

Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION  
OIL & GAS CONSERVATION DIVISION

Form ACO-1

January 2018

Form must be Typed

Form must be Signed

All blanks must be Filled

WELL COMPLETION FORM  
WELL HISTORY - DESCRIPTION OF WELL & LEASE

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

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

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

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

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

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

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

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

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

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

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

Designate Type of Completion:

New Well  Re-Entry  Workover

Oil  WSW  SWD

Gas  DH  EOR

OG  GSW

CM (Coal Bed Methane)

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

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

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

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

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

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

Plug Back  Liner  Conv. to GSW  Conv. to Producer

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

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

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

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

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

Spud Date or Date Reached TD Completion Date or Recompletion Date

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

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

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

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

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

Footages Calculated from Nearest Outside Section Corner:

NE  NW  SE  SW

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

Datum:  NAD27  NAD83  WGS84

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

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

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

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

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

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

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

Multiple Stage Cementing Collar Used?  Yes  No

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

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

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

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

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

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

Location of fluid disposal if hauled offsite:

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

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

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

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

AFFIDAVIT

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

Submitted Electronically

KCC Office Use ONLY

Confidentiality Requested

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

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

Wireline Log Received  Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

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

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

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

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

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

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

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

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

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

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5) (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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Form	ACO1 - Well Completion
Operator	Darrah Oil Company, LLC
Well Name	CHURCH 1-14
Doc ID	1728795

All Electric Logs Run

dual induction
micro
porosity
sonic



# COPELAND

## Acid & Cement

BURRTON, KS (620) 463-5161  
 GREAT BEND, KS (620) 793-3366  
 FAX (620) 463-2104 FAX (620) 793-3536

POST OFFICE BOX 438  
 HAYSVILLE, KS 67060  
 (316) 524-1225  
 (316) 524-1027 FAX

**Invoice**

INVOICE NUMBER:  
**C80139-IN**

**BILL TO:**  
 DARRAH OIL COMPANY LLC  
 PO BOX 2786  
 WICHITA, KS 67202-2786

LEASE: CHURCH 1-14

DATE	ORDER	SALESMAN	ORDER DATE	PURCHASE ORDER	SPECIAL INSTRUCTIONS	
05/18/2023	80139		05/15/2023	CHURCH 1-14	NET 30	
QUANTITY	U/M	ITEM NO./DESCRIPTION		D/C	PRICE	EXTENSION
100.00	MI	MILEAGE CEMENT PUMP TRUCK		0.00	6.00	600.00
1.00	EA	PUMP CHARGE SURFACE		0.00	1,150.00	1,150.00
175.00	SK	COMMON CEMENT		0.00	16.75	2,931.25
10.00	SK	CALCIUM CHLORIDE		0.00	42.00	420.00
185.00	EA	BULK CHARGE		0.00	1.25	231.25
423.75	MI	BULK TRUCK - TON MILES		0.00	1.10	466.13
<b>REMIT TO:</b> P.O. BOX 438 HAYSVILLE, KS 67060		COP		Net Invoice:		5,798.63
RECEIVED BY _____		FUEL SURCHARGE IS NOT TAXABLE AND IS ADDED TO MILEAGE, PUMP AND OR DELIVERY CHARGES ONLY.		BUTCO Sales Tax:		376.91
		<b>NET 30 DAYS</b>		<b>Invoice Total:</b>		<b>6,175.54</b>

There will be a charge of 1.5% "per month" (18% annual rate) on all accounts over 30 days pas

Copeland Acid & Cement is a subsidiary of Gressel Oil Field Service

Gressel Oil Field Service reserves a security interest in the goods sold until the same are paid for in full and reserve all the rights of a secured party under the Uniform Commercial Code.





# COPELAND

**Acid & Cement**

POST OFFICE BOX 438  
 HAYSVILLE, KS 67060  
 (316) 524-1225  
 (316) 524-1027 FAX

**Invoice**

BURRTON, KS    ♦    GREAT BEND, KS  
 (620) 463-5161    (620) 793-3366  
 FAX (620) 463-2104    FAX (620) 793-3536

INVOICE NUMBER:  
**C60841-IN**

**BILL TO:**  
 DARRAH OIL COMPANY LLC  
 PO BOX 2786  
 WICHITA, KS 67202-2786

LEASE: CURCH 1-14

DATE	ORDER	SALESMAN	ORDER DATE	PURCHASE ORDER	SPECIAL INSTRUCTIONS	
05/31/2023	60841		05/20/2023	CHURCH 1-14	NET 30	
QUANTITY	U/M	ITEM NO./DESCRIPTION		D/C	PRICE	EXTENSION
		<b>NEW WELL</b>				
100.00	MI	MILEAGE CEMENT PUMP TRUCK		0.00	6.00	600.00
1.00	EA	PUMP CHARGE ROATRY PLUG		0.00	1,150.00	1,150.00
110.00	SK	60/40 POZ MIX 2% GEL		0.00	13.35	1,468.50
2.00	SK	2% ADDITIONAL GEL		0.00	25.25	50.50
30.00	LB	CELLO-FLAKES		0.00	3.25	97.50
1.00	EA	BULK CHARGE - MIN CHG		0.00	150.00	150.00
250.80	MI	BULK TRUCK - TON MILES		0.00	1.10	275.88
<b>REMIT TO:</b> P.O. BOX 438 HAYSVILLE, KS 67060		COP		Net Invoice:		3,792.38
RECEIVED BY _____		FUEL SURCHARGE IS NOT TAXABLE AND IS ADDED TO MILEAGE, PUMP AND OR DELIVERY CHARGES ONLY.		BUTCO Sales Tax:		98.74
		<b>NET 30 DAYS</b>		Invoice Total:		<b>3,891.12</b>

There will be a charge of 1.5% "per month" (18% annual rate) on all accounts over 30 days pas

Copeland Acid & Cement is a subsidiary of Gressel Oil Field Service

Gressel Oil Field Service reserves a security interest in the goods sold until the same are paid for in full and reserve all the rights of a secured party under the Uniform Commercial Code.







## DRILL STEM TEST REPORT

Prepared For: **Darrah Oil Company, LLC**

125 N Market Suite 1425  
Wichita, KS 67202

ATTN: Roger Martin

### **Church #1-14**

### **14-23s-5e Butler,KS**

Start Date: 2023.05.17 @ 21:58:00

End Date: 2023.05.18 @ 04:38:02

Job Ticket #: 70663                      DST #: 1

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

Printed: 2023.05.22 @ 15:22:58



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Darrah Oil Company, LLC

**14-23s-5e Butler, KS**

125 N Market Suite 1425  
Wichita, KS 67202

**Church #1-14**

Job Ticket: 70663

**DST#: 1**

ATTN: Roger Martin

Test Start: 2023.05.17 @ 21:58:00

## GENERAL INFORMATION:

Formation: **Lansing A - B**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:40:17

Time Test Ended: 04:38:02

Test Type: Conventional Bottom Hole (Initial)

Tester: Chris Hagman

Unit No: 69

**Interval: 1623.00 ft (KB) To 1660.00 ft (KB) (TVD)**

Reference Elevations: 1521.00 ft (KB)

Total Depth: 1660.00 ft (KB) (TVD)

1510.00 ft (CF)

Hole Diameter: 7.80 inches Hole Condition: Good

KB to GR/CF: 11.00 ft

**Serial #: 6751**

**Outside**

Press@RunDepth: 330.95 psig @ 1625.00 ft (KB)

Capacity: psig

Start Date: 2023.05.17

End Date: 2023.05.18

Last Calib.: 1899.12.30

Start Time: 21:58:01

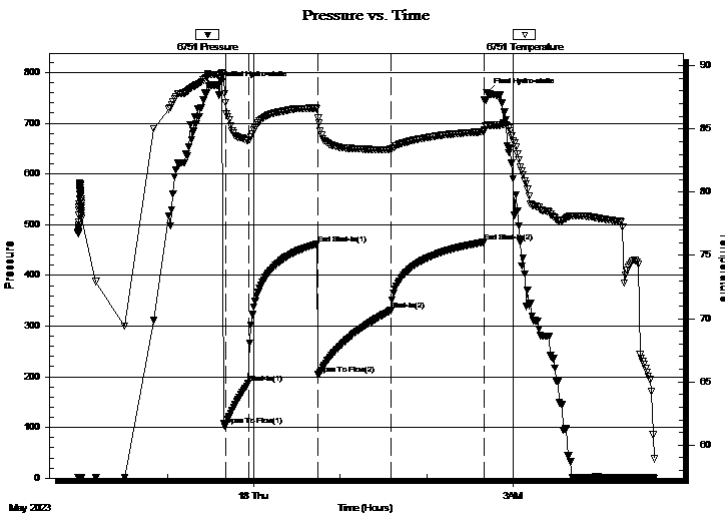
End Time: 04:38:02

Time On Btm: 2023.05.17 @ 23:35:47

Time Off Btm: 2023.05.18 @ 02:41:47

**TEST COMMENT:** IF: 15 min., BOB 2 min., strong building blow , 53 inches  
IS: 45 min., no blow back  
FF: 45 min., BOB 1 min., strong building blow , 117 inches  
FS: 60 min., no blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	774.93	89.31	Initial Hydro-static
5	104.01	87.10	Open To Flow (1)
21	186.80	84.07	Shut-In(1)
69	461.48	86.64	End Shut-In(1)
69	204.33	85.86	Open To Flow (2)
120	330.95	83.40	Shut-In(2)
184	465.64	84.82	End Shut-In(2)
186	760.98	85.28	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
700.00	oil spotted muddy w ater 5%M, 95%W	8.73

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Darrah Oil Company, LLC

**14-23s-5e Butler, KS**

125 N Market Suite 1425  
Wichita, KS 67202

**Church #1-14**

Job Ticket: 70663

**DST#: 1**

ATTN: Roger Martin

Test Start: 2023.05.17 @ 21:58:00

## Tool Information

Drill Pipe:	Length: 1483.00 ft	Diameter: 3.80 inches	Volume: 20.80 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 40000.00 lb
			<u>Total Volume: 21.39 bbl</u>	Tool Chased 8.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 36000.00 lb
Depth to Top Packer:	1623.00 ft			Final 31000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	37.00 ft			
Tool Length:	62.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			1603.00	
Hydraulic tool	5.00			1608.00	
Isolator Sub	3.00			1611.00	
Safety Joint	3.00			1614.00	
Packer	5.00			1619.00	25.00 Bottom Of Top Packer
Packer	4.00			1623.00	
Stubb	1.00			1624.00	
Perforations	1.00			1625.00	
Recorder	0.00	6752	Inside	1625.00	
Recorder	0.00	6751	Outside	1625.00	
Pickup sub perf	5.00			1630.00	
Perforations	27.00			1657.00	
Bullnose	3.00			1660.00	37.00 Bottom Packers & Anchor

**Total Tool Length: 62.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Darrah Oil Company, LLC

**14-23s-5e Butler,KS**

125 N Market Suite 1425  
Wichita, KS 67202

**Church #1-14**

Job Ticket: 70663

**DST#: 1**

ATTN: Roger Martin

Test Start: 2023.05.17 @ 21:58:00

### 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:

37000 ppm

Viscosity: 45.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 10.48 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1100.00 ppm

Filter Cake: inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
700.00	oil spotted muddy w ater 5%M, 95%W	8.726

Total Length: 700.00 ft      Total Volume: 8.726 bbl

Num Fluid Samples: 0

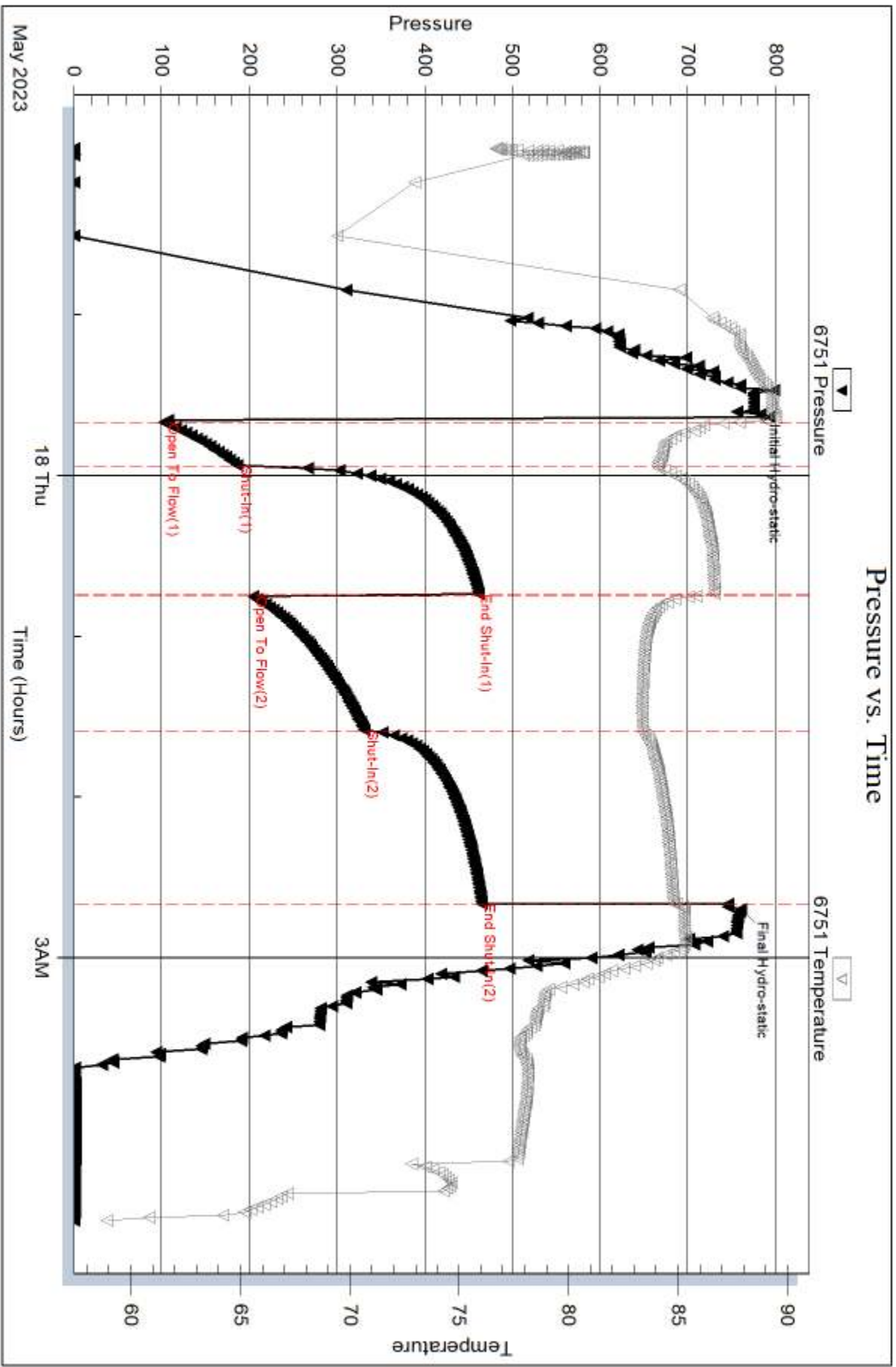
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW=.270@60F=37000ppm



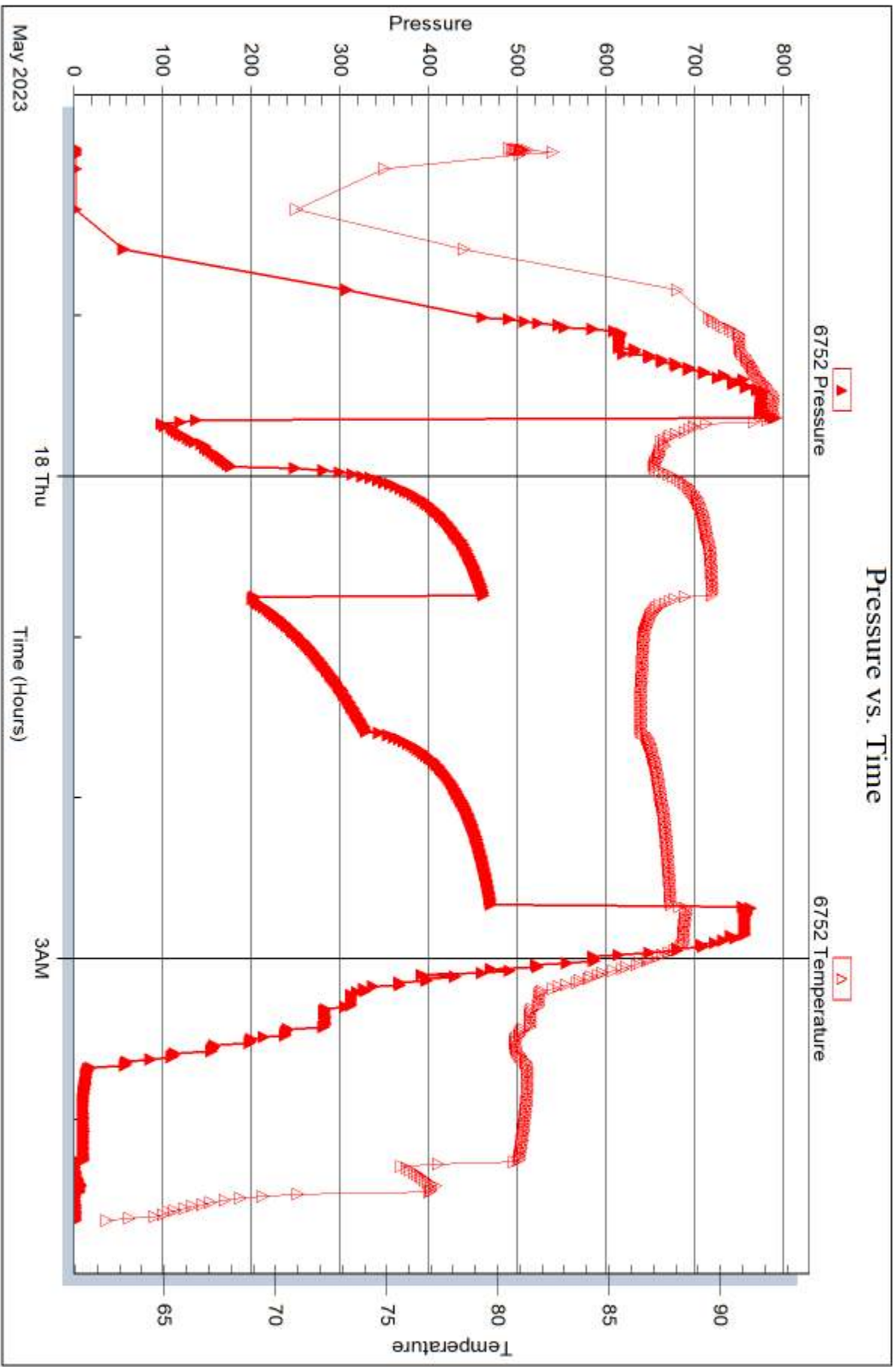
Serial #: 6752

Inside

Darrah Oil Company, LLC

Church #1-14

DST Test Number: 1





## DRILL STEM TEST REPORT

Prepared For: **Darrah Oil Company, LLC**

125 N Market Suite 1425  
Wichita, KS 67202

ATTN: Roger Martin

### **Church #1-14**

#### **14-23s-5e Butler,KS**

Start Date: 2023.05.18 @ 19:45:00

End Date: 2023.05.19 @ 00:09:17

Job Ticket #: 70664                      DST #: 2

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

Printed: 2023.05.22 @ 15:22:25



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Darrah Oil Company, LLC

**14-23s-5e Butler, KS**

125 N Market Suite 1425  
Wichita, KS 67202

**Church #1-14**

Job Ticket: 70664

**DST#: 2**

ATTN: Roger Martin

Test Start: 2023.05.18 @ 19:45:00

## GENERAL INFORMATION:

Formation: **KC A - B**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:58:47

Time Test Ended: 00:09:17

Test Type: Conventional Bottom Hole (Initial)

Tester: Chris Hagman

Unit No: 69

**Interval: 1869.00 ft (KB) To 1907.00 ft (KB) (TVD)**

Reference Elevations: 1521.00 ft (KB)

Total Depth: 1907.00 ft (KB) (TVD)

1510.00 ft (CF)

Hole Diameter: 7.80 inches Hole Condition: Good

KB to GR/CF: 11.00 ft

**Serial #: 6751**

**Outside**

Press@RunDepth: 39.72 psig @ 1871.00 ft (KB)

Capacity: psig

Start Date: 2023.05.18

End Date:

2023.05.19

Last Calib.:

1899.12.30

Start Time: 19:45:01

End Time:

00:09:17

Time On Btm:

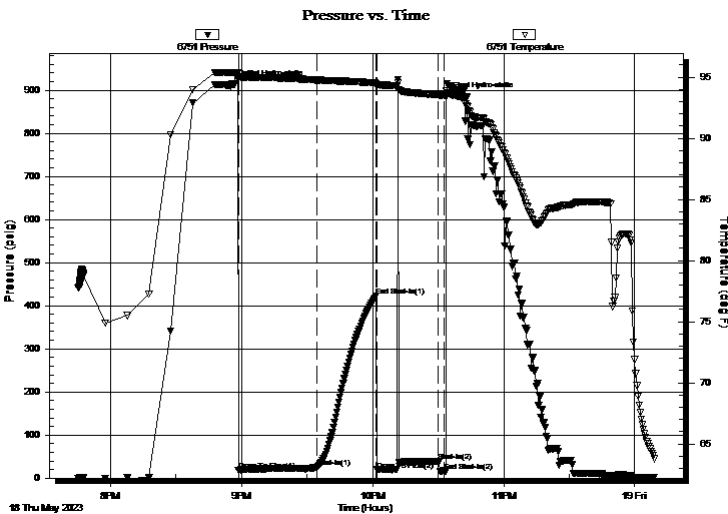
2023.05.18 @ 20:56:47

Time Off Btm:

2023.05.18 @ 22:33:47

**TEST COMMENT:** IF: 30 min., very weak surface blow, died 1 min.  
IS: 30 min., no blow back  
FF: 30 min., no blow, flushed tool, surface blow  
FS: 1 min., pulled tool

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	913.38	95.34	Initial Hydro-static
2	18.46	95.04	Open To Flow (1)
38	25.04	94.77	Shut-In(1)
65	422.43	94.50	End Shut-In(1)
66	19.23	94.30	Open To Flow (2)
93	39.72	93.56	Shut-In(2)
96	16.51	93.53	End Shut-In(2)
97	885.35	93.87	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
30.00	mud 100%M	0.15

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Darrah Oil Company, LLC

**14-23s-5e Butler, KS**

125 N Market Suite 1425  
Wichita, KS 67202

**Church #1-14**

Job Ticket: 70664

**DST#: 2**

ATTN: Roger Martin

Test Start: 2023.05.18 @ 19:45:00

## Tool Information

Drill Pipe:	Length: 1738.00 ft	Diameter: 3.80 inches	Volume: 24.38 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 42000.00 lb
			<u>Total Volume: 24.97 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	14.00 ft			String Weight: Initial 33000.00 lb
Depth to Top Packer:	1869.00 ft			Final 33000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	38.00 ft			
Tool Length:	63.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			1849.00	
Hydraulic tool	5.00			1854.00	
Isolator Sub	3.00			1857.00	
Safety Joint	3.00			1860.00	
Packer	5.00			1865.00	25.00 Bottom Of Top Packer
Packer	4.00			1869.00	
Stubb	1.00			1870.00	
Perforations	1.00			1871.00	
Recorder	0.00	6752	Inside	1871.00	
Recorder	0.00	6751	Outside	1871.00	
Pickup sub perf	5.00			1876.00	
Perforations	28.00			1904.00	
Bullnose	3.00			1907.00	38.00 Bottom Packers & Anchor

**Total Tool Length: 63.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Darrah Oil Company, LLC

**14-23s-5e Butler, KS**

125 N Market Suite 1425  
Wichita, KS 67202

**Church #1-14**

Job Ticket: 70664

**DST#: 2**

ATTN: Roger Martin

Test Start: 2023.05.18 @ 19:45:00

### 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: 41.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.99 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	mud 100%M	0.148

Total Length: 30.00 ft      Total Volume: 0.148 bbl

Num Fluid Samples: 0

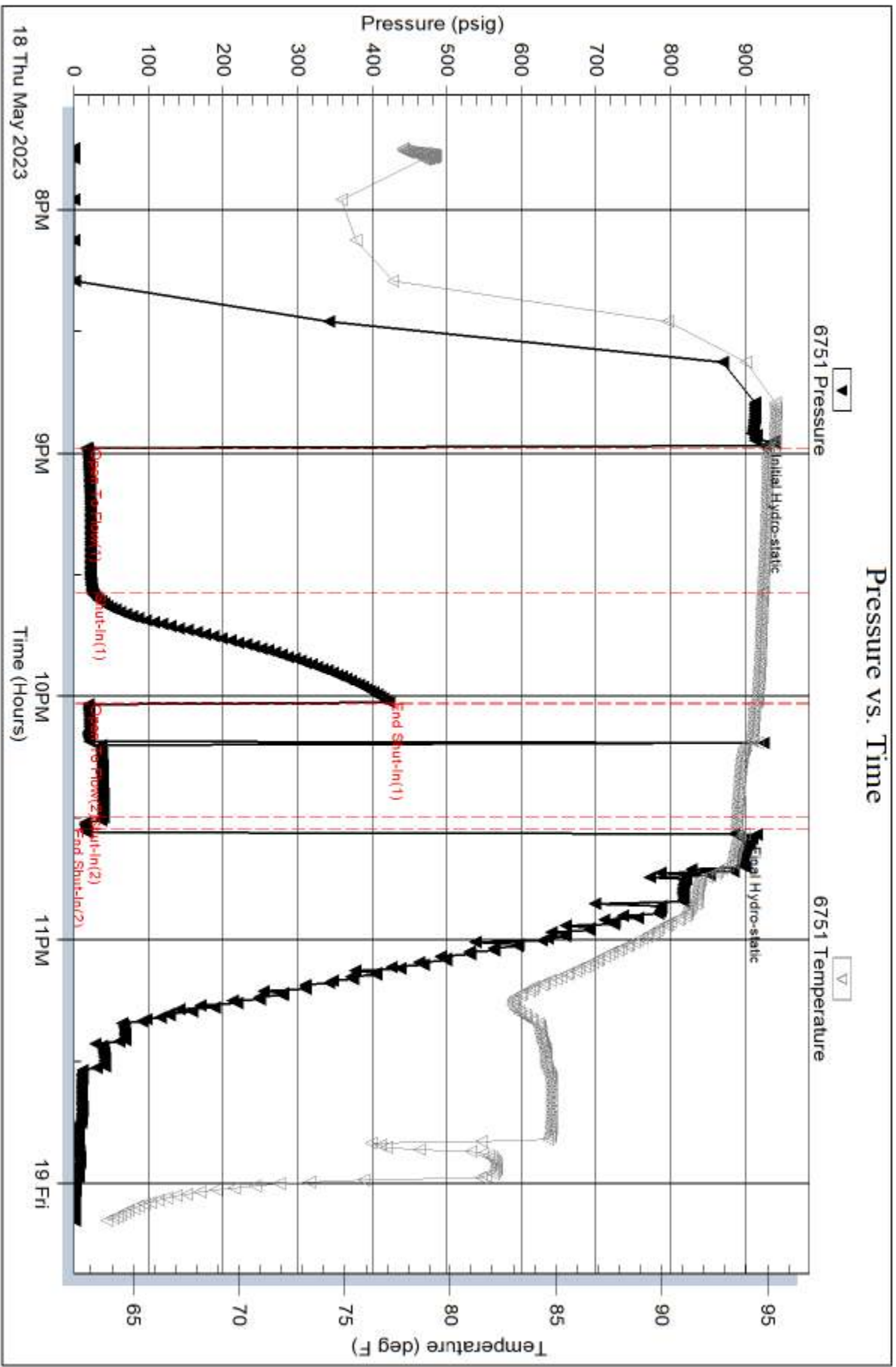
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



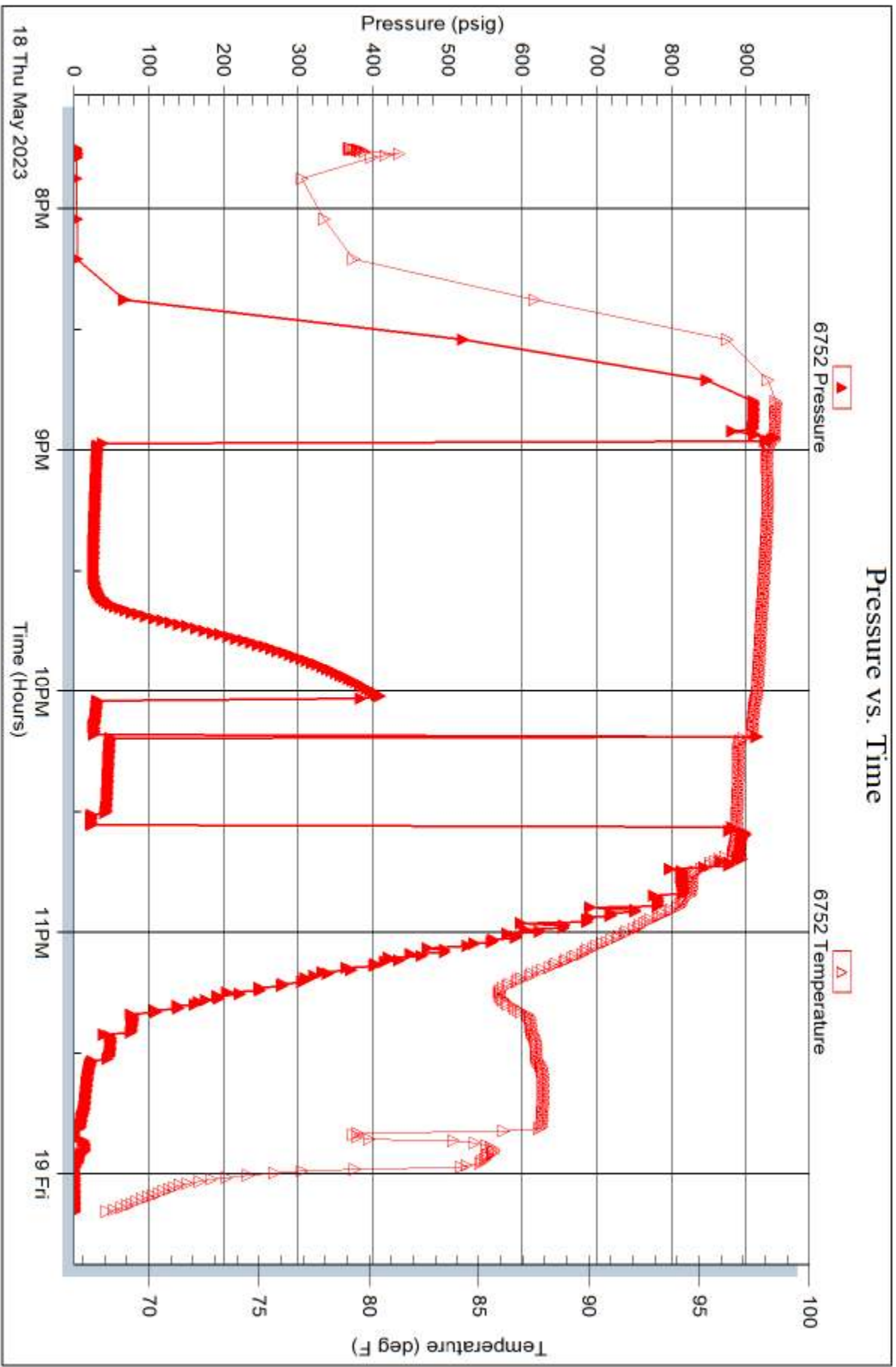
Serial #: 6752

Inside

Darrah Oil Company, LLC

Church #1-14

DST Test Number: 2





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 70663

Well Name & No. Church 1-14 Test No. 1 Date 5-17-23  
 Company Darrah Oil Company, LLC Elevation 1521 KB 1510 GL  
 Address 125 N Market Suite 1425 Wichita, KS 67202  
 Co. Rep / Geo Roger Martin Rig Duke 02  
 Location: Sec. 14 Twp 23 Rge. 5 Co. Butler State KS

Interval Tested 1623-1660 Zone Tested Lens A-B  
 Anchor Length 37' Drill Pipe Run 1483 Mud Wt. 8.7  
 Top Packer Depth 1618 Drill Collars Run 120 Vis 4.5  
 Bottom Packer Depth 1623 Wt. Pipe Run N.A. Wt. 10.3  
 Total Depth 1660 Chlorides 1,100 ppm System LCM 1<sup>a</sup>

Blow Description 2P 15 min. BOB 2 min. Strong building blow, 53 inches  
1SP 45 min. no blow back  
FP 45 min. BOB 1 min. Strong building blow, 117 inches  
1SP 60 min. no blow back

Rec	Feet of	%gas	Spot %oil	%water	%mud
<u>700</u>	<u>Oil spotted muddy water</u>		<u>95</u>		<u>5</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 700 BHT 85° Gravity API RW 270 @ 60 °F Chlorides 37,000 ppm

Initial Hydrostatic 775  Test CAUV 1800  Ruined Shale Packer  
 Initial Flow 104 to 187  Jars  Ruined Packer  
 Initial Shut-In 461  Circ Sub  Hotel  
 Final Flow 204 to 331  Hourly Standby  EM Tool Successful good  
 Final Shut-In 466  Mileage 114mi 199.50  Accessibility  
21mi 36.75  Gas Sample  
 Final Hydrostatic 761  Sampler  Oversized Hole

T-On Location 2100  Shale Packer  Sub Total 0  
 Initial Flow 15 T-Started 2200  Extra Packer  Total 2036.25  
 Initial Shut-In 45 T-Open 2345  Extra Recorder  Tool Loaded @  
 Final Flow 45 T-Pulled 0230  Day Standby  MP/DST Disc't  
 Final Shut-In 60 T-Out 0430

Comments \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative Chris Hagan

785-656-3947

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



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 70664

Well Name & No. Church 1-14 Test No. 2 Date 5-18-23  
 Company Darrah Oil Company, LLC Elevation 1521 KB 1510 GL  
 Address 125 N Market Street 1425 Wichita, KS 67202  
 Co. Rep / Geo Roger Martin Rig Duke #2  
 Location: Sec. 14 Twp 23 Rge. S Co. Butler State KS

Interval Tested 1869-1907 Zone Tested 1CC A+B  
 Anchor Length 38' Drill Pipe Run 1738 Mud Wt. 9.3  
 Top Packer Depth 1864 Drill Collars Run 120 Vis 41  
 Bottom Packer Depth 1869 Wt. Pipe Run N.A. WL 10.0  
 Total Depth 1907 Chlorides 2,000 ppm System LCM 1<sup>st</sup>  
 Blow Description RF: 30 min. very weak surface blow, died 2 min.  
ISB: 30 min., no blow, ~~flushed tool, surface blow~~  
FP: 30 min., no blow, flushed tool, surface blow  
FSB: 1 min., pulled tool

Rec	Feet of	%gas	%oil	%water	%mud
<u>30</u>	<u>mud</u>			<u>100%</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 30 BHT 94 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm  
 Initial Hydrostatic 913  Test CON 1800  Ruined Shale Packer \_\_\_\_\_  
 Initial Flow 18 to 25  Jars \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Initial Shut-In 422  Circ Sub \_\_\_\_\_  Hotel \_\_\_\_\_  
 Final Flow 19 to 40  Hourly Standby \_\_\_\_\_  EM Tool Successful good  
 Final Shut-In 17  Mileage 240 (motel)  Accessibility \_\_\_\_\_  
73.50 + 36.75 + 199.50  Gas Sample \_\_\_\_\_  
 Final Hydrostatic 885  Sampler \_\_\_\_\_  Oversized Hole \_\_\_\_\_  
 T-On Location 1930  Straddle \_\_\_\_\_  Sub Total 0  
 Initial Flow 30 T-Started 2000  Shale Packer \_\_\_\_\_  Total 2109.75  
 Initial Shut-In 30 T-Open 2105  Extra Packer \_\_\_\_\_  Tool Loaded \_\_\_\_\_ @ \_\_\_\_\_  
 Final Flow 30 T-Pulled 2236  Extra Recorder \_\_\_\_\_  MP/DST Disc't \_\_\_\_\_  
 Final Shut-In 1 T-Out 0030  Day Standby \_\_\_\_\_

Comments \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative [Signature]

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# ROGER L. MARTIN

INDEPENDENT PETROLEUM GEOLOGIST 316-250-6970

## GEOLOGIST'S REPORT

### DRILLING TIME AND SAMPLE LOG

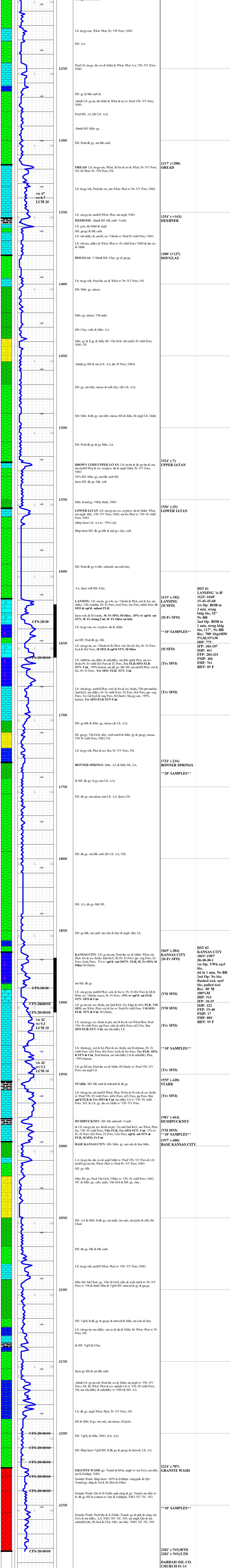
<b>COMPANY</b> DARRAH OIL COMPANY, LLC	<b>ELEVATIONS</b>
<b>LEASE</b> CHURCH #1-14	<b>KB</b> 1517' <b>GL</b> 1509'
<b>FIELD</b> UNNAMED	<b>Measurements Are All</b>
<b>LOCATION</b> 356' FNL & 1500' FEL	<b>From</b> KB
<b>SECTION</b> 14 <b>TOWNSHIP</b> 23S <b>RANGE</b> 05E	<b>API #</b> 15-015-24175
<b>COUNTY</b> BUTLER <b>STATE</b> KANSAS	
<b>CONTRACTOR</b> DUKE DRILLING, Rig #2	<b>CASING</b>
<b>SPUD</b> 05/15/2023 <b>COMP</b> 05/20/2023	<b>SURFACE</b> 8.58" Set @ 210' w/ 175 sks
<b>RTD</b> 2282' <b>LTD</b> 2282'	Common 3% cc.
<b>ELECTRICAL SURVEYS</b>	<b>PRODUCTION</b> n/a P&A
ELI: DIL, CDL/CNL/PE, MEL/SONIC	

FORMATION TOPS	LOG	SAMPLES	CHRONOLOGY
OREAD	1318' (+199)	1317' (+200)	05/15/2023- MIRU Duke Drilling, Rig #2. SPUD
HEEBNER	1354' (+163)	1354' (+163)	12 134" hole @ 10:45 AM. DTD 263' & set 8.58" surface casing @ 210.66' w. 240 sks common 3% cc. Cement did circulate.
UPPER IATAN	1524' (-7)	1524' (-7)	05/16/2023- WOC @ 263' @ 7 AM.
LOWER IATAN	1557' (-40)	1556' (-39)	05/17/2023- Drlg @ 1347' @ 7 AM. Run DST #1.
LANSING	1621' (-104)	1619' (-102)	05/18/2023- Run DST #2 @ 1660' @ 7 AM.
BONNER SPRINGS	1733' (-216)	1733' (-216)	05/19/2023- Drlg @ 1970' @ 7 AM.
KANSAS CITY	1867' (-350)	1865' (-384)	05/20/2023- Run E-logs @ RTD 2282' @ 7 AM. P&A in accordance with KCC recommendations.
STARK SHALE	1955' (-438)	1955' (-438)	
HUSHPUCKNEY	1980' (-463)	1981' (-464)	
BASE KANSAS CITY	1997' (-480)	1997' (-480)	
GRANITE WASH	2224' (-707)	2224' (-707)	
RTD/LTD	2282' (-765)	2282' (-765)	

**REMARKS:** The decision was made to P&A the Darrah Oil Church #1-14 test well as follows:

05/20/2023- Copeland Acid & Cement. 60/40 POZ, 4%Gel, 1/40/sk Cellulose-Pump. 35 sks @ 2224', 35 sks @ 270'. Circulate cement from 60' to surface, Took 20 sks. Plug Reathole with 20 sks. Job complete 10:15 PM. Ticket #C60841.

LITHO      COUNTY      DRILLING TIME      DST      SAMPLE DESCRIPTION      0      TGV      100



DARRAH OIL CO.  
CHURCH #1-14  
356' FNL & 1500' FEL  
Sec. 14-23S-05E  
BUTLER CO., KS  
15-015-24175



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Darrah Oil Company

**14 23S 5E Butler, KS**

125 N Market 1015  
Wichita, KS 67202

**Church 1-14**

Job Ticket: 70663

**DST#: 1**

ATTN: Roger Martin

Test Start: 2023.05.17 @ 21:58:00

## GENERAL INFORMATION:

Formation: **Lansing A-B**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:40:17

Time Test Ended: 04:38:02

Test Type: Conventional Bottom Hole (Initial)

Tester: Chris Hagman

Unit No: 69

Interval: **1623.00 ft (KB) To 1660.00 ft (KB) (TVD)**

Reference Elevations: 1518.00 ft (KB)

Total Depth: 1660.00 ft (KB) (TVD)

1509.00 ft (CF)

Hole Diameter: inches Hole Condition: Good

KB to GR/CF: 9.00 ft

**Serial #: 6751 Outside**

Press@RunDepth: 330.95 psig @ 1625.00 ft (KB)

Capacity: psig

Start Date: 2023.05.17 End Date: 2023.05.18

Last Calib.: 1899.12.30

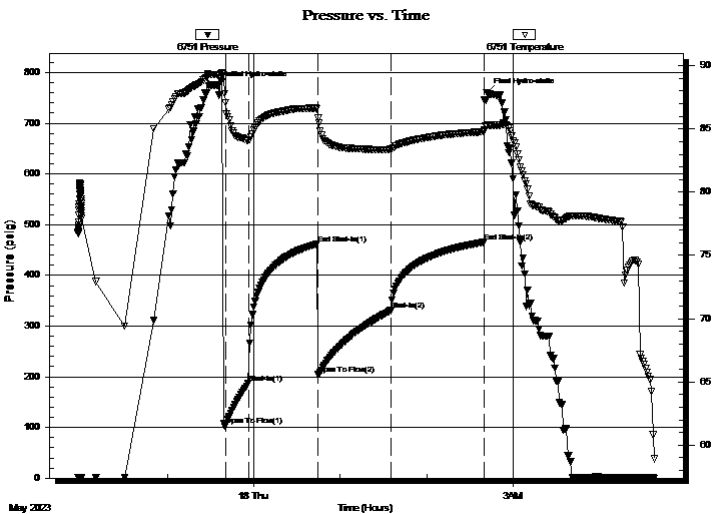
Start Time: 21:58:01 End Time: 04:38:02

Time On Btm: 2023.05.17 @ 23:35:47

Time Off Btm: 2023.05.18 @ 02:41:47

**TEST COMMENT:** IF: 15 min., BOB 2 min., strong building blow , 53 inches  
IS: 45 min., no blow back  
FF: 45 min., BOB 1 min., strong building blow , 117 inches  
FS: 60 min., no blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	774.93	89.31	Initial Hydro-static
5	104.01	87.10	Open To Flow (1)
21	186.80	84.07	Shut-In(1)
69	461.48	86.64	End Shut-In(1)
69	204.33	85.86	Open To Flow (2)
120	330.95	83.40	Shut-In(2)
184	465.64	84.82	End Shut-In(2)
186	760.98	85.28	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
700.00	oil spotted muddy w ater 5%M, 95%W	8.73

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Darrah Oil Company

**14 23S 5E Butler,KS**

125 N Market 1015  
Wixhita,KS 67202

**Church 1-14**

Job Ticket: 70663

**DST#: 1**

ATTN: Roger Martin

Test Start: 2023.05.17 @ 21:58:00

### 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:

37000 ppm

Viscosity: 45.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 10.49 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1100.00 ppm

Filter Cake: inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
700.00	oil spotted muddy w ater 5%M, 95%W	8.726

Total Length: 700.00 ft      Total Volume: 8.726 bbl

Num Fluid Samples: 0

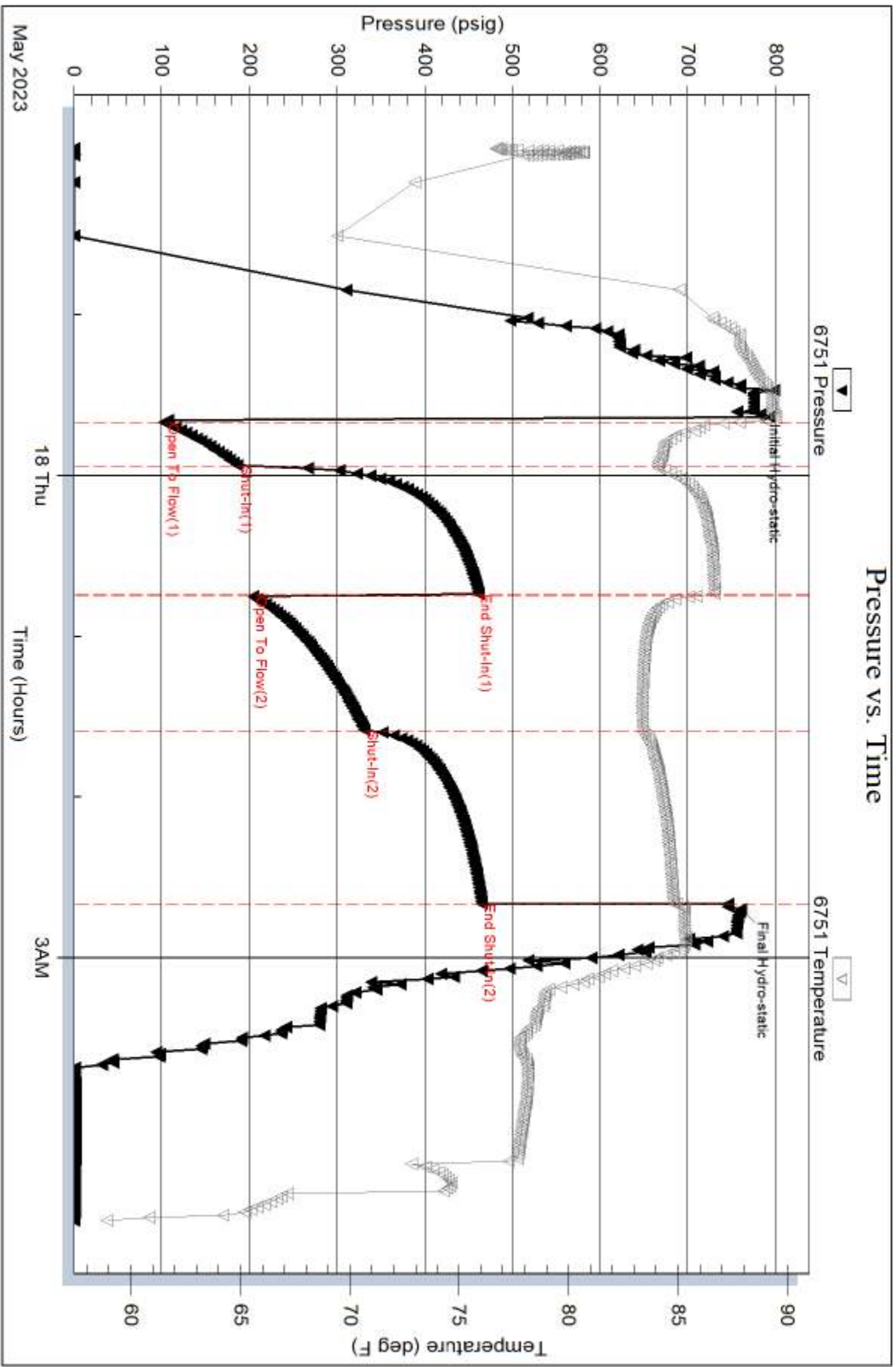
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW=.270@60F=37000ppm



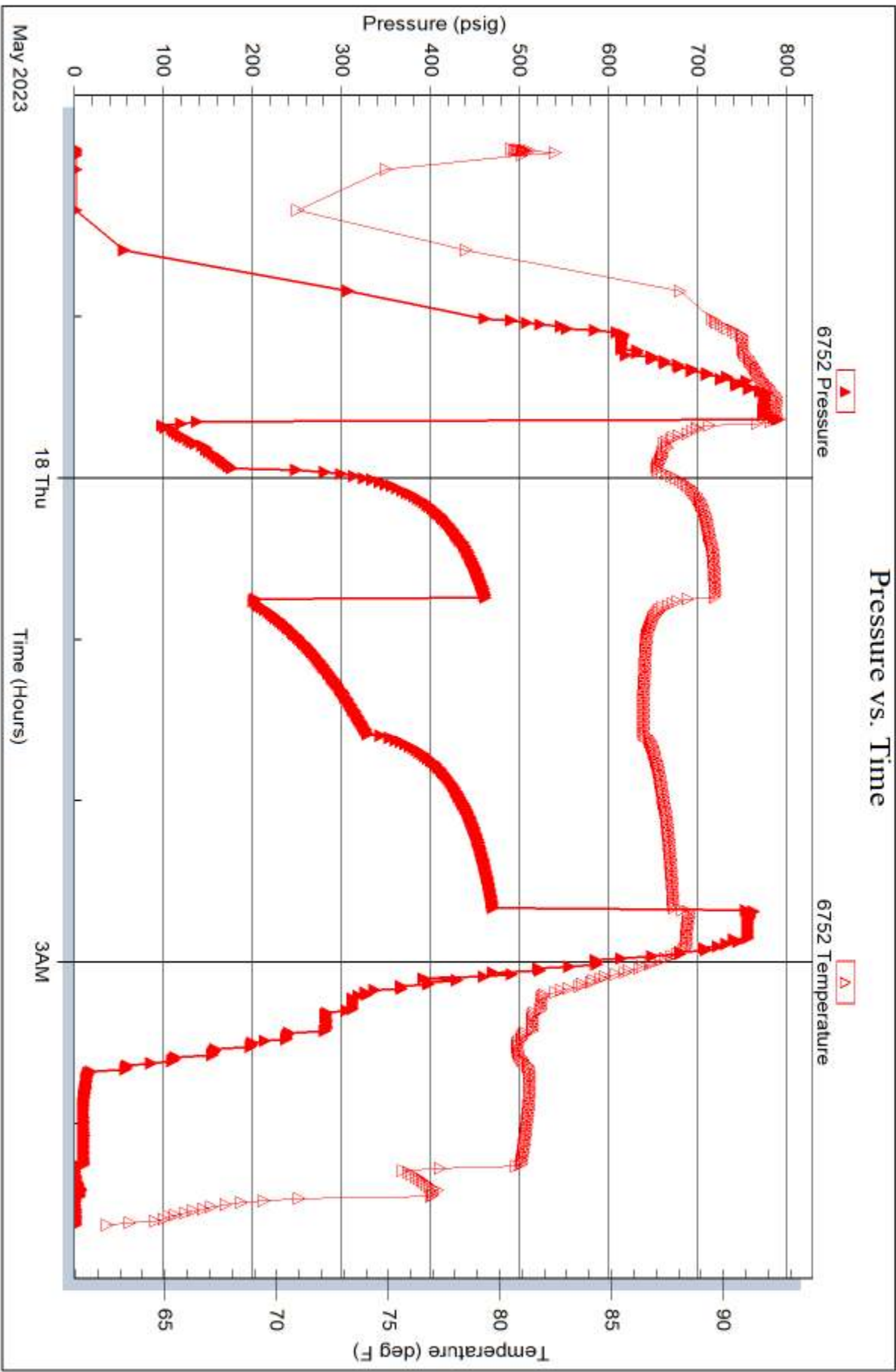
Serial #: 6752

Inside

Darrah Oil Company

Church 1-14

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 70663

Printed: 2023.05.18 @ 06:55:02



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Darrah Oil Company, LLC

**14/23/5**

125 N Market Suite 1425  
Wichita, KS 67202

**Church 1-14**

ATTN: Roger Martin

Job Ticket: 70664

**DST#: 2**

Test Start: 2023.05.18 @ 19:45:00

## GENERAL INFORMATION:

Formation: **KC A&B**

Deviated: No Whipstock: 1521.00 ft (KB)

Time Tool Opened: 20:58:47

Time Test Ended: 00:09:17

Test Type: Conventional Bottom Hole (Initial)

Tester: Chris Hagman

Unit No: 69

Interval: **1869.00 ft (KB) To 1907.00 ft (KB) (TVD)**

Reference Elevations: 1521.00 ft (KB)

Total Depth: 1907.00 ft (KB) (TVD)

1510.00 ft (CF)

Hole Diameter: 7.80 inches Hole Condition: Good

KB to GR/CF: 11.00 ft

**Serial #: 6751**

**Outside**

Press@RunDepth: 39.72 psig @ 1871.00 ft (KB)

Capacity: psig

Start Date: 2023.05.18

End Date:

2023.05.19

Last Calib.: 1899.12.30

Start Time: 19:45:01

End Time:

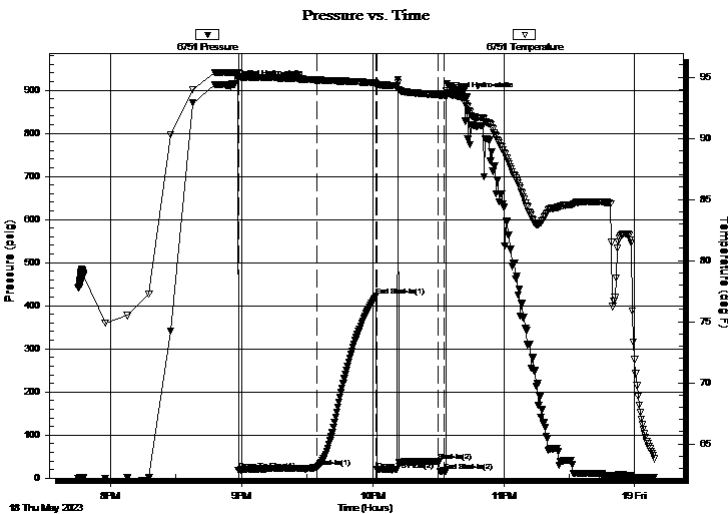
00:09:17

Time On Btm: 2023.05.18 @ 20:56:47

Time Off Btm: 2023.05.18 @ 22:33:47

**TEST COMMENT:** IF: 30 min., very weak surface blow, died 1 min.  
IS: 30 min., no blow back  
FF: 30 min., no blow, flushed tool, surface blow  
FS: 1 min., pulled tool

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	913.38	95.34	Initial Hydro-static
2	18.46	95.04	Open To Flow (1)
38	25.04	94.77	Shut-In(1)
65	422.43	94.50	End Shut-In(1)
66	19.23	94.30	Open To Flow (2)
93	39.72	93.56	Shut-In(2)
96	16.51	93.53	End Shut-In(2)
97	885.35	93.87	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
30.00	mud 100%M	0.15

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Darrah Oil Company, LLC

**14/23/5**

125 N Market Suite 1425  
Wichita, KS 67202

**Church 1-14**

Job Ticket: 70664

**DST#: 2**

ATTN: Roger Martin

Test Start: 2023.05.18 @ 19:45:00

### 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: 41.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.99 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	mud 100%M	0.148

Total Length: 30.00 ft      Total Volume: 0.148 bbl

Num Fluid Samples: 0

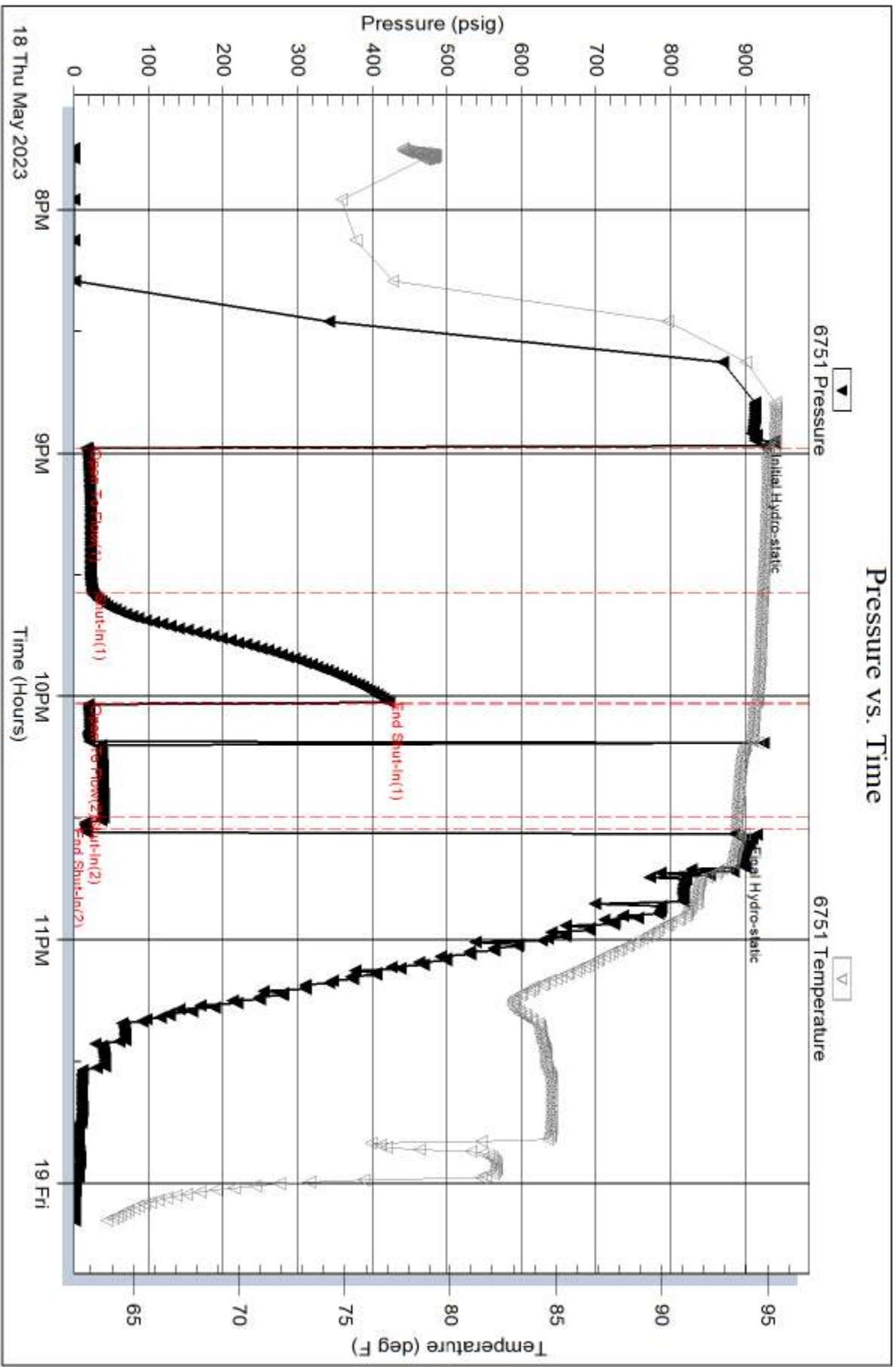
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



Serial #: 6752

Inside

Darrah Oil Company, LLC

Church 1-14

DST Test Number: 2

