

Confidentiality Requested:

Yes No

**KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION**

Form ACO-1

January 2018

Form must be Typed

Form must be Signed

All blanks must be Filled

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

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

New Well Re-Entry Workover

Oil WSW SWD

Gas DH EOR

OG GSW

CM (Coal Bed Methane)

Cathodic Other (Core, Expl., etc.): _____

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

Operator: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

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

Plug Back Liner Conv. to GSW Conv. to Producer

Commingled Permit #: _____

Dual Completion Permit #: _____

SWD Permit #: _____

EOR Permit #: _____

GSW Permit #: _____

Spud Date or Date Reached TD Completion Date or Recompletion Date

API No.: _____

Spot Description: _____

_____ - _____ - _____ Sec. _____ Twp. _____ S. R. _____ East West

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

NE NW SE SW

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

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite:

Operator Name: _____

Lease Name: _____ License #: _____

Quarter _____ Sec. _____ Twp. _____ S. R. _____ East West

County: _____ Permit #: _____

AFFIDAVIT

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

Submitted Electronically

KCC Office Use ONLY

Confidentiality Requested

Date: _____

Confidential Release Date: _____

Wireline Log Received Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT I II III Approved by: _____ Date: _____

Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ East West County: _____

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

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

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

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

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

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

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

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

Prepared For: **Ritchie Exploration**

8100 E 22nd St. N#700
Box 783188
Wichita KS 67278

ATTN: John Goldsmith

Baker 24B #1

24-17-35 Wichita,KS

Start Date: 2018.04.10 @ 01:08:15

End Date: 2018.04.10 @ 07:19:15

Job Ticket #: 63577 DST #: 1

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2018.04.18 @ 14:24:41



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Ritchie Exploration
8100 E 22nd St. N#700
Box 783188
Wichita KS 67278
ATTN: John Goldsmith

24-17-35 Wichita, KS

Baker 24B #1

Job Ticket: 63577

DST#: 1

Test Start: 2018.04.10 @ 01:08:15

GENERAL INFORMATION:

Formation: **LKC C**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 03:33:45
 Time Test Ended: 07:19:15
 Interval: **4103.00 ft (KB) To 4134.00 ft (KB) (TVD)**
 Total Depth: 4134.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Mike Roberts
 Unit No: 81
 Reference Elevations: 3188.00 ft (KB)
 3178.00 ft (CF)
 KB to GR/CF: 10.00 ft

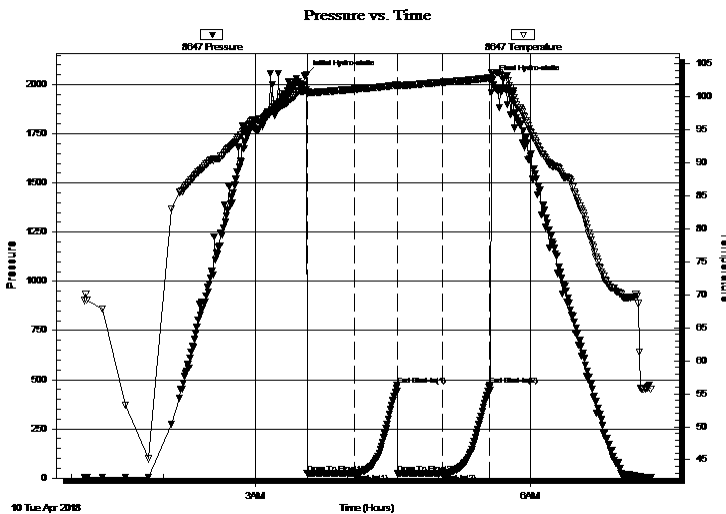
Serial #: 8647

Inside

Press@RunDepth: 23.50 psig @ 4104.00 ft (KB)
 Start Date: 2018.04.10 End Date: 2018.04.10
 Start Time: 01:08:15 End Time: 07:19:15
 Capacity: 8000.00 psig
 Last Calib.: 2018.04.10
 Time On Btm: 2018.04.10 @ 03:33:30
 Time Off Btm: 2018.04.10 @ 05:35:00

TEST COMMENT: IF: Built to weak surface blow
 IS: No return blow
 FF: No blow
 FS: No return blow

PRESSURE SUMMARY



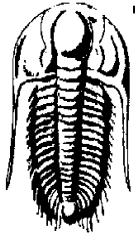
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2051.82	101.11	Initial Hydro-static
1	23.11	100.52	Open To Flow (1)
32	23.58	101.18	Shut-In(1)
60	471.18	101.81	End Shut-In(1)
60	23.73	101.69	Open To Flow (2)
89	23.50	102.23	Shut-In(2)
120	471.85	102.88	End Shut-In(2)
122	2026.85	103.72	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
2.00	mud with trace of oil	0.03

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Ritchie Exploration
8100 E 22nd St. N#700
Box 783188
Wichita KS 67278
ATTN: John Goldsmith

24-17-35 Wichita, KS

Baker 24B #1

Job Ticket: 63577

DST#: 1

Test Start: 2018.04.10 @ 01:08:15

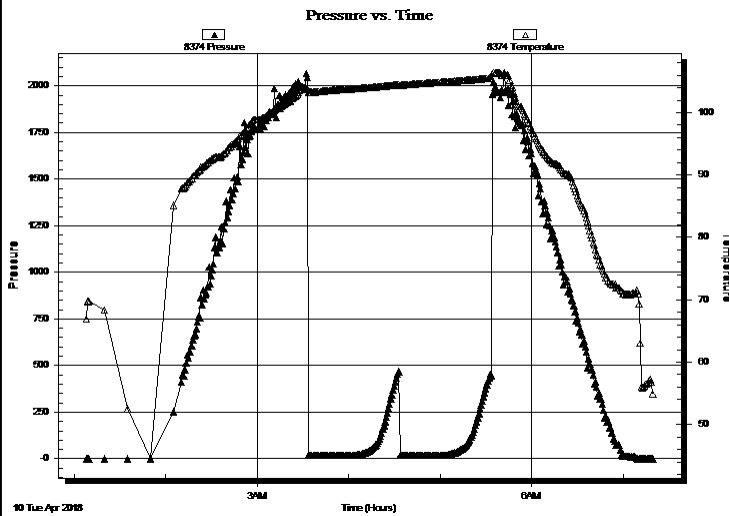
GENERAL INFORMATION:

Formation: LKC C		
Deviated: No Whipstock:	ft (KB)	Test Type: Conventional Bottom Hole (Initial)
Time Tool Opened: 03:33:45		Tester: Mike Roberts
Time Test Ended: 07:19:15		Unit No: 81
Interval: 4103.00 ft (KB) To 4134.00 ft (KB) (TVD)		Reference Elevations: 3188.00 ft (KB)
Total Depth: 4134.00 ft (KB) (TVD)		3178.00 ft (CF)
Hole Diameter: 7.88 inches	Hole Condition: Fair	KB to GR/CF: 10.00 ft

Serial #: 8374 Outside

Press@RunDepth: psig @ 4104.00 ft (KB)	Capacity: 8000.00 psig	
Start Date: 2018.04.10	End Date: 2018.04.10	Last Calib.: 1899.12.30
Start Time: 01:08:15	End Time: 07:19:30	Time On Btm:
		Time Off Btm:

TEST COMMENT: IF: Built to weak surface blow
IS: No return blow
FF: No blow
FS: No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
2.00	mud with trace of oil	0.03

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration

24-17-35 Wichita, KS

8100 E 22nd St. N#700
Box 783188
Wichita KS 67278
ATTN: John Goldsmith

Baker 24B #1

Job Ticket: 63577

DST#: 1

Test Start: 2018.04.10 @ 01:08:15

Tool Information

Drill Pipe:	Length: 4097.00 ft	Diameter: 3.80 inches	Volume: 57.47 bbl	Tool Weight: 1500.00 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: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 57.47 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4103.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	31.00 ft			
Tool Length:	59.00 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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Change Over Sub	1.00			4076.00	
Shut In Tool	5.00			4081.00	
Hydraulic tool	5.00			4086.00	
Jars	5.00			4091.00	
Safety Joint	3.00			4094.00	
Packer	5.00			4099.00	28.00 Bottom Of Top Packer
Packer	4.00			4103.00	
Stubb	1.00			4104.00	
Recorder	0.00	8647	Inside	4104.00	
Recorder	0.00	8374	Outside	4104.00	
Perforations	25.00			4129.00	
Bullnose	5.00			4134.00	31.00 Bottom Packers & Anchor

Total Tool Length: 59.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration

24-17-35 Wichita, KS

8100 E 22nd St. N#700
Box 783188
Wichita KS 67278
ATTN: John Goldsmith

Baker 24B #1

Job Ticket: 63577

DST#: 1

Test Start: 2018.04.10 @ 01:08:15

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: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.31 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2.00	mud w ith trace of oil	0.028

Total Length: 2.00 ft Total Volume: 0.028 bbl

Num Fluid Samples: 0

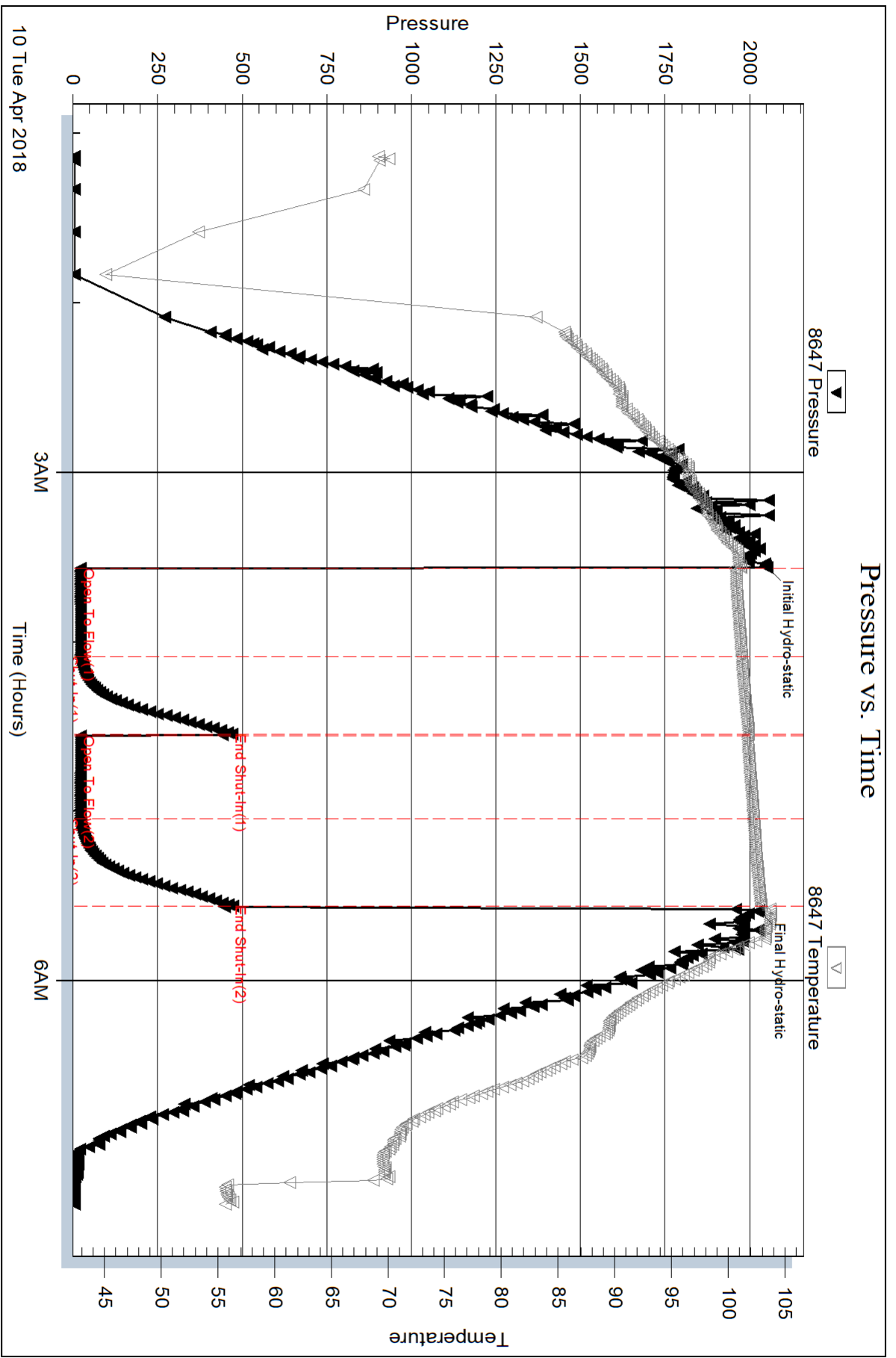
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



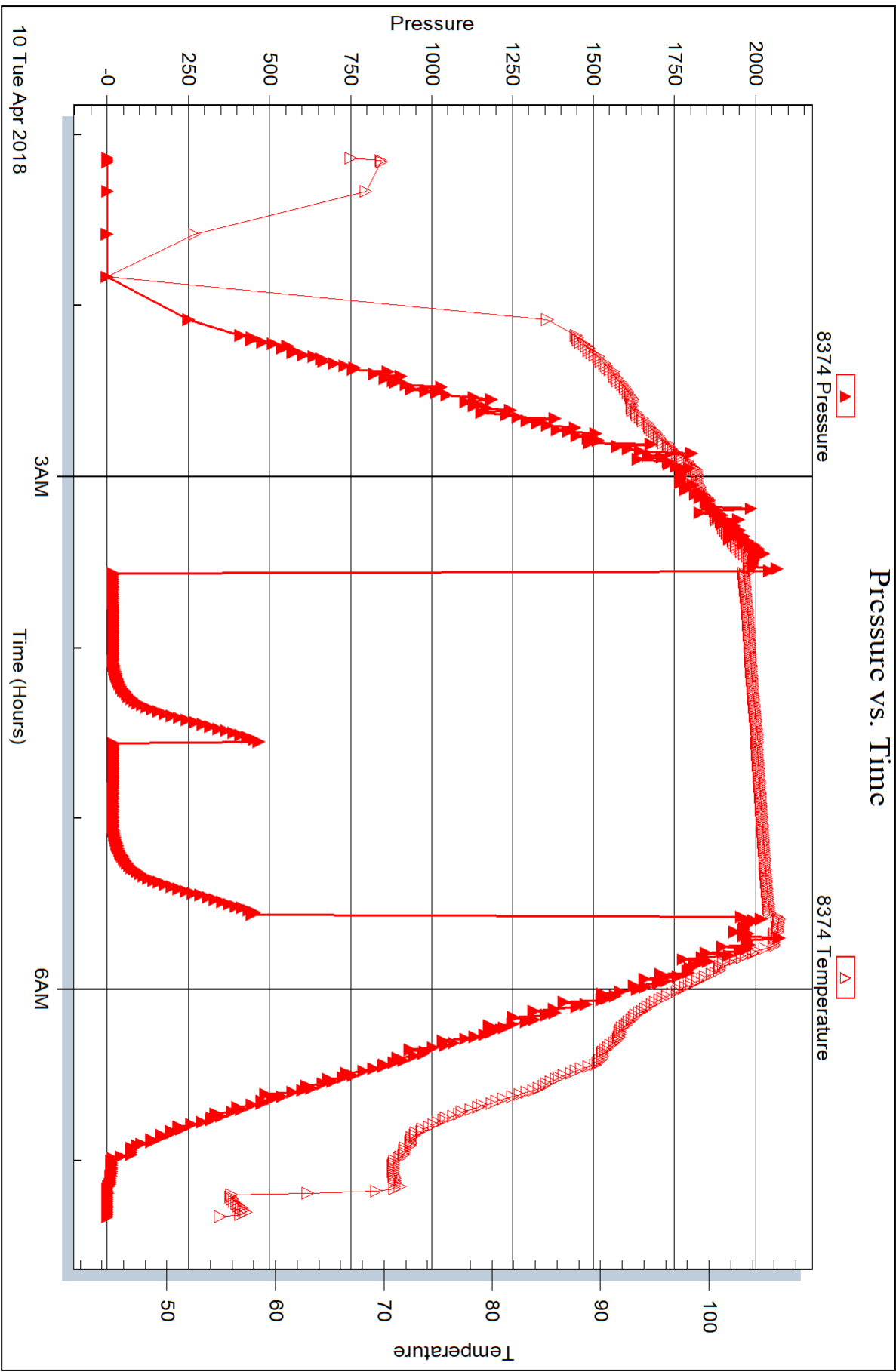
Serial #: 8374

Outside

Ritchie Exploration

Baker 24B #1

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration**

8100 E 22nd St. N#700
Box 783188
Wichita KS 67278

ATTN: John Goldsmith

Baker 24B #1

24-17-35 Wichita,KS

Start Date: 2018.04.10 @ 16:48:15

End Date: 2018.04.10 @ 23:41:00

Job Ticket #: 63578 DST #: 2

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2018.04.18 @ 14:24:15



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Ritchie Exploration
 8100 E 22nd St. N#700
 Box 783188
 Wichita KS 67278
 ATTN: John Goldsmith

24-17-35 Wichita, KS

Baker 24B #1

Job Ticket: 63578

DST#: 2

Test Start: 2018.04.10 @ 16:48:15

GENERAL INFORMATION:

Formation: **LKC D-E**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:43:15

Time Test Ended: 23:41:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Mike Roberts

Unit No: 81

Interval: 4130.00 ft (KB) To 4188.00 ft (KB) (TVD)

Reference Elevations: 3188.00 ft (KB)

Total Depth: 4188.00 ft (KB) (TVD)

3178.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 8647

Inside

Press@RunDepth: 100.82 psig @ 4168.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.04.10

End Date:

2018.04.10

Last Calib.: 2018.04.10

Start Time: 16:48:15

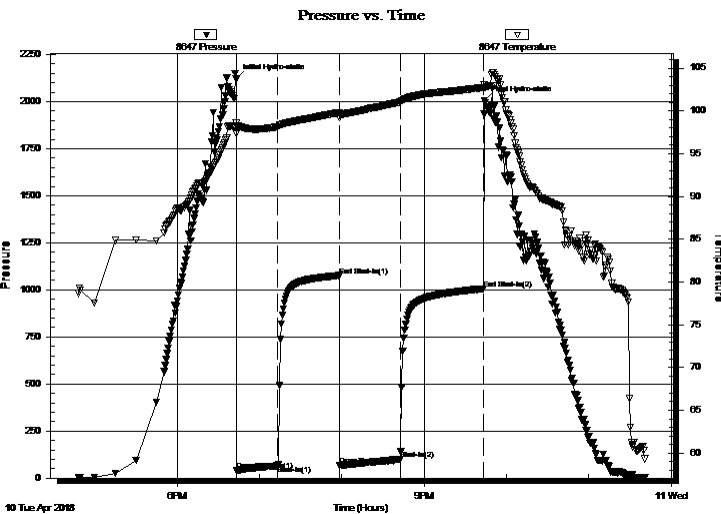
End Time:

23:41:00

Time On Btm: 2018.04.10 @ 18:43:00

Time Off Btm: 2018.04.10 @ 21:44:00

TEST COMMENT: IF: Built to 4" blow
 IS: No return blow
 FF: Built to 5" blow
 FS: No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2119.60	98.58	Initial Hydro-static
1	40.92	97.31	Open To Flow (1)
31	65.85	98.16	Shut-In(1)
76	1076.10	99.80	End Shut-In(1)
76	67.57	99.19	Open To Flow (2)
120	100.82	101.04	Shut-In(2)
181	1005.79	102.73	End Shut-In(2)
181	2005.51	102.73	Final Hydro-static

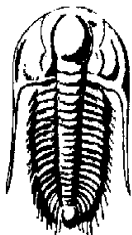
Recovery

Length (ft)	Description	Volume (bbl)
124.00	mud w ith oil spots 100%m	1.74

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Ritchie Exploration
8100 E22nd St. N#700
Box 783188
Wichita KS 67278
ATTN: John Goldsmith

24-17-35 Wichita, KS
Baker 24B #1
Job Ticket: 63578 **DST#: 2**
Test Start: 2018.04.10 @ 16:48:15

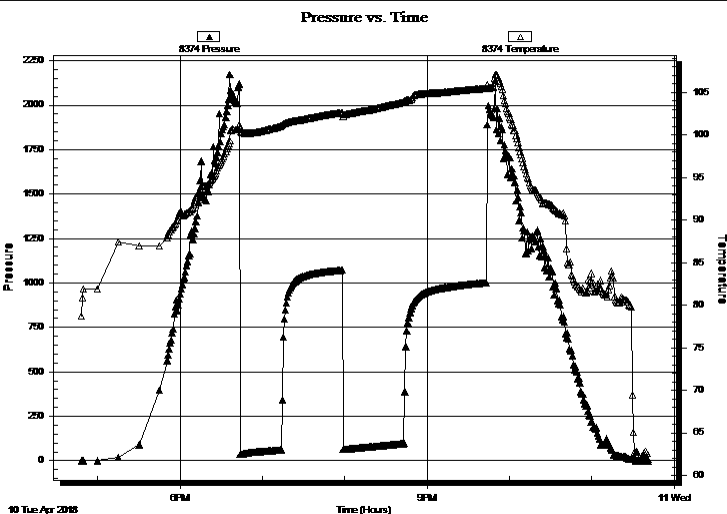
GENERAL INFORMATION:

Formation:	LKC D-E			Test Type:	Conventional Bottom Hole (Reset)
Deviated:	No	Whipstock:	ft (KB)	Tester:	Mike Roberts
Time Tool Opened:	18:43:15			Unit No:	81
Time Test Ended:	23:41:00			Reference Elevations:	3188.00 ft (KB)
Interval:	4130.00 ft (KB) To 4188.00 ft (KB) (TVD)				3178.00 ft (CF)
Total Depth:	4188.00 ft (KB) (TVD)			KB to GR/CF:	10.00 ft
Hole Diameter:	7.88 inches			Hole Condition:	Fair

Serial #: 8374 Outside

Press@RunDepth:	psig @	4168.00 ft (KB)	Capacity:	8000.00 psig	
Start Date:	2018.04.10	End Date:	2018.04.10	Last Calib.:	2018.04.10
Start Time:	16:48:15	End Time:	23:41:15	Time On Btm:	
				Time Off Btm:	

TEST COMMENT: IF:Built to 4" blow
IS:No return blow
FF:Built to 5" blow
FS:No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
124.00	mud w ith oil spots 100%m	1.74

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration

24-17-35 Wichita, KS

8100 E 22nd St. N#700
Box 783188
Wichita KS 67278
ATTN: John Goldsmith

Baker 24B #1

Job Ticket: 63578

DST#: 2

Test Start: 2018.04.10 @ 16:48:15

Tool Information

Drill Pipe:	Length: 4129.00 ft	Diameter: 3.80 inches	Volume: 57.92 bbl	Tool Weight: 1500.00 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: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 57.92 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	27.00 ft			String Weight: Initial 64000.00 lb
Depth to Top Packer:	4130.00 ft			Final 64000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	58.00 ft			
Tool Length:	86.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Length (ft) Serial No. Position Depth (ft) Accum. Lengths

Change Over Sub	1.00			4103.00	
Shut In Tool	5.00			4108.00	
Hydraulic tool	5.00			4113.00	
Jars	5.00			4118.00	
Safety Joint	3.00			4121.00	
Packer	5.00			4126.00	28.00 Bottom Of Top Packer
Packer	4.00			4130.00	
Stubb	1.00			4131.00	
Perforations	4.00			4135.00	
Change Over Sub	1.00			4136.00	
Drill Pipe	31.00			4167.00	
Change Over Sub	1.00			4168.00	
Recorder	0.00	8647	Inside	4168.00	
Recorder	0.00	8374	Outside	4168.00	
Perforations	15.00			4183.00	
Bullnose	5.00			4188.00	58.00 Bottom Packers & Anchor
Total Tool Length:	86.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration

24-17-35 Wichita, KS

8100 E 22nd St. N#700
Box 783188
Wichita KS 67278
ATTN: John Goldsmith

Baker 24B #1

Job Ticket: 63578

DST#: 2

Test Start: 2018.04.10 @ 16:48:15

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: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.11 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3400.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
124.00	mud w ith oil spots 100%m	1.739

Total Length: 124.00 ft

Total Volume: 1.739 bbl

Num Fluid Samples: 0

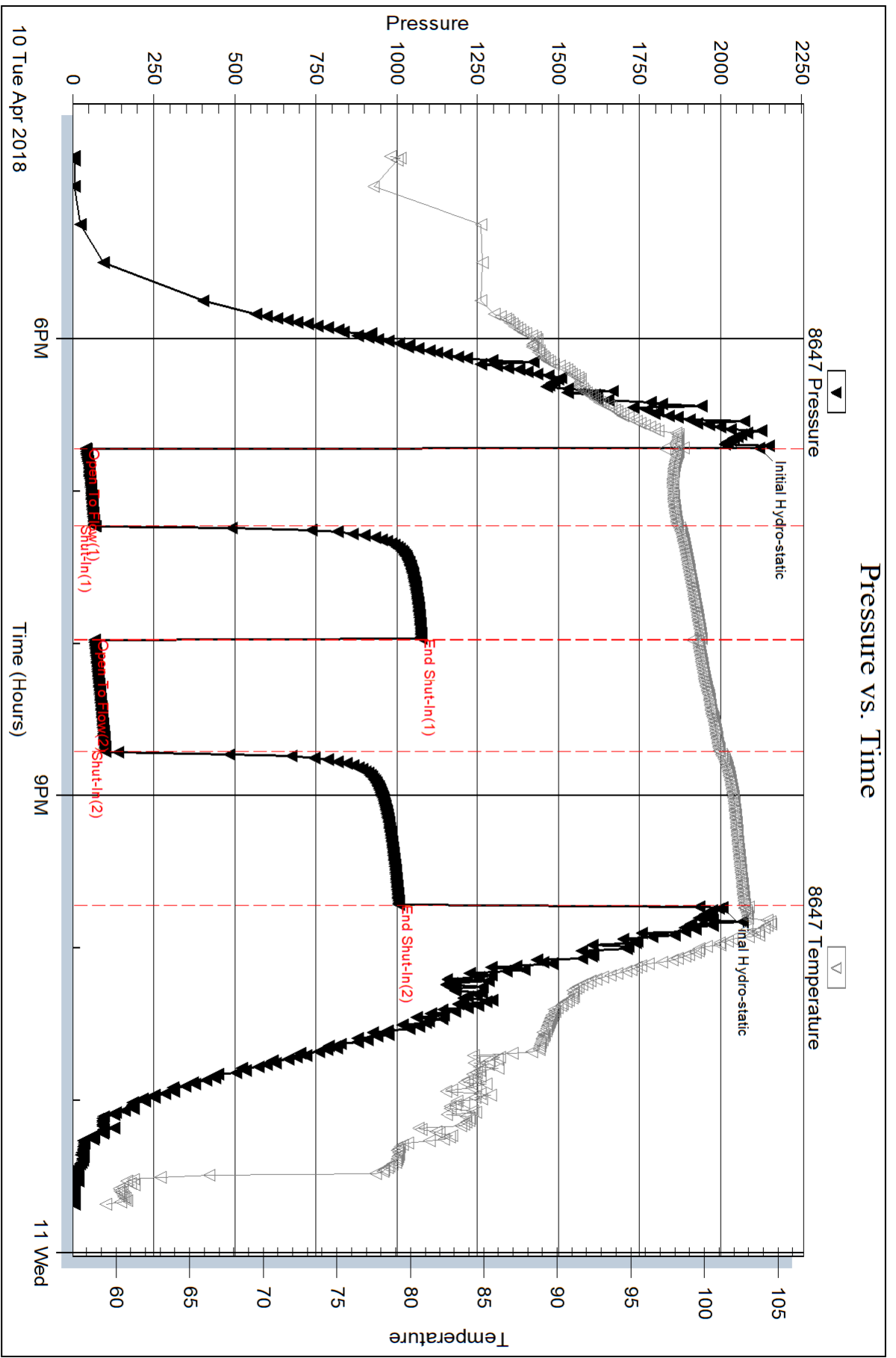
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

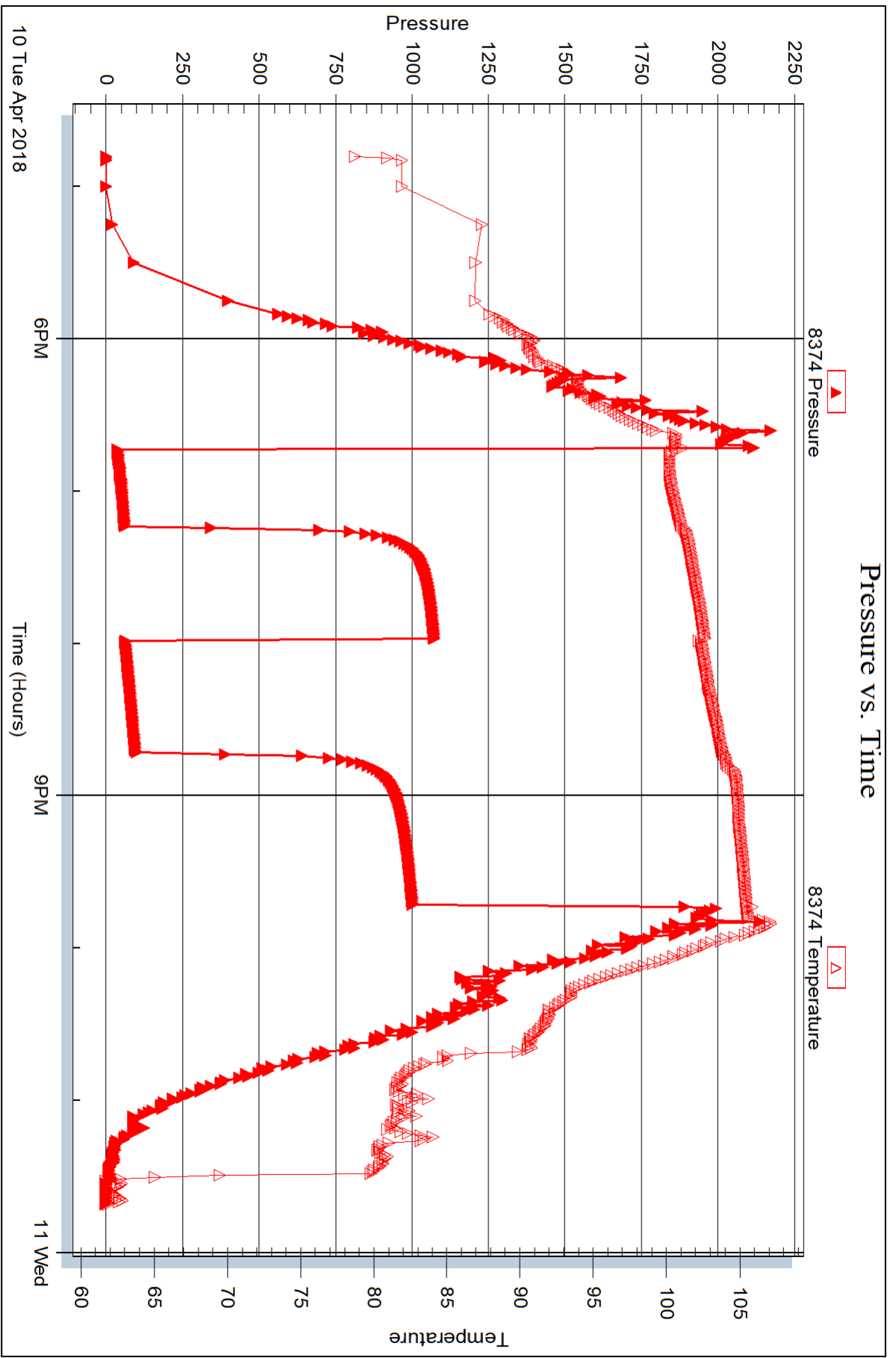


Serial #: 8374

Outside Ritchie Exploration

Baker 24B #1

DST Test Number: 2





DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration**

8100 E 22nd St. N#700
Box 783188
Wichita KS 67278

ATTN: John Goldsmith

Baker 24B #1

24-17-35 Wichita,KS

Start Date: 2018.04.11 @ 16:29:15

End Date: 2018.04.11 @ 23:19:45

Job Ticket #: 63579 DST #: 3

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2018.04.18 @ 14:23:54



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Ritchie Exploration
 8100 E 22nd St. N#700
 Box 783188
 Wichita KS 67278
 ATTN: John Goldsmith

24-17-35 Wichita, KS

Baker 24B #1

Job Ticket: 63579

DST#: 3

Test Start: 2018.04.11 @ 16:29:15

GENERAL INFORMATION:

Formation: **LKC H-I**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 18:11:15
 Tester: Mike Roberts
 Time Test Ended: 23:19:45
 Unit No: 81
 Interval: **4256.00 ft (KB) To 4330.00 ft (KB) (TVD)**
 Reference Elevations: 3188.00 ft (KB)
 Total Depth: 4256.00 ft (KB) (TVD)
 3178.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Fair
 KB to GR/CF: 10.00 ft

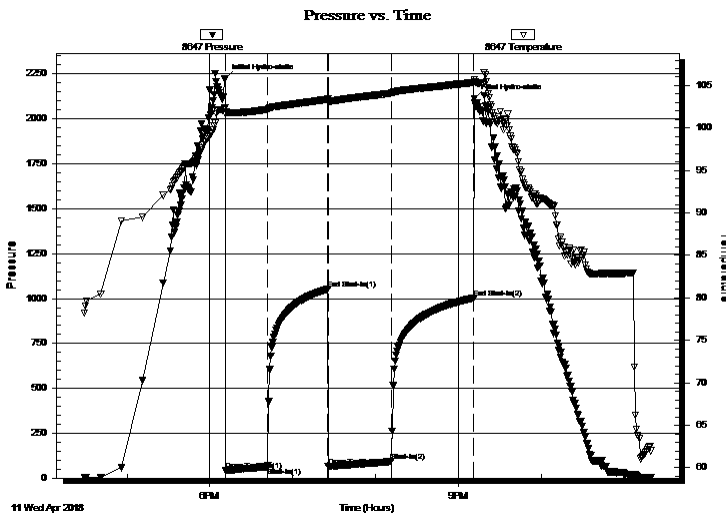
Serial #: 8647

Inside

Press@RunDepth: 91.87 psig @ 4294.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2018.04.11 End Date: 2018.04.11 Last Calib.: 2018.04.11
 Start Time: 16:29:15 End Time: 23:19:45 Time On Btm: 2018.04.11 @ 18:11:00
 Time Off Btm: 2018.04.11 @ 21:11:45

TEST COMMENT: IF: Built to 2 1/2" blow
 IS: No return blow
 FF: Built to 3" blow
 FS: No return blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2224.69	102.39	Initial Hydro-static
1	43.36	101.72	Open To Flow (1)
31	62.24	102.19	Shut-In(1)
75	1052.49	103.38	End Shut-In(1)
75	65.80	103.00	Open To Flow (2)
121	91.87	104.08	Shut-In(2)
181	1002.87	105.34	End Shut-In(2)
181	2111.62	105.67	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
90.00	mud w ith oil spots 100%m	1.26

Gas Rates

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

* Recovery from multiple tests



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Ritchie Exploration
 8100 E 22nd St. N#700
 Box 783188
 Wichita KS 67278
 ATTN: John Goldsmith

24-17-35 Wichita, KS
Baker 24B #1
 Job Ticket: 63579 **DST#: 3**
 Test Start: 2018.04.11 @ 16:29:15

GENERAL INFORMATION:

Formation: **LKC H-I**
 Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 18:11:15 Tester: Mike Roberts
 Time Test Ended: 23:19:45 Unit No: 81

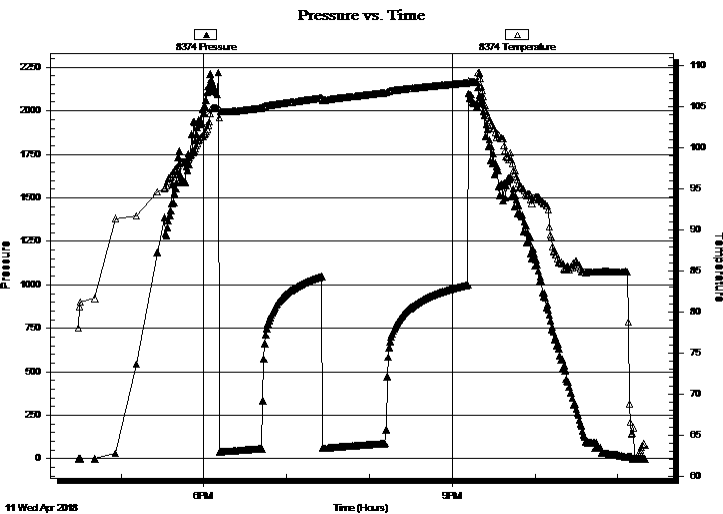
Interval: **4256.00 ft (KB) To 4330.00 ft (KB) (TVD)** Reference Elevations: 3188.00 ft (KB)
 Total Depth: 4256.00 ft (KB) (TVD) 3178.00 ft (CF)
 Hole Diameter: 7.88 inchesHole Condition: Fair KB to GR/CF: 10.00 ft

Serial #: 8374

Outside

Press@RunDepth: psig @ 4294.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2018.04.11 End Date: 2018.04.11 Last Calib.: 2018.04.11
 Start Time: 16:29:15 End Time: 23:20:00 Time On Btm:
 Time Off Btm:

TEST COMMENT: IF:Built to 2 1/2" blow
 IS:No return blow
 FF:Built to 3" blow
 FS:No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
90.00	mud w ith oil spots 100%m	1.26

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration

24-17-35 Wichita, KS

8100 E 22nd St. N#700
Box 783188
Wichita KS 67278
ATTN: John Goldsmith

Baker 24B #1

Job Ticket: 63579

DST#: 3

Test Start: 2018.04.11 @ 16:29:15

Tool Information

Drill Pipe:	Length: 4255.00 ft	Diameter: 3.80 inches	Volume: 59.69 bbl	Tool Weight: 1500.00 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: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 80000.00 lb
		Total Volume: 59.69 bbl		Tool Chased 0.00 ft
Drill Pipe Above KB:	27.00 ft			String Weight: Initial 64000.00 lb
Depth to Top Packer:	4256.00 ft			Final 64000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	74.00 ft			
Tool Length:	102.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

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

Change Over Sub	1.00			4229.00	
Shut In Tool	5.00			4234.00	
Hydraulic tool	5.00			4239.00	
Jars	5.00			4244.00	
Safety Joint	3.00			4247.00	
Packer	5.00			4252.00	28.00 Bottom Of Top Packer
Packer	4.00			4256.00	
Stubb	1.00			4257.00	
Perforations	4.00			4261.00	
Change Over Sub	1.00			4262.00	
Drill Pipe	31.00			4293.00	
Change Over Sub	1.00			4294.00	
Recorder	0.00	8647	Inside	4294.00	
Recorder	0.00	8374	Outside	4294.00	
Perforations	31.00			4325.00	
Bullnose	5.00			4330.00	74.00 Bottom Packers & Anchor
Total Tool Length:		102.00			



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration

24-17-35 Wichita, KS

8100 E 22nd St. N#700
Box 783188
Wichita KS 67278
ATTN: John Goldsmith

Baker 24B #1

Job Ticket: 63579

DST#: 3

Test Start: 2018.04.11 @ 16:29:15

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: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.70 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 6000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
90.00	mud w ith oil spots 100%m	1.262

Total Length: 90.00 ft Total Volume: 1.262 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

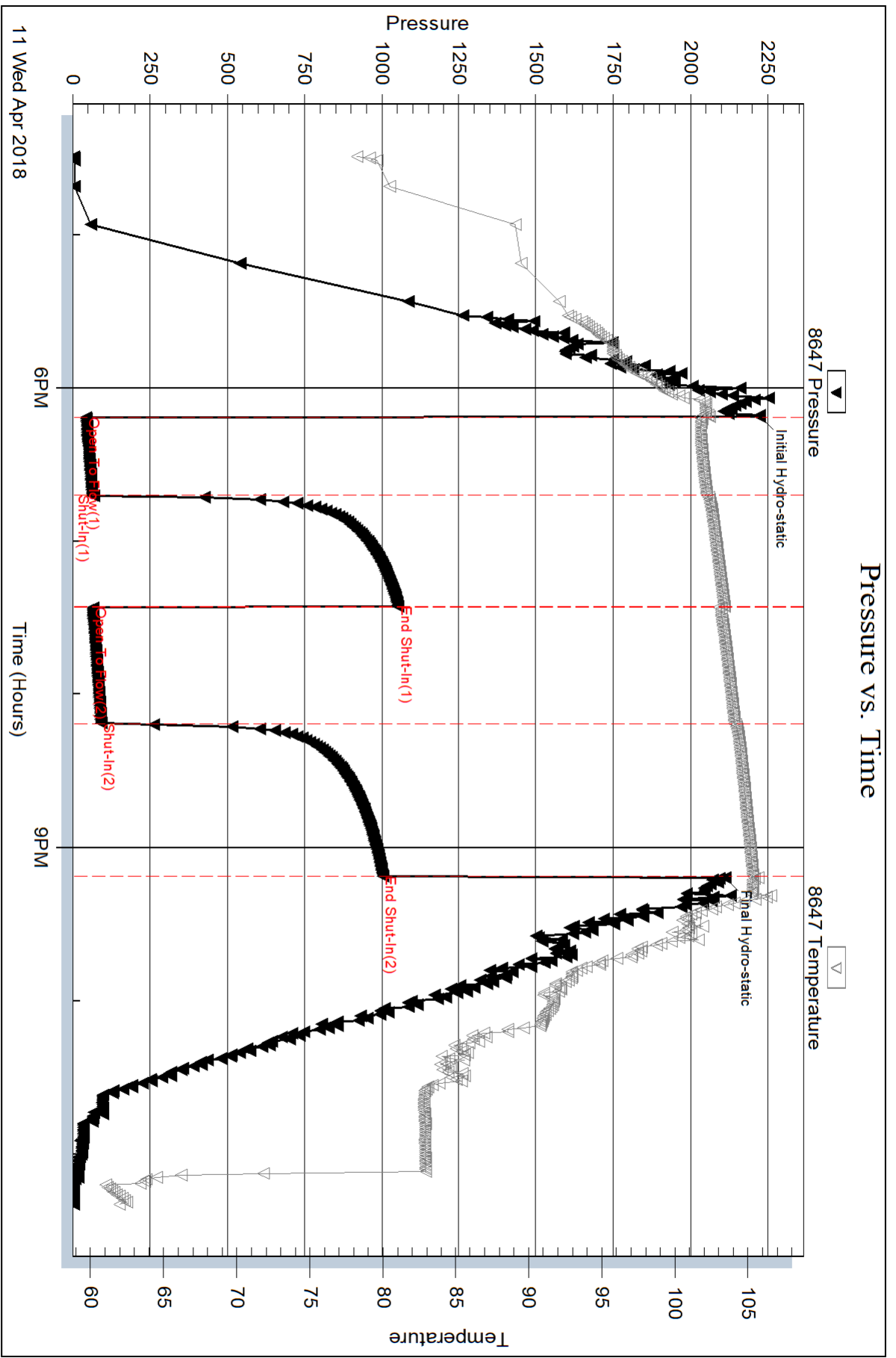
Serial #: 8647

Inside

Ritchie Exploration

Baker 24B #1

DST Test Number: 3

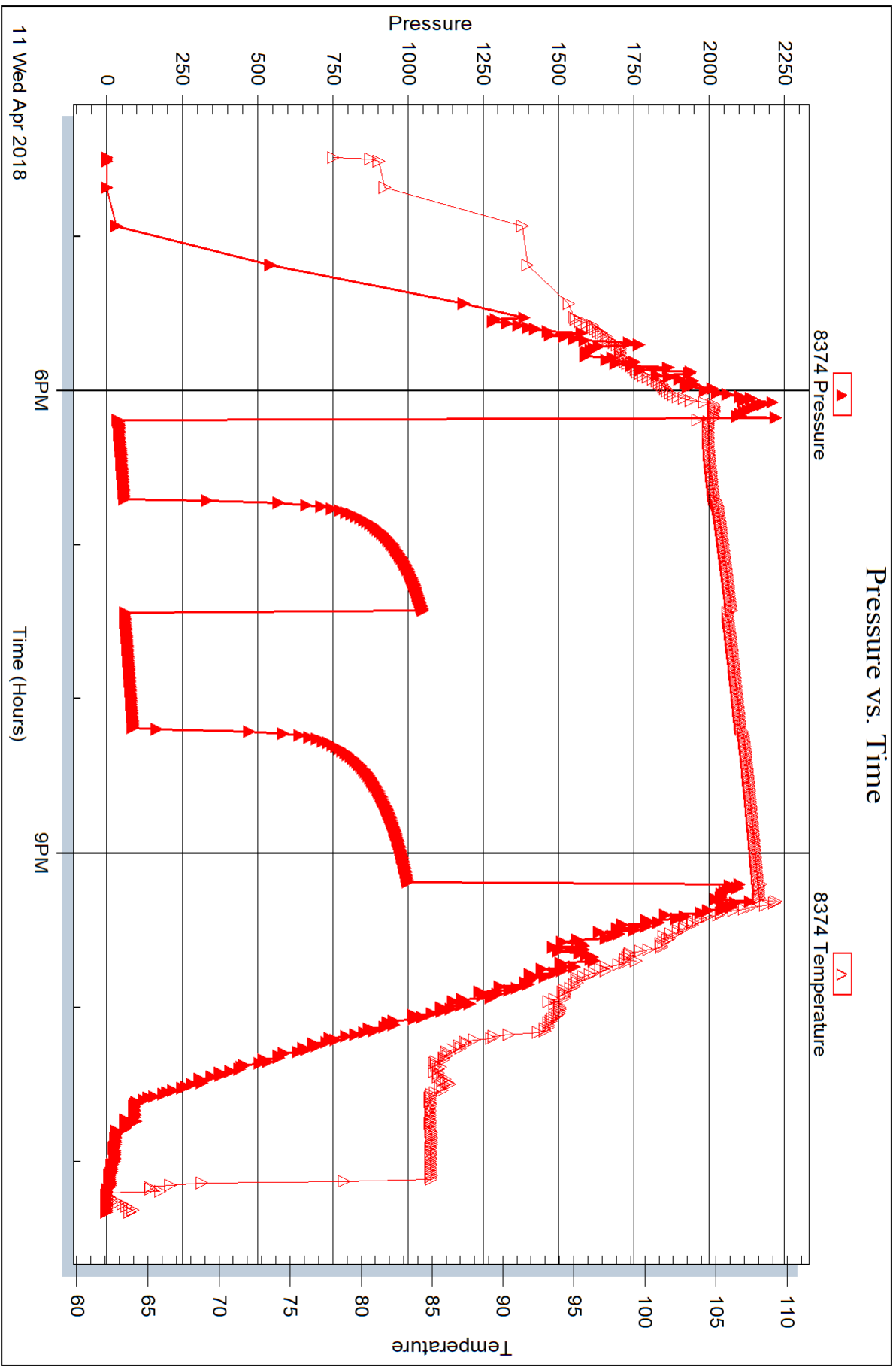


Serial #: 8374

Outside Ritchie Exploration

Baker 24B #1

DST Test Number: 3





DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration**

8100 E 22nd St. N#700
Box 783188
Wichita KS 67278

ATTN: John Goldsmith

Baker 24B #1

24-17-35 Wichita,KS

Start Date: 2018.04.12 @ 06:26:15

End Date: 2018.04.12 @ 12:58:15

Job Ticket #: 63580 DST #: 4

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2018.04.18 @ 14:23:27



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Ritchie Exploration
 8100 E 22nd St. N#700
 Box 783188
 Wichita KS 67278
 ATTN: John Goldsmith

24-17-35 Wichita, KS

Baker 24B #1

Job Ticket: 63580

DST#: 4

Test Start: 2018.04.12 @ 06:26:15

GENERAL INFORMATION:

Formation: **LKC J**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 08:06:00
 Time Test Ended: 12:58:15
 Interval: **4332.00 ft (KB) To 4350.00 ft (KB) (TVD)**
 Total Depth: 4350.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Mike Roberts
 Unit No: 81
 Reference Elevations: 3188.00 ft (KB)
 3178.00 ft (CF)
 KB to GR/CF: 10.00 ft

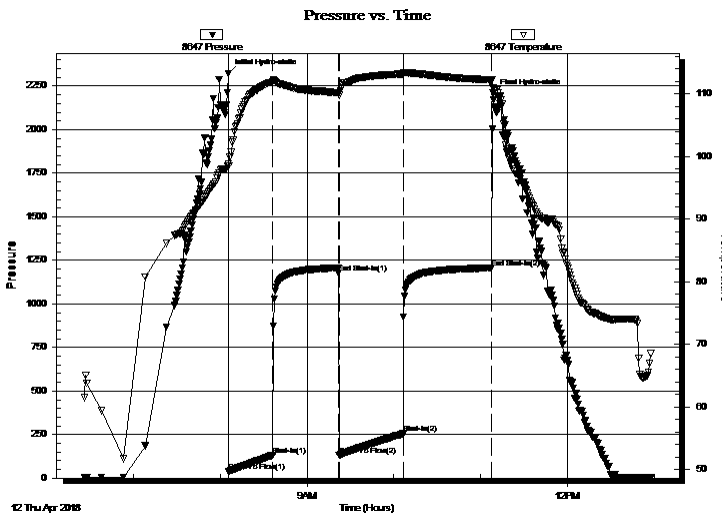
Serial #: 8647

Inside

Press@RunDepth: 255.69 psig @ 4333.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2018.04.12 End Date: 2018.04.12 Last Calib.: 2018.04.12
 Start Time: 06:26:15 End Time: 12:58:15 Time On Btm: 2018.04.12 @ 08:05:45
 Time Off Btm: 2018.04.12 @ 11:08:45

TEST COMMENT: IF:BOB in 14 min.
 IS:No return blow
 FF:BOB in 18 min.
 FS:No return blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2323.45	98.82	Initial Hydro-static
1	36.46	98.52	Open To Flow (1)
31	131.60	111.91	Shut-In(1)
77	1179.05	110.09	End Shut-In(1)
77	131.97	109.78	Open To Flow (2)
121	255.69	113.18	Shut-In(2)
182	1205.35	112.21	End Shut-In(2)
183	2209.45	111.03	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
196.00	m 100% mud w ith oil spots	2.75
320.00	mcw 10% m 90% w	4.49

Gas Rates

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

* Recovery from multiple tests



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Ritchie Exploration
 8100 E 22nd St. N#700
 Box 783188
 Wichita KS 67278
 ATTN: John Goldsmith

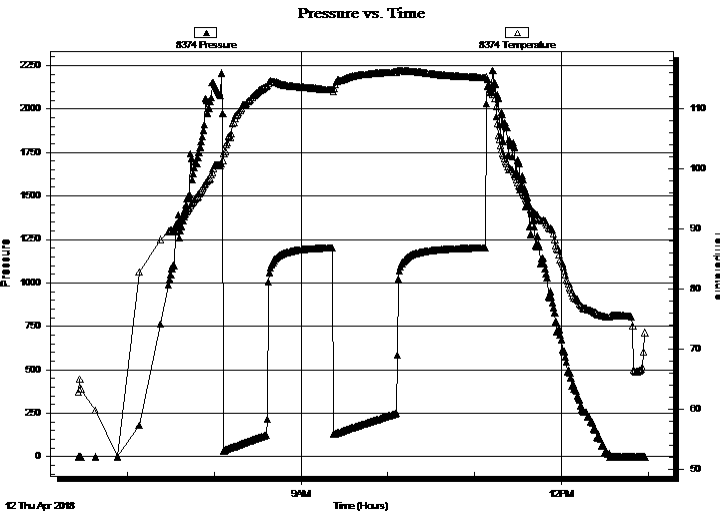
24-17-35 Wichita, KS
Baker 24B #1
 Job Ticket: 63580 **DST#: 4**
 Test Start: 2018.04.12 @ 06:26:15

GENERAL INFORMATION:

Formation: **LKC J**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 08:06:00
 Time Test Ended: 12:58:15
 Interval: **4332.00 ft (KB) To 4350.00 ft (KB) (TVD)**
 Total Depth: 4350.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Mike Roberts
 Unit No: 81
 Reference Elevations: 3188.00 ft (KB)
 3178.00 ft (CF)
 KB to GR/CF: 10.00 ft

Serial #: 8374 Outside
 Press@RunDepth: psig @ 4333.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2018.04.12 End Date: 2018.04.12 Last Calib.: 2018.04.12
 Start Time: 06:26:15 End Time: 12:58:15 Time On Btm:
 Time Off Btm:

TEST COMMENT: IF:BOB in 14 min.
 IS:No return blow
 FF:BOB in 18 min.
 FS:No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
196.00	m 100% mud w ith oil spots	2.75
320.00	mcw 10% m 90% w	4.49

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration

24-17-35 Wichita, KS

8100 E 22nd St. N#700
Box 783188
Wichita KS 67278
ATTN: John Goldsmith

Baker 24B #1

Job Ticket: 63580

DST#: 4

Test Start: 2018.04.12 @ 06:26:15

Tool Information

Drill Pipe:	Length: 4317.00 ft	Diameter: 3.80 inches	Volume: 60.56 bbl	Tool Weight: 1500.00 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: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 60.56 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial 64000.00 lb
Depth to Top Packer:	4332.00 ft			Final 67000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	18.00 ft			
Tool Length:	46.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

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

Change Over Sub	1.00			4305.00	
Shut In Tool	5.00			4310.00	
Hydraulic tool	5.00			4315.00	
Jars	5.00			4320.00	
Safety Joint	3.00			4323.00	
Packer	5.00			4328.00	28.00 Bottom Of Top Packer
Packer	4.00			4332.00	
Stubb	1.00			4333.00	
Recorder	0.00	8647	Inside	4333.00	
Recorder	0.00	8374	Outside	4333.00	
Perforations	12.00			4345.00	
Bullnose	5.00			4350.00	18.00 Bottom Packers & Anchor

Total Tool Length: 46.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration

24-17-35 Wichita, KS

8100 E 22nd St. N#700
Box 783188
Wichita KS 67278
ATTN: John Goldsmith

Baker 24B #1

Job Ticket: 63580

DST#: 4

Test Start: 2018.04.12 @ 06:26:15

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:

20000 ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.72 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 6000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
196.00	m 100% mud w ith oil spots	2.749
320.00	mcw 10% m 90% w	4.489

Total Length: 516.00 ft Total Volume: 7.238 bbl

Num Fluid Samples: 0

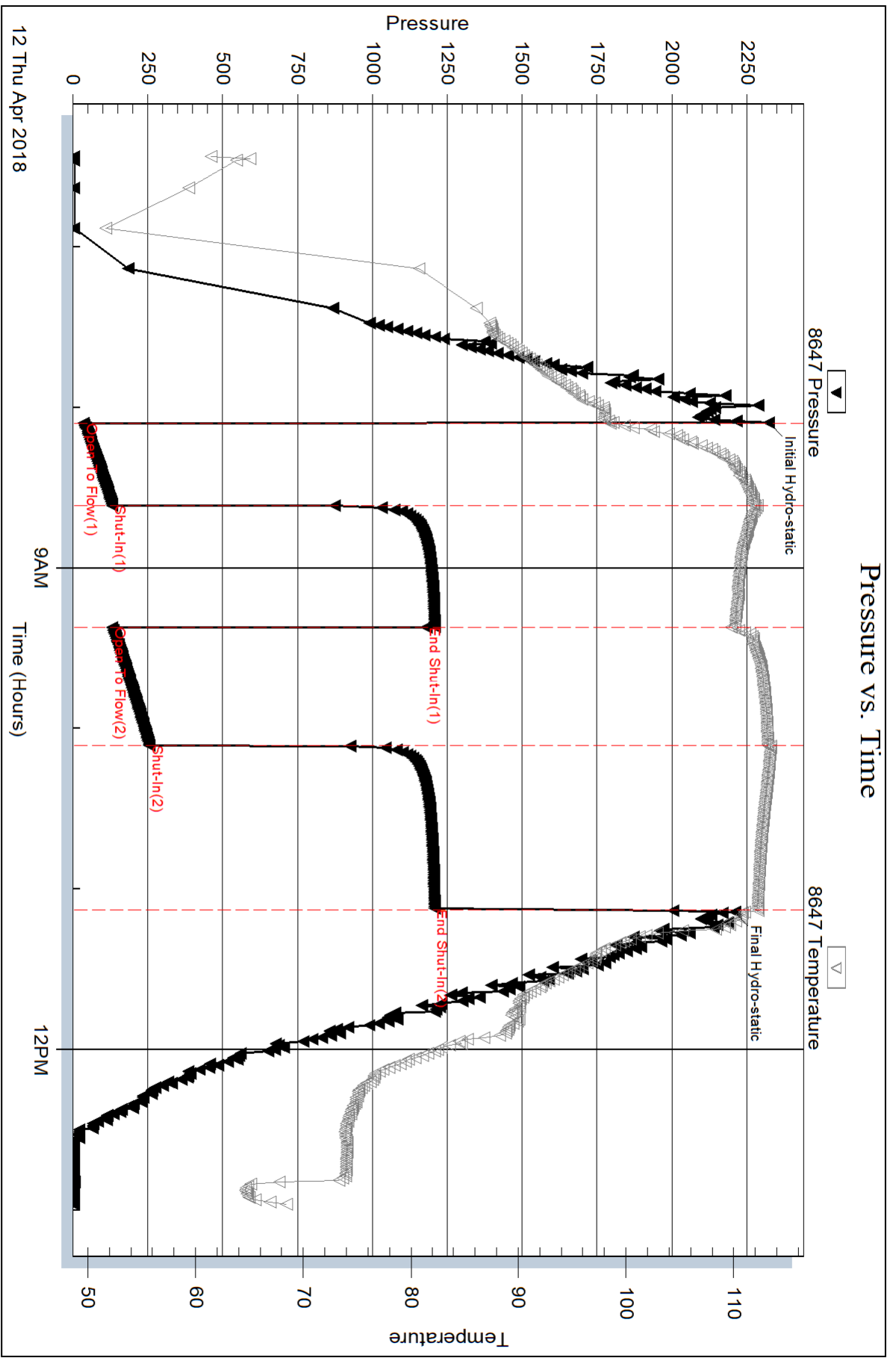
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW= .349@81.8*=20,000 ppm

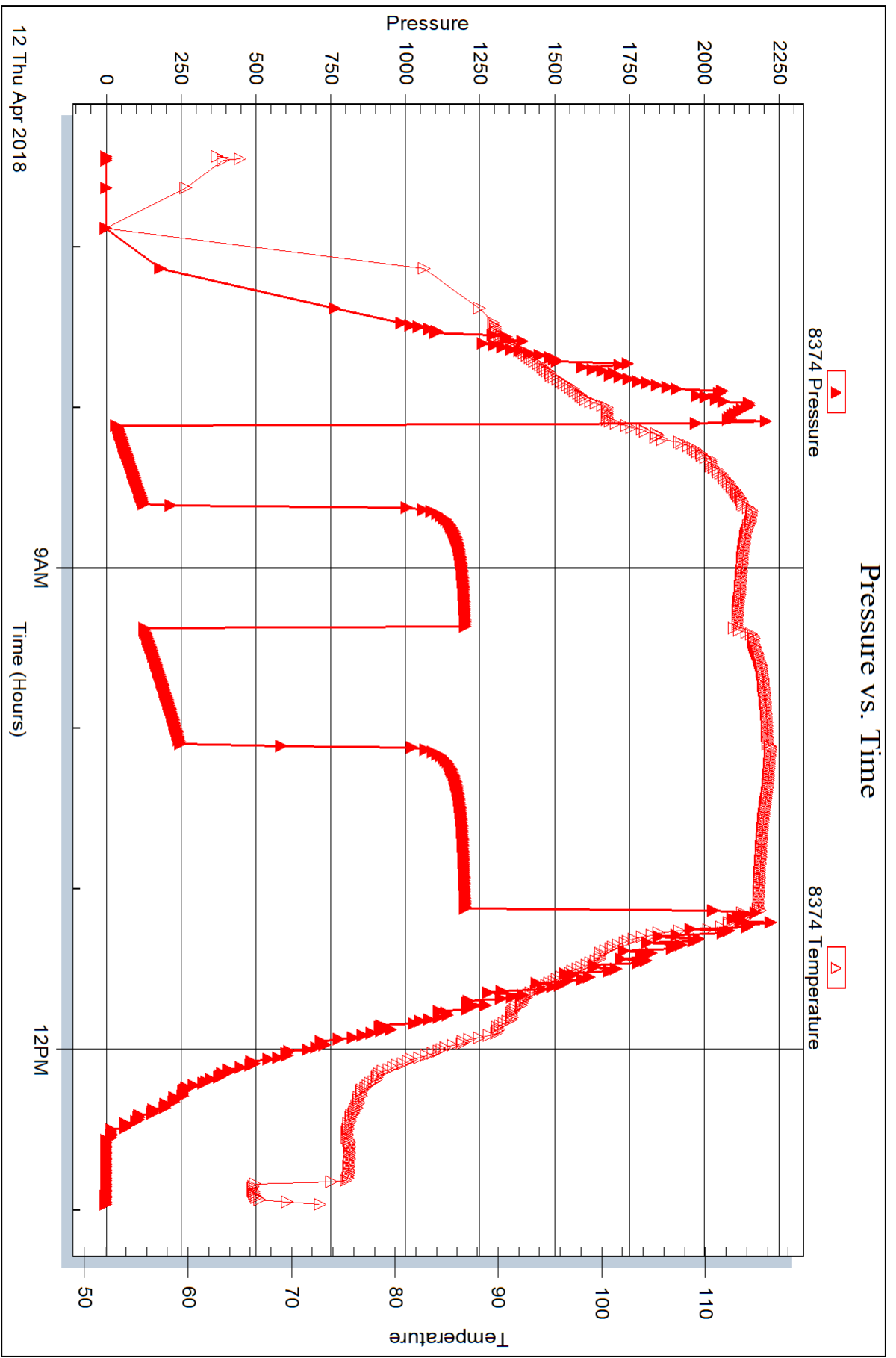


Serial #: 8374

Outside Ritchie Exploration

Baker 24B #1

DST Test Number: 4





DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration**

8100 E 22nd St. N#700
Box 783188
Wichita KS 67278

ATTN: John Goldsmith

Baker 24B #1

24-17-35 Wichita,KS

Start Date: 2018.04.12 @ 21:54:15

End Date: 2018.04.13 @ 05:11:45

Job Ticket #: 63581 DST #: 5

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2018.04.18 @ 14:23:05



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Ritchie Exploration
 8100 E 22nd St. N#700
 Box 783188
 Wichita KS 67278
 ATTN: John Goldsmith

24-17-35 Wichita, KS

Baker 24B #1

Job Ticket: 63581

DST#: 5

Test Start: 2018.04.12 @ 21:54:15

GENERAL INFORMATION:

Formation: **LKC K**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 23:47:00
 Time Test Ended: 05:11:45
 Interval: **4364.00 ft (KB) To 4400.00 ft (KB) (TVD)**
 Total Depth: 4364.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Mike Roberts
 Unit No: 81
 Reference Elevations: 3188.00 ft (KB)
 3178.00 ft (CF)
 KB to GR/CF: 10.00 ft

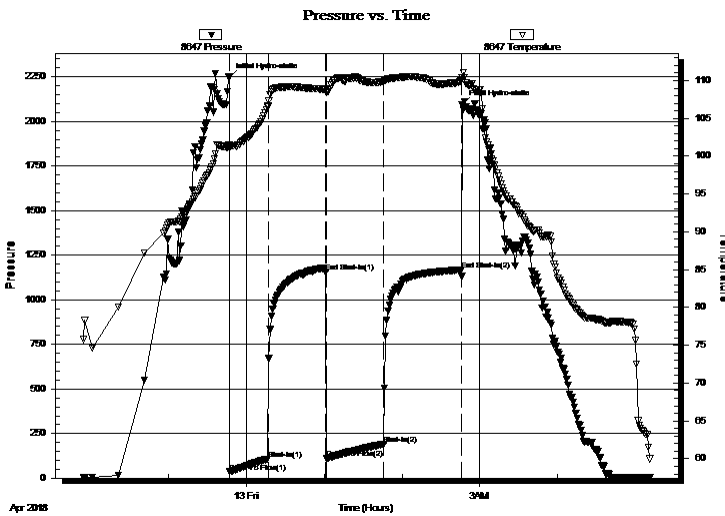
Serial #: 8647

Inside

Press@RunDepth: 190.87 psig @ 4365.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2018.04.12 End Date: 2018.04.13 Last Calib.: 2018.04.13
 Start Time: 21:54:15 End Time: 05:11:45 Time On Btm: 2018.04.12 @ 23:46:30
 Time Off Btm: 2018.04.13 @ 02:46:30

TEST COMMENT: IF:BOB in 18 min.
 IS:No return blow
 FF:BOB in 22 min.
 FS:No return blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2243.66	101.51	Initial Hydro-static
1	35.19	101.14	Open To Flow (1)
30	107.25	106.61	Shut-In(1)
75	1156.49	108.82	End Shut-In(1)
75	109.74	108.46	Open To Flow (2)
120	190.87	109.87	Shut-In(2)
180	1167.78	109.96	End Shut-In(2)
180	2091.98	110.36	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	Free Oil Thick Oil	0.21
77.00	ow cm 10%o 10%w 80%m	1.08
248.00	omcw 3%o 20%m 77%w	3.48

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Ritchie Exploration
 8100 E 22nd St. N#700
 Box 783188
 Wichita KS 67278
 ATTN: John Goldsmith

24-17-35 Wichita, KS
Baker 24B #1
 Job Ticket: 63581 **DST#: 5**
 Test Start: 2018.04.12 @ 21:54:15

GENERAL INFORMATION:

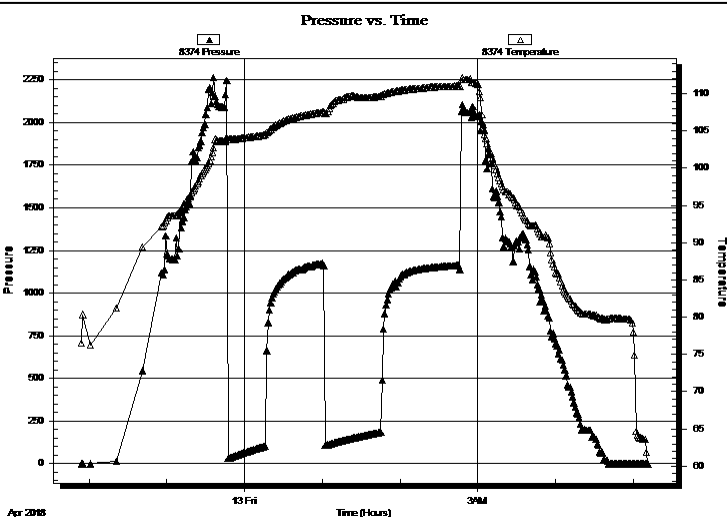
Formation: **LKC K**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 23:47:00
 Time Test Ended: 05:11:45
 Interval: **4364.00 ft (KB) To 4400.00 ft (KB) (TVD)**
 Total Depth: 4364.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Mike Roberts
 Unit No: 81
 Reference Elevations: 3188.00 ft (KB)
 3178.00 ft (CF)
 KB to GR/CF: 10.00 ft

Serial #: 8374

Outside

Press@RunDepth: psig @ 4365.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2018.04.12 End Date: 2018.04.13 Last Calib.: 2018.04.13
 Start Time: 21:54:15 End Time: 05:11:45 Time On Btm:
 Time Off Btm:

TEST COMMENT: IF:BOB in 18 min.
 IS:No return blow
 FF:BOB in 22 min.
 FS:No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
15.00	Free Oil Thick Oil	0.21
77.00	ow cm 10%o 10%w 80%m	1.08
248.00	omcw 3%o 20%m 77%w	3.48

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration

24-17-35 Wichita, KS

8100 E 22nd St. N#700
Box 783188
Wichita KS 67278
ATTN: John Goldsmith

Baker 24B #1

Job Ticket: 63581

DST#: 5

Test Start: 2018.04.12 @ 21:54:15

Tool Information

Drill Pipe:	Length: 4347.00 ft	Diameter: 3.80 inches	Volume: 60.98 bbl	Tool Weight: 1500.00 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: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 60.98 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	11.00 ft			String Weight: Initial 64000.00 lb
Depth to Top Packer:	4364.00 ft			Final 66000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	36.00 ft			
Tool Length:	64.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4337.00	
Shut In Tool	5.00			4342.00	
Hydraulic tool	5.00			4347.00	
Jars	5.00			4352.00	
Safety Joint	3.00			4355.00	
Packer	5.00			4360.00	28.00 Bottom Of Top Packer
Packer	4.00			4364.00	
Stubb	1.00			4365.00	
Recorder	0.00	8647	Inside	4365.00	
Recorder	0.00	8374	Outside	4365.00	
Perforations	30.00			4395.00	
Bullnose	5.00			4400.00	36.00 Bottom Packers & Anchor

Total Tool Length: 64.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration

24-17-35 Wichita, KS

8100 E 22nd St. N#700

Baker 24B #1

Box 783188

Job Ticket: 63581

DST#: 5

Wichita KS 67278

ATTN: John Goldsmith

Test Start: 2018.04.12 @ 21:54:15

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

19 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

21000 ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.93 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 6200.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
15.00	Free Oil Thick Oil	0.210
77.00	ow cm 10%o 10%w 80%m	1.080
248.00	omcw 3%o 20%m 77%w	3.479

Total Length: 340.00 ft Total Volume: 4.769 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

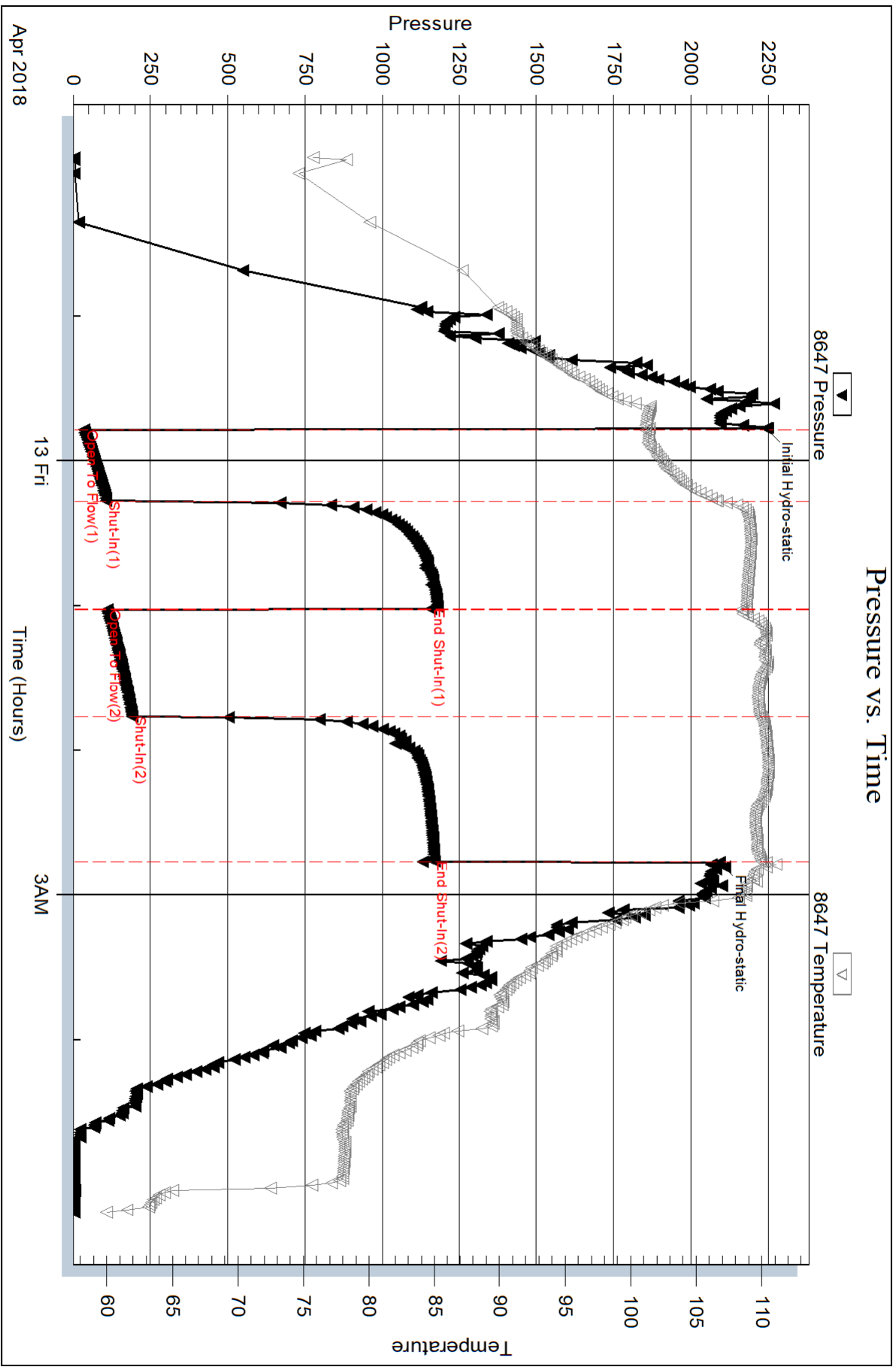
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW= .617@46.4= 21,000 ppm

API= 18@50 corrected to 19

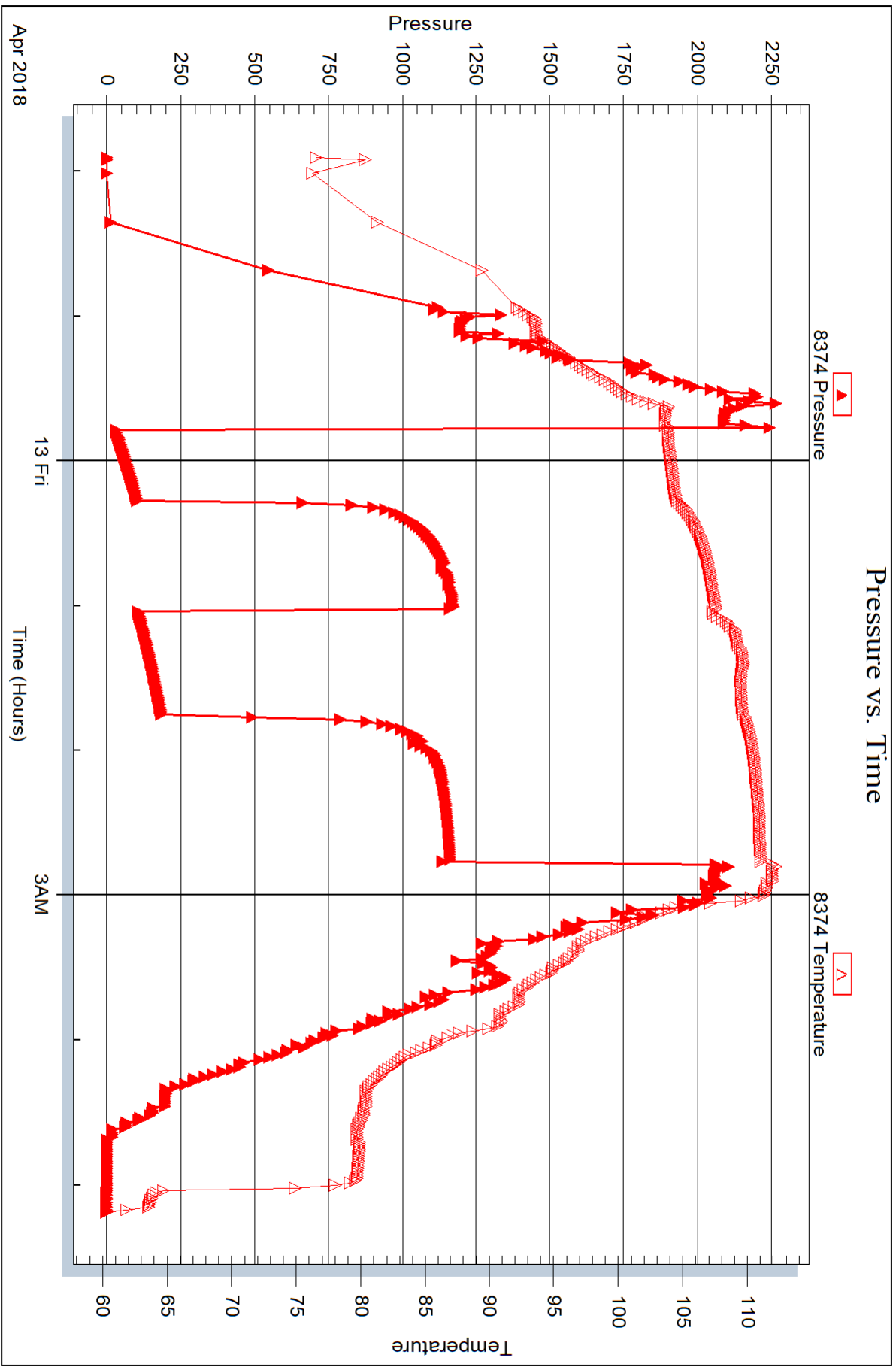


Serial #: 8374

Outside Ritchie Exploration

Baker 24B #1

DST Test Number: 5





DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration**

8100 E 22nd St. N#700
Box 783188
Wichita KS 67278

ATTN: John Goldsmith

Baker 24B #1

24-17-35 Wichita,KS

Start Date: 2018.04.14 @ 02:44:15

End Date: 2018.04.14 @ 10:09:30

Job Ticket #: 63582 DST #: 6

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2018.04.18 @ 14:22:42



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Ritchie Exploration
8100 E 22nd St. N#700
Box 783188
Wichita KS 67278
ATTN: John Goldsmith

24-17-35 Wichita, KS

Baker 24B #1

Job Ticket: 63582

DST#: 6

Test Start: 2018.04.14 @ 02:44:15

GENERAL INFORMATION:

Formation: **Altamont**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 05:41:15
 Time Test Ended: 10:09:30
 Interval: **4486.00 ft (KB) To 4564.00 ft (KB) (TVD)**
 Total Depth: 4564.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Mike Roberts
 Unit No: 81
 Reference Elevations: 3188.00 ft (KB)
 3178.00 ft (CF)
 KB to GR/CF: 10.00 ft

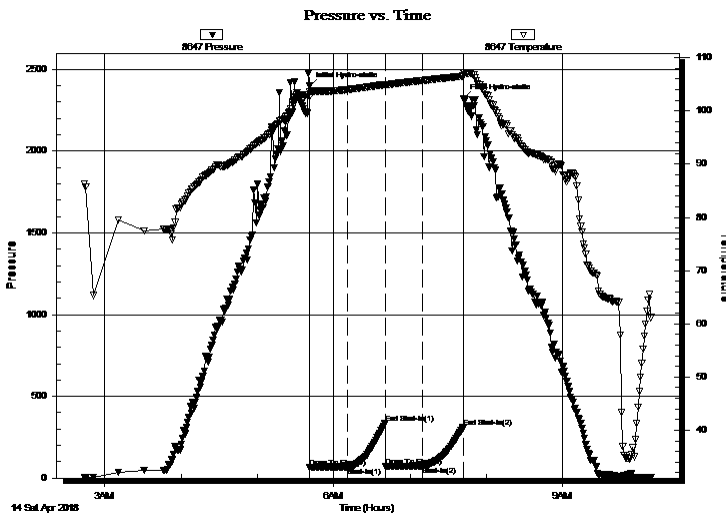
Serial #: 8647

Inside

Press@RunDepth: 73.50 psig @ 4554.00 ft (KB)
 Start Date: 2018.04.14 End Date: 2018.04.14
 Start Time: 02:44:15 End Time: 10:09:30
 Capacity: 8000.00 psig
 Last Calib.: 2018.04.14
 Time On Btm: 2018.04.14 @ 05:41:00
 Time Off Btm: 2018.04.14 @ 07:42:15

TEST COMMENT: IF:Weak surface blow died in 22 min
 IS:No return blow
 FF:No blow
 FS:No return blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2396.46	103.65	Initial Hydro-static
1	65.14	102.67	Open To Flow (1)
30	68.60	104.01	Shut-In(1)
60	335.51	104.95	End Shut-In(1)
60	70.44	104.80	Open To Flow (2)
89	73.50	105.72	Shut-In(2)
121	308.06	106.54	End Shut-In(2)
122	2318.37	107.23	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	mud w ith oil spots	0.28

Gas Rates

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

* Recovery from multiple tests



**TRILLOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Ritchie Exploration
8100 E 22nd St. N#700
Box 783188
Wichita KS 67278
ATTN: John Goldsmith

24-17-35 Wichita, KS

Baker 24B #1

Job Ticket: 63582

DST#: 6

Test Start: 2018.04.14 @ 02:44:15

GENERAL INFORMATION:

Formation: **Altamont**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:41:15

Time Test Ended: 10:09:30

Interval: 4486.00 ft (KB) To 4564.00 ft (KB) (TVD)

Total Depth: 4564.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole (Reset)

Tester: Mike Roberts

Unit No: 81

Reference Elevations: 3188.00 ft (KB)

3178.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 8374 Outside

Press@RunDepth: psig @ 4554.00 ft (KB)

Start Date: 2018.04.14 End Date: 2018.04.14

Start Time: 02:44:15 End Time: 10:09:30

Capacity: 8000.00 psig

Last Calib.: 2018.04.14

Time On Btm:

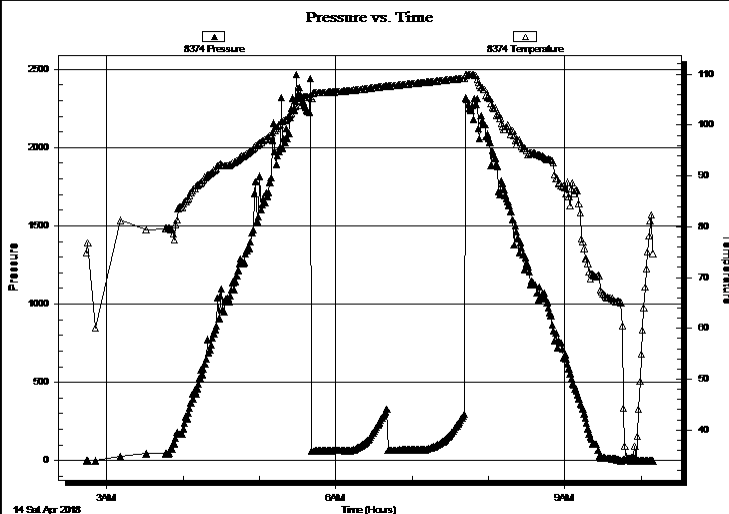
Time Off Btm:

TEST COMMENT: IF:Weak surface blow died in 22 min

IS:No return blow

FF:No blow

FS:No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
20.00	mud w ith oil spots	0.28

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration

24-17-35 Wichita, KS

8100 E 22nd St. N#700
Box 783188
Wichita KS 67278
ATTN: John Goldsmith

Baker 24B #1

Job Ticket: 63582

DST#: 6

Test Start: 2018.04.14 @ 02:44:15

Tool Information

Drill Pipe:	Length: 4473.00 ft	Diameter: 3.80 inches	Volume: 62.74 bbl	Tool Weight: 1500.00 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: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 62.74 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 67000.00 lb
Depth to Top Packer:	4486.00 ft			Final 67000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	78.00 ft			
Tool Length:	106.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Length (ft) Serial No. Position Depth (ft) Accum. Lengths

Change Over Sub	1.00			4459.00	
Shut In Tool	5.00			4464.00	
Hydraulic tool	5.00			4469.00	
Jars	5.00			4474.00	
Safety Joint	3.00			4477.00	
Packer	5.00			4482.00	28.00 Bottom Of Top Packer
Packer	4.00			4486.00	
Stubb	1.00			4487.00	
Perforations	2.00			4489.00	
Change Over Sub	1.00			4490.00	
Drill Pipe	63.00			4553.00	
Change Over Sub	1.00			4554.00	
Recorder	0.00	8647	Inside	4554.00	
Recorder	0.00	8374	Outside	4554.00	
Perforations	5.00			4559.00	
Bullnose	5.00			4564.00	78.00 Bottom Packers & Anchor
Total Tool Length:	106.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration

24-17-35 Wichita, KS

8100 E 22nd St. N#700
Box 783188
Wichita KS 67278
ATTN: John Goldsmith

Baker 24B #1

Job Ticket: 63582

DST#: 6

Test Start: 2018.04.14 @ 02:44:15

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: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.74 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 7000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	mud w ith oil spots	0.281

Total Length: 20.00 ft Total Volume: 0.281 bbl

Num Fluid Samples: 0

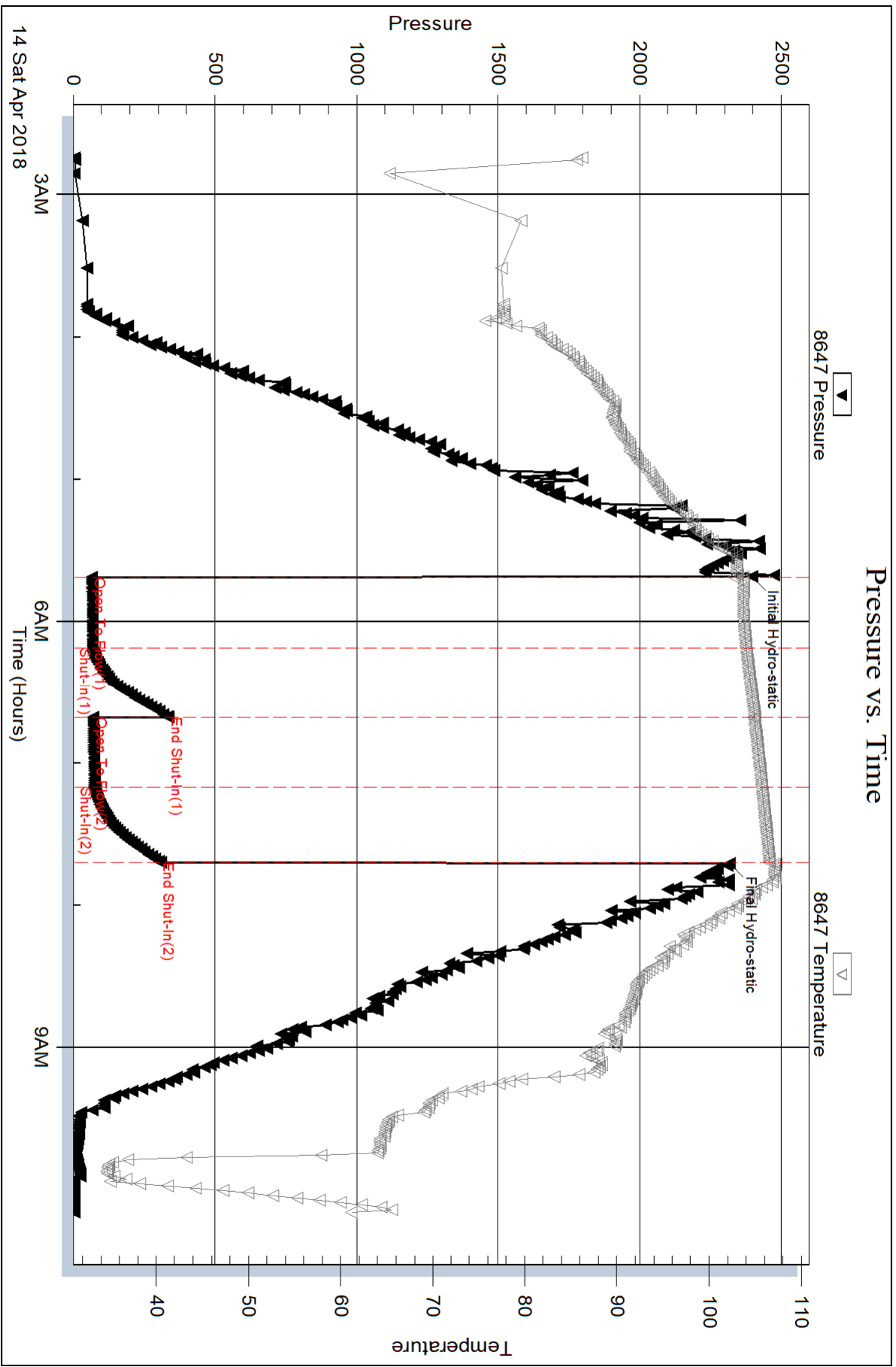
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

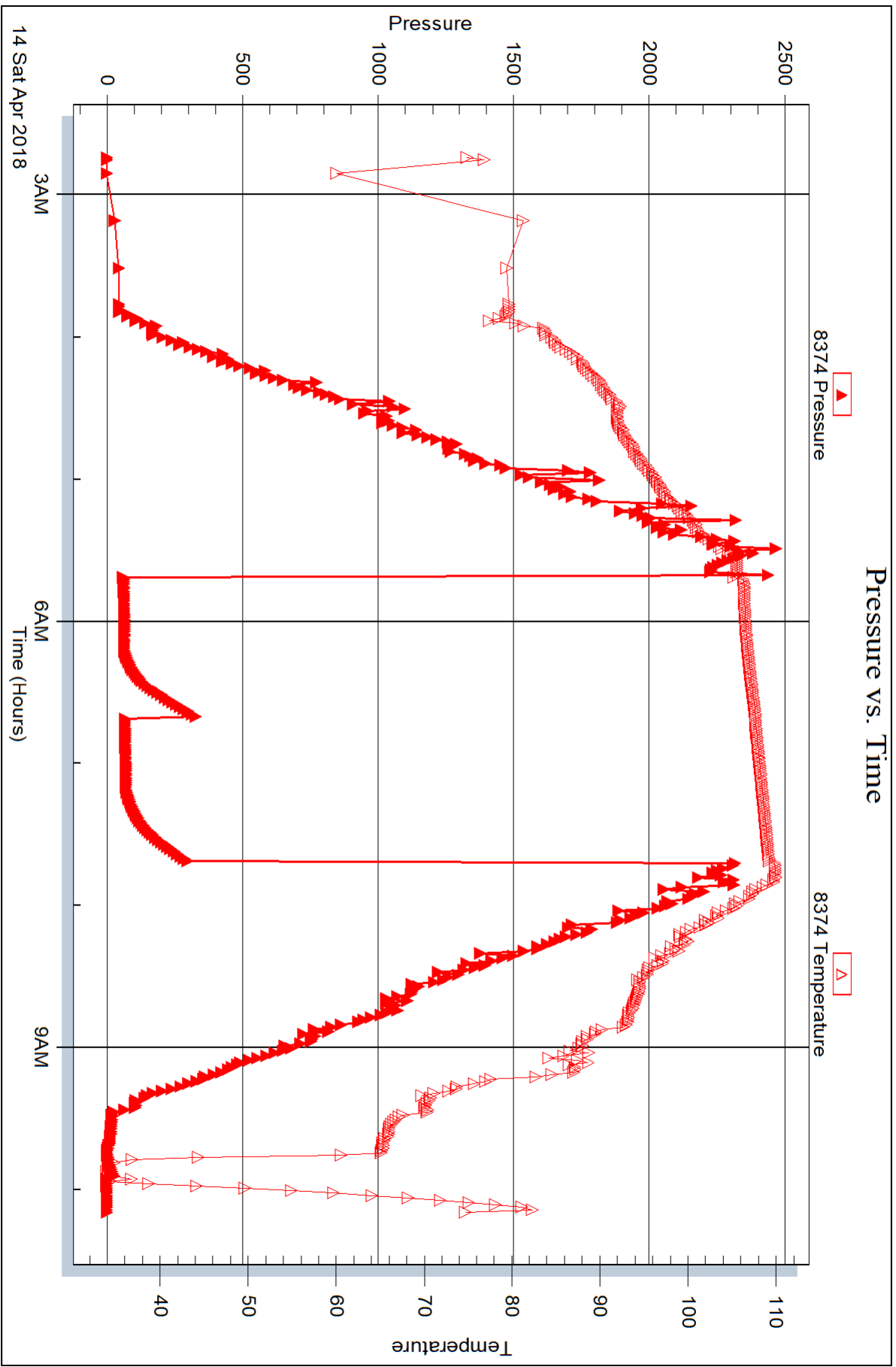


Serial #: 8374

Outside Ritchie Exploration

Baker 24B #1

DST Test Number: 6





DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration**

8100 E 22nd St. N#700
Box 783188
Wichita KS 67278

ATTN: John Goldsmith

Baker 24B #1

24-17-35 Wichita,KS

Start Date: 2018.04.14 @ 22:15:15

End Date: 2018.04.15 @ 06:12:15

Job Ticket #: 63583 DST #: 7

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

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**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Ritchie Exploration
8100 E 22nd St. N#700
Box 783188
Wichita KS 67278
ATTN: John Goldsmith

24-17-35 Wichita, KS

Baker 24B #1

Job Ticket: 63583

DST#: 7

Test Start: 2018.04.14 @ 22:15:15

GENERAL INFORMATION:

Formation: **Altamont C - Pawnee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:32:45

Time Test Ended: 06:12:15

Test Type: Conventional Bottom Hole (Reset)

Tester: Mike Roberts

Unit No: 81

Interval: 4542.00 ft (KB) To 4616.00 ft (KB) (TVD)

Reference Elevations: 3188.00 ft (KB)

Total Depth: 4616.00 ft (KB) (TVD)

3178.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 8647

Inside

Press@RunDepth: 248.22 psig @ 4582.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.04.14

End Date:

2018.04.15

Last Calib.: 2018.04.15

Start Time: 22:15:15

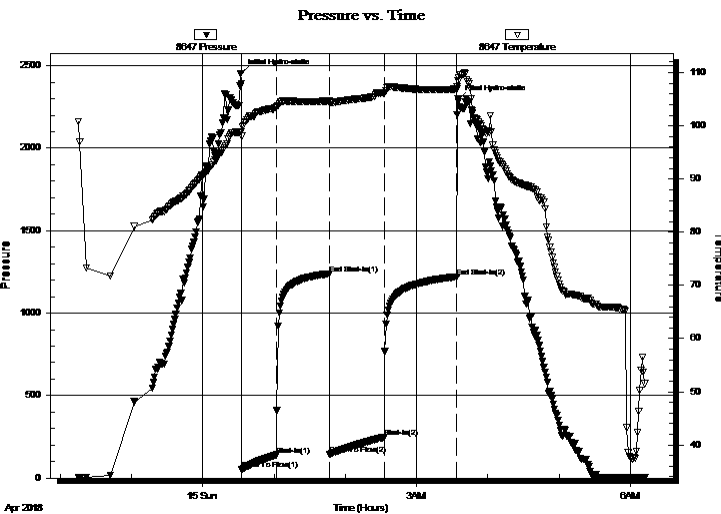
End Time:

06:12:15

Time On Btm: 2018.04.15 @ 00:32:00

Time Off Btm: 2018.04.15 @ 03:35:00

TEST COMMENT: IF:BOB in 15 min.
IS:No return blow
FF:BOB in 17 min.
FS:No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2453.70	98.85	Initial Hydro-static
1	53.78	98.08	Open To Flow (1)
30	141.58	103.50	Shut-In(1)
75	1239.20	104.71	End Shut-In(1)
75	145.14	104.25	Open To Flow (2)
121	248.22	106.13	Shut-In(2)
182	1220.62	106.90	End Shut-In(2)
183	2296.37	108.45	Final Hydro-static

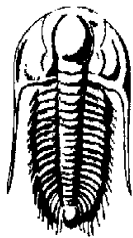
Recovery

Length (ft)	Description	Volume (bbl)
10.00	free oil 100%o	0.14
186.00	ocm 10%o 90%m	2.61
124.00	ocw m 10%o 30%w 60%m	1.74

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Ritchie Exploration
8100 E 22nd St. N#700
Box 783188
Wichita KS 67278
ATTN: John Goldsmith

24-17-35 Wichita, KS

Baker 24B #1

Job Ticket: 63583

DST#: 7

Test Start: 2018.04.14 @ 22:15:15

GENERAL INFORMATION:

Formation: **Altamont C - Pawnee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:32:45

Time Test Ended: 06:12:15

Test Type: Conventional Bottom Hole (Reset)

Tester: Mike Roberts

Unit No: 81

Interval: 4542.00 ft (KB) To 4616.00 ft (KB) (TVD)

Reference Elevations: 3188.00 ft (KB)

Total Depth: 4616.00 ft (KB) (TVD)

3178.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 8374 Outside

Press@RunDepth: psig @ 4582.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.04.14

End Date: 2018.04.15

Last Calib.: 2018.04.15

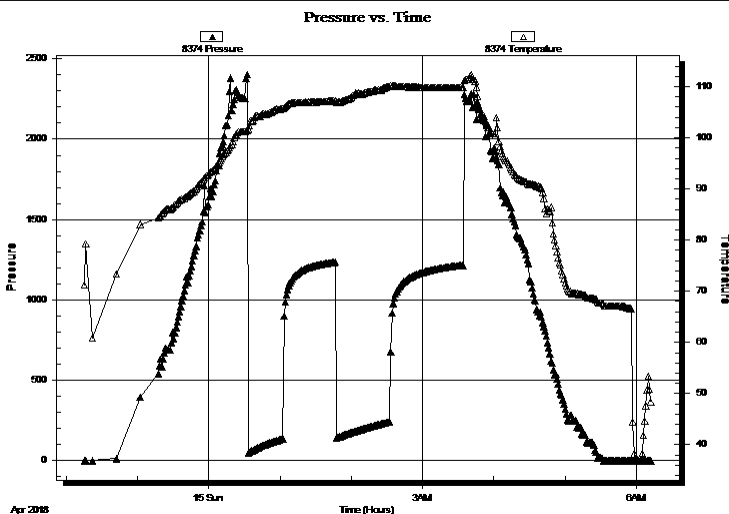
Start Time: 22:15:15

End Time: 06:12:30

Time On Btm:

Time Off Btm:

TEST COMMENT: IF:BOB in 15 min.
IS:No return blow
FF:BOB in 17 min.
FS:No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
10.00	free oil 100%o	0.14
186.00	ocm 10%o 90%m	2.61
124.00	ocw m 10%o 30%w 60%m	1.74

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration

24-17-35 Wichita, KS

8100 E 22nd St. N#700
Box 783188
Wichita KS 67278
ATTN: John Goldsmith

Baker 24B #1

Job Ticket: 63583

DST#: 7

Test Start: 2018.04.14 @ 22:15:15

Tool Information

Drill Pipe:	Length: 4537.00 ft	Diameter: 3.80 inches	Volume: 63.64 bbl	Tool Weight: 1500.00 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: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 63.64 bbl</u>	Tool Chased 5.00 ft
Drill Pipe Above KB:	23.00 ft			String Weight: Initial 77000.00 lb
Depth to Top Packer:	4542.00 ft			Final 80000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	74.00 ft			
Tool Length:	102.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4515.00	
Shut In Tool	5.00			4520.00	
Hydraulic tool	5.00			4525.00	
Jars	5.00			4530.00	
Safety Joint	3.00			4533.00	
Packer	5.00			4538.00	28.00 Bottom Of Top Packer
Packer	4.00			4542.00	
Stubb	1.00			4543.00	
Perforations	6.00			4549.00	
Change Over Sub	1.00			4550.00	
Drill Pipe	31.00			4581.00	
Change Over Sub	1.00			4582.00	
Recorder	0.00	8647	Inside	4582.00	
Recorder	0.00	8374	Outside	4582.00	
Perforations	29.00			4611.00	
Bullnose	5.00			4616.00	74.00 Bottom Packers & Anchor
Total Tool Length:	102.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration

24-17-35 Wichita, KS

8100 E 22nd St. N#700

Baker 24B #1

Box 783188

Job Ticket: 63583

DST#: 7

Wichita KS 67278

ATTN: John Goldsmith

Test Start: 2018.04.14 @ 22:15:15

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

24 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

23000 ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbf

Water Loss: 9.56 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 8100.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
10.00	free oil 100%o	0.140
186.00	ocm 10%o 90%m	2.609
124.00	ocw m 10%o 30%w 60%m	1.739

Total Length: 320.00 ft Total Volume: 4.488 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

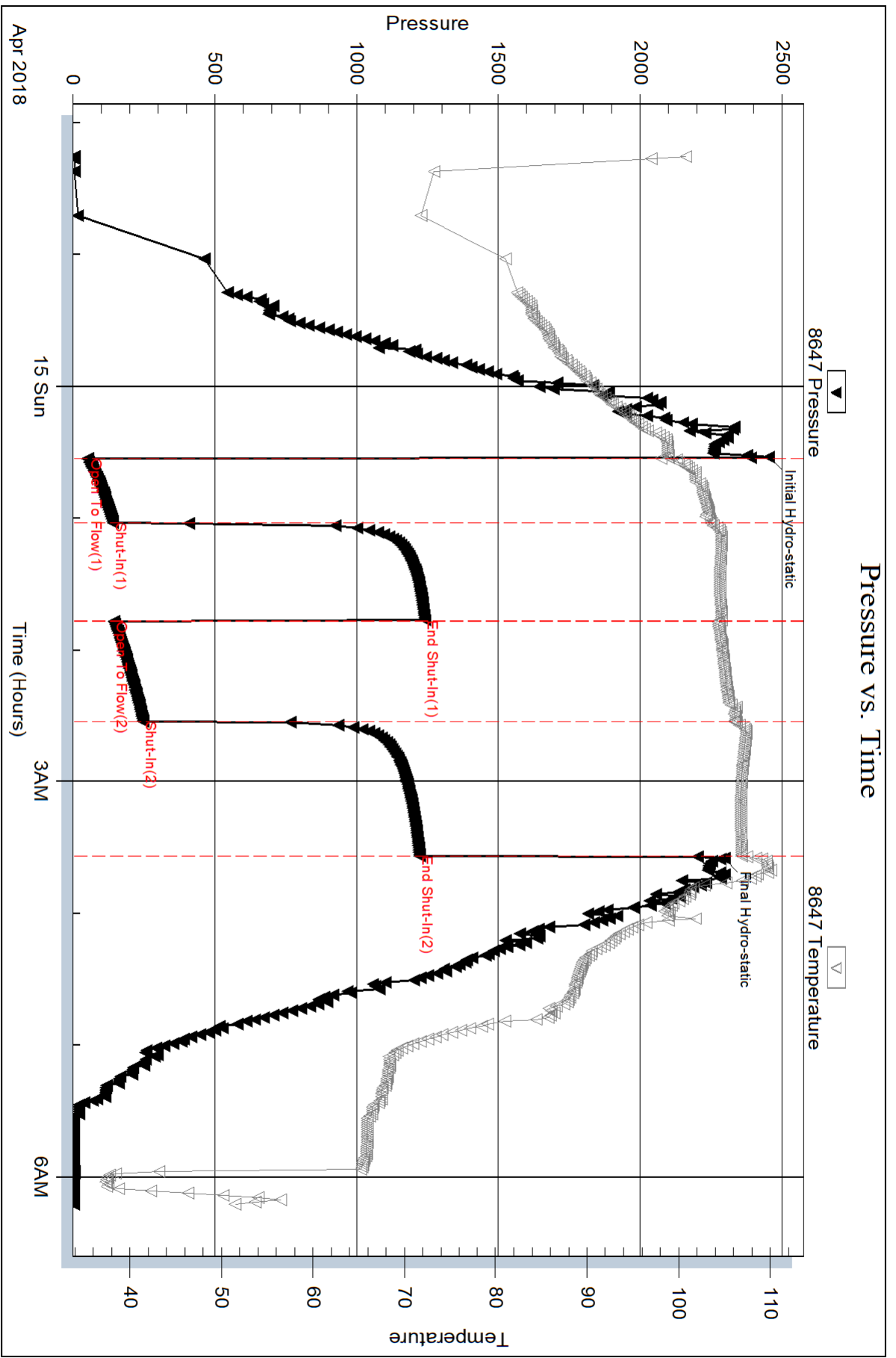
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW= .623@ 47.9= 23,000

API= 22@ 40 corrected to 24@ 60

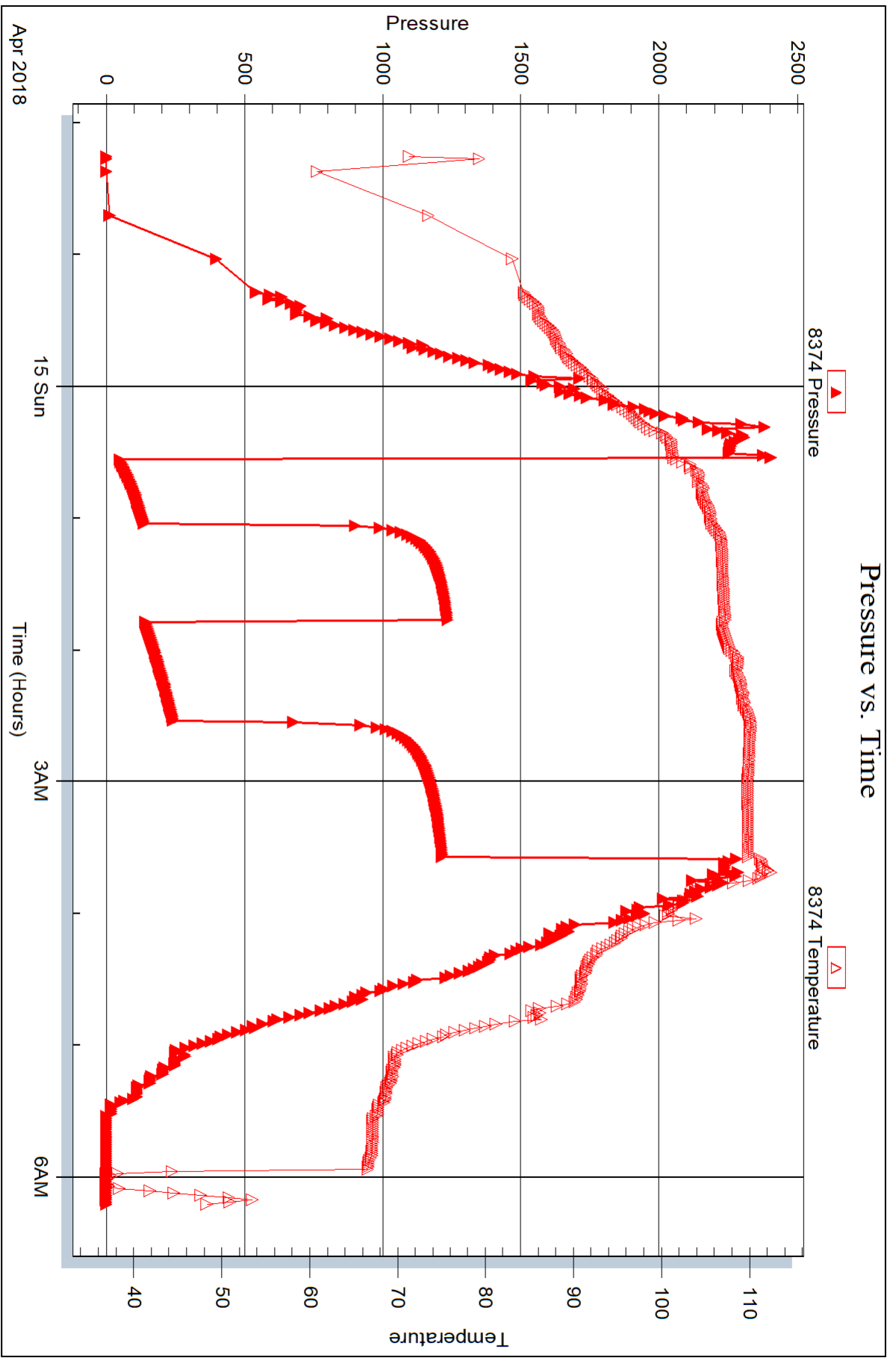


Serial #: 8374

Outside Ritchie Exploration

Baker 24B #1

DST Test Number: 7





DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration**

8100 E 22nd St. N#700
Box 783188
Wichita KS 67278

ATTN: John Goldsmith

Baker 24B #1

24-17-35 Wichita,KS

Start Date: 2018.04.16 @ 00:31:15

End Date: 2018.04.16 @ 07:11:45

Job Ticket #: 63584 DST #: 8

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

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**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Ritchie Exploration
8100 E 22nd St. N#700
Box 783188
Wichita KS 67278
ATTN: John Goldsmith

24-17-35 Wichita, KS

Baker 24B #1

Job Ticket: 63584

DST#: 8

Test Start: 2018.04.16 @ 00:31:15

GENERAL INFORMATION:

Formation: **Miss**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 02:25:45
 Time Test Ended: 07:11:45
 Interval: **4906.00 ft (KB) To 4948.00 ft (KB) (TVD)**
 Total Depth: 4948.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Mike Roberts
 Unit No: 81
 Reference Elevations: 3188.00 ft (KB)
 3178.00 ft (CF)
 KB to GR/CF: 10.00 ft

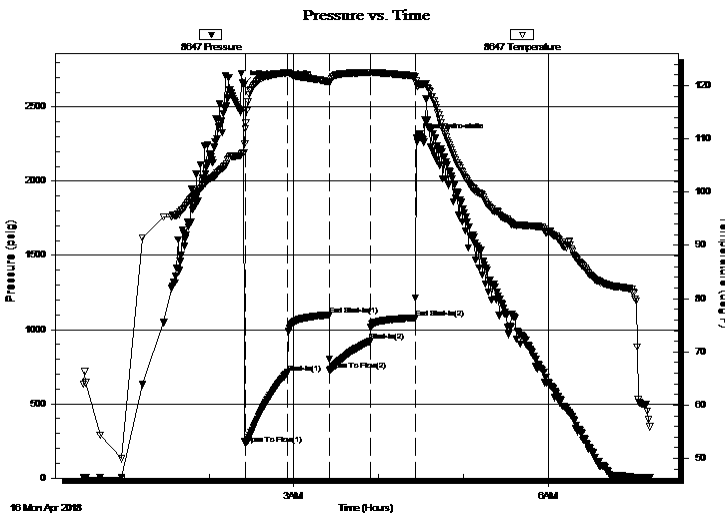
Serial #: 8647

Inside

Press@RunDepth: 921.91 psig @ 4943.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2018.04.16 End Date: 2018.04.16 Last Calib.: 2018.04.17
 Start Time: 00:31:15 End Time: 07:11:45 Time On Btm: 2018.04.16 @ 02:24:30
 Time Off Btm: 2018.04.16 @ 04:26:30

TEST COMMENT: IF:BOB in 1 min.
 IS:No return blow
 FF:BOB in 3 min.
 FS:No return blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2651.64	107.40	Initial Hydro-static
2	231.24	111.84	Open To Flow (1)
31	710.24	122.42	Shut-In(1)
61	1100.29	120.75	End Shut-In(1)
61	726.87	120.61	Open To Flow (2)
90	921.91	122.42	Shut-In(2)
122	1079.96	121.72	End Shut-In(2)
122	2290.69	120.84	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
496.00	mud 100%m	6.96
1984.00	mcsw 5%m 955sw	27.83

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Ritchie Exploration
8100 E 22nd St. N#700
Box 783188
Wichita KS 67278
ATTN: John Goldsmith

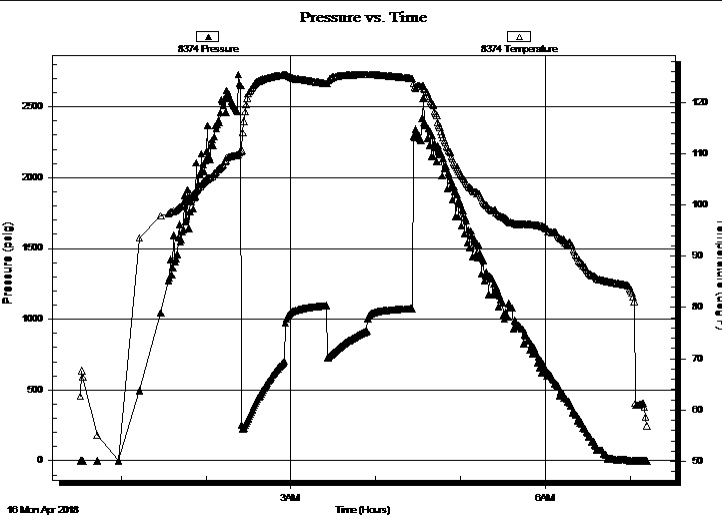
24-17-35 Wichita, KS
Baker 24B #1
Job Ticket: 63584 **DST#: 8**
Test Start: 2018.04.16 @ 00:31:15

GENERAL INFORMATION:

Formation: **Miss**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 02:25:45
 Time Test Ended: 07:11:45
 Interval: **4906.00 ft (KB) To 4948.00 ft (KB) (TVD)**
 Total Depth: 4948.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Mike Roberts
 Unit No: 81
 Reference Elevations: 3188.00 ft (KB)
 3178.00 ft (CF)
 KB to GR/CF: 10.00 ft

Serial #: 8374 Outside
 Press@RunDepth: psig @ 4943.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2018.04.16 End Date: 2018.04.16 Last Calib.: 2018.04.17
 Start Time: 00:31:15 End Time: 07:12:00 Time On Btm:
 Time Off Btm:

TEST COMMENT: IF:BOB in 1 min.
 IS:No return blow
 FF:BOB in 3 min.
 FS:No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
496.00	mud 100%m	6.96
1984.00	mcsw 5%m 955sw	27.83

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration

24-17-35 Wichita, KS

8100 E 22nd St. N#700
Box 783188
Wichita KS 67278
ATTN: John Goldsmith

Baker 24B #1

Job Ticket: 63584

DST#: 8

Test Start: 2018.04.16 @ 00:31:15

Tool Information

Drill Pipe:	Length: 4885.00 ft	Diameter: 3.80 inches	Volume: 68.52 bbl	Tool Weight: 1500.00 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: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 100000.0 lb
			<u>Total Volume: 68.52 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	7.00 ft			String Weight: Initial 70000.00 lb
Depth to Top Packer:	4906.00 ft			Final 80000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	42.00 ft			
Tool Length:	70.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Length (ft) Serial No. Position Depth (ft) Accum. Lengths

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4879.00	
Shut In Tool	5.00			4884.00	
Hydraulic tool	5.00			4889.00	
Jars	5.00			4894.00	
Safety Joint	3.00			4897.00	
Packer	5.00			4902.00	28.00 Bottom Of Top Packer
Packer	4.00			4906.00	
Stubb	1.00			4907.00	
Perforations	2.00			4909.00	
Change Over Sub	1.00			4910.00	
Drill Pipe	32.00			4942.00	
Change Over Sub	1.00			4943.00	
Recorder	0.00	8647	Inside	4943.00	
Recorder	0.00	8374	Outside	4943.00	
Bullnose	5.00			4948.00	42.00 Bottom Packers & Anchor

Total Tool Length: 70.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration

24-17-35 Wichita, KS

8100 E 22nd St. N#700
Box 783188
Wichita KS 67278
ATTN: John Goldsmith

Baker 24B #1

Job Ticket: 63584

DST#: 8

Test Start: 2018.04.16 @ 00:31:15

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:

24000 ppm

Viscosity: 65.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.76 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 8000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
496.00	mud 100%m	6.958
1984.00	mcsw 5%m 955sw	27.830

Total Length: 2480.00 ft Total Volume: 34.788 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

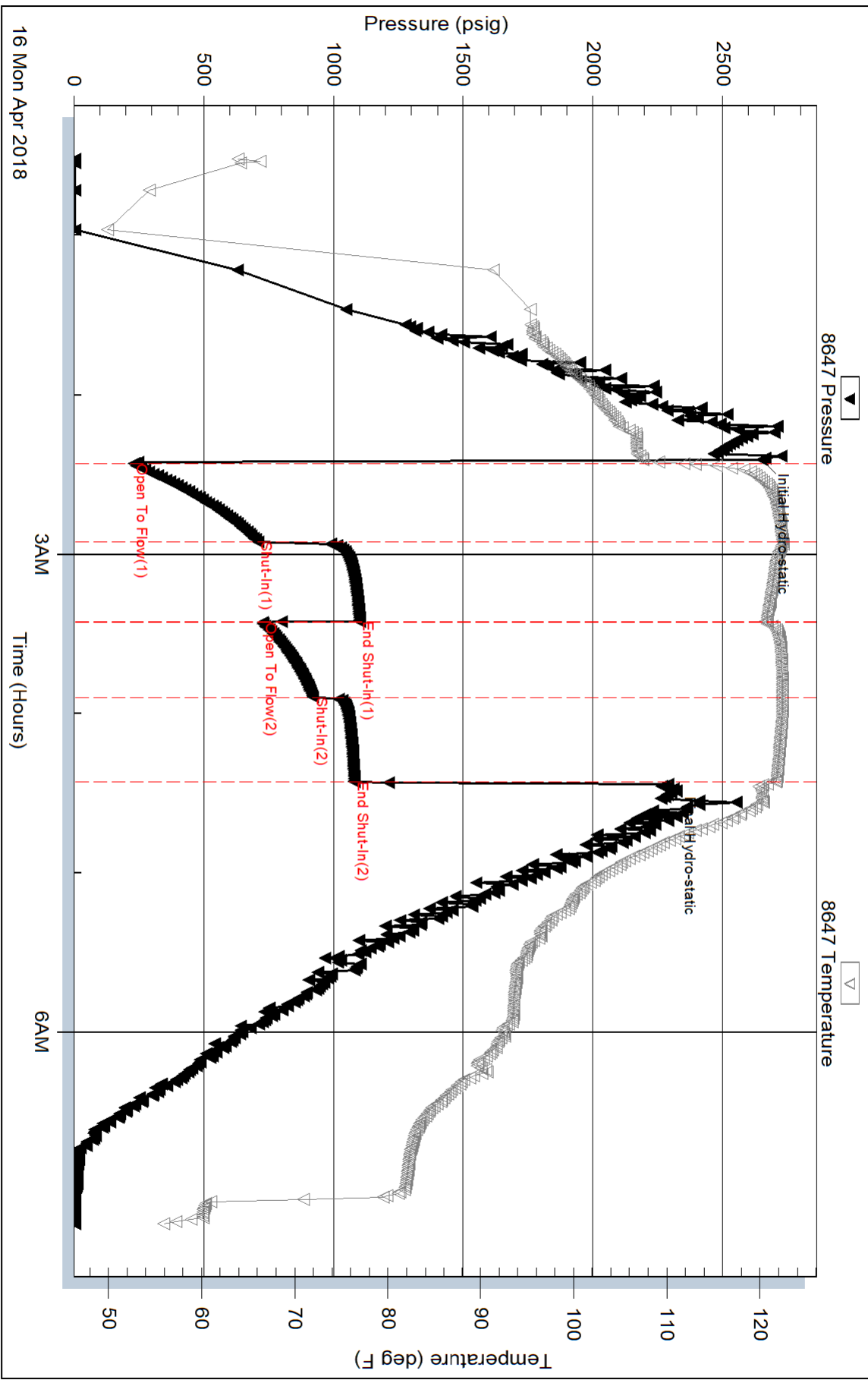
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW= .685@ 36.3= 24,000 ppm

Pressure vs. Time

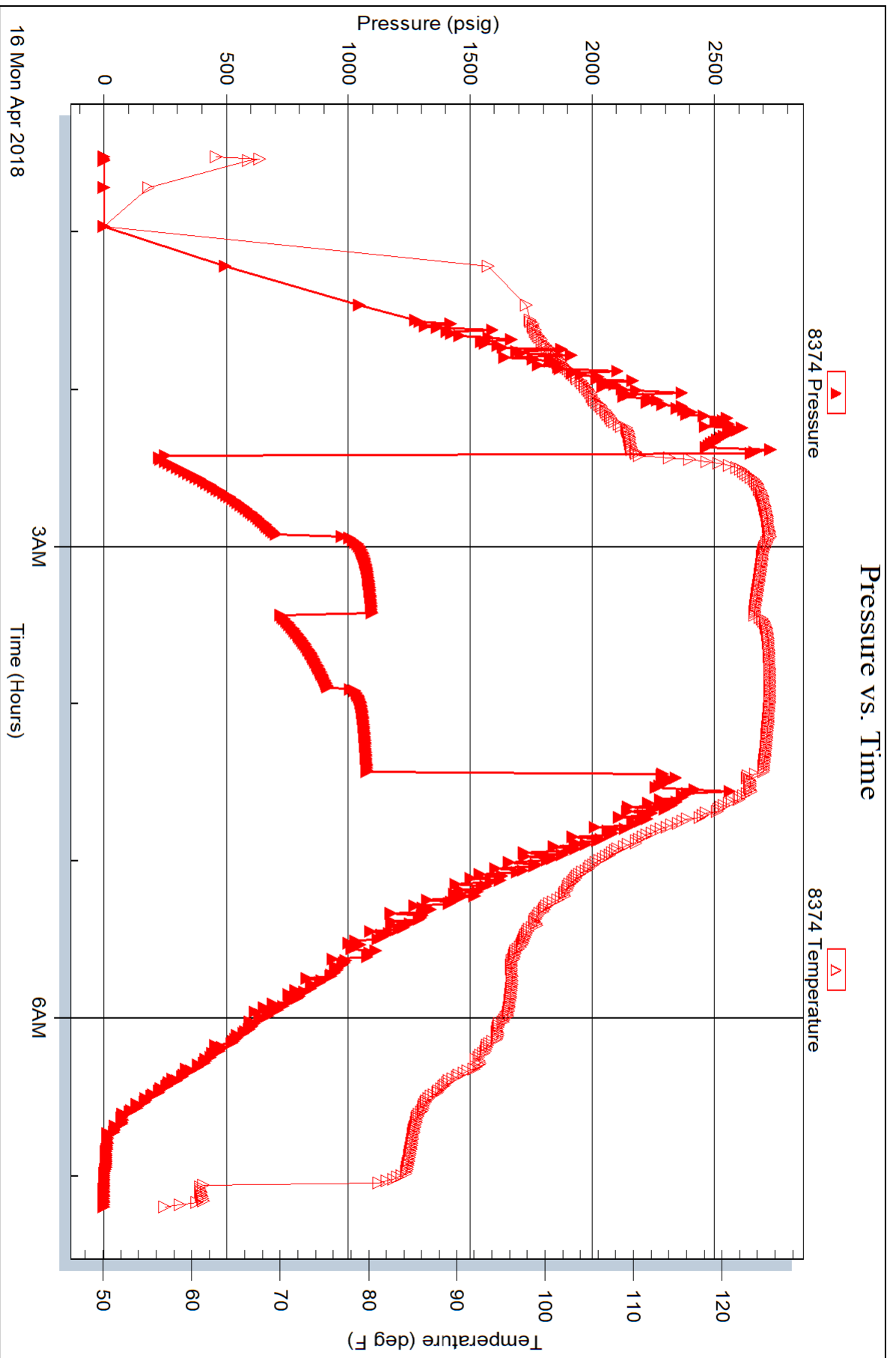


Serial #: 8374

Outside Ritchie Exploration

Baker 24B #1

DST Test Number: 8





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63577

Well Name & No. Baker 24 B Test No. 1 Date 4-10-18
 Company Ritchie Exploration Elevation 3188 KB 3178 GL
 Address 8100 E 22nd St. N. #700 Box 783188 Wichita KS 67278
 Co. Rep / Geo. John Goldsmith Rig Dike 1
 Location: Sec. 24 Twp 17 Rge. 35 Co. Wichita State KS

Interval Tested 4103-4134 Zone Tested "LKC C"
 Anchor Length 31 Drill Pipe Run 4097 Mud Wt. 9.0
 Top Packer Depth 4098 Drill Collars Run 0 Vls 53
 Bottom Packer Depth 4103 Wt. Pipe Run 0 WL 6.4
 Total Depth 4134 Chlorides 3000 ppm System LCM 2

Blow Description IF: Weak Surface Blow
IS: NO Return Blow
FF: NO Blow
FS: NO Return Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>2</u>	<u>mud with oil trace</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 Total 2 BHT 103 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic 2051 Test 1150 T-On Location 23:00
 (B) First Initial Flow 23 Jars 250 T-Started 01:08
 (C) First Final Flow 23 Safety Joint 75 T-Open 03:34
 (D) Initial Shut-In 471 Circ Sub NC T-Pulled 05:34
 (E) Second Initial Flow 23 Hourly Standby — T-Out 07:19
 (F) Second Final Flow 23 Mileage 40 RT 40 Comments —
 (G) Final Shut-In 471 Sampler —
 (H) Final Hydrostatic 2026 Straddle — Ruined Shale Packer —
 Shale Packer — Ruined Packer —
 Extra Packer — Extra Copies —
 Extra Recorder — Sub Total 0
 Day Standby — Total 1515
 Accessibility — MP/DST Disc't —

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

Approved By _____ Our Representative Mike Roberts

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63578

Well Name & No. Baker 24 B Test No. 2 Date 4-10-18
 Company Ritchie Exploration Elevation 3188 KB 3178 GL
 Address 8100 E 22nd St N#700 Box 783188 Wichita KS 67278
 Co. Rep / Geo. John Goldsmith Rig Duke 1
 Location: Sec. 24 Twp 17 Rge. 35 Co. Wichita State KS

Interval Tested 4130-4188 Zone Tested "LKC A/E"
 Anchor Length 58 Drill Pipe Run 4129 Mud Wt. 9.1
 Top Packer Depth 4125 Drill Collars Run 0 Vls 60
 Bottom Packer Depth 4130 Wt. Pipe Run 0 WL 7.2
 Total Depth 4188 Chlorides 3900 ppm System LCM 2

Blow Description IF: Boilt to 4" Blow
IS: No Return Blow
FF: Boilt to 5" Blow
FS: No Return Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>124</u>	<u>mud with oil spots</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 Total 124 BHT 103 Gravity 1 API RW 1 @ 1 °F Chlorides 1 ppm
 (A) Initial Hydrostatic 2119 Test 1150 T-On Location 16:00
 (B) First Initial Flow 40 Jars 250 T-Started 16:48
 (C) First Final Flow 65 Safety Joint 75 T-Open 18:43
 (D) Initial Shut-In 1076 Circ Sub NC T-Pulled 21:43
 (E) Second Initial Flow 67 Hourly Standby _____ T-Out 23:41
 (F) Second Final Flow 100 Mileage 40 RT 40 Comments _____
 (G) Final Shut-In 1005 Sampler _____
 (H) Final Hydrostatic 2005 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 1515
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1515

Initial Open 30
 Initial Shut-In 45
 Final Flow 45
 Final Shut-In 60

Approved By _____ Our Representative Mike Roberts

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **63579**

Well Name & No. Baker 24 B Test No. 3 Date 4-11-18
 Company Ritchie Exploration Elevation 3188 KB 3178 GL
 Address 8100 E 22nd St. N #700 Box 783188 Wichita KS 67278
 Co. Rep / Geo. John Goldsmith Rig Duke 1
 Location: Sec. 24 Twp 17 Rge. 35 Co. Wichita State KS

Interval Tested 4256-4330 Zone Tested H-I
 Anchor Length 74 Drill Pipe Run 4255 Mud Wt. 9.4
 Top Packer Depth 4251 Drill Collars Run Ø Vis 50
 Bottom Packer Depth 4256 Wt. Pipe Run Ø WL 8.8
 Total Depth 4330 Chlorides 6000 ppm System LCM 2

Blow Description IF: Built to 2 1/2" Blow
FS: No Return Blow
FF: Built to 3" Blow
FS: No Return Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>90</u>	<u>Mud with oil spots</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

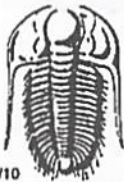
Rec Total 90 BHT 105 Gravity 1150 API RW 1150 @ 1150 °F Chlorides 6000 ppm

(A) Initial Hydrostatic 2224 Test 1150 T-On Location 16:00
 (B) First Initial Flow 43 Jars 250 T-Started 16:29
 (C) First Final Flow 62 Safety Joint 75 T-Open 18:11
 (D) Initial Shut-In 1052 Circ Sub NC T-Pulled 21:11
 (E) Second Initial Flow 65 Hourly Standby _____ T-Out 23:19
 (F) Second Final Flow 91 Mileage 40RT 40
 (G) Final Shut-In 1002 Sampler _____
 (H) Final Hydrostatic 2111 Straddle _____

Initial Open 30 Shale Packer _____ Ruined Shale Packer _____
 Initial Shut-In 45 Extra Packer _____ Ruined Packer _____
 Final Flow 45 Extra Recorder _____ Extra Copies _____
 Final Shut-In 60 Day Standby _____ Sub Total 0
 Accessibility _____ Total 1515
 Sub Total 1515 MP/DST Disc't _____

Approved By _____ Our Representative Mike Roberts

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **63580**

Well Name & No. Baker 24B Test No. 4 Date 4-12-8
 Company Ritchie Exploration Elevation 3188 KB 3178 GL
 Address 8100 E 22nd St. N. #700 Box 783188 Wichita KS 67278
 Co. Rep / Geo. John Goldsmith Rig Dulce 1
 Location: Sec. 24 Twp 17 Rge. 35 Co. Wichita State KS

Interval Tested 4332-4350 Zone Tested J
 Anchor Length 18 Drill Pipe Run 4317 Mud Wt. 9.4
 Top Packer Depth 4327 Drill Collars Run 0 Vis 50
 Bottom Packer Depth 4332 Wt. Pipe Run 0 WL 8.8
 Total Depth 4350 Chlorides 6000 ppm System LCM 2

Blow Description IF: BOB in 14 Min.
IS: No Return Blow
FF: BOB in 18 Min.
FS: No Return Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>196</u>	<u>MUP with trace of oil</u>			<u>100</u>	
<u>320</u>	<u>mcw</u>		<u>90</u>	<u>10</u>	

Rec Total 516 BHT 112 Gravity — API RW 349 @ 81.8° F Chlorides 20000 ppm

(A) Initial Hydrostatic 2323
 (B) First Initial Flow 36
 (C) First Final Flow 131
 (D) Initial Shut-In 1179
 (E) Second Initial Flow 131
 (F) Second Final Flow 255
 (G) Final Shut-In 1205
 (H) Final Hydrostatic 2209

Test 1150
 Jars 250
 Safety Joint 75
 Circ Sub NC
 Hourly Standby
 Mileage 40RT 40
 Sampler
 Straddle
 Shale Packer
 Extra Packer
 Extra Recorder
 Day Standby
 Accessibility
 Sub Total 1515

T-On Location 05:00
 T-Started 06:26
 T-Open 08:07
 T-Pulled 11:07
 T-Out 12:58

Comments
 Ruined Shale Packer
 Ruined Packer
 Extra Copies
 Sub Total 0
 Total 1515
 MP/DST Disc't

Initial Open 30
 Initial Shut-In 45
 Final Flow 45
 Final Shut-In 60

Approved By _____ Our Representative Mike Roberts

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63581

Well Name & No. Baker 24 B Test No. 5 Date 4-12-18
 Company Ritchie Exploration Elevation 3188 KB 3178 GL
 Address 8100 E 22nd St. N[#] 700 Box 783188 Wichita KS 67278
 Co. Rep / Geo. John Goldsmith Rig Duke 1
 Location: Sec. 24 Twp 17 Rge. 35 Co. Wichita State KS

Interval Tested 4364-4400 Zone Tested K
 Anchor Length 36 Drill Pipe Run 4347 Mud Wt. 9.4
 Top Packer Depth 4359 Drill Collars Run 0 Vis 52
 Bottom Packer Depth 4364 Wt. Pipe Run 0 WL 8.0
 Total Depth 4400 Chlorides 6200 ppm System LCM 2

Blow Description IF: BOB IN 18 Min
IS: No Return Blow
FF: BOB IN 22 Min
FS: No Return Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>15</u>	<u>Thick Free Oil</u>	<u>100</u>			
<u>77</u>	<u>OWCM</u>	<u>10</u>	<u>10</u>	<u>80</u>	
<u>248</u>	<u>OWCM</u>	<u>3</u>	<u>77</u>	<u>20</u>	

Rec Total 340 BHT 110 Gravity 19 API RW .617 @ 46.4°F Chlorides 21000 ppm
 (A) Initial Hydrostatic 2243 Test 1150 T-On Location 20:45
 (B) First Initial Flow 35 Jars 250 T-Started 21:54
 (C) First Final Flow 107 Safety Joint 75 T-Open 23:46
 (D) Initial Shut-In 1156 Circ Sub NC T-Pulled 02:46
 (E) Second Initial Flow 109 Hourly Standby _____ T-Out 05:11
 (F) Second Final Flow 190 Mileage 40 RT 40 Comments _____
 (G) Final Shut-In 1167 Sampler _____
 (H) Final Hydrostatic 2091 Straddle _____

Initial Open 30 Shale Packer _____
 Initial Shut-In 45 Shale Packer _____
 Final Flow 45 Extra Packer _____
 Final Shut-In 60 Extra Recorder _____
 Day Standby _____
 Accessibility _____
 Sub Total 1515 Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Sub Total 0
 Total 1515
 MP/DST Disc't _____

Approved By _____ Our Representative Mike Roberts

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63582

Well Name & No. Baker 24 B Test No. 6 Date 4-14-18
 Company Ritchie Exploration Elevation 3188 KB 3178 GL
 Address 8100 E 22nd St. N. #700. Box 783188 Wichita KS 67278
 Co. Rep / Geo. John Oddsmith Rig Dukel
 Location: Sec. 24 Twp 17 Rge. 35 Co. Wichita State KS

Interval Tested 4486-4564 Zone Tested Altamont
 Anchor Length 78 Drill Pipe Run 4473 Mud Wt. 9.2
 Top Packer Depth 4481 Drill Collars Run 0 Vis 52
 Bottom Packer Depth 4486 Wt. Pipe Run 0 WL 8.8
 Total Depth 4564 Chlorides 7000 ppm System LCM 2
 Blow Description TF: Weak Surface Blow Dried in 22 Min.
IS: No Return Blow
FF: No Blow
FS: No Return Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>20</u>	<u>MUD with oil spots</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 Total 20 BHT 108 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>2396</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>01:45</u>
(B) First Initial Flow <u>65</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>02:44</u>
(C) First Final Flow <u>68</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>05:41</u>
(D) Initial Shut-In <u>335</u>	<input checked="" type="checkbox"/> Circ Sub <u>NC</u>	T-Pulled <u>07:41</u>
(E) Second Initial Flow <u>70</u>	<input type="checkbox"/> Hourly Standby _____	T-Out _____
(F) Second Final Flow <u>73</u>	<input checked="" type="checkbox"/> Mileage <u>40 RT</u> 40	Comments _____
(G) Final Shut-In <u>308</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>2318</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____
	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Packer _____
	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
	<input type="checkbox"/> Day Standby _____	Total <u>1515</u>
	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1515</u>	

Approved By _____ Our Representative Mike Roberts

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63583

Well Name & No. Baker 24 B Test No. 7 Date 4-14-18
 Company Ritchie Exploration Elevation 3188 KB 3178 GL
 Address 8100 E 22nd St. N. #700. Box 783188 Wichita KS 67278
 Co. Rep / Geo. John Goldsmith Rig Duke 1
 Location: Sec. 24 Twp 17 Rge. 35 Co. Wichita State KS

Interval Tested 4542-4616 Zone Tested Alt. C - Pawnee
 Anchor Length 74 Drill Pipe Run 4537 Mud Wt. 9.4
 Top Packer Depth 4537 Drill Collars Run Ø Vis 60
 Bottom Packer Depth 4542 Wt. Pipe Run Ø WL 9.6
 Total Depth 4616 Chlorides 8100 ppm System LCM 2
 Blow Description IF! ~~BOB~~ BOB in 15 Min
IS! No Return Blow
FF! BOB in 17 Min
FS! No Return Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>Free Oil</u>	<u>100</u>			
<u>186</u>	<u>OCM</u>	<u>10</u>		<u>90</u>	
<u>124</u>	<u>OCUM</u>	<u>10</u>	<u>30</u>	<u>60</u>	

Rec Total 320 BHT 107 Gravity 24 API RW 623 @ 47.9°F Chlorides 23000 ppm
 (A) Initial Hydrostatic 2453 Test 1150 T-On Location 20:55
 (B) First Initial Flow 53 Jars 250 T-Started ~~00:15~~ 22:15
 (C) First Final Flow 141 Safety Joint 75 T-Open 00:31
 (D) Initial Shut-In 1239 Circ Sub NC T-Pulled 03:31
 (E) Second Initial Flow 145 Hourly Standby _____ T-Out ~~02:15~~ 06:12
 (F) Second Final Flow 248 Mileage 40 RT 40 Comments _____
 (G) Final Shut-In 1220 Sampler _____
 (H) Final Hydrostatic 2296 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 1515
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1515

Initial Open 30
 Initial Shut-In 45
 Final Flow 45
 Final Shut-In 60

Approved By _____ Our Representative Mike Roberts

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63584

Well Name & No. Baker 24B Test No. 8 Date 4-16-18
 Company Ritchie Exploration Elevation 3188 KB 3178 GL
 Address 8100 E 22nd St. N. #700 Box 783188 Wichita KS 67278
 Co. Rep / Geo. John Goldsmith Rig Duke 1
 Location: Sec. 24 Twp 17 Rge. 35 Co. Wichita State KS

Interval Tested 4906-4948 Zone Tested Miss
 Anchor Length 42 Drill Pipe Run 4885 Mud Wt. 9.4
 Top Packer Depth 4901 Drill Collars Run Ø Vis 65
 Bottom Packer Depth 4906 Wt. Pipe Run Ø WL 8.8
 Total Depth 4948 Chlorides 8000 ppm System LCM 2

Blow Description IF: BOB 1 Min
IS: No Return Blow
FF: BOB 3 Min
FS: No Return Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>496</u>	<u>MUD</u>			<u>100</u>	
<u>1984</u>	<u>Ø mcsu</u>		<u>95</u>	<u>5</u>	

Rec Total 2480 BHT 120 Gravity — API RW .685 @ 30.3°F Chlorides 24000 ppm
 (A) Initial Hydrostatic 2651 Test 1150 T-On Location 23:00
 (B) First Initial Flow 231 Jars 250 T-Started 00:31
 (C) First Final Flow 710 Safety Joint 75 T-Open 02:26
 (D) Initial Shut-In 1100 Circ Sub NC T-Pulled 04:26
 (E) Second Initial Flow 726 Hourly Standby _____ T-Out 07:11
 (F) Second Final Flow 921 Mileage 40RT X 2 Comments load tools
 (G) Final Shut-In 1079 Sampler 40+40 at 23:30 4-16-18
 (H) Final Hydrostatic 2290 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____

Initial Open 30
 Initial Shut-In 30
 Final Flow 30
 Final Shut-In 30
 Day Standby _____
 Accessibility _____
 Sub Total 1555
 Total 1555
 MP/DST Disc't _____

Approved By _____ Our Representative Mike Roberts

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Wellsite Services, LLC

John Goldsmith
(316) 640-0236

427 Roosevelt St.
Cheney, KS 67025

Scale 1:240 (5"=100') Imperial Measured Depth Log

Well Name: #1 Baker 24B
API: 15-203-20332
Location: 1937' FNL & 336' FWL, Sec 24-17S-35W, S/2 SW NW
License Number: REI #4767
Spud Date: 4/4/2018
Surface Coordinates: LAT: 38.5636226
LONG: -101.1446569
Bottom Hole Vertical Hole
Coordinates: 1 Degree Deviation
Ground Elevation (ft): 3176'
Logged Interval (ft): 3800' To: RTD
Formation: Mississippian at RTD
Type of Drilling Fluid: Chemical

Region: Wichita County
Drilling Completed: 4/18/2018

K.B. Elevation (ft): 3188'
Total Depth (ft): 5000'

Printed by MUD.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: Ritchie Exploration Inc.
Address: 8100 E. 22nd St. N. #700
Wichita, KS 67226
(316) 691-9500

GEOLOGIST

Name: John Goldsmith
Company: Wellsite Services LLC
Address: 427 Roosevelt St.
Cheney, KS 67025
(316) 640-0236

RIG RECORDS

Contractor: Duke Drilling Rig #1
Pusher: Mike Godfrey

Collar Tally: 459'

Pump: Ideco MM 550
Liner & Stroke: 6 x 15

BIT RECORDS

Size:	Type:	Footage:	Condition:	Hours:	Serial #:
12 1/2"	Sm-tooth	0-270'	RR	2	NA
7 7/8"	HE21	270'-4616'	New	104	1571361
7 7/8"	HE29	4616'-5000'	Used	30.25	1565859

COMMENTS

Surface Casing: 6 joints of 8 5/8" set @ 268'
Production Casing: This well was plugged and abandoned.
Mud by: MudCo
DST's by: Trilobite Testing
Logs by: Pioneer Energy Services (DIL, CN-CD, ML)
RTD=5000' LTD=4996'

FORMATION TOPS

FORMATION	SAMPLE TOPS		LOG TOPS	
	Depth	Datum	Depth	Datum
Stotler	3652'	-664	3647'	-659
Heebner Shale	4035'	-847	4029'	-841
Toronto	4051'	-863	4044'	-856
Lansing	4080'	-892	4073'	-885 4258'
Muncie Creek Shale	4263'	-1075		-1070
Stark Shale	4367'	-1179	4362'	-1174
Hushpuckney Shale	4414'	-1226	4410'	-1222
Base of KC	4460'	-1272	4455'	-1267
Marmaton	4506'	-1318	4502'	-1314
Altamont	4520'	-1332	4514'	-1326
Pawnee	4602'	-1414	4597'	-1409
Myric Station	4642'	-1454	4638'	-1450
Ft Scott	4658'	-1470	4652'	-1464
Cherokee Shale	4682'	-1494	4677'	-1489
Johnson Zone	4764'	-1576	4760'	-1572
Morrow	4824'	-1636	4819'	-1631
Mississippian	4920'	-1732	4916'	-1728
RTD	5000'	-1812		
LTD			4996'	-1808

DST's

DST #1 "LKC C" 4103'-4134' 4-9-18 30-30-30-30
1st Blw: Blt to wk surf blw (No BB)
2nd Blw: No blw (No BB)
IFP: 23-244# ISIP: 471# FFP: 24-24# FSIP: 472#
Hyd: 2052-2027#
Rec: 2' Mud w/ tr oil.

DST #2 "LKC D/E" 4130'-4188' 4-10-18 30-45-45-60
1st Blw: Blw blt to 4" (No BB)
2nd Blw: Blw blt to 5" (No BB)
IFP: 40-65# ISIP: 1076# FFP: 67-100# FSIP: 1005#
Hyd: 2119-2005#
Rec: 124' Mud w/ OS.

DST #3 "LKC H/I" 4225'-4330' 4-11-18 30-45-45-60
1st Blw: Blw blt to 2.5" (No BB)
2nd Blw: Blw blt to 3" (No BB)
IFP: 43-62# ISIP: 1052# FFP: 65-91# FSIP: 1002#
Hyd: 2224-2111#
Rec: 90' Mud w/ OS.

DST #4 "LKC J" 4332'-4350' 4-12-18 30-45-45-60
1st Blw: Blw blt to BOB in 14min (No BB)
2nd Blw: Blw blt to BOB in 18min (No BB)
IFP: 36-131# ISIP: 1179# FFP: 131-255# FSIP: 1205#
Hyd: 2323-2209#
Rec: 196'Mw/TrO, 320'MCW.

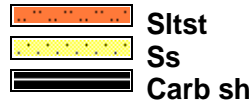
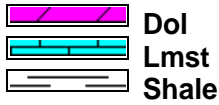
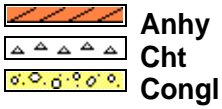
DST #5 "LKC K" 4364'-4400' 4-12-18 30-45-45-60
1st Blw: Blw blt to BOB in 18min (No BB)
2nd Blw: Blw blt to BOB in 22min (No BB)
IFP: 35-107# ISIP: 1156# FFP: 109-190# FSIP: 1167#
Hyd: 2243-2091#
Rec: 15'FO, 77'OWCM, 248'OMCW.

DST #6 "Altamont A/B" 4486'-4564' 4-14-18 30-30-30-30
1st Blw: Wk surf blw dead in 22min (No BB)
2nd Blw: No blw (No BB)
IFP: 65-68# ISIP: 335# FFP: 70-73# FSIP: 308#
Hyd: 2396-2318#
Rec: 20'Mw/OS.

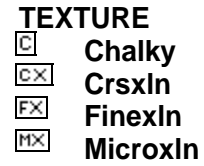
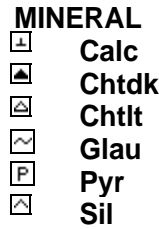
DST #7 "Altamont C-Pawnee" 4486'-4564' 4-14-18 30-45-45-60
1st Blw: Blw blt to BOB in 15min (No BB)
2nd Blw: Blw blt to BOB in 17min (No BB)
IFP: 53-141# ISIP: 1239# FFP: 145-248# FSIP: 1220#
Hyd: 2453-2296#
Rec: 10'CO, 186'OCM, 124'OCWM.

DST #8 "Mississippi" 4906'-4948' 4-16-18 30-30-30-30
1st Blw: Blw blt to BOB in 1min (No BB)
2nd Blw: Blw blt to BOB in 3min (No BB)
IFP: 231-710# ISIP: 1100# FFP: 726-921# FSIP: 1079#
Hyd: 2651-2290#
Rec: 496'M, 1984'MCSW.

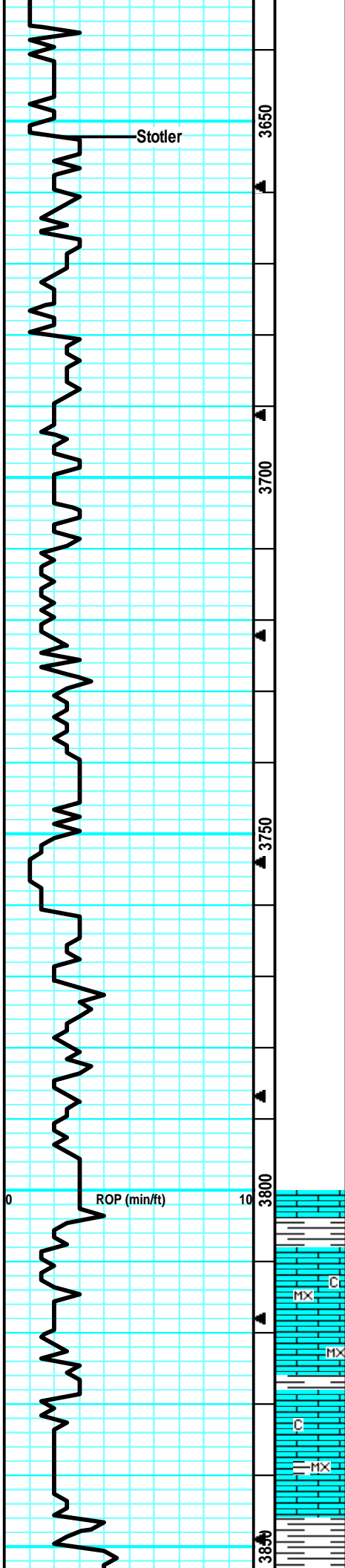
ROCK TYPES



ACCESSORIES



Drilling Time ROP (min/ft)	Depth	Lithology	CFS Point	Oil Shows	Geological Descriptions	Remarks
	0 10 2500 3600				<p>Morning Activity/Report</p> <p>April 4, 2018: Spud @ 8:30 p.m. 4/5/18: WOC @ 268' 4/6/18: drlg @ 1740' 4/7/18: drlg @ 2909' 4/8/18: drlg @ 3390' 4/9/18: drlg @ 3940' 4/10/18: TOH w/ TT (DST #1 & DST#2) 4/11/18: drlg @ 4240' (DST #3) 4/12/18: Testing (DST #4 & DST #5) 4/13/18: TOH w/ Bit 4/14/18: Testing (DST #6 & DST #7) 4/15/18: TIH after test 4/16/18: drlg @ 4830' (DST #8) 4/17/18: TIH after test (RTD 5000' & EL) 4/18/18: Plug and abandon</p>	<p>Survey @ 270' = 1/2 Degree</p> <p>Survey @ 1298' = 3/4 Degree</p> <p>Anhydrite @ 2471' (+717)</p> <p>Survey @ 1803' = 3/4 Degree</p> <p>Survey @ 2403' = 3/4 Degree</p> <p>B/Anhydrite @ 2488' (+700)</p> <p>Mud Report #2 1757' 4/6/18 Wt Vis pH 8.8 28 7.0 Filt Chl LCM n/c 17K 0#</p> <p>Mud Report #3 2909' 4/7/18 Wt Vis pH 9.3 30 7.0 Filt Chl LCM n/c 45K 1#</p> <p>Mud Report #4 3395' 4/8/18 Wt Vis pH 9.6 29 7.0 Filt Chl LCM n/c 42K 1#</p>
	3600				<p>1' Drill Time begins @ 3600' on 4/8/18</p>	<p>Survey @ 3502' = 1 Degree</p>



Stotler @ 3652' (-464)

10' Samples caught @ 3800' on 4/9/18

LS: lt gry/lt tan sing, fn xln, fw foss, tr-nvp, fw SH: gry, silty, no cup odr, ns.

LS: lt tan, micro-fn xln, dense, chalky in prt, tr-nvp, no cup odr, ns.

LS: lt tan, micro-fn xln, chalky, tr-nvp, fw pcs pur chl, no cup odr, ns.

LS: lt gry/lt tan, sing, fn xln, mostly dense, fw chlky, tr-nvp, no cup odr, ns.

LS: lt tan/lt gry, sing, micro-fn xln, dense, sm brittle, chlky, tr-nvp, no odr, ns.

SH: .../.../... silty, soft, ... mud by, no cup odr, ns.

SH: gry/brn/red, silty, soft, sm muddy, no cup odr, ns.

SH: gry/brn/drk gry, silty, soft, sm LS: lt gry/lt tan, sing, fn xln, brittle, no cup odr, ns.

LS: lt tan, sing, micro-fn xln, dense, sm brit, fw chlky, no cup odr, ns.

LS: lt gry/lt tan, sing, micro-fn xln, brit, sm chlky, tr-nvp, no cup odr, ns.

LS: lt tan, sing, micro-fn xln, sm dense, brit, sub-chlky in prt, tr-nvp, no cup odr, ns.

LS: lt tan, sing, fn xln, fw dense, chlky in prt, tr-nvp, fw pcs pur chlky, no cup odr, ns.

SH: gry/drk gry, silty, soft, fw LS: lt tan, sing, fn xln, chlky, no cup odr, ns.

SH: gry/drk gry, silty, fw SltStn: gry/brn, gritty, friab, soft, fw LS: tan, fn xln, dense, tr-nvp, no cup odr, ns.

SH: gry, silty, soft, fw SltStn: brn, gritty, soft, fw LS: lt tan, sing, fn xln, tr-nvp, no cup odr, ns.

LS: lt gry/lt tan, sing, fn xln, fw foss frags, brit, sub-chlky, tr-nvp, no cup odr, ns.

LS: tan/lt gry, slight mott, fn xln, mostly dense, tr-nvp, 1 pcs ool, pr sptd tarry stn, no cup odr, ns.

LS: tan/lt gry, sing, fn xln, mostly dense, fw sub-chlky, brit, tr-nvp, no cup odr, ns.

LS: tan/lt tan/lt gry, sing, micro-fn xln, dense, sm firm, sub-chlky in prt, fw SH: drk gry, silty, soft, no cup odr, ns.

LS: lt tan/lt gry, sing, micro-fn xln, dense, fw sub-chlky, tr-nvp, fw Chert: wht/opaq, sharp, no cup odr, ns.

LS: gry/lt tan, sing, fn xln, fw foss frags, fw sandy/gritty, tr-nvp, fw Chert: wht/gry, sharp, no odr, ns.

LS: tan/lt gry, slight mott, foss w/ crin/frags, sm brit, tr-nvp, fw Chert: wht/opaq, no cup odr, ns.

LS: tan/lt gry, slight mott, fn xln, sm brit, sub-chlky in prt, tr-nvp, no cup odr, ns.

LS: gry/lt tan, slight mott, fn xln, fw foss crin/frags, tr-nvp, 2 sml pcs 2/ scat vugs drk tarry stn, no fluor, nsfo, no cup odr.

LS: tan/gry, slight mott, fn xln, fw foss frags, sm denst, tr-nvp, fw SH: gry, no cup odr, ns.

SH: blk, carb, silty, fw LS: gry, slight mott, fn xln, fw foss, fw Chert: gry, foss, sharp, no odr, ns.

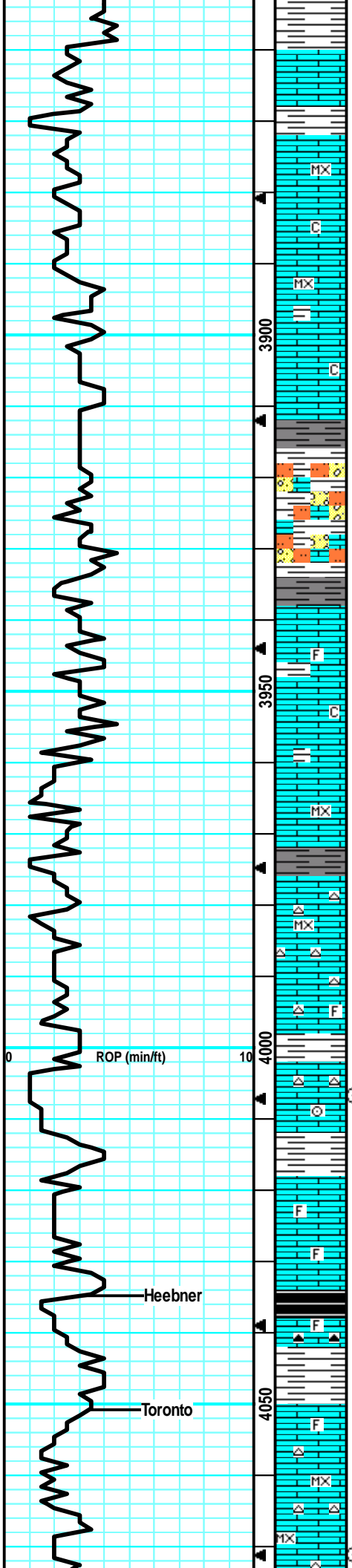
LS: tan/lt gry, slight mott, fn xln, fw foss frags, tr-nvp, sm pos patchy brn stns, no fluor, nsfo, no cup odr, sm SH: gry/blu, soft.

LS: tan/lt gry, slight mott, fn xln, foss w/ fuss/frags, sm firm, tr-nvp, svrl SH: drk gry/silty, no cup odr, ns.

LS: lt tan, sing, micro-fn xln, chlky in prt, brit, fw pcs Chert: wht/opaq, sharp, no cup odr, ns.

LS: tan, micro-fn xln, dense, brittle, tr-nvp, fw Chert: wht/opaq, no cup odr, ns.

LS: tan/dr. slight mott. fn xln. fw foss frags. many



Mud Report #5
 3974' 4/9/18
 Wt Vis pH
 9.0 53 11.0
 Filt Chl LCM
 6.4 3K 2#

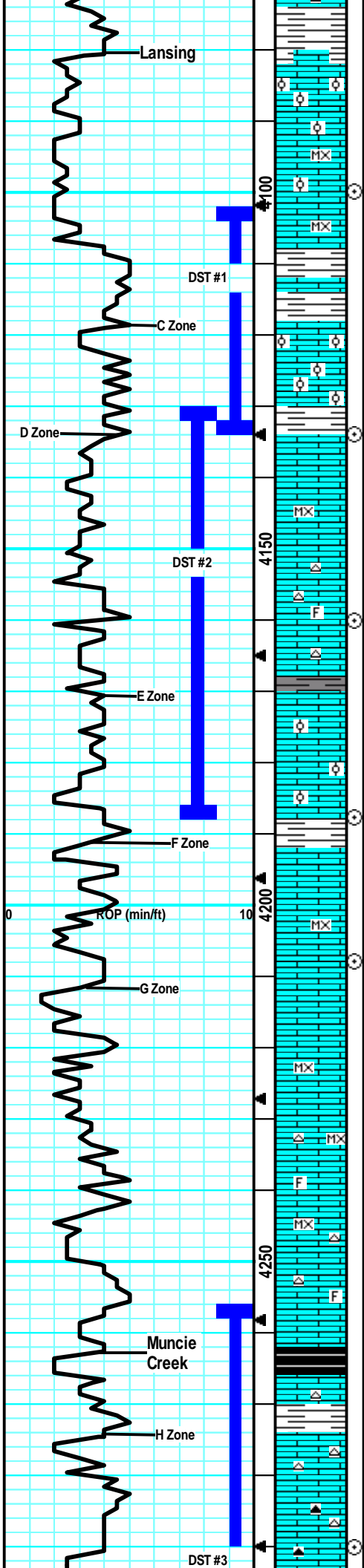
Wiper Trip 20 Stands

CFS @ 4007'
 (30"/60")

Heebner @ 4035' (-847)

Toronto @ 4051' (-863)

CFS @ 4071'
 (30"/60")



LS: tan, slight mott, fn xln, fw ool, fr intool por in v fw pcs, lght brn stns in por, vssfo, wk-? fluor, no cup odr, ns.

LS: tan, slight mott, fn xln, fw ool, fr intool por in v fw pcs, lght brn stns in por, vssfo, wk-? fluor, no cup odr.

LS: It tan/lt gry, sing, micro-fn xln, fw ool, mostly dense, sub-chlky sm brittle, tr-nvp, no odr, ns.

LS: It tan, sing, micro-fn xln, dense, sm brittle, fw sub-chlky, tr-nvp, fw Chert: wht/opaq, no odr, ns.

LS: tan, sing, fn xln, dense, sm firm, scat vuggy por, drk stns in por, gd fluor, wk cup odr, fr drk hvy fo on brk.

LS: tan, fn xln, slight ool, mostly dense, gd intxn/intool, sm vuggy por, gd hvy stns in por, gd sfo on brk and in try, fr cup odr.

LS: tan/lt tan, sing, fn xln, mostly dense, tr-nvp, 3 pcs of ool sho rx from abv, no cup odr.

LS: tan/lt tan, sing, fn xln, mostly dense, tr-nvp, abund SH: drk gry/brn, silty, no cup odr, ns.

LS: lt gry/lt tan, mostly sing, micro-fn xln, dense, tr-nvp, 2 sml pcs, chlky, patchy lght brn stns, vssfo in try on brk, no cup odr.

LS: lt gry/tan, sing, fn xln, mostly dense, sub-chlky in prt, tr-nvp, 3-4 pcs of pr intxn por, w/ spttd stns, wk fluor, vssfo on brk, no cup odr.

60" LS: lt gry, tr-nvp, fw Chert: wht, foss, ns.

LS: lt gry/tan, sing, fn xln, mostly dense, sm chlky in prt, tr-nvp, fw SH: gry, silty, no odr, ns.

LS: lt tan, sing, fn xln, mostly dense, tr-nvp, 4 pcs slight ool, w/ gd intxn/intool por, drk brn hvy stns in por, gd cup odr, sso in 4 pcs.

LS: tan, sing, fn xln, mostly dense, sm pcs w/ gd intxn/slight vuggy por on frac edge, gd/strng cup odr, fr sfo in por and on brk, sml gas bub clng to rx chp.

LS: tan/lt tan, sing, fn xln, sm brit, sub-chlky in prt, tr-pr intxn por in sm, abund SH: brn/gry, silty, no cup odr, ns.

LS: crm/lt gry, sing, micro xln, dense, brit, sub-chlky in prt, tr-nvp, no cup odr, ns.

60" Smpl, more micro xln, dense, brit LS, tr-nvp, no odr, ns.

LS: lt gry/lt tan, sing, micro-fn xln, mostly dense, sm brit, fw firm, tr-nvp, no cup odr, ns.

LS: gry/lt tan, sing, micro xln, dense, sm firm, fw brit, sub-chlky in prt, tr-nvp, no odr, ns.

LS: lt gry/lt tan, sing, micro-fn xln, mostly dense, sm brit, tr-nvp, svrl pcs pur chlk, no cup odr, ns.

LS: tan/lt gry, sing, fn xln, dense, sm firm, sm brit, tr-nvp, fw pcs pur chlk, fw Chert: gry, foss, sharp, no cup odr, ns.

LS: gry/lt tan, slight mott, fn xln, sm foss, mostly brit, pr intxn por in sm, fw Chert: gry, no cup odr, ns.

SH: blk, silty, soft, carb.

LS: gry/lt tan, slight mott, fn xln, fw foss, mostly dense, firm, tr-nvp, fw SH: drk gry/blk, silty, fw carb, no cup odr, ns.

LS: tan, fn xln, mostly dense, fw pcs w/ fr intxn por, 2 pcs w/ pr frac edge por, lght brn stns, wk fluor, faint cup odr, vssfo, fw Chert: gry foss, sharp.

LS: gry/lt tan, sing, fn xln, mostly dense, sm firm, sub-chlky in prt, tr-nvp, fw Chert: gry, sharp, no cup odr, ns.

LS: gry/lt tan, slight mott, fn xln, fw flakey/mealy,

Lansing @ 4080' (-892)

CFS @ 4100'
(30"/60")

DST #1 "LKC C" 4103'-4134' 4-10-18
30-30-30-30
1st Blw: Blt to wk surf blw (No BB)
2nd Blw: No blw (No BB)
IFP: 23-244# ISIP: 471# FFP: 24-24# FSIP: 472#
Hyd: 2052-2027#
Rec: 2' Mud w/ tr oil.

Mud Report #6
4134' 4/10/18
Wt Vis pH
9.1 60 11.0
Filt Chl LCM
7.2 3.4K 2#

CFS @ 4134'
(30"/60")

Survey @ 4134' = 1 Degree

CFS @ 4160'
(30"/60")

DST #2 "LKC D/E" 4130'-4188' 4-10-18
30-45-45-60
1st Blw: Blw blt to 4" (No BB)
2nd Blw: Blw blt to 5" (No BB)
IFP: 40-65# ISIP: 1076# FFP: 67-100# FSIP: 1005#
Hyd: 2119-2005#
Rec: 124' Mud w/ OS.

CFS @ 4188'
(30"/60")

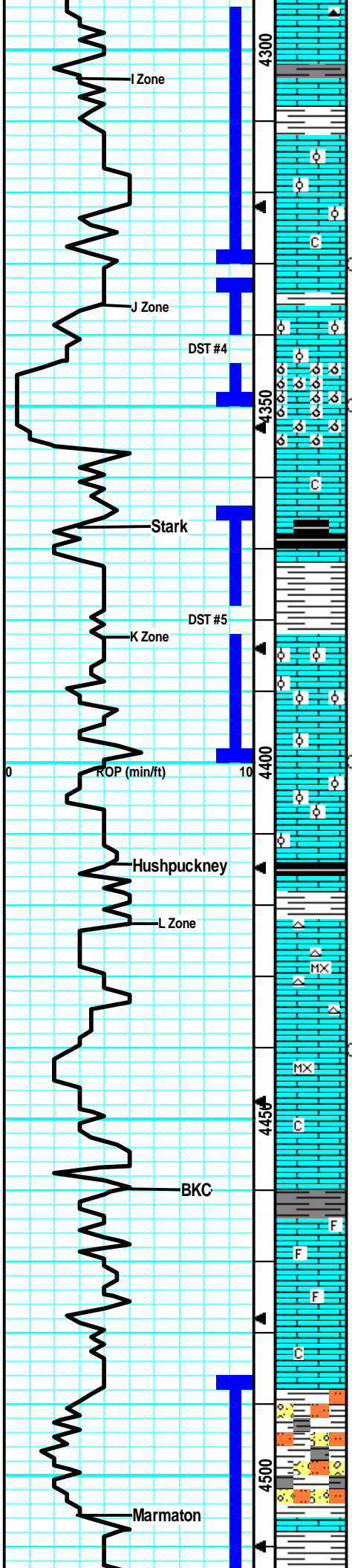
CFS @ 4208'
(30"/60")

DST #3 "LKC H/I" 4225'-4330' 4-11-18
30-45-45-60
1st Blw: Blw blt to 2.5" (No BB)
2nd Blw: Blw blt to 3" (No BB)
IFP: 43-62# ISIP: 1052# FFP: 65-91# FSIP: 1002#
Hyd: 2224-2111#
Rec: 90' Mud w/ OS.

Muncie Creek @ 4263' (-1075)

CFS @ 4290'
(30"/60")

Mud Report #7
4262' 4/11/18
Wt Vis pH
9.4 50 10.0
Filt Chl LCM
8.8 6K 2#



sub-chlky in prt, tr-nvp, gw Chert: gry, silty, soft, no odr, ns.

LS: tan/lt tan/lt brn, slight mott, fn xln, dense, sm firm, fw sub-chlky, tr-nvp, sm SH: drk gry, silty, no odr, ns.

LS: mostly lt tan/lt gry, slight mott, fn xln, dense, sub-chlky, tr-nvp, 4-5 pcs tan, ool, brittle, pr intool por, drk brn stns in por, wk cup odr, vssfo.

LS: lt gry/lt tan, slight mott, mostly dense, sub-chlky tr-nvp, 3 pcs w/ fr intxn fact'd edge por, drk hvy stns, sso, dul yel fluor. wk cup odr.

LS: gry, slight mott, fn xln, mostly dense, much firmer, tr-nvp, 2 sho pcs most likely from above, no odr.

LS: tan/gry, slight mott, fn xln, mostly dense, sub-chlky in prt, tr-nvp, abund SH: gry/brn, silty, no odr, ns.

LS: tan/lt tan, slight mott, sm v foss, fw pcs w/ fr vuggy/intfoss por, drk blk tarry stns in por, faint cup odr, sso in 5-6 pcs.

60" Smpl: LS: lt tan, v ool, ool pcs gd intool por, fr cup odr, gd sfo, also a bunch of lt gry oolcastic brit rx w/ no sho.

LS: lt gry, mott in prt, fn xln, sm v ool, brit, many pcs w/ gd oolcast por, 3 pcs of ool sho pcs as above, no cup odr.

LS: gry/lt tan, slight mott, fn xln, sub-chlky, tr-nvp, fw pcs SH: gry/brn/blk, silty, fw carb, no odr, ns.

LS: lt gry/lt tan, slight mott, fn xln, fw foss frags, mostly brit, sub-chlky, tr-nvp, svrl SH: blk/drk gry, silty, many carb, no odr, ns.

LS: gry, lt gry, fn xln, many v ool, sm pr-fr intool por, gd evn stn, wk cup odr, fr sho drk brn oil, on brk and rx chp, gd fluor/cut.

30" Smpl: rx tightened up, pr intool por in svrl pcs, fr sfo on brk, 1 pcs w/ vuggy frac edge por, hvy sat stn, wk cup odr.

60" Smpl much more gry dense, sub-chlky LS, still svrl ool pcs in try w/ sho, wk cup odr.

LS: lt tan/lt gry, fn xln, sm v ool, fr sfo much like above, tr-pr intool por, influx of lt gry tan, fn xln, sub-chlky, dense, tr-nvp, fw SH: gry/blu, no faint-? odr.

LS: tan/lt gry, sing, fn xln, sm dense, sub-chlky, tr-nvp, fw SH: gry/brn/blk, silty, fw carb, no cup odr, ns.

LS: gry/tan, slight mott, fn xln, dense, brittl, fw sub-chlky, tr-nvp, fw Chert: tan/wht, foss, sharp, no odr, ns.

LS: tan/gry, sing, micro-fn xln, dense, birttl, sub-chlky, tr-nvp, fw pcs pur chl, fw Chert: gry foss, sharp, no odr, ns.

LS: tan/lt gry, sing, fn xln, dense, tr-nvp, svrl pcs chl, no cupodr, ns.

LS: lt gry/tan, sing, micro-fn xln, mostly dense, sm firm, tr-nvp, no cup odr, ns.

LS: tan/lt gry, sing, fn xln, mostly dense, sub-chlky in prt, tr-nvp, fw SH: gry/grn, silty, soft, no cup odr, ns.

LS: gry/lt tan, sing, fn xln, fw foss, mostly dense, sub-chlky in prt, tr-nvp, 2 pcs w/ salt/pep sptd stns, wk fluor, vssfo on brk, no cup odr.

LS: tan/gry, slight mott, fn xln, fw foss mostly dense, sm firm, tr-nvp, 3 pcs w/ slt/pep stns like abov, tr intxn por, firm, vssfo on brk, no cup odr.

LS: tan/lt tan, slight mott, fn xln, many dense, sm britl, sub-chlky in prt, tr-nvp, svrl SH: drk gry/grn, silty, soft, no cup odr, ns.

SH: gry/brn/grn, silty, soft, fw waxy, sm grny, svrl LS: gry/lt tan, fn xln, dense, sm brittle, sub-chlky, tr-nvp, no odr, ns.

Mostly SH: gry/brn/blu, silty, soft, sm muddy like, fw LS: gry/tan, tr-nvp, no odr, ns.

LS: tan/gry, slight mott, fn xln, sm v ool/foss, mostly dense, firm, tr-nvp, 2 pcs w/ pr intool por, drk brn stns,

DST #4 "LKC J" 4332'-4350' 4-12-18
30-45-45-60
1st Blw: Blw blt to BOB in 14min (No BB)
2nd Blw: Blw blt to BOB in 18min (No BB)
IFP: 36-131# ISIP: 1179# FFP:
131-255# FSIP: 1205#
Hyd: 2323-2209#
Rec: 196'Mw/TrO, 320'MCW.

CFS @ 4330'
(30"/60")

Mud Report #8
4350' 4/12/18
Wt Vis pH
9.4 52 11.0
Filt Chl LCM
8.0 6.2K 3#

Stark @ 4367' (-1179)

DST #5 "LKC K" 4364'-4400' 4-12-18
30-45-45-60
1st Blw: Blw blt to BOB in 18min (No BB)
2nd Blw: Blw blt to BOB in 22min (No BB)
IFP: 35-107# ISIP: 1156# FFP:
109-190# FSIP: 1167#
Hyd: 2243-2091#
Rec: 15'FO, 77'OWCM, 248'OMCW.

CFS @ 4400'
(30"/60")

Survey @ 4400' = 1 Degree

Hushpuckney @ 4414' (-1226)

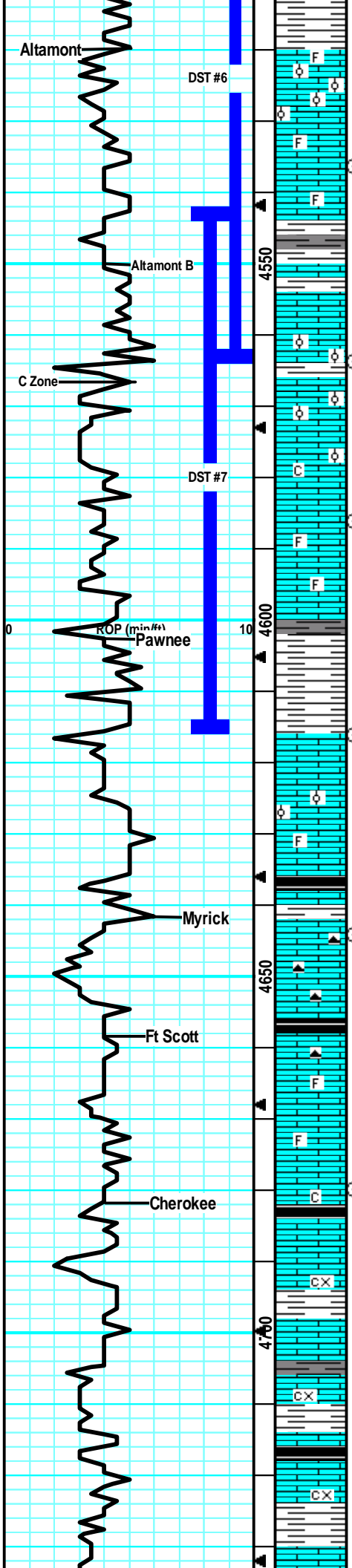
Mud Report #9
4422' 4/13/18
Wt Vis pH
9.2 52 11.0
Filt Chl LCM
8.8 7K 2#

CFS @ 4440'
(30"/60")

BKC @ 4460' (-1272)

DST #6 "Altamont A/B" 4486'-4564'
4-14-18 30-30-30-30
1st Blw: Wk surf blw dead in 22min (No BB)
2nd Blw: No blw (No BB)
IFP: 65-68# ISIP: 335# FFP: 70-73# FSIP:
308#
Hyd: 2396-2318#
Rec: 20'Mw/OS.

Marmaton @ 4506' (-1318)



ssfo on brk, gd fluor/cut, no cup odr.

LS: tan, slight mott, fn xln, sm v foss/ool, dense, firm, sm hard, tr-nvp, abund chlk, sm SH: gry, silty, no odr, ns.

LS: tan/gry, slight mott, fn xln, sm v ool/foss, dense, hard, tr-nvp, svrl SH: gry/drk gry, silty, no odr, ns.

LS: gry/tan, slight mott, fn xln, pr intxln por, 2-3 pcs w/ sptd brn stns, gd fluor, vssfo on brk, faint-? cup odr.

LS: gry/tan, slight mott, fn xln, sm foss in prt, fr intxln/intfoss por in sm, 4-5 pcs w/ gd sat stns in por, gd fluor/cut, ssfo on brk, fr-gd cup odr that incrsd undr lght.

LS: 4 pcs tan/lt brn, fn xln, fr intxln por on frac edges, even sat med brn stn, gd fluor, ssfo on brk, fr cup odr.

LS: gry/tan, slight mott, fn xln, mostly dense, 5-6 pcs w/ pr intxln por on frac edge, even med brn stn, gd fluor, ssfo on brk, fr cup odr.

60": LS, tan/gry, mostly dense, firm, 1 v ool pcs w/ gd show, most likely from above, no cup odr.

LS: tan, fn xln, mott, fn xln, slight ool in prt, 5-6 pcs w/ fr intool por/and scat vuggy por, 2nd rxln in vugs, gd even med brn stns, gd sho fo, sml gas bubs on brk, gd fluor/cut, gd cup odr.

LS: tan, slight mott, fn xln, sm ool, mostly dense, sm firm, tr-nvp, 1-2 pcs of intool sho rock from above, faint-? cup odr.

LS: gry/tan, slight mott, fn xln, mostly flakey/mealy, sm firm, tr-nvp, sbu-chlky in prt, faint-? cup odr, nsfo.

LS: gry/lt brn, mott, fn xln, sm v foss, firm, sm flakey/mealy, tr-nvp, no odr, ns.

LS: gry/lt brn, mott, fn-crs xln, dense, hard, flakey, tr-nvp, abund SH: brn/gry/blk, silty, fw carb, no odr, ns.

Sample Really Shaley: fw LS: gry, slight mott, fn xln, sub-chlky, tr-nvp, no cup odr, ns.

LS: tan, mott in prt, fn xln, foss, many dense, sm pr intfoss por in 2-3 pcs, lght sptd brn stn, gd fluor, vssfo on brk only, wk cup odr.

SH: drk gry/blk/brn, silty, soft, many carb, fw LS: gry/tan, slight mott, fn xln, dense, sub-chlky, tr-nvp, no odr, ns.

LS: gry/tan, slight mott, fn xln, fw ool, mostly dense, firm, 2 pcs w/ pr tight intool por, drk tarry stns in por, 2 pcs w/ pr intxln frac edge por, drk brn sptd stn, 1 pcs w/ vssfo on brk, no cup odr.

LS: gry/tan, slight mott, fn xln, fw foss frags, dense, hard, sub-chlky in fw, tr-nvp, svrl SH: drk gry/blk, silty, many carb, no odr, ns.

LS: gry/lt tan, slight mott, fn xln, mostly dense, fw flakey, sub-chlky in prt, tr-nvp, svrl SH: blk/drk gry, silty, many carb, no cup odr, ns.

LS: gry/tan, slight mott, fn xln, mostly dense, sub-chlky, tr-nvp, 2 pcs w/ pos drk brn/blk stn on edge, no fluor, nsfo, abund SH: blk, silty, carb, no odr.

LS: gry/tan, slight mott, fn xln, fw foss, dense, sub-chlky, tr-nvp, 1 pcs w/ patchy lght brn stn, chlky, brit, v sml sphr of oil on brk, fw Chert: gry, foss, sharp, no cup odr.

LS: gry/tan, slight mott, fn xln, foss, sub-chlky, flakey/mealy, tr-nvp, fw pcs pur chlk, svrl SH: blk, carb, no cup odr, ns.

LS: gry/lt brn, slight mott, fn xln, dense, hard, sm flakey, tr-nvp, fw SH: drk gry, silty, no odr, ns.

LS: gry, sing, fn xln, dense, firm, fw sub-chlky, tr-nvp, no odr, ns.

LS gry/lt tan, slight mott, fn xln, mostly dense, sm flakey/mealy, tr-nvp, abund SH: blk, carb, med crush, no odr, ns.

SH: blk/drk gry, sm carb, sm LS: tan/gry, mott, fn-crs xln, sm hard, sm grainy, tr-nvp, no cup odr, ns.

SH: blk/drk gry, many carb, fw LS: gry, slight mott, fn xln, dense, firm, tr-nvp, no cup odr, ns.

LS: gry/lt brn, sing, fn-crs xln, dense, hard, fw flakey, tr-nvp, svrl SH: drk gry/blk, silty, fw carb, no cup odr, ns.

LS: tan/lt brn/gry, slight mott, fn-crs xln, fw foss, dense, hard, tr-pr intxln por in fw, abund SH: gry/blk, silty, no cup odr, ns.

Altamont @ 4520' (-1332)

CFS @ 4536'
(30"/60")

DST #7 "Altamont C-Pawnee" 4486'-4564'
4-14-18 30-45-45-60
1st Blw: Blw bit to BOB in 15min (No BB)
2nd Blw: Blw bit to BOB in 17min (No BB)
IFP: 53-141# ISIP: 1239# FFP: 145-248# FSIP: 1220#
Hyd: 2453-2296#
Rec: 10'CO, 186'OCM, 124'OCWM.

CFS @ 4564'
(30"/60")

Mud Report #10
4564' 4/14/18
Wt Vis pH
9.4 60 10.5
Filt Chl LCM
9.6 8.1K 2#

CFS @ 4586'
(30"/60")

Samples are very poor,
almost 95% Shale.

Pawnee @ 4602' (-1414)

CFS @ 4616'
(30"/60")

Mud Report #11
4626' 4/15/18
Wt Vis pH
9.5 49 11.0
Filt Chl LCM
9.6 8.3K 2#

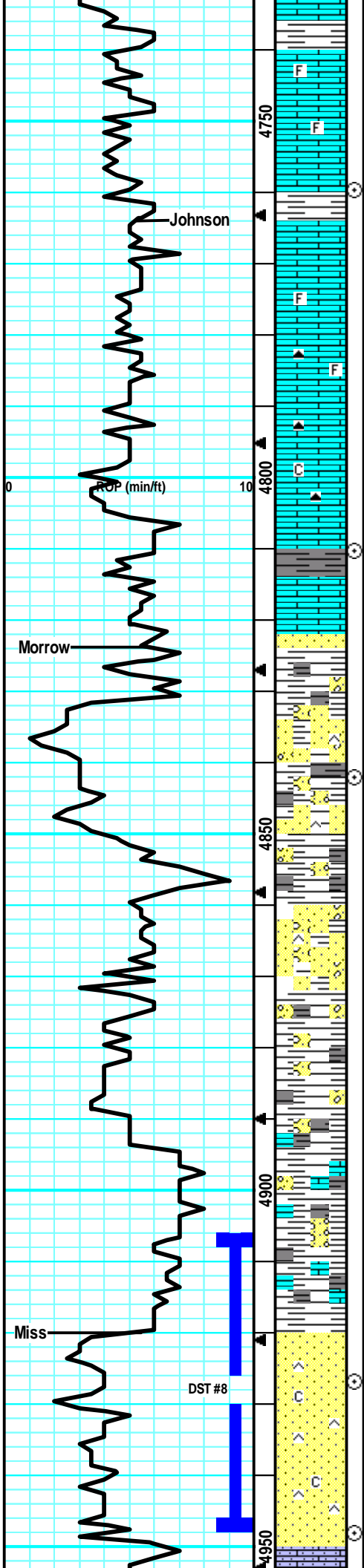
Myrick Station @ 4642' (-1454)

CFS @ 4644'
(30"/60")

Ft Scott @ 4658' (-1470)

CFS @ 4680'
(30"/60")

Cherokee @ 4682' (-1494)



SH: gry/blk/brn, silty, soft, sm carb, fw LS: lt brn/tan, slight mott, fn xln, dense, firm, tr-nvp, no cup odr, ns.

LS: gry/tan, slight mott, fn xln, fw foss frags, v dense, hard, tr-nvp, fw SH: drk gry/blk, silty, no odr, ns.

LS: tan/gry/lt brn, slight mott, fn xln, dense, hard, fw flakey, tr-nvp, svrl SH: gry/brn, silty, fw fissle, no odr, ns.

LS: tan/gry, slight mott, fn xln, sm dense, sub-chlky, fw brittle, tr-nvp, abund SH: drk gry, silty, soft, no cup odr, ns.

LS: tan/gry, slight mott, fn xln, fw dense, many firm, sub-chlky, tr-nvp, no odr, ns.

LS: tan/lt gry, slight mott, fn xln, fw foss frags, fw sandy/grainy, firm, tr-nvp, no odr, ns.

LS: tan/gry, slight mott, fn xln, sub-chlky, fw flakey/mealy, tr-nvp, fw Chert: gry, foss, sharp, no cup odr, ns.

LS: gry/tan, mott, fn xln, foss in prt, sm flakey, sm hard, tr-nvp, 2 pcs SS: vf gr, gritty, chlky, tr-nvp, abund SH: drk gry/blk, silty, no odr, ns.

LS: tan/lt brn/blk, slight mott, fn-crs xln, dense, hard, flakey, tr-nvp, fw SH: drk gry, silty, no odr, ns.

SH: gry/grn, silty, med crush, fw LS: lt brn/gry, mott, fn xln, flakey, hard, tr-nvp, no cup odr, ns.

SH: gry/blu, silty, soft, fw SS: crm/wht, fn-v fn gr, sub-rnd/sub-ang, v britl, friabl, tr-nvp, fw LS: gry, flakey, dense, hard, tr-nvp, no odr, ns.

SS: crm/wht, fn qrtz grn, fr-gd srted, sub-rnd, britl, friabl, tr-nvp, svrl SH: gry/drk gry/blu, silty, no cup odr, ns.

SS: lt gry/crm/wht, fn qrtz grn, sub-rnd, fr srted, friable, sm frim, fw arg, tr-nvp, abund SH: drk gry/gry/grn, silty, soft, no odr, ns.

SH: gry/blu/grn, silty, sm v soft, fw muddy like, fw LS: gry, fn xln, flakey, tr-nvp, no odr, ns.

SH: drk gry/gry, silty, med crush, fw muddy like, no cup odr, ns.

SH: gry/drk gry, silty, med crush, fw LS: gry/tan, fn xln, flakey/mealy, tr-nvp, no cup odr, ns.

SH: gry/drk gry/brn/blu, silty, soft, fw gritty, tr-nvp, no odr, ns.

SH: gry/drk gry/brn, silty, soft, fw LS: gry/tan, flakey/mealy, tr-nvp, no odr, ns.

LS: gry/tan, flakey, dense, hard, sub-chlky in prt, tr-nvp, abund SH: gry/brn, silty, no cup odr, ns.

LS: gry, fn xln, dense, flakey, sm hard, tr-nvp, abund SH still, gry/brn, no odr, ns.

SS: crm/wht, fn grn, fw poorly srted, sub-rnd/sub-ang, arg, sm firm, friable, tr-? intgrn por, 2 pcs LS: tan, ool, drk hvy stns in por, pr-fr intool por, no cup odr, vssfo on brk w/ 1 gas bub.

SS: crm/wht, vfn-fn grn, arg, well srted, brittl, friable, sm almost chlky, tr-nvp, no cup odr, ns.

SS: crm/wht, fn xln, fn-vfn grn, arg, chlky, friable, brit, sub-rnd, well srted, tr-nvp, a bunch of shale slough, no odr, ns.

SS: crm/wht, fn grn, sub-rnd, well srt, chlky, arg, britl, friabl, tr-nvp, fw LS: crm/lt tan, sandy/gritty, firm, tr-nvp, no odr, ns.

CFS @ 4760'
(30"/60")

Johnson @ 4764' (-1576)

Samples are really trashy and small.

CFS @ 4810'
(30"/60")

Morrow @ 4821' (-1636)

CFS @ 4842'
(30"/60")

Mud Report #12
4857' 4/16/18

Wt	Vis	pH
9.4	65	11.0
Filt	Chl	LCM
8.8	8K	2#

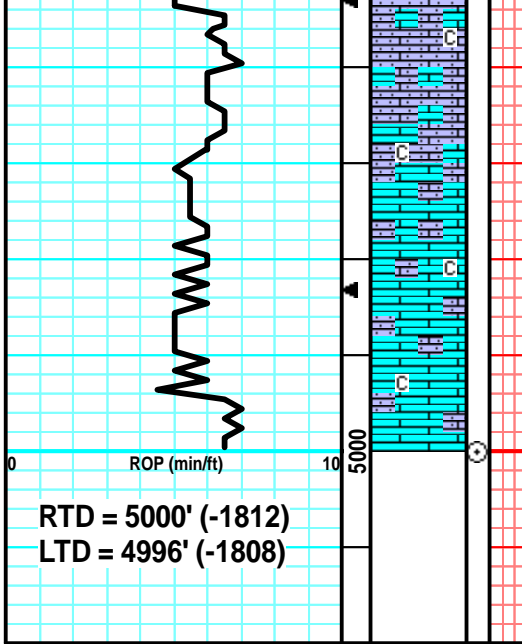
DST #8 "Mississippi" 4906'-4948' 4-16-18
30-30-30-30
1st Blw: Blw blt to BOB in 1 min (No BB)
2nd Blw: Blw blt to BOB in 3 min (No BB)
IFP: 231-710# ISIP: 1100# FFP: 726-921#
FSIP: 1079#
Hyd: 2651-2290#
Rec: 496'M, 1984'MCSW.

Miss 4920' (-1732)

CFS @ 4927'
(30"/60")

CFS @ 4948'
(30"/60")

Samples a



RTD = 5000' (-1812)
 LTD = 4996' (-1808)

LS: lt gry/crm, sing, fn xln, sandy/gritty, sm friabl, chlky in prt, tr-nvp, no cup odr, ns.

LS: lt gry/crm, grn tint, sing, fn xln, sandy/gritty, fw lrg sand gr, sm firm, fw friable, tr-nvp, no odr, ns.

LS: crm/lt gry/lt tan, sing, fn xln, sandy/gritty, fw lrg sand gr, chlky, friable, tr-nvp, no odr, ns.

LS: crm/lt gry, sing, fn xln, sandy/gritty, chlky in prt, friable, fw firm, tr-nvp, no odr, ns.

LS: gry/tan, slight mott, fn xln, mostly dense, fw flakey/mealy, sub-chlky, fw sandy/gritty, tr-nvp, no cup odr, ns.

Mud Report #13
 4948' 4/17/18
 Wt Vis pH
 9.5 67 10.5
 Filt Chi LCM
 10.4 8.9K 2#

are really shaley, with slough from above.

Survey @ 5000' = 1 Degree



#1 Baker 24B

1937' FNL & 336' FWL

43' N & 6' E of W/2 SW NW Section 24-17S-35W

Wichita County, Kansas

API# 15-203-20332-0000

Elevation: GL: 3176', KB: 3188'

Sample Tops			Ref. Well
Anhydrite	2471	+717	-1
B/Anhydrite	2488	+700	-1
Stotler	3652	-464	+6
Heebner	4035	-847	+5
Toronto	4048	-860	+9
Lansing	4074	-886	+12
Muncie	4263	-1075	+11
Stark	4366	-1178	+17
Hush	4414	-1226	+14
BKC	4457	-1269	+15
Marmaton	4508	-1320	+13
Altamont	4514	-1326	+20
Pawnee	4602	-1414	+12
Myrick	4642	-1454	+10
Ft. Scott	4654	-1466	+10
Cherokee	4682	-1494	+7
Johnson	4762	-1574	+11
Morrow	4821	-1633	+12
Mississippian	4920	-1732	+6
RTD	5000	-1812	



PRESSURE PUMPING LLC
 PO Box 884, Chanute, KS 66720
 620-431-9210 or 800-467-8676

TICKET NUMBER 55097
 LOCATION Qakley/KS
 FOREMAN Jerry Y

FIELD TICKET & TREATMENT REPORT
CEMENT

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY												
4-5-18	7173	Baker 24B #1	24	175	350	Wichita												
CUSTOMER <u>Ritchie</u>			<table border="1"> <thead> <tr> <th>TRUCK #</th> <th>DRIVER</th> <th>TRUCK #</th> <th>DRIVER</th> </tr> </thead> <tbody> <tr> <td>731</td> <td>Cory D</td> <td></td> <td></td> </tr> <tr> <td>530-7129</td> <td>PDW</td> <td></td> <td></td> </tr> </tbody> </table>				TRUCK #	DRIVER	TRUCK #	DRIVER	731	Cory D			530-7129	PDW		
TRUCK #	DRIVER	TRUCK #					DRIVER											
731	Cory D																	
530-7129	PDW																	
MAILING ADDRESS																		
CITY	STATE	ZIP CODE																

JOB TYPE Surfact HOLE SIZE 12 1/4 HOLE DEPTH 270 CASING SIZE & WEIGHT 8 7/8 24#
 CASING DEPTH 268 DRILL PIPE _____ TUBING _____ OTHER _____
 SLURRY WEIGHT 15.2 SLURRY VOL 1.24 WATER gal/sk _____ CEMENT LEFT in CASING 20'
 DISPLACEMENT 15 3/4 bbl DISPLACEMENT PSI _____ MIX PSI _____ RATE _____

REMARKS: Safety meeting & rig up on Duke 1 circulate casing mix 205 sks com
3%cc 2%kg/l wash on & displace with 15 3/4 bbl H₂O & shot in
5 bbl to pit

cement did
circulate

Thank you
Jerry S crew

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
CE0171	1	PUMP CHARGE	1150.00	1150.00
CE0002	45	MILEAGE	7.15	321.75
CE0710	9.64	for mileage delivery	1.75	169.15
CE5871	205 sks	surfact blend II	24.00	4920.00
CE5326	100 #	salt	NC	NC
			subtotal	7150.90
			-30%	2145.27
			subtotal	5005.63
			SALES TAX	
			ESTIMATED TOTAL	

Ravin 3737

AUTHORIZATION M.H. Haddock TITLE _____ DATE _____

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form.

GLOBAL OIL FIELD SERVICES, LLC

3322

REMIT TO 24 S. Lincoln
Russell, KS 67665

SERVICE POINT
Russell KS

DATE <u>4-18-18</u>	SEC. <u>24</u>	TWP. <u>17</u>	RANGE <u>35</u>	CALLED OUT	ON LOCATION	JOB START	JOB FINISH <u>11:00 am</u>
LEASE <u>Baker</u>	WELL# <u>24 B #1</u>	LOCATION <u>West of Russell city</u>			COUNTY <u>Michi</u>	STATE <u>KS</u>	
OLD OR NEW (CIRCLE ONE)			<u>5 North to J RD West 1/2 South East</u>				

CONTRACTOR Duke Drilling Rig # 1

TYPE OF JOB Rotary Plug

HOLE SIZE 7 3/4" T.D. 500'

CASING SIZE _____ DEPTH 2500'

TUBING SIZE _____ DEPTH _____

DRILL PIPE _____ DEPTH _____

TOOL _____ DEPTH _____

PRES. MAX _____ MINIMUM _____

MEAS. LINE _____ SHOE JOINT _____

CEMENT LEFT IN CSG. _____

PERFS _____

DISPLACEMENT _____

EQUIPMENT _____

PUMP TRUCK # 409 CEMENTER Cody

HELPER Brad

BULK TRUCK # 491 DRIVER Tony

BULK TRUCK # _____ DRIVER _____

OWNER Ritchie Exploration

CEMENT AMOUNT ORDERED 3000 60/40 Ppt

40 gal 40 per barrel

COMMON _____ @ _____

POZMIX _____ @ _____

GEL _____ @ _____

CHLORIDE _____ @ _____

ASC _____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

HANDLING _____ @ _____

MILEAGE _____ @ _____

TOTAL _____

REMARKS:

500x 2500'

800x 1500'

500x 250'

300x 300'

200x 60'

Rot hole 300x Wiper Plug

Mayse hole 200x

CHARGE TO: Ritchie Exploration

STREET _____

CITY _____ STATE _____ ZIP _____

Global Oil Field Services, LLC

You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PRINTED NAME Mike Godsey

SIGNATURE Mike Godsey

SERVICE

DEPTH OF JOB _____

PUMP TRUCK CHARGE _____

EXTRA FOOTAGE _____ @ _____

MILEAGE _____ @ _____

MANIFOLD _____ @ _____

_____ @ _____

_____ @ _____

TOTAL _____

PLUG & FLOAT EQUIPMENT

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

TOTAL _____

SALES TAX (If Any) _____

TOTAL CHARGES _____

DISCOUNT _____ IF PAID IN 30 DAYS