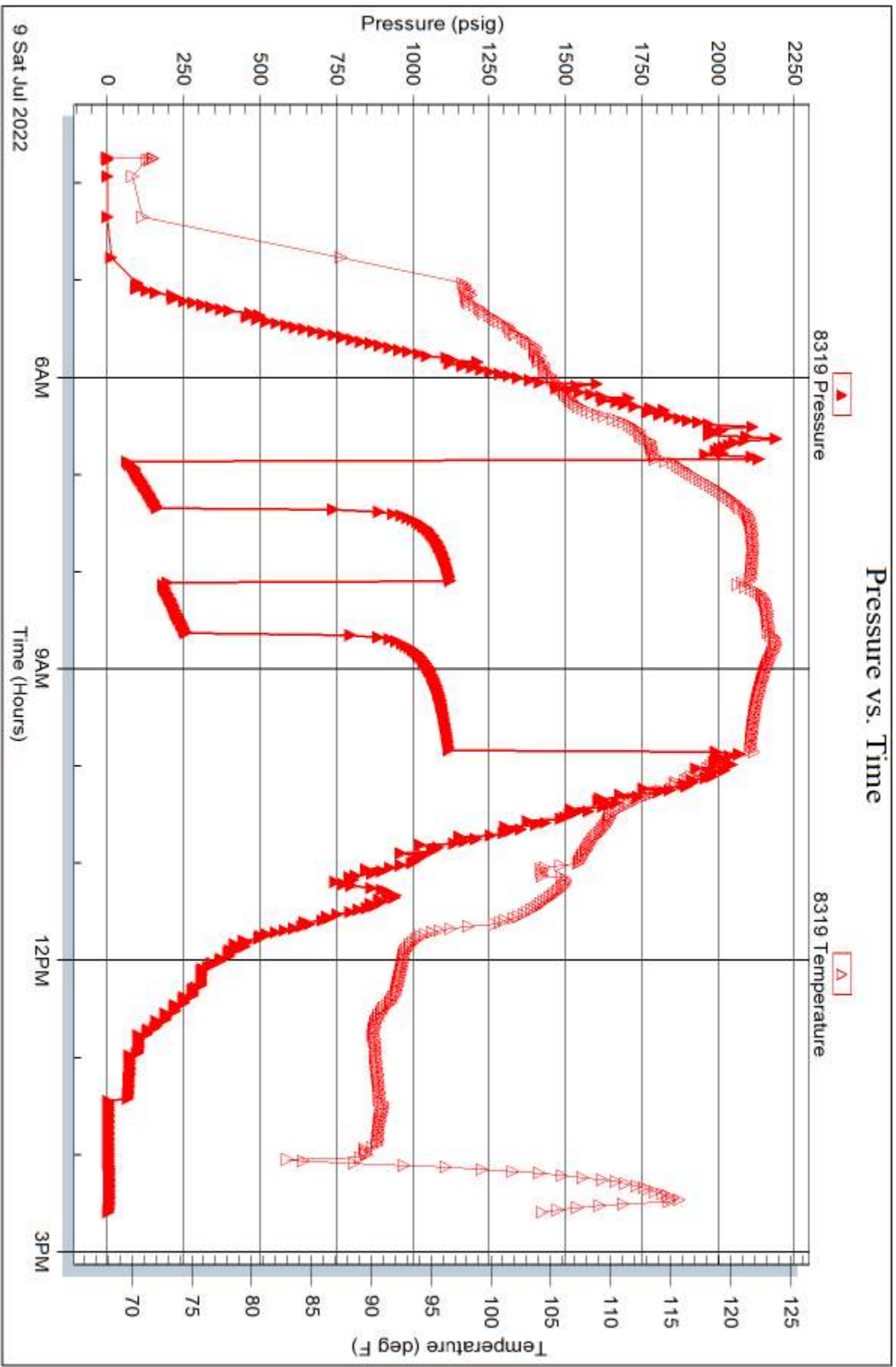
Serial #: 8319

Inside

Darrah Oil

Younkin #2-10

DST Test Number: 2





**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Darrah Oil  
 125 N Market St Ste 1015  
 Wichita, Ks 67202  
 ATTN: Seth Evenson

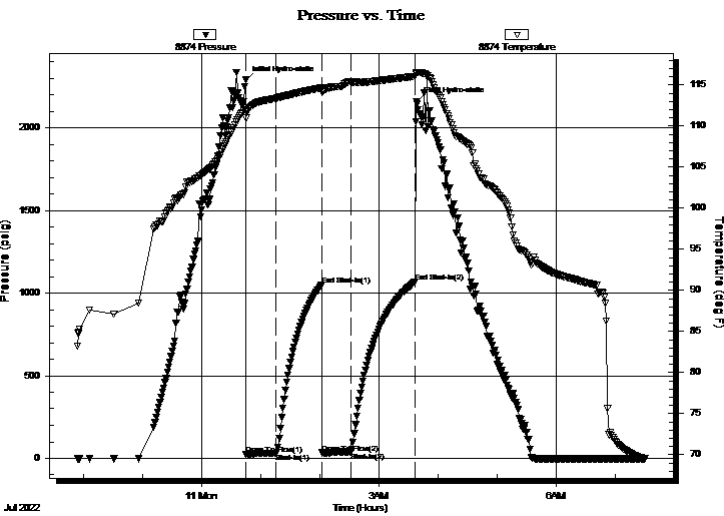
**10 14s 34w Logan Ks**  
**Younkin #2-10**  
 Job Ticket: 68130 **DST#: 3**  
 Test Start: 2022.07.10 @ 21:54:00

## GENERAL INFORMATION:

Formation: **Ft Scott - Johnson**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 00:45:15  
 Time Test Ended: 07:30:45  
 Interval: **4414.00 ft (KB) To 4555.00 ft (KB) (TVD)**  
 Total Depth: 4555.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Bradley Walter  
 Unit No: 78  
 Reference Elevations: 3032.00 ft (KB)  
 3021.00 ft (CF)  
 KB to GR/CF: 11.00 ft

**Serial #: 8874 Outside**  
 Press@RunDepth: 38.49 psig @ 4415.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2022.07.10 End Date: 2022.07.11 Last Calib.: 2022.07.11  
 Start Time: 21:54:05 End Time: 07:30:45 Time On Btm: 2022.07.11 @ 00:45:00  
 Time Off Btm: 2022.07.11 @ 03:38:30

TEST COMMENT: IF: 1 15" blow  
 IS: No return.  
 FF: Surface blow.  
 FS: No return. 30-45-30-60



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2288.21	111.94	Initial Hydro-static
1	24.24	110.96	Open To Flow (1)
31	30.51	113.36	Shut-In(1)
77	1050.00	114.64	End Shut-In(1)
78	33.10	114.13	Open To Flow (2)
107	38.49	115.39	Shut-In(2)
172	1066.50	116.03	End Shut-In(2)
174	2158.03	116.52	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
45.00	Mud 100m (oil spots)	0.22

\* Recovery from multiple tests

## Gas Rates

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







**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Darrah Oil

**10 14s 34w Logan Ks**

125 N Market St Ste 1015  
Wichita, Ks 67202

**Younkin #2-10**

Job Ticket: 68130

**DST#: 3**

ATTN: Seth Evenson

Test Start: 2022.07.10 @ 21:54:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 58.00 sec/qt

Cushion Volume:

bbl

Water Loss: 8.79 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5800.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
45.00	Mud 100m (oil spots)	0.221

Total Length: 45.00 ft      Total Volume: 0.221 bbl

Num Fluid Samples: 0

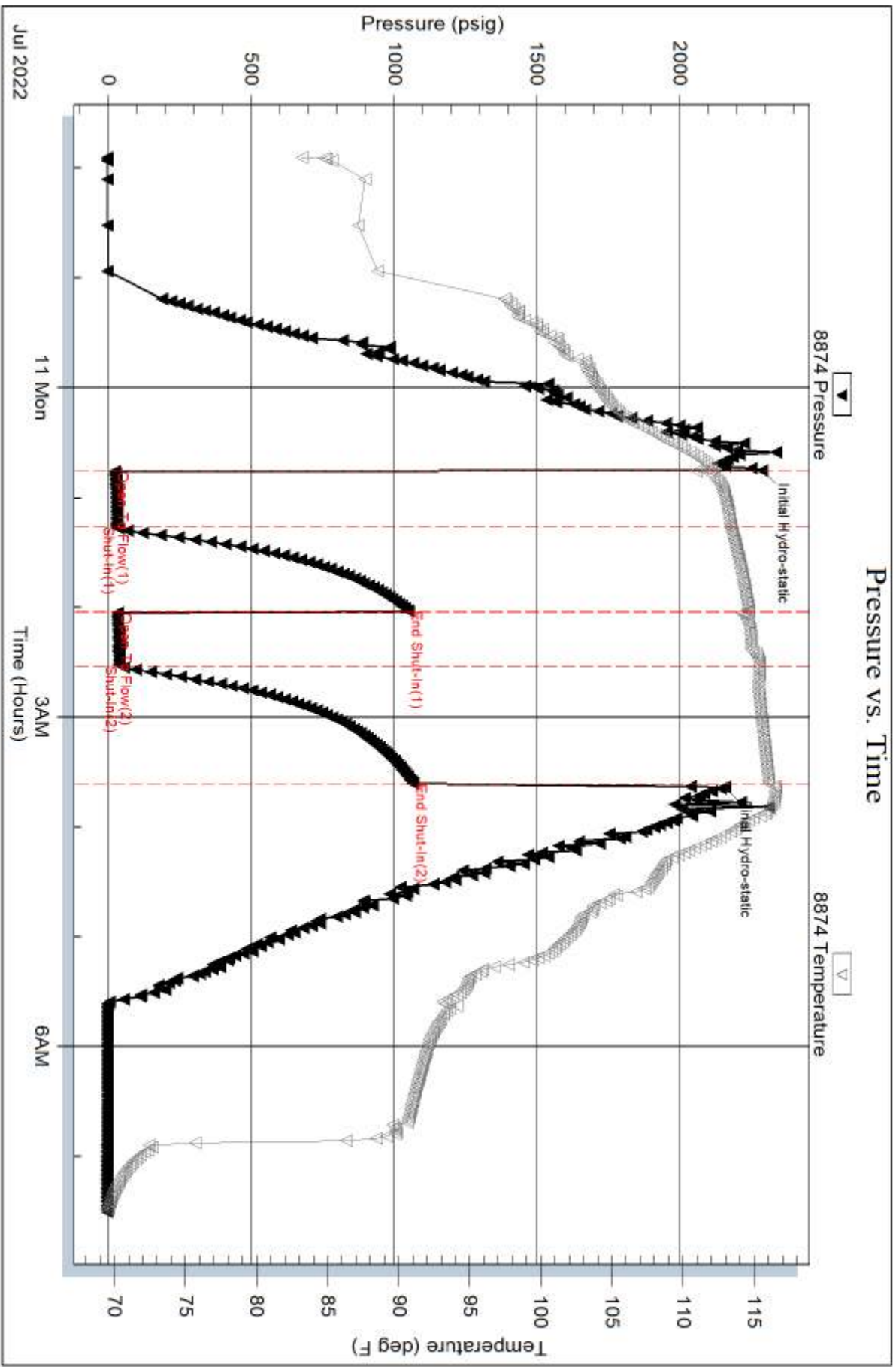
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



Serial #: 8319

Inside

Darrah Oil

Younkin #2-10

DST Test Number: 3

