



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1093254
OIL & GAS CONSERVATION DIVISION

Form ACO-1

August 2013

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 SIOW
- Gas D&A ENHR SIGW
- OG GSW Temp. Abd.
- 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 ENHR Conv. to SWD
- Plug Back Conv. to GSW Conv. to Producer
- Commingled Permit #: _____
- Dual Completion Permit #: _____
- SWD Permit #: _____
- ENHR Permit #: _____
- GSW Permit #: _____

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
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API No. 15 - _____

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
- Geologist Report Received
- UIC Distribution
- ALT I II III Approved by: _____ Date: _____

1093254

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 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				

Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 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)*

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD:	Size:	Set At:	Packer At:	Liner Run: <input type="checkbox"/> Yes <input type="checkbox"/> No
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Date of First, Resumed Production, SWD or ENHR.	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____
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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> <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Barline Oil, LLC
Well Name	RATLIFF TRUST 1-16
Doc ID	1093254

All Electric Logs Run

Sonic Log
Compensated Density/Neutron Log
Micro Log
Dual Induction Log

Form	ACO1 - Well Completion
Operator	Barline Oil, LLC
Well Name	RATLIFF TRUST 1-16
Doc ID	1093254

Tops

Name	Top	Datum
Stotler	2677	-696
Tarkio	2717	-736
Howard	2795	-814
Severy sd	2824	-843
Bs Sd	2839	-858
Topeka	2850	-869
Lecompton	2982	-1001
Heebner	3072	-1091
Toronto	3100	-1119
Lansing	3120	-1139
BKC	3386	-1405
Cherokee Sh	3559	-1578
Cgl	3650	-1669
Mississippi Chert	3718	-1737
Viola	3751	-1770
Simpson Sh	3854	-1873
Simpson dolo	3878	-1897
Arbuckle	3895	-1914



DRILL STEM TEST REPORT

Prepared For: **Barline Oil LLC.**

7804 E. Funston, STE. 209
2102 Dalton Witchita KS 67207

ATTN: Bill Ree

Ratliff Trust #1-16

16-2s-15w Smith,KS

Start Date: 2012.07.18 @ 04:25:00

End Date: 2012.07.18 @ 11:28:30

Job Ticket #: 47384 DST #: 1

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

Printed: 2012.07.26 @ 13:52:08



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Barline Oil LLC.

16-2s-15w Smith,KS

7804 E. Funston, STE. 209
2102 Dalton Wichita KS 67207

Ratliff Trust #1-16

Job Ticket: 47384

DST#: 1

ATTN: Bill Ree

Test Start: 2012.07.18 @ 04:25:00

Tool Information

Drill Pipe:	Length: 2687.00 ft	Diameter: 3.80 inches	Volume: 37.69 bbl	Tool Weight: 2600.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 122.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 38000.00 lb
			<u>Total Volume: 38.29 bbl</u>	Tool Chased 20.00 ft
Drill Pipe Above KB:	24.00 ft			String Weight: Initial 30000.00 lb
Depth to Top Packer:	2813.00 ft			Final 34000.00 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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Shut In Tool	5.00			2790.00	
Hydraulic tool	5.00			2795.00	
Jars	5.00			2800.00	
Safety Joint	3.00			2803.00	
Packer	5.00			2808.00	28.00 Bottom Of Top Packer
Packer	5.00			2813.00	
Stubb	1.00			2814.00	
Recorder	0.00	8791	Inside	2814.00	
Recorder	0.00	8673	Outside	2814.00	
Perforations	27.00			2841.00	
Bullnose	3.00			2844.00	31.00 Bottom Packers & Anchor

Total Tool Length: 59.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Barline Oil LLC.

16-2s-15w Smith,KS

7804 E. Funston, STE. 209
2102 Dalton Wichita KS 67207

Ratliff Trust #1-16

Job Ticket: 47384

DST#: 1

ATTN: Bill Ree

Test Start: 2012.07.18 @ 04:25:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.97 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 600.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
122.00	mcw -10%m90%w	0.600
340.00	mcw -30%m70%w	4.769
62.00	w cm-40%w 60%m	0.870
30.00	w cm-w ithoil specs-20%w 80%m	0.421

Total Length: 554.00 ft

Total Volume: 6.660 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

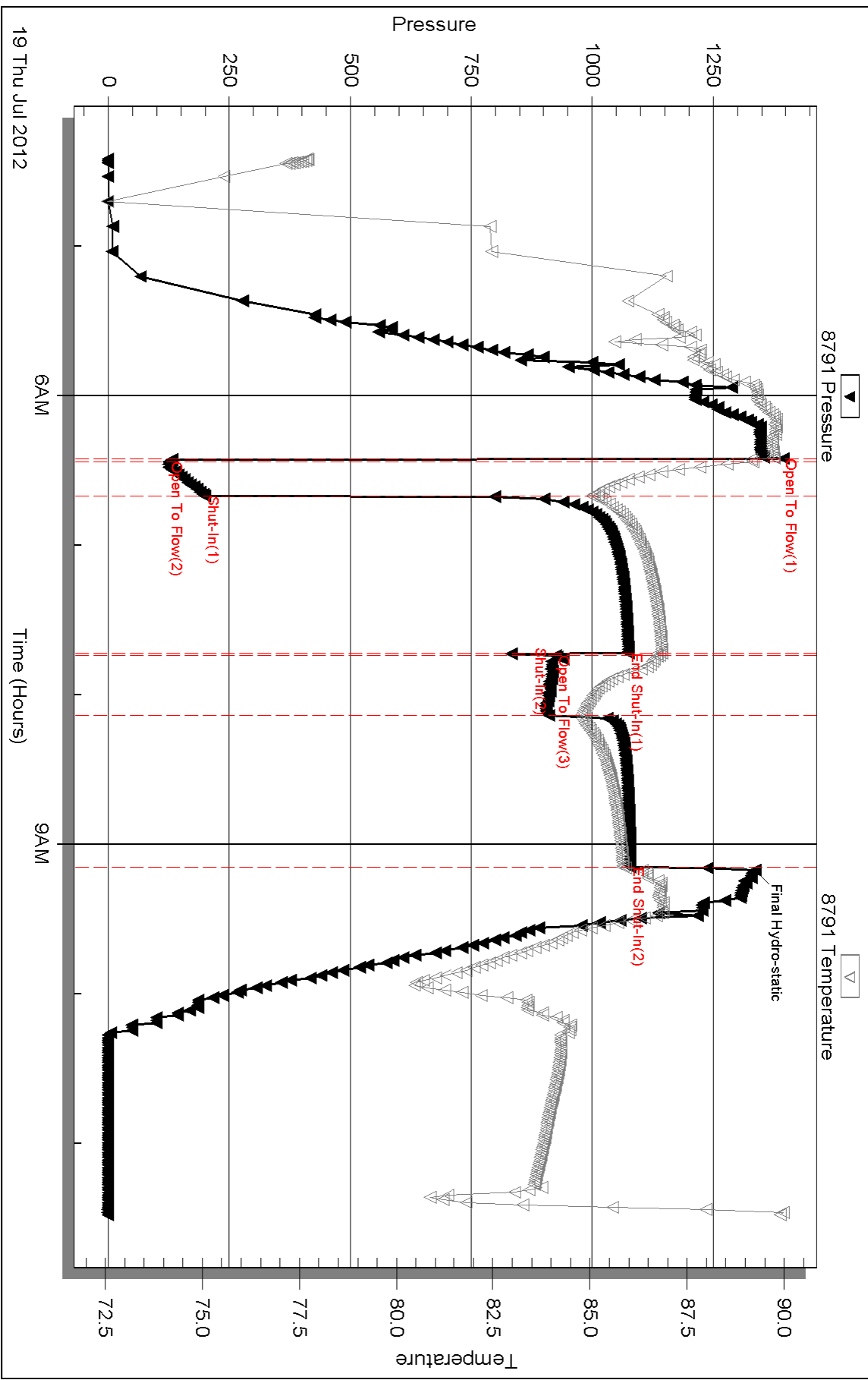
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

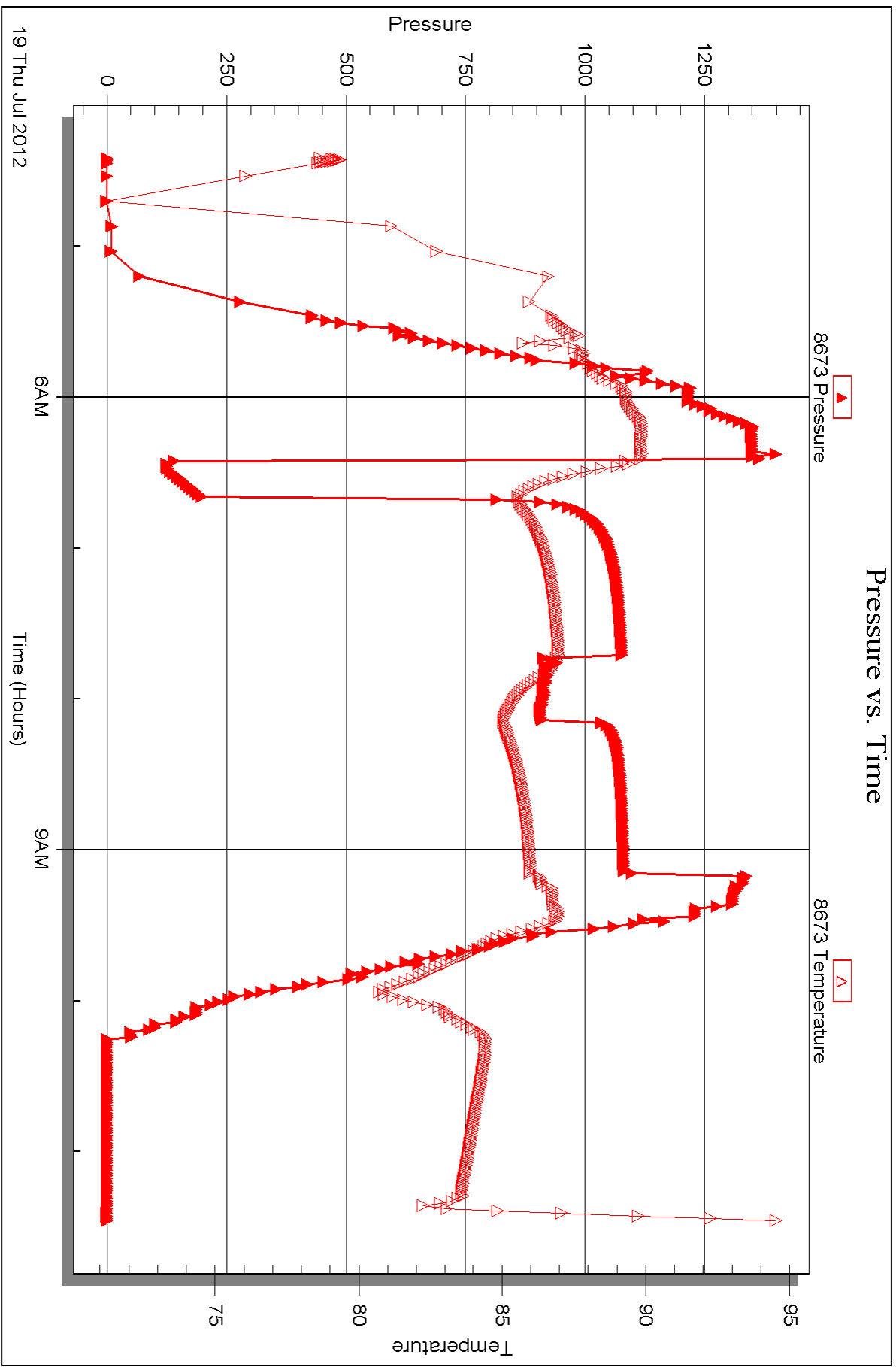


Serial #: 8673

Outside Barline Oil LLC.

Ratliff Trust #1-16

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Barline Oil LLC.**

7804 E. Funston, STE. 209
2102 Dalton Witchita KS 67207

ATTN: Bill Ree

Ratliff Trust #1-16

16-2s-15w Smith,KS

Start Date: 2012.07.19 @ 02:55:00

End Date: 2012.07.19 @ 08:25:00

Job Ticket #: 47385 DST #: 2

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

Printed: 2012.07.26 @ 13:51:11



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Barline Oil LLC.
7804 E. Funston, STE. 209
2102 Dalton Wichita KS 67207
ATTN: Bill Ree

16-2s-15w Smith,KS
Ratliff Trust #1-16
Job Ticket: 47385 **DST#: 2**
Test Start: 2012.07.19 @ 02:55:00

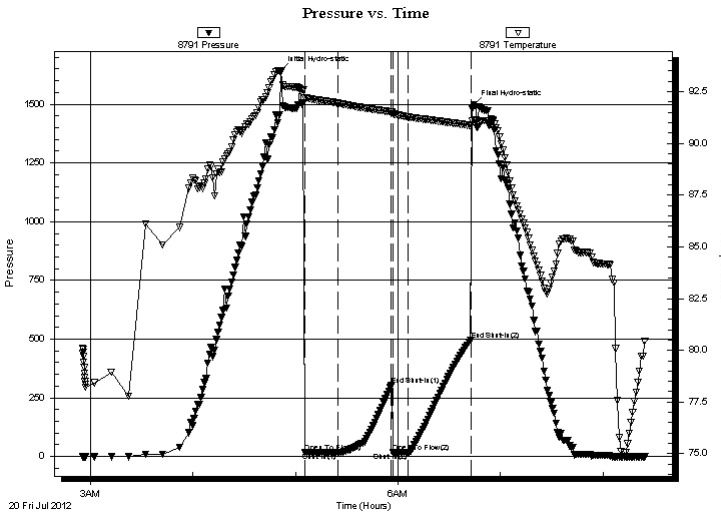
GENERAL INFORMATION:

Formation: **Topeka**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 05:05:30
Time Test Ended: 08:25:00
Interval: **3048.00 ft (KB) To 3092.00 ft (KB) (TVD)**
Total Depth: 3092.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Reset)
Tester: Chuck Kreuzer Jr.
Unit No: 61
Reference Elevations: 1995.00 ft (KB)
1990.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8791 Inside
Press @ Run Depth: 18.42 psig @ 3052.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2012.07.20 End Date: 2012.07.20 Last Calib.: 2012.07.19
Start Time: 02:55:05 End Time: 08:24:59 Time On Btm: 2012.07.20 @ 04:51:30
Time Off Btm: 2012.07.20 @ 06:44:30

TEST COMMENT: IF: Weak blow, Dead in 5 mins.
IS: No blow back over 30 mins.
FF: No blow over 15 mins.
FS: No blow back over 30 mins.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1644.02	93.43	Initial Hydro-static
14	17.73	92.20	Open To Flow (1)
33	17.35	91.94	Shut-In(1)
65	304.36	91.51	End Shut-In(1)
66	18.18	91.42	Open To Flow (2)
75	18.42	91.27	Shut-In(2)
111	496.73	90.86	End Shut-In(2)
113	1497.29	91.13	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	mud-100%	0.02

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Barline Oil LLC.

16-2s-15w Smith,KS

7804 E. Funston, STE. 209
2102 Dalton Wichita KS 67207

Ratliff Trust #1-16

Job Ticket: 47385

DST#: 2

ATTN: Bill Ree

Test Start: 2012.07.19 @ 02:55:00

Tool Information

Drill Pipe:	Length: 2907.00 ft	Diameter: 3.80 inches	Volume: 40.78 bbl	Tool Weight: 2600.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 122.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 32000.00 lb
			<u>Total Volume: 41.38 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	9.00 ft			String Weight: Initial 30000.00 lb
Depth to Top Packer:	3048.00 ft			Final 30000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	44.00 ft			
Tool Length:	72.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			3025.00	
Hydraulic tool	5.00			3030.00	
Jars	5.00			3035.00	
Safety Joint	3.00			3038.00	
Packer	5.00			3043.00	28.00 Bottom Of Top Packer
Packer	5.00			3048.00	
Stubb	1.00			3049.00	
Perforations	2.00			3051.00	
Change Over Sub	1.00			3052.00	
Recorder	0.00	8791	Inside	3052.00	
Recorder	0.00	8673	Outside	3052.00	
Drill Pipe	31.00			3083.00	
Change Over Sub	1.00			3084.00	
Perforations	5.00			3089.00	
Bullnose	3.00			3092.00	44.00 Bottom Packers & Anchor

Total Tool Length: 72.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Barline Oil LLC.

16-2s-15w Smith,KS

7804 E. Funston, STE. 209
2102 Dalton Wichita KS 67207

Ratliff Trust #1-16

Job Ticket: 47385

DST#: 2

ATTN: Bill Ree

Test Start: 2012.07.19 @ 02:55:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.78 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	mud-100%	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8791

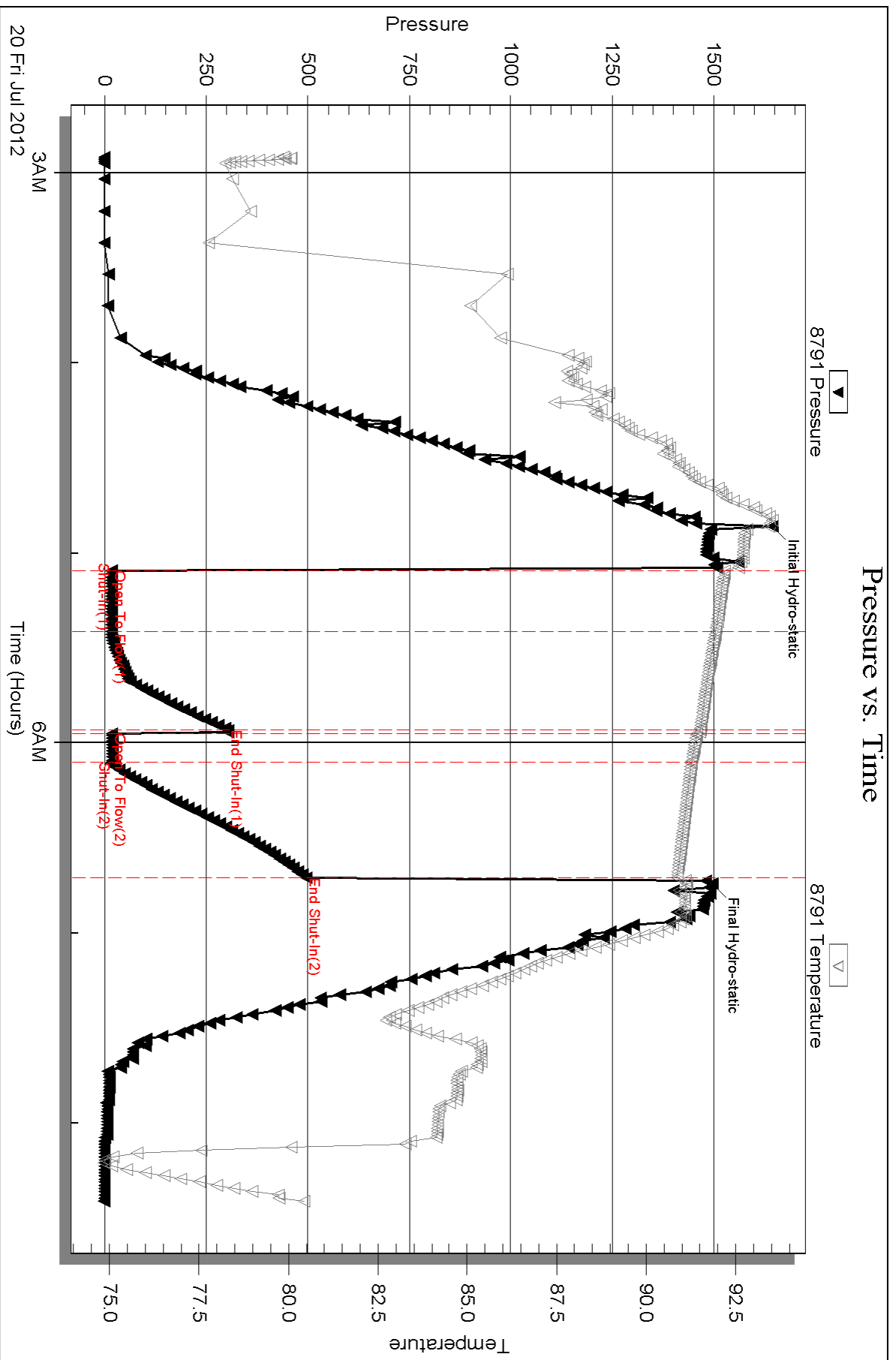
Inside

Barline Oil LLC.

Ratliff Trust #1-16

DST Test Number: 2

Pressure vs. Time

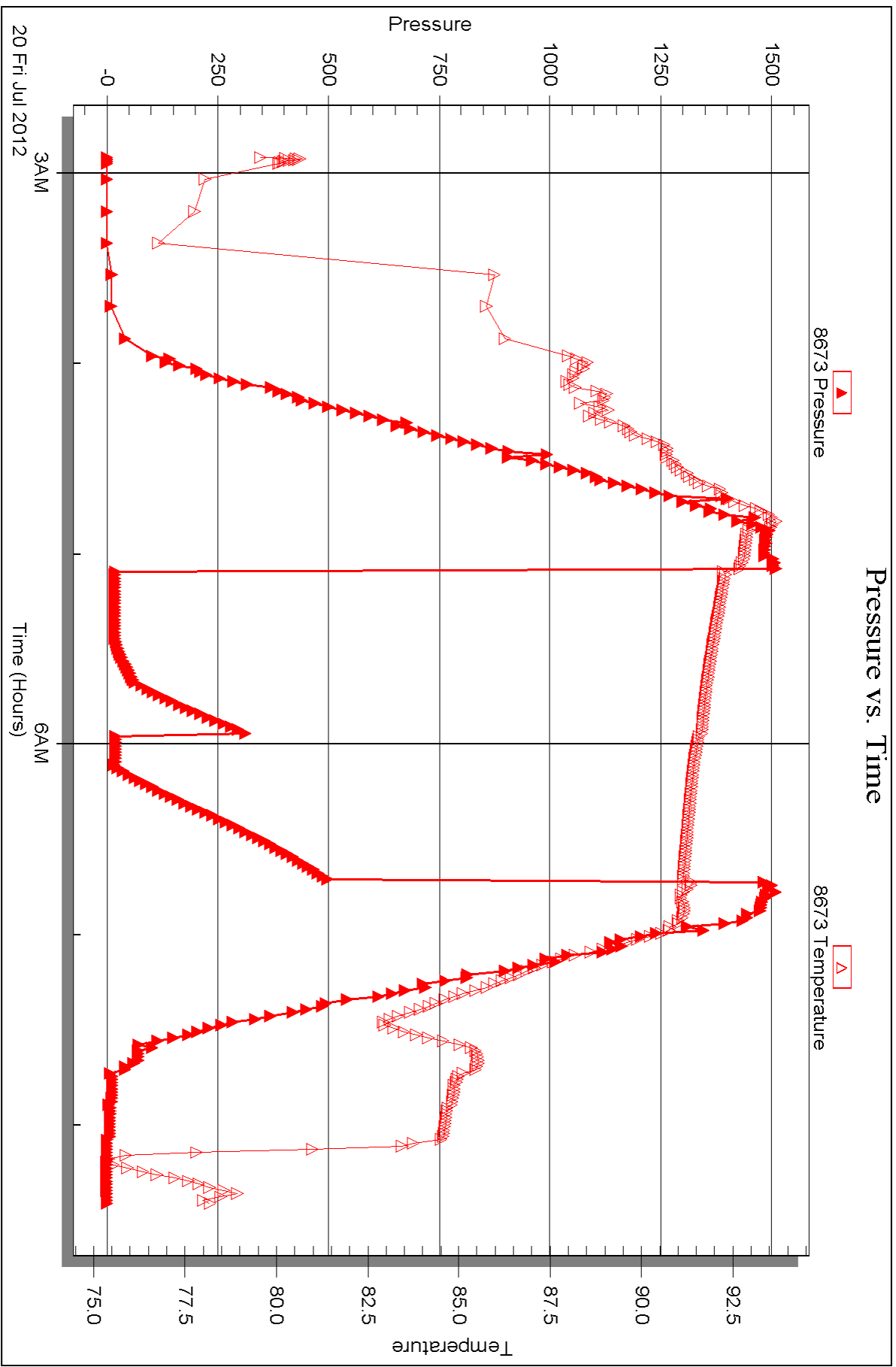


Serial #: 8673

Outside Barline Oil LLC.

Ratliff Trust #1-16

DST Test Number: 2





DRILL STEM TEST REPORT

Prepared For: **Barline Oil LLC.**

7804 E. Funston, STE. 209
2102 Dalton Witchita KS 67207

ATTN: Bill Ree

Ratliff Trust #1-16

16-2s-15w Smith,KS

Start Date: 2012.07.19 @ 15:05:00

End Date: 2012.07.19 @ 19:29:30

Job Ticket #: 47386 DST #: 3

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

Printed: 2012.07.26 @ 13:50:09

Barline Oil LLC.
16-2s-15w Smith,KS
Ratliff Trust #1-16
DST # 3
LKC-A
2012.07.19



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Barline Oil LLC.
7804 E. Funston, STE. 209
2102 Dalton Wichita KS 67207
ATTN: Bill Ree

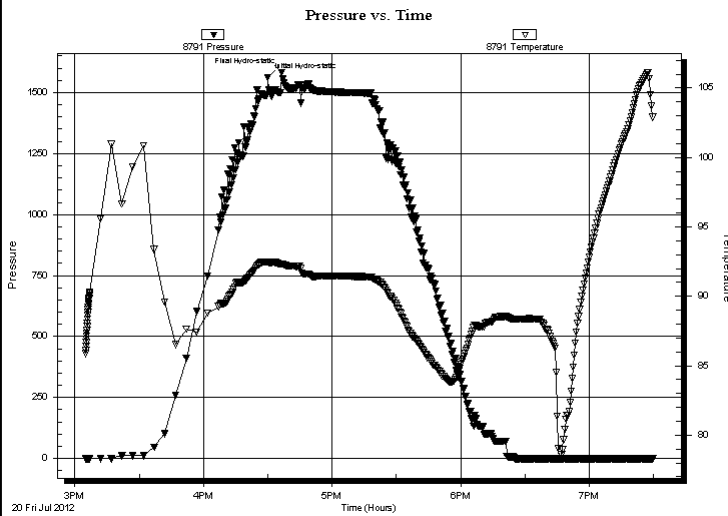
16-2s-15w Smith,KS
Ratliff Trust #1-16
Job Ticket: 47386 **DST#: 3**
Test Start: 2012.07.19 @ 15:05:00

GENERAL INFORMATION:

Formation: **LKC-A**
Deviated: No Whipstock: ft (KB)
Time Tool Opened:
Time Test Ended: 19:29:30
Interval: **3091.00 ft (KB) To 3130.00 ft (KB) (TVD)**
Total Depth: 3130.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Reference Elevations: 1995.00 ft (KB)
1990.00 ft (CF)
KB to GR/CF: 5.00 ft
Test Type: Conventional Bottom Hole (Reset)
Tester: Chuck Kreutzer Jr.
Unit No: 61

Serial #: 8791 Inside
Press @ Run Depth: psig @ 3092.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2012.07.20 End Date: 2012.07.20 Last Calib.: 2012.07.19
Start Time: 15:05:05 End Time: 19:29:29 Time On Btm: 2012.07.20 @ 16:30:00
Time Off Btm: 2012.07.20 @ 16:36:30

TEST COMMENT: ----Slid 15 Ft.--- Still 6 ft. from bottom, Tool opened, Couldn't get to bottom..



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1563.02	92.48	Initial Hydro-static
7	1582.72	92.33	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Barline Oil LLC.

16-2s-15w Smith,KS

7804 E. Funston, STE. 209
2102 Dalton Witchita KS 67207

Ratliff Trust #1-16

Job Ticket: 47386

DST#: 3

ATTN: Bill Ree

Test Start: 2012.07.19 @ 15:05:00

Tool Information

Drill Pipe:	Length: 2966.00 ft	Diameter: 3.80 inches	Volume: 41.61 bbl	Tool Weight: 2600.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 122.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 32000.00 lb
			<u>Total Volume: 42.21 bbl</u>	Tool Chased 15.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 30000.00 lb
Depth to Top Packer:	3091.00 ft			Final 32000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	39.00 ft			
Tool Length:	67.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3068.00	
Hydraulic tool	5.00			3073.00	
Jars	5.00			3078.00	
Safety Joint	3.00			3081.00	
Packer	5.00			3086.00	28.00 Bottom Of Top Packer
Packer	5.00			3091.00	
Stubb	1.00			3092.00	
Recorder	0.00	8791	Inside	3092.00	
Recorder	0.00	8673	Outside	3092.00	
Perforations	35.00			3127.00	
Bullnose	3.00			3130.00	39.00 Bottom Packers & Anchor

Total Tool Length: 67.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Barline Oil LLC.

16-2s-15w Smith,KS

7804 E. Funston, STE. 209
2102 Dalton Wichita KS 67207

Ratliff Trust #1-16

Job Ticket: 47386

DST#: 3

ATTN: Bill Ree

Test Start: 2012.07.19 @ 15:05:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.78 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl

Total Length: ft Total Volume: bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:

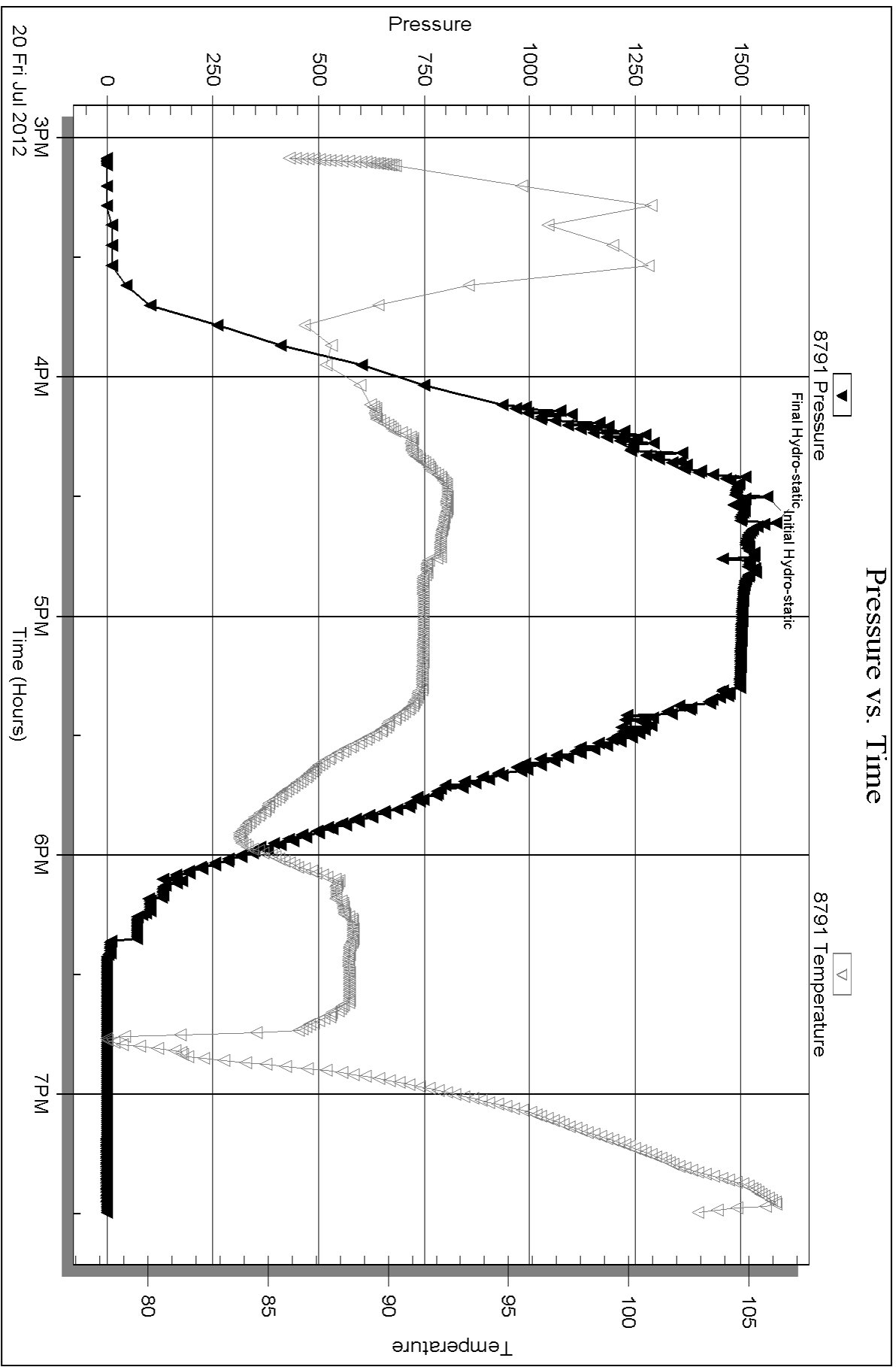
Serial #: 8791

Inside

Barline Oil LLC.

Ratliff Trust #1-16

DST Test Number: 3

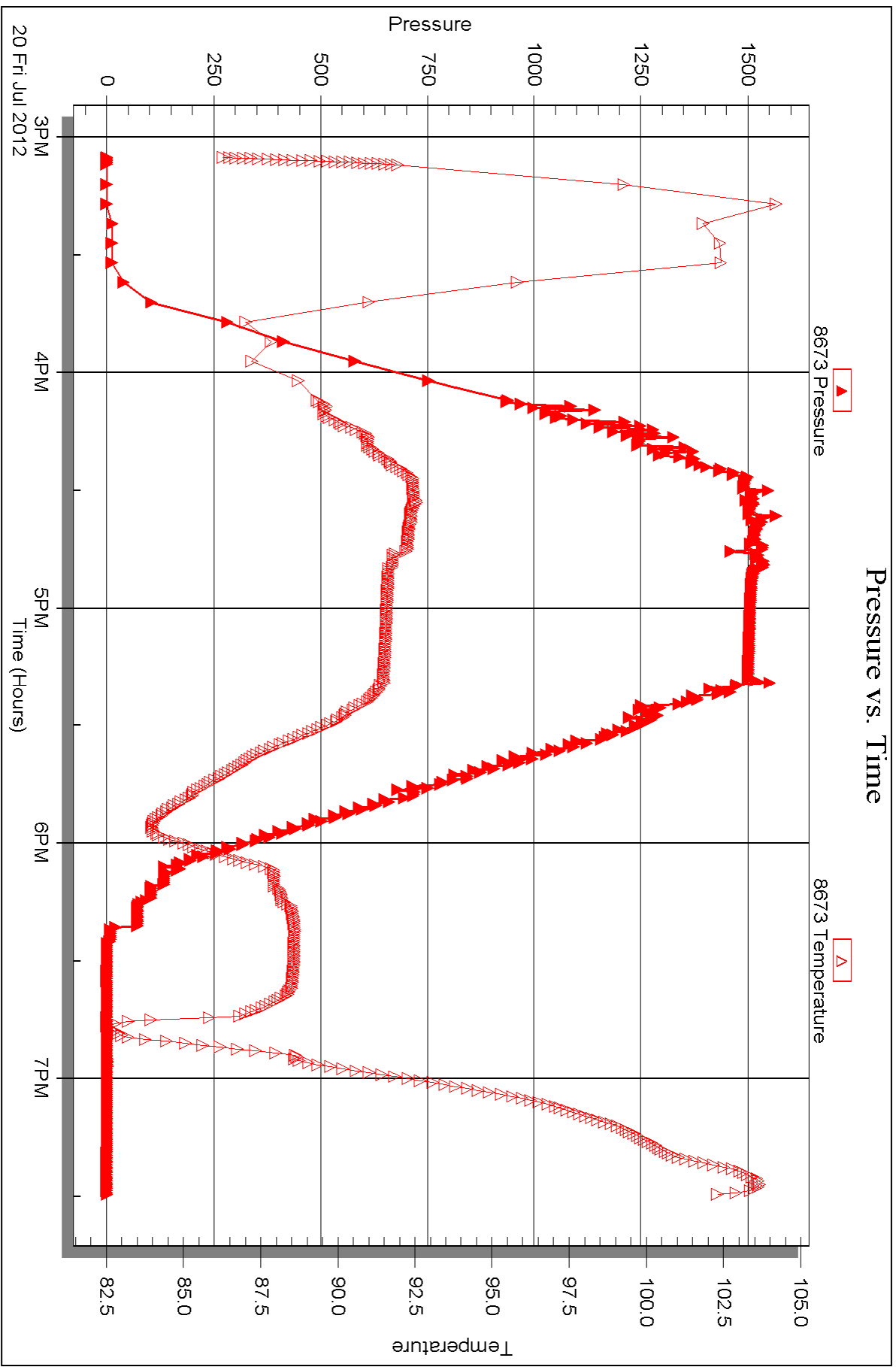


Serial #: 8673

Outside Barline Oil LLC.

Ratliff Trust #1-16

DST Test Number: 3





DRILL STEM TEST REPORT

Prepared For: **Barline Oil LLC.**

7804 E. Funston, STE. 209
2102 Dalton Witchita KS 67207

ATTN: Bill Ree

Ratliff Trust #1-16

16-2s-15w Smith,KS

Start Date: 2012.07.21 @ 00:10:05

End Date: 2012.07.21 @ 05:01:59

Job Ticket #: 47387 DST #: 4

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

Printed: 2012.07.26 @ 13:49:17

Barline Oil LLC.
16-2s-15w Smith,KS
Ratliff Trust #1-16
DST # 4
LKC-A
2012.07.21



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Barline Oil LLC.

16-2s-15w Smith,KS

7804 E. Funston, STE. 209
2102 Dalton Witchita KS 67207

Ratliff Trust #1-16

Job Ticket: 47387

DST#: 4

ATTN: Bill Ree

Test Start: 2012.07.21 @ 00:10:05

Tool Information

Drill Pipe:	Length: 2966.00 ft	Diameter: 3.80 inches	Volume: 41.61 bbl	Tool Weight: 2600.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 122.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 35000.00 lb
			<u>Total Volume: 42.21 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 30000.00 lb
Depth to Top Packer:	3091.00 ft			Final 34000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	39.00 ft			
Tool Length:	67.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

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

Shut In Tool	5.00			3068.00	
Hydraulic tool	5.00			3073.00	
Jars	5.00			3078.00	
Safety Joint	3.00			3081.00	
Packer	5.00			3086.00	28.00 Bottom Of Top Packer
Packer	5.00			3091.00	
Stubb	1.00			3092.00	
Recorder	0.00	8791	Inside	3092.00	
Recorder	0.00	8673	Outside	3092.00	
Perforations	35.00			3127.00	
Bullnose	3.00			3130.00	39.00 Bottom Packers & Anchor

Total Tool Length: 67.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Barline Oil LLC.
7804 E. Funston, STE. 209
2102 Dalton Wichita KS 67207
ATTN: Bill Ree

16-2s-15w Smith,KS
Ratliff Trust #1-16
Job Ticket: 47387 **DST#: 4**
Test Start: 2012.07.21 @ 00:10:05

Mud and Cushion Information

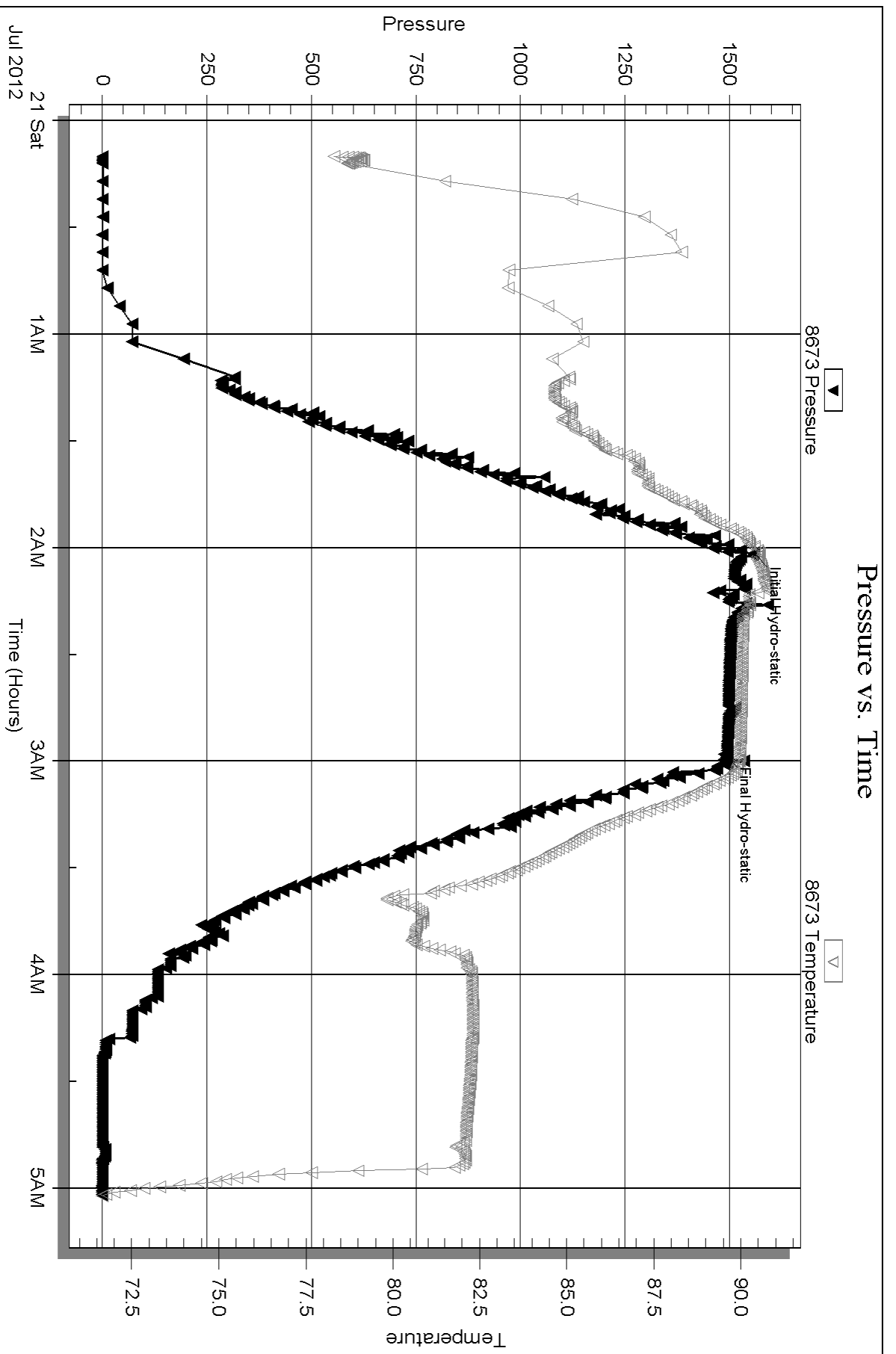
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 53.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.78 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 1000.00 ppm			
Filter Cake: 2.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
310.00	mud-100%	3.237

Total Length: 310.00 ft Total Volume: 3.237 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:



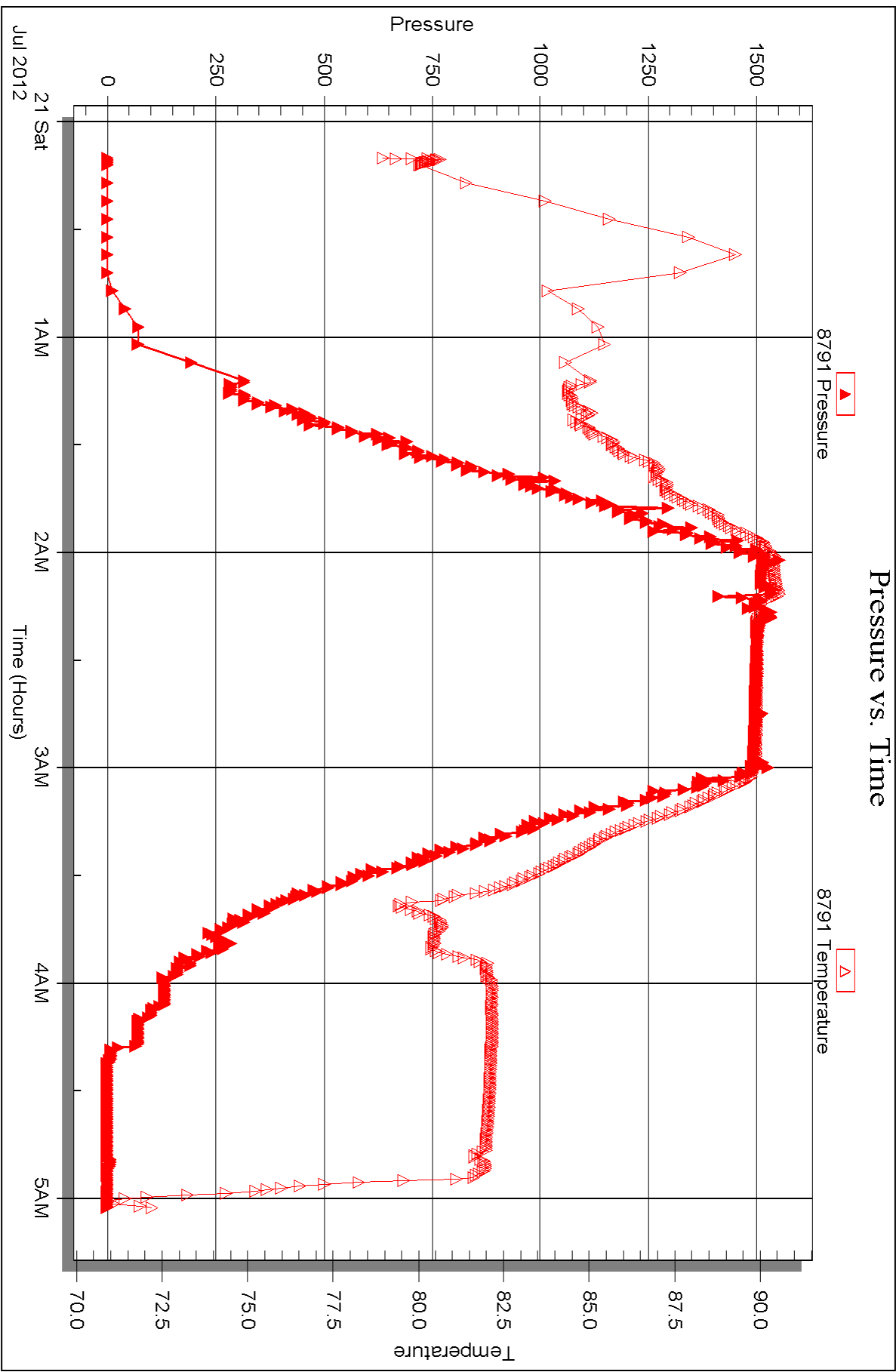
Serial #: 8791

Inside

Barline Oil LLC.

Ratliff Trust #1-16

DST Test Number: 4





DRILL STEM TEST REPORT

Prepared For: **Barline Oil LLC.**

7804 E. Funston, STE. 209
2102 Dalton Witchita KS 67207

ATTN: Bill Ree

Ratliff Trust #1-16

16-2s-15w Smith,KS

Start Date: 2012.07.20 @ 05:30:00

End Date: 2012.07.20 @ 11:24:30

Job Ticket #: 47388 DST #: 5

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

Printed: 2012.07.26 @ 13:48:05

Barline Oil LLC.
16-2s-15w Smith,KS
Ratliff Trust #1-16
DST # 5
LKC-A
2012.07.20



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Barline Oil LLC.
7804 E. Funston, STE. 209
2102 Dalton Wichita KS 67207
ATTN: Bill Ree

16-2s-15w Smith,KS
Ratliff Trust #1-16
Job Ticket: 47388 **DST#: 5**
Test Start: 2012.07.20 @ 05:30:00

GENERAL INFORMATION:

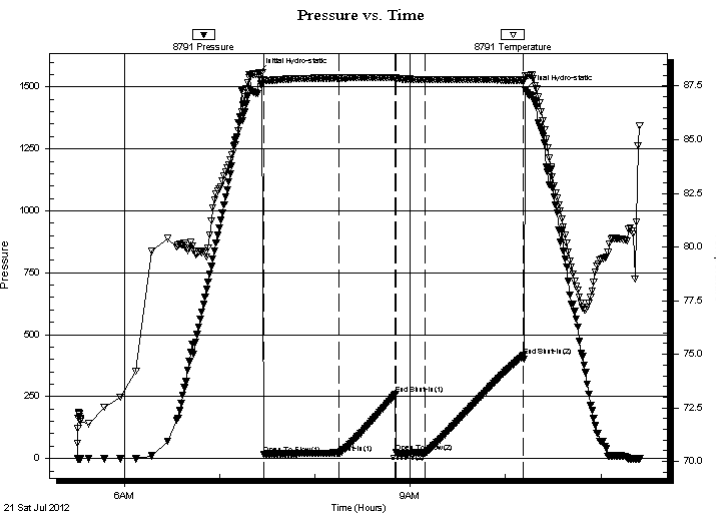
Formation: **LKC-A**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 07:27:30
Time Test Ended: 11:24:30
Interval: **3046.00 ft (KB) To 3130.00 ft (KB) (TVD)**
Total Depth: 3130.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Reference Elevations: 1995.00 ft (KB)
1990.00 ft (CF)
KB to GR/CF: 5.00 ft
Test Type: Conventional Bottom Hole (Reset)
Tester: Chuck Kreuzer Jr.
Unit No: 61

Serial #: 8791

Inside

Press @ Run Depth: 22.44 psig @ 3048.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2012.07.21 End Date: 2012.07.21 Last Calib.: 2012.07.20
Start Time: 05:30:05 End Time: 11:24:29 Time On Btm: 2012.07.21 @ 07:24:30
Time Off Btm: 2012.07.21 @ 10:12:30

TEST COMMENT: IF: Weak surface blow, Died in 15 mins
IS: No blow back over 60 mins.
FF: No blow
FS: No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1559.17	88.10	Initial Hydro-static
3	18.22	87.78	Open To Flow (1)
51	22.92	87.88	Shut-In(1)
86	261.05	87.91	End Shut-In(1)
87	24.36	87.77	Open To Flow (2)
105	22.44	87.80	Shut-In(2)
167	414.80	87.77	End Shut-In(2)
168	1488.10	87.99	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
8.00	mud w ith oil specs	0.04

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Barline Oil LLC.

16-2s-15w Smith,KS

7804 E. Funston, STE. 209
2102 Dalton Witchita KS 67207

Ratliff Trust #1-16

Job Ticket: 47388

DST#: 5

ATTN: Bill Ree

Test Start: 2012.07.20 @ 05:30:00

Tool Information

Drill Pipe:	Length: 2905.00 ft	Diameter: 3.80 inches	Volume: 40.75 bbl	Tool Weight: 2600.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 122.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 35000.00 lb
			<u>Total Volume: 41.35 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	9.00 ft			String Weight: Initial 34000.00 lb
Depth to Top Packer:	3046.00 ft			Final 34000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	84.00 ft			
Tool Length:	112.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

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

Shut In Tool	5.00			3023.00	
Hydraulic tool	5.00			3028.00	
Jars	5.00			3033.00	
Safety Joint	3.00			3036.00	
Packer	5.00			3041.00	28.00 Bottom Of Top Packer
Packer	5.00			3046.00	
Stubb	1.00			3047.00	
Perforations	1.00			3048.00	
Recorder	0.00	8791	Inside	3048.00	
Recorder	0.00	8673	Outside	3048.00	
Change Over Sub	1.00			3049.00	
Drill Pipe	62.00			3111.00	
Change Over Sub	1.00			3112.00	
Perforations	15.00			3127.00	
Bullnose	3.00			3130.00	84.00 Bottom Packers & Anchor

Total Tool Length: 112.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Barline Oil LLC.
7804 E. Funston, STE. 209
2102 Dalton Wichita KS 67207
ATTN: Bill Ree

16-2s-15w Smith,KS
Ratliff Trust #1-16
Job Ticket: 47388 **DST#: 5**
Test Start: 2012.07.20 @ 05:30:00

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 53.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.78 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 1000.00 ppm			
Filter Cake: 2.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
8.00	mud w ith oil specs	0.039

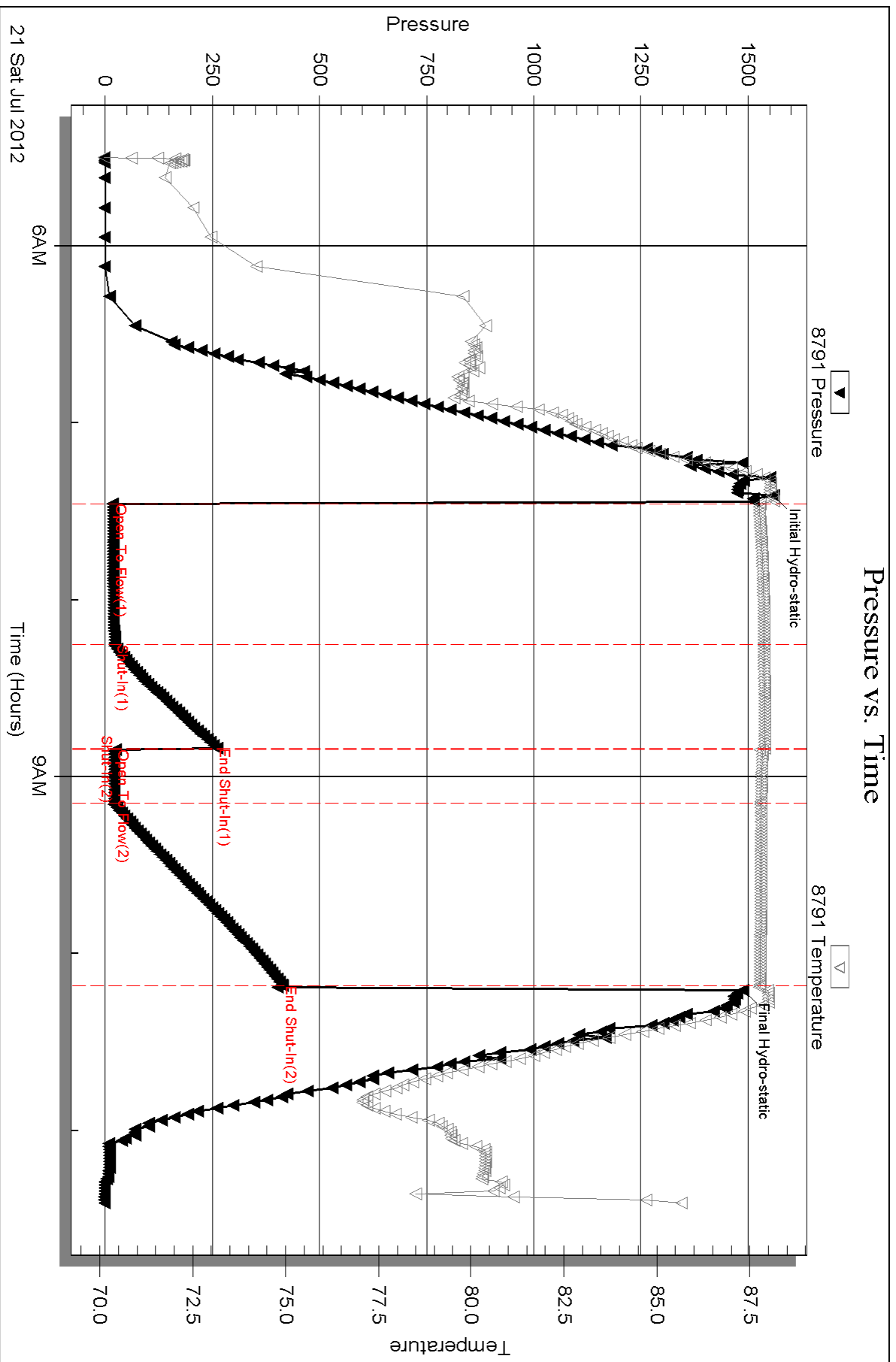
Total Length: 8.00 ft Total Volume: 0.039 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Barline Oil LLC.**

7804 E. Funston, STE. 209
2102 Dalton Witchita KS 67207

ATTN: Bill Ree

Ratliff Trust #1-16

16-2s-15w Smith,KS

Start Date: 2012.07.20 @ 20:00:00

End Date: 2012.07.21 @ 03:04:30

Job Ticket #: 47389 DST #: 6

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

Printed: 2012.07.26 @ 13:47:12

Barline Oil LLC.
16-2s-15w Smith,KS
Ratliff Trust #1-16
DST # 6
LKC-C
2012.07.20



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Barline Oil LLC.
7804 E. Funston, STE. 209
2102 Dalton Witchita KS 67207
ATTN: Bill Ree

16-2s-15w Smith,KS
Ratliff Trust #1-16
Job Ticket: 47389 **DST#: 6**
Test Start: 2012.07.20 @ 20:00:00

GENERAL INFORMATION:

Formation: **LKC-C**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 22:12:00
Time Test Ended: 03:04:30
Interval: **3147.00 ft (KB) To 3180.00 ft (KB) (TVD)**
Total Depth: 3180.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Reference Elevations: 1995.00 ft (KB)
1990.00 ft (CF)
KB to GR/CF: 5.00 ft
Test Type: Conventional Bottom Hole (Reset)
Tester: Chuck Kreuzer Jr.
Unit No: 61

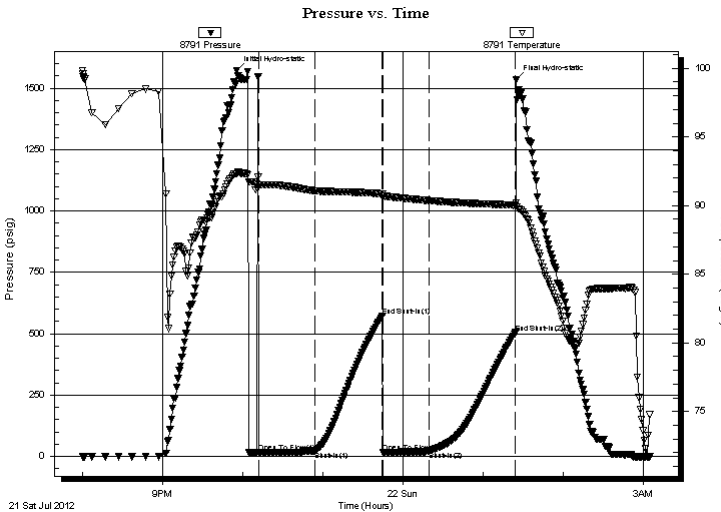
Serial #: 8791

Inside

Press @ Run Depth: 23.16 psig @ 3148.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2012.07.21 End Date: 2012.07.22 Last Calib.: 2012.07.21
Start Time: 20:00:05 End Time: 03:04:29 Time On Btm: 2012.07.21 @ 21:55:30
Time Off Btm: 2012.07.22 @ 01:24:30

TEST COMMENT: IF: Weak blow , Died in 1 min.
IS: No blow back.
FF: No blow .
FS: No blow back.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1572.88	92.33	Initial Hydro-static
17	16.71	91.38	Open To Flow (1)
59	23.19	91.06	Shut-In(1)
109	573.16	90.87	End Shut-In(1)
110	18.22	90.55	Open To Flow (2)
144	23.16	90.36	Shut-In(2)
209	504.32	90.02	End Shut-In(2)
209	1534.17	90.19	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	mud w iyh oil specs- Oil specs in tool	0.05

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Barline Oil LLC.
 7804 E. Funston, STE. 209
 2102 Dalton Witchita KS 67207
 ATTN: Bill Ree

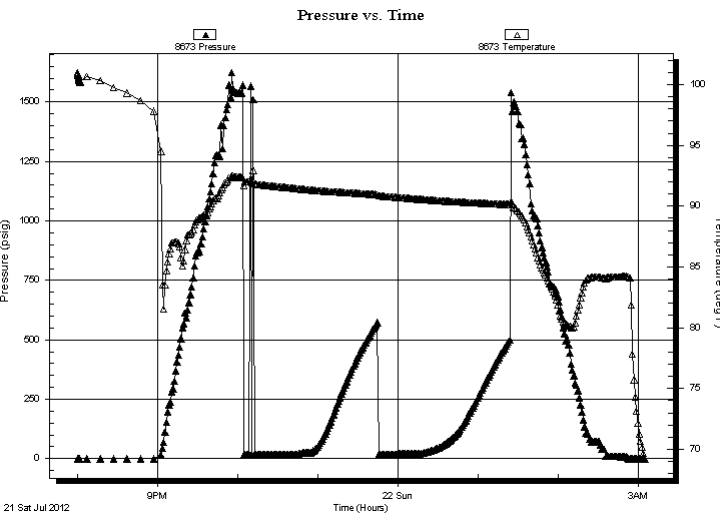
16-2s-15w Smith,KS
Ratliff Trust #1-16
 Job Ticket: 47389 **DST#: 6**
 Test Start: 2012.07.20 @ 20:00:00

GENERAL INFORMATION:

Formation: **LKC-C**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 22:12:00
 Time Test Ended: 03:04:30
 Interval: **3147.00 ft (KB) To 3180.00 ft (KB) (TVD)**
 Total Depth: 3180.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Chuck Kreutzer Jr.
 Unit No: 61
 Reference Elevations: 1995.00 ft (KB)
 1990.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 8673 Outside
 Press @ Run Depth: psig @ 3148.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2012.07.21 End Date: 2012.07.22 Last Calib.: 2012.07.21
 Start Time: 20:00:05 End Time: 03:04:59 Time On Btm:
 Time Off Btm:

TEST COMMENT: IF: Weak blow , Died in 1 min.
 IS: No blow back.
 FF: No blow .
 FS: No blow back.



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
10.00	mud w iyh oil specs- Oil specs in tool	0.05

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Barline Oil LLC.

16-2s-15w Smith,KS

7804 E. Funston, STE. 209
2102 Dalton Witchita KS 67207

Ratliff Trust #1-16

Job Ticket: 47389

DST#: 6

ATTN: Bill Ree

Test Start: 2012.07.20 @ 20:00:00

Tool Information

Drill Pipe:	Length: 3027.00 ft	Diameter: 3.80 inches	Volume: 42.46 bbl	Tool Weight:	2600.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 122.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose:	36000.00 lb
			<u>Total Volume: 43.06 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial	34000.00 lb
Depth to Top Packer:	3147.00 ft			Final	34000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	33.00 ft				
Tool Length:	61.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

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

Shut In Tool	5.00			3124.00	
Hydraulic tool	5.00			3129.00	
Jars	5.00			3134.00	
Safety Joint	3.00			3137.00	
Packer	5.00			3142.00	28.00 Bottom Of Top Packer
Packer	5.00			3147.00	
Stubb	1.00			3148.00	
Recorder	0.00	8791	Inside	3148.00	
Recorder	0.00	8673	Outside	3148.00	
Perforations	29.00			3177.00	
Bullnose	3.00			3180.00	33.00 Bottom Packers & Anchor

Total Tool Length: 61.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Barline Oil LLC.
7804 E. Funston, STE. 209
2102 Dalton Wichita KS 67207
ATTN: Bill Ree

16-2s-15w Smith,KS
Ratliff Trust #1-16
Job Ticket: 47389 **DST#: 6**
Test Start: 2012.07.20 @ 20:00:00

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 53.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.78 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 1000.00 ppm			
Filter Cake: 2.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	mud w iyh oil specs- Oil specs in tool	0.049

Total Length: 10.00 ft Total Volume: 0.049 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

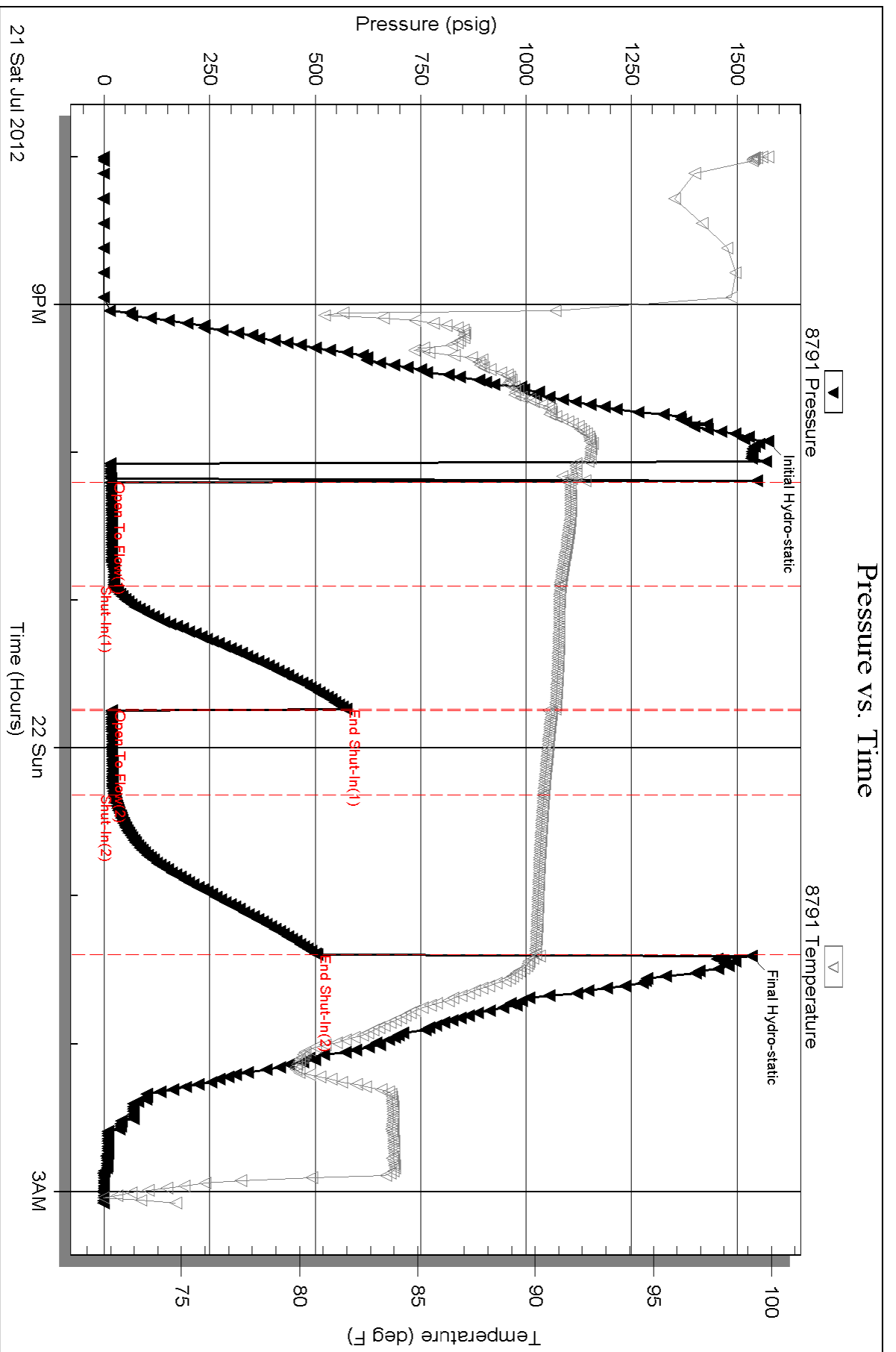
Serial #: 8791

Inside

Barline Oil LLC.

Ratliff Trust #1-16

DST Test Number: 6

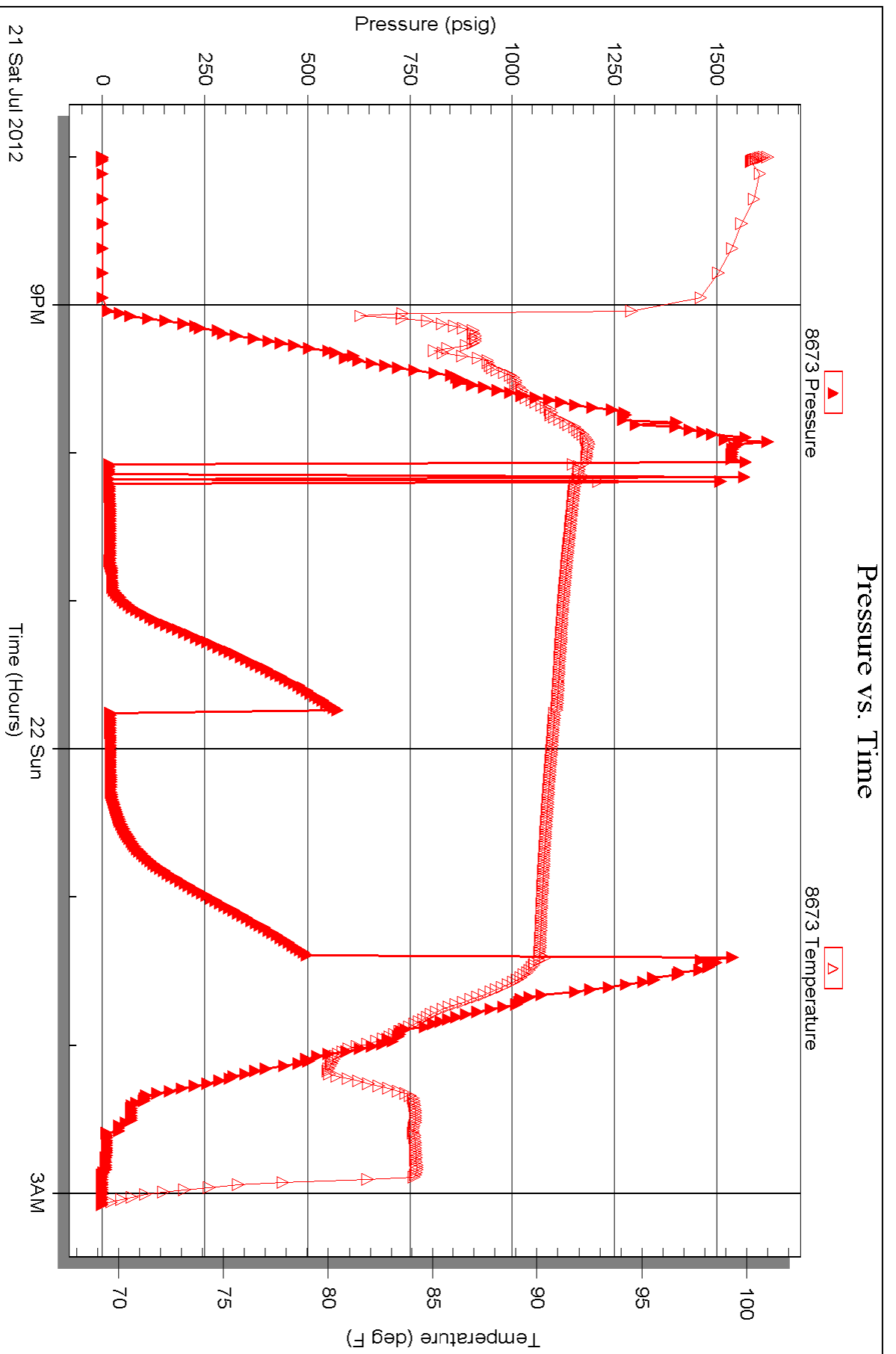


Serial #: 8673

Outside Barline Oil LLC.

Ratliff Trust #1-16

DST Test Number: 6





TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 47384

Well Name & No. Ratliff Trust #1-16 Test No. 1 Date 7-19-02
 Company Barline Oil, LLC Elevation 1995 KB 1990 GL
 Address 7804 E. Funston, Ste 209 2103 Dalton Wichita KS 67207
 Co. Rep / Geo. Bill Ree Rig WV-#12
 Location: Sec. 16 Twp. 2S Rge. 15W Co. Smith State Ks

Interval Tested 2813 2844 Zone Tested Topeka
 Anchor Length 31 Drill Pipe Run 2687 Mud Wt. 2.9
 Top Packer Depth 2808 Drill Collars Run 122 Vis 52
 Bottom Packer Depth 2813 Wt. Pipe Run -0 WL 8.0
 Total Depth 2844 Chlorides 600 ppm System LCM 3#

Blow Description IF: Strong blow, Built to B.O.B. in 2 mins
ISI: No blow back
FF: Fair blow After 5mins built to 7in over 30mins.
FSI: No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>30</u>	<u>Feet of MCW WCM with oil specs</u>		<u>20</u>	<u>80</u>	
<u>62</u>	<u>Feet of WCM</u>		<u>40</u>	<u>60</u>	
<u>340</u>	<u>Feet of MCW</u>		<u>70</u>	<u>30</u>	
<u>122</u>	<u>Feet of MCW</u>		<u>90</u>	<u>10</u>	

Rec Total 524 BHT 85.9 Gravity API RW .15 @ 70 °F Chlorides 42,000 ppm

(A) Initial Hydrostatic	<u>1394</u>	<input checked="" type="checkbox"/> Test	<u>1150</u>	T-On Location	<u>3:00</u>
(B) First Initial Flow	<u>125</u>	<input checked="" type="checkbox"/> Jars	<u>250</u>	T-Started	<u>4:25</u>
(C) First Final Flow	<u>199</u>	<input checked="" type="checkbox"/> Safety Joint	<u>75</u>	T-Open	<u>6:25</u>
(D) Initial Shut-In	<u>1075</u>	<input type="checkbox"/> Circ Sub		T-Pulled	<u>9:08</u>
(E) Second Initial Flow	<u>925</u>	<input type="checkbox"/> Hourly Standby		T-Out	<u>11:28</u>
(F) Second Final Flow	<u>911</u>	<input checked="" type="checkbox"/> Mileage	<u>90 x 2 = 180 x 1.55 = 279</u>	Comments	<u>They would be told to shut off hole at 3:00pm Not out till 4:30am</u>
(G) Final Shut-In	<u>1079</u>	<input type="checkbox"/> Sampler			
(H) Final Hydrostatic	<u>1337</u>	<input type="checkbox"/> Straddle		<input type="checkbox"/> Ruined Shale Packer	
Initial Open	<u>15</u>	<input type="checkbox"/> Shale Packer		<input type="checkbox"/> Ruined Packer	
Initial Shut-In	<u>60</u>	<input type="checkbox"/> Extra Packer		<input type="checkbox"/> Extra Copies	
Final Flow	<u>30</u>	<input type="checkbox"/> Extra Recorder		Sub Total	<u>0</u>
Final Shut-In	<u>60</u>	<input type="checkbox"/> Day Standby		Total	<u>1754</u>
		<input type="checkbox"/> Accessibility		MP/DST Disc't	
		Sub Total	<u>1754</u>		

Approved By Bill Ree Our Representative Chuck [Signature]

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



TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 47385

Well Name & No. Ratliff Trust # 1-16 Test No. 2 Date 7-20-2012
 Company Barlin oil, LLC, Elevation 1995 KB 1990 GL
 Address 7804 E. Funston, Ste. 209 2103 Dalton Wichita Ks. 67207
 Co. Rep / Geo. Bill Ree Rig Wm#12
 Location: Sec. 16 Twp. 25 Rge. 15W Co. Smith State Ks.

Interval Tested 3048 3092 Zone Tested OKC/LP To Peka
 Anchor Length 44 Drill Pipe Run 2907 Mud Wt. 8.9
 Top Packer Depth 3043 Drill Collars Run 122 Vis 55
 Bottom Packer Depth 3048 Wt. Pipe Run 0 WL 8.8
 Total Depth 3092 Chlorides 1000 ppm System LCM 3#

Blow Description IF: Weak blow, Died in 5 mins.
ISI: No blow back
FF: No blow
FST: No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>mud</u>			<u>100</u>	

Rec Total 5 BHT 91 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>1644</u>	<input checked="" type="checkbox"/> Test 1150	T-On Location <u>2:20</u>
(B) First Initial Flow <u>18</u>	<input checked="" type="checkbox"/> Jars 250	T-Started <u>2:55</u>
(C) First Final Flow <u>17</u>	<input checked="" type="checkbox"/> Safety Joint 75	T-Open <u>5:05</u>
(D) Initial Shut-In <u>304</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>6:35</u>
(E) Second Initial Flow <u>18</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>8:25</u>
(F) Second Final Flow <u>18</u>	<input checked="" type="checkbox"/> Mileage <u>90x2 = 180x155</u> 279	Comments _____
(G) Final Shut-In <u>497</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>1497</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____
	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Packer _____
Initial Open <u>15</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
Final Flow <u>15</u>	<input type="checkbox"/> Day Standby _____	Total <u>1754</u>
Final Shut-In <u>30</u>	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1754</u>	

Approved By _____ Our Representative Chuck Meyer

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



TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 47386

Well Name & No. Ratliff Trust #1-16 Test No. 3 Date 7-20-2012
 Company Barin oil, LLC. Elevation 1995 KB 1900 GL
 Address 2804 E. Funston, ste 209 2103 Dalton Wichita Ks 67207
 Co. Rep / Geo. Bill Ree Rig WW#12
 Location: Sec. 16 Twp. 2S Rge. 15W Co. Smith State Ks.

Interval Tested 3091 3130 Zone Tested LKc-A
 Anchor Length 39 Drill Pipe Run 2966 Mud Wt. 9.3
 Top Packer Depth 3086 Drill Collars Run 122 Vis 53
 Bottom Packer Depth 3091 Wt. Pipe Run 0 WL 8.8
 Total Depth 3130 Chlorides 1000 ppm System LCM 3#

Blow Description skd 15 ft. - still 6 ft. from bottom tool opened, couldn't get to bottom

Rec	Feet of	%gas	%oil	%water	%mud
<u>310</u>	<u>mud</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total _____ BHT _____ Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic Test 950 T-On Location 14:55
 (B) First Initial Flow Jars 250 T-Started 15:05
 (C) First Final Flow Safety Joint 75 T-Open _____
 (D) Initial Shut-In Circ Sub _____ T-Pulled 17:00
 (E) Second Initial Flow Hourly Standby _____ T-Out 19:30
 (F) Second Final Flow Mileage 90x.2 = 180 x 1.55 = 279 Comments _____
 (G) Final Shut-In Sampler _____
 (H) Final Hydrostatic Straddle _____
 Shale Packer _____
 Ruined Shale Packer _____
 Ruined Packer 320
 Initial Open _____
 Extra Packer _____
 Initial Shut-In _____
 Extra Recorder _____
 Final Flow _____
 Day Standby _____
 Final Shut-In _____
 Accessibility _____
 Sub Total 1554
 Sub Total 1874
 MP/DST Disc't _____

Approved By _____

Our Representative Chuck Koger



TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 47388

Well Name & No. Ratiff Trust #1-16 Test No. 5 Date 7-21-2012
 Company Barlin oil, LLC. Elevation 1995 KB 1900 GL
 Address 7804 E. Funston, Ste. 209 2103 Wichita KS. 67207
 Co. Rep / Geo. Bill Ree Rig WW#12
 Location: Sec. 16 Twp. 2S Rge. 15W Co. Smith State Ks.

Interval Tested 3046 3130 Zone Tested LKC-A
 Anchor Length 84 Drill Pipe Run 2905 Mud Wt. 9.8
 Top Packer Depth 3041 Drill Collars Run 122 Vis 53
 Bottom Packer Depth 3046 Wt. Pipe Run -0- WL 8.8
 Total Depth 3130 Chlorides 1000 ppm System LCM 3#

Blow Description IF: Weak surface blow, died in 15 mins.

ISI: No blow back over 60mins.

FF: No blow

FSD: No blow back over 60mins.

Rec	Feet of	%gas	%oil	%water	%mud
<u>8</u>	<u>mud with oil specs</u>				

Rec Total 8 BHT 88 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>1559</u>	<input checked="" type="checkbox"/> Test 1150	T-On Location <u>7-20-12 18:00</u>
(B) First Initial Flow <u>18</u>	<input checked="" type="checkbox"/> Jars 250	T-Started <u>7-21-12 5:30</u>
(C) First Final Flow <u>23</u>	<input checked="" type="checkbox"/> Safety Joint 75	T-Open <u>7:27</u>
(D) Initial Shut-In <u>261</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>10:05</u>
(E) Second Initial Flow <u>24</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>11:24</u>
(F) Second Final Flow <u>22</u>	<input checked="" type="checkbox"/> Mileage	Comments _____
(G) Final Shut-In <u>415</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1488</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
Initial Open <u>30</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Flow <u>15</u>	<input type="checkbox"/> Day Standby	Total <u>1475</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Accessibility	MP/DST Disc't _____
	Sub Total <u>1475</u>	

Approved By _____

Our Representative Chuck [Signature]

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



TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 47389

Well Name & No. Rattiff trust #116 Test No. 6 Date 7-21-2012
 Company Bertin oil, LLC. Elevation 1905 KB 1900 GL
 Address 7804 E. Funston, Ste 209 2103 Wichita
 Co. Rep / Geo. Bill Ree Rig WVA12
 Location: Sec. 16 Twp. 25 Rge. 15W Co. Smith State Ks.

Interval Tested 3147 3180 Zone Tested LRC-C
 Anchor Length 33 Drill Pipe Run 3027 Mud Wt. 9.3
 Top Packer Depth 3142 Drill Collars Run 122 Vis 53
 Bottom Packer Depth 3147 Wt. Pipe Run 0 WL 8.8
 Total Depth 3180 Chlorides 1000 ppm System LCM 3#

Blow Description IF: Weak blow, Dead in 1 min.

ISF: No blow back

FF: No blow

FSI: No blow back.

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>Mud with oil specs - oil specs in fool</u>				

Rec Total 10 BHT 90 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic	<u>1572</u>	<input checked="" type="checkbox"/> Test	1150	T-On Location	<u>18:30</u>
(B) First Initial Flow	<u>17</u>	<input checked="" type="checkbox"/> Jars	250	T-Started	<u>20:00</u>
(C) First Final Flow	<u>23</u>	<input checked="" type="checkbox"/> Safety Joint	75	T-Open	<u>22:12</u>
(D) Initial Shut-In	<u>573</u>	<input type="checkbox"/> Circ Sub		T-Pulled	<u>1:15</u>
(E) Second Initial Flow	<u>18</u>	<input type="checkbox"/> Hourly Standby		T-Out	<u>3:04</u>
(F) Second Final Flow	<u>23</u>	<input checked="" type="checkbox"/> Mileage	279x2 558	Comments	<u>was told at 4:AM on 24 th at 10:00 AM</u>
(G) Final Shut-In	<u>504</u>	<input type="checkbox"/> Sampler			<u>Load tools 9:00</u>
(H) Final Hydrostatic	<u>1534</u>	<input type="checkbox"/> Straddle		<input type="checkbox"/> Ruined Shale Packer	
Initial Open	<u>30</u>	<input type="checkbox"/> Shale Packer		<input checked="" type="checkbox"/> Ruined Packer	<u>320</u>
Initial Shut-In	<u>60</u>	<input type="checkbox"/> Extra Packer		<input type="checkbox"/> Extra Copies	
Final Flow	<u>30</u>	<input type="checkbox"/> Extra Recorder		Sub Total	<u>800+320</u>
Final Shut-In	<u>60</u>	<input type="checkbox"/> Day Standby	1d 25h	Total	<u>3153</u>
		<input type="checkbox"/> Accessibility		MP/DST Disc't	
		Sub Total	<u>2033</u>		

Approved By _____

Our Representative Chuck Hagan

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

Conservation Division
Finney State Office Building
130 S. Market, Rm. 2078
Wichita, KS 67202-3802



Phone: 316-337-6200
Fax: 316-337-6211
<http://kcc.ks.gov/>

Mark Sievers, Chairman
Thomas E. Wright, Commissioner
Shari Feist Albrecht, Commissioner

Sam Brownback, Governor

September 11, 2012

Bill Ree
Barline Oil, LLC
7804 E FUNSTON, STE. 209
WICHITA, KS 67207

Re: ACO1
API 15-183-20018-00-00
RATIFF TRUST 1-16
SW/4 Sec.16-02S-15W
Smith County, Kansas

Dear Production Department:

We are herewith requesting that the Well Completion Form ACO-1 and attached information for the subject well be held confidential for a period of two years.

Should you have any questions or need additional information regarding subject well, please contact our office.

Respectfully,
Bill Ree

ALLIED OIL & GAS SERVICES, LLC 056169

Federal Tax I.D.# 20-5975804

EMIT TO P.O. BOX 31
RUSSELL, KANSAS 67665

SERVICE POINT: Russell

DATE <u>7-16-12</u>	SEC. <u>16</u>	TWP. <u>20</u>	RANGE <u>15</u>	CALLED OUT	ON LOCATION	JOB START <u>7:30</u>	JOB FINISH <u>2:17</u>
EASE <u>Ret Lift</u>	TRUST WELL # <u>1-16</u>	LOCATION <u>Kinsington 6 N E NE 1/4</u>			COUNTY <u>Smith</u>	STATE <u>KS</u>	
OLD OR NEW (Circle one)							

CONTRACTOR W.W. 12 OWNER _____
 TYPE OF JOB Surface
 HOLE SIZE 12 1/4 T.D. 211
 CASING SIZE 8 5/8 DEPTH 210
 TUBING SIZE _____ DEPTH _____
 DRILL PIPE _____ DEPTH _____
 TOOL _____ DEPTH _____
 PRES. MAX _____ MINIMUM _____
 MEAS. LINE _____ SHOE JOINT 15
 CEMENT LEFT IN CSG. 15
 PERFS. _____
 DISPLACEMENT 12 1/4 661

CEMENT AMOUNT ORDERED	<u>150</u>	<u>27.64</u>	<u>4137.60</u>
COMMON	<u>150</u>	@ <u>16.25</u>	<u>2437.50</u>
POZMIX		@	
GEL	<u>3</u>	@ <u>21.25</u>	<u>63.75</u>
CHLORIDE	<u>3</u>	@ <u>9.20</u>	<u>27.60</u>
ASC		@	
HANDLING	<u>150</u>	@ <u>2.25</u>	<u>337.50</u>
MILEAGE	<u>12,640</u>	@ <u>.11</u>	<u>1390.40</u>
TOTAL			<u>4538.15</u>

EQUIPMENT

PUMP TRUCK. CEMENTER John
 # 409 HELPER Tony
 BULK TRUCK
 # 378 DRIVER Robert Y
 BULK TRUCK
 # _____ DRIVER _____

REMARKS:

run 5 at 8 5/8 27.64, 4137.60 circulation
 20 min mix 12 1/4 31.25 210
 No Play 12 1/4 661 210
 No cement DID circulate to surface
 Thanks!

SERVICE

DEPTH OF JOB		
PUMP TRUCK CHARGE		<u>1125.00</u>
EXTRA FOOTAGE	@	
MILEAGE M/LW <u>80</u>	@ <u>7.10</u>	<u>568.00</u>
MANIFOLD	@	
<u>M/LW 80</u>	@ <u>4.10</u>	<u>328.00</u>
TOTAL <u>2021.00</u>		

CHARGE TO: Barline Oil Co.
 STREET _____
 CITY _____ STATE _____ ZIP _____

PLUG & FLOAT EQUIPMENT

	@	
	@	
	@	
	@	
	@	
TOTAL <u>0</u>		

To: Allied Oil & Gas 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 Chris Proulx
 SIGNATURE [Signature]

SALES TAX (If Any) 203.83
 TOTAL CHARGES 6,543.15
 DISCOUNT 20/50 1989.75 IF PAID IN 30 DAYS
net 4553.40 before tax

ALLIED OIL & GAS SERVICES, LLC 053683

Federal Tax I.D.# 20-5975804

REMIT TO P.O. BOX 31
RUSSELL, KANSAS 67665

SERVICE POINT:
Great Bend, KS

DATE <u>11-24-12</u>	SEC. <u>16</u>	TWP. <u>25</u>	RANGE <u>15</u>	CALLED OUT	ON LOCATION	JOB START <u>4:00 pm</u>	JOB FINISH <u>7:00 pm</u>
LEASE <u>Rotchford trust</u>	WELL # <u>1-16</u>	LOCATION <u>Kensington, KS</u>	<u>17 north</u>	COUNTY <u>MITCHELL</u>	STATE <u>KS</u>		
OLD OR NEW (Circle one) <u>NEW</u>		<u>1/4 east, north into</u>		<u>103</u>		<u>1.3</u>	

CONTRACTOR <u>DWW #12</u>	OWNER <u>Barline Oil Co</u>
TYPE OF JOB <u>Notary Area</u>	
HOLE SIZE <u>11 7/8</u>	T.D. <u>3760</u>
CASING SIZE	DEPTH
TUBING SIZE	DEPTH
DRILL PIPE	DEPTH
TOOL	DEPTH
PRES. MAX	MINIMUM
MEAS. LINE	SHOE JOINT
CEMENT LEFT IN CSG.	
PERFS.	
DISPLACEMENT	

CEMENT AMOUNT ORDERED	<u>230 SKS 60/40</u>
for <u>4 1/2 gal 1/4 loss</u>	
COMMON	<u>138 @ 16.25 2,242.50</u>
POZMIX	<u>92 @ 8.50 782.00</u>
GEL	<u>8 @ 21.25 170.00</u>
CHLORIDE	@
ASC	@
<u>Flt-seal 58lbs</u>	<u>@ 2.70 156.60</u>
	@
	@
	@
	@
	@
HANDLING	<u>247.20</u> @ <u>2.10 519.12</u>
MILEAGE	<u>10.32 X 80 X 2.35 1940.16</u>
	<u>825.60</u>
TOTAL	<u>5,810.38</u>

EQUIPMENT	
PUMP TRUCK # <u>366</u>	CEMENTER <u>Greg Reletzke</u>
	HELPER <u>Kevin Eddy</u>
BULK TRUCK # <u>341</u>	DRIVER <u>Kevin Weighous</u>
BULK TRUCK #	DRIVER

REMARKS:
1 1/2 hrs mix 25 SKS @ 3790'
1 1/2 hrs mix 25 SKS @ 1450'
2 1/2 hrs plug mix 100 SKS @ 1095'
1 1/2 hrs plug mix 40 SKS @ 260'
5 1/2 hrs mix 10 SKS @ 40'
50 SKS in 1/2 note
Hole plugged @ 5:00 pm

CHARGE TO: Barline Oil Co.
 STREET _____
 CITY _____ STATE _____ ZIP _____

SERVICE	
DEPTH OF JOB	<u>3790</u>
PUMP TRUCK CHARGE	<u>1250.00</u>
EXTRA FOOTAGE	@
MILEAGE	<u>HVM 80 @ 7.00 560.00</u>
MANIFOLD	@
	<u>LVM 80 @ 4.00 320.00</u>
	@

TOTAL 3705.00
2,130.00

PLUG & FLOAT EQUIPMENT	
	@
	@
	@
	@
	@

To: Allied Oil & Gas 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 Colin Pharr
 SIGNATURE Colin Pharr

TOTAL _____
 SALES TAX (If Any) 579.64
 TOTAL CHARGES 8,915.38 7,940.38
 DISCOUNT 25% 2228.95 1,985.10
\$4,686.53 \$5,955.28
 IF PAID IN 30 DAYS

AND
GEOLOGICAL REPORT

SAMPLE LOG

COMPANY Barline Oil, LLC

LEASE Ratliff Tr. WELL NO. 1-16

FIELD Wildcat

LOCATION S/2 SW SW

SEC. 16 TWP. 2 S. RGE. 15 W.

COUNTY Smith STATE KANSAS

CONTRACTOR WW Drig RIG NO. 12

COMMENCED DRILLING 7/16/12

COMPLETED DRILLING 7/25/12

RDT 3960 FEET LTD 3960 FEET

MUD UP AT 2400 FEET MUD TYPE Chemical

ELEVATIONS

KB 1981 FEET

DF _____ FEET

GL 1973 FEET

MEASUREMENTS ARE ALL FROM KB

CASINO

8 5/8 @ 211

W/150 SX

D & A

ELECTRICAL SURVEYS

CNL-CDL

DIL

MEL

Sonic

SAMPLES SAVED FROM 2500 FEET TO RTD 3960 FEET

DRILLING TIME KEPT FROM 2500 FEET TO _____ FEET

SAMPLES EXAMINED FROM 2500 FEET TO _____ FEET

GEOLOGICAL SUPERVISION FROM 2000 FEET TO _____ FEET

GEOLOGIST Bill Ree

DRILL STEM TESTING BY Trilobite Tasting

GAS DETECTOR NBC-Hot Wire & Chromatograph

REMARKS The Topeka (Oread), Lansing "A", Lansing "B" zones had fair to good shows of oil in samples, as well as in the DST tool, but were found to be impermeable after drill stem testing. This well would likely have been productive but for the lack of permeability.

It is most important now to reinterpret the 3-D seis in an effort to determine where permeability is most likely to occur on the prospect.

Bill Ree

LEGEND

Anhydrite	Salt	Sandstone	Shale	Carb sh	Limestone	Ool. Lime	Chert	Dolomite

DRILLING TIME IN MINUTES PER FOOT
Rate of Penetration Decreases

5" 10" 15" 20" 25"

DEPTH

LITHOLOGY

SAMPLE DESCRIPTIONS

OIL SHOWS

REMARKS

2550

ls, lt gray, f. xlm/ds, sl foss

sh, lt gray

ls tan & gray ds

60

60- sh, lt gry
ls, tan & gry, ds
Red sh strks
ls, wh, ds to lt. gry

80- sh, gry
sh & ls AA

2600- ls, lt gry to wh,
xin to s/chalky - soft

20- AA

40- ls & scz + sh AA
sh, red/gry & gry
ls, wh/lt gry, ds,
frg, sl foss

60- ls & sh AA

Statler +24'
2673 (-698)

Log 2677 (-696)

80- ls, wh, s/chalky to
ds & brittle
gry sh strks
ls, gry, ds, sl frg &
foss.

2700- gry sh

Tarkio +23'
2718 (-737)

Log 2717 (-736)

20- ls, wh, ds to s/chalky

40- AA

60- sh, red

ls, tan/gry, ds
to gry mott to wh,
ds/sl. foss

80- shly sd, lt gry, v. f. gr

Howard

+22'

Howard +22
2795 (-814)

Log 2795 (-814)

severy sh +20
2814 (-833)

Log 2814 (-833)

severy sd
2824 (-843)
Log 2824 (-843)

IT THICK

Bs sd 2841 (-860)

Log 2839 (-858)

Topeka +5'

2851 (-870)
Log 2850 (-869)

shly sd, lt gry, v.f. gr

2800

ls, gry, ds to sl. chiky
& sl foss

20

sh red

DST #1

ss, gry mott, f. gr
very cal, spkd to
sdn is

Der 40
314°

ls, tan/lt gry, xln/ds
to f. gran, int gr &
w/ sptr lt brn str

DST #1 28

15/60/3

1st Op - BOE

2d Op - FB-

Rec. 92' W

462

SIP 1075

IFP 125-1

FFP 925-

HP 1394

60

ls, gry, ds & wh, ds

Vis 55

WT 8.9

WL 8.8

80

ls, gry/wh, ds to chiky

sh, blk to dk gry

2900

ls, wh, ds-gran- s/chiky
scat blk opa Δ, foss

sh strks gry to red

20

ls, crm/wh, xln-chiky
& gran, tr int part φ

40

ls, wh, chiky w/sh,
red-gry-blk

60

ls, wh/gry, frag-foss
sl chiky

ls, tan, xln/frag-soft
sl. foss - drlg brk
sl chiky

Lecompton
2983 (-1002)

Log 2982 (-1001)

80

AA
soft red sh

ls, wh, chiky/xln/ds
to pgr

3000

ls, AA, sl foss/frag

Red sh strks

Red sh strks
 1s, wh, ds to s/chiky
 1s, tan, ds
 1s, wh, s/chiky / ds
 scat Δ, 1+ grn, foss
 1s, 1+ grn, ds. No φ
 1s, grn, frq, w/int part
 φ w/ brn str - No cut

Heebner +3'
 3073 (-1097)
 Log 3072 (-1091)

DST #2

SSFO

DST #2 3
 15/30/15
 1st op - WB
 2nd op - No
 Rec. 5' Mu
 SIP 304-4
 IFP 18-17
 FFP 18-18
 HP 1644-

Toronto +5'
 3099 (-1118)
 Log 3100 (-1119)

DST #5

Vis 5.3
 Wt 9.3
 W 4.8

DST #3 3
 Could not

Lansing +3'
 3121 (-1140)
 Log 3120 (-1139)

DST #4

Vis 4.9
 Wt 9.3
 W 4 7.6

DST #4 3
 Packer F

DST #5 3
 30/60/15
 1st op - WK
 died
 2d op - No
 Rec 8' Mu

"B" Zone +6'
 3159 (-1178)
 Log 3159 (-1178)
 Fair to good odor

DST #6

SFO

SFO
 SIP 261-
 IFP 18-2
 FFP 24-2
 HP 1550-1

"C" Zone +3'
 3180 (-1199)
 Log 3181 (-1200)

DST #6

SFO?

DST #6 3
 30/60/15
 1st op - WB
 2d op - No b
 Rec. 10' Mu

3200

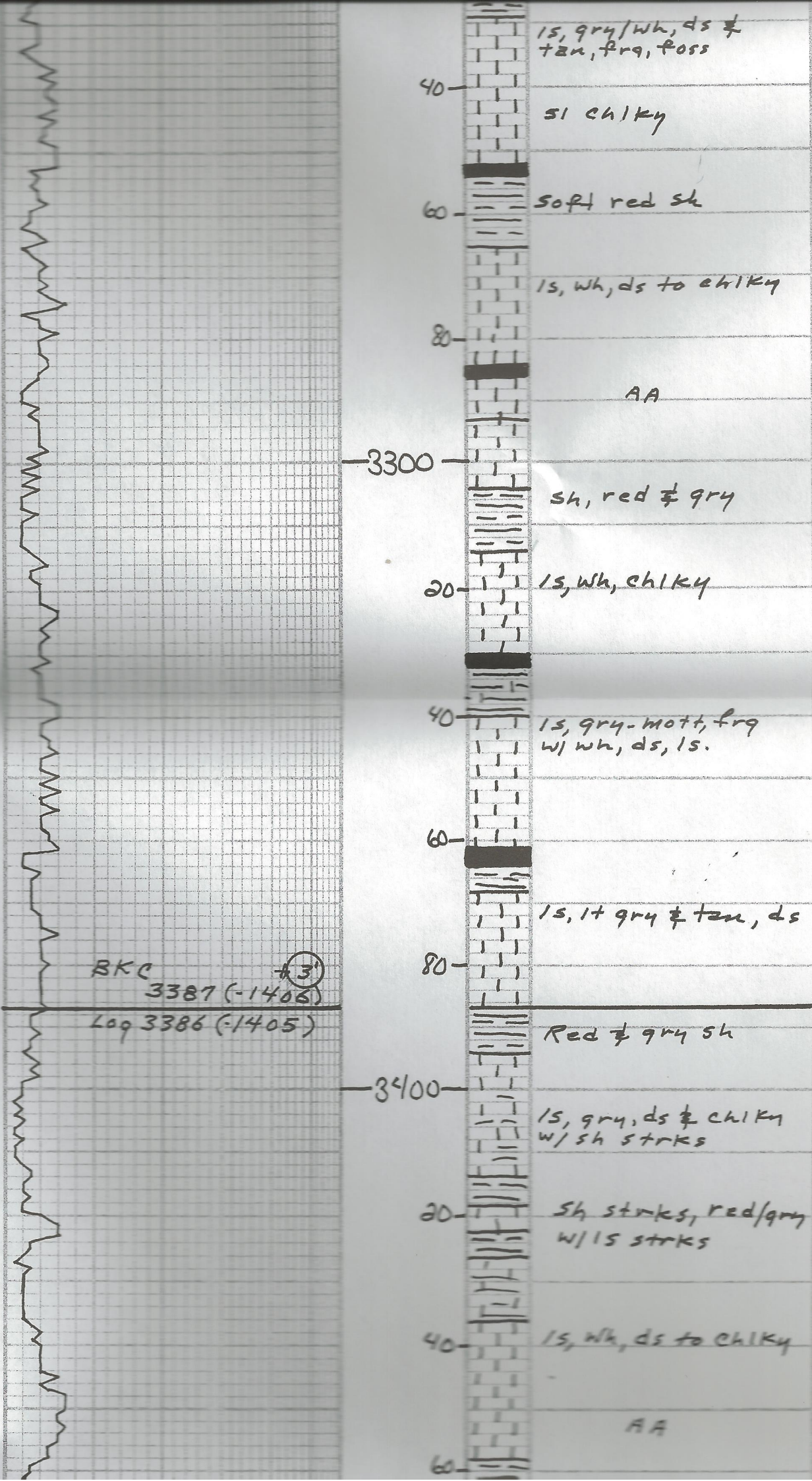
SFO in
 SIP 573-
 IFP 17-23
 FFP 18-23
 HP 1572-

30

1s, wh, tan, ds & s/chiky
 1s, crm/wh, ds to gran
 Frq & chiky

1s, grn/wh, ds &
 tan, frq, foss

Vis
wt
WL



ls, gry/wh, ds &
tan, frq, foss

40

sl chiky

60

soft red sh

80

ls, wh, ds to chiky

AA

3300

sh, red & gry

20

ls, wh, chiky

40

ls, gry-mott, frq
w/ wh, ds, ls.

60

ls, lt gry & tan, ds

80

BKC 3387 (-1406) ⁽³⁾

Log 3386 (-1405)

Red & gry sh

3400

ls, gry, ds & chiky
w/ sh strks

20

sh strks, red/gry
w/ ls strks

40

ls, wh, ds to chiky

AA

60

60
80
3500
20
40
60
80
3600
20
40
60
80

sh & ls strks AA

ls, wh, lt gr, ds to s/chiky

ls, gr, ds to sl, chiky
bac. frq ls

ls, lt gr, ds/frq

ls, wh, f. gr., sdy
pyritic

sh, red-yell-green

v. hd blk material
w/v.c. sh AA

ls, wh, ds

inc. soft yell sh
w/ls, wh, hd-ds

sh, red-gr, lavender
Few pcs Δ, wh, opa.

inc. yell & v.c. sh
2-3 pcs Δ, wh/gr, inc Δ, AA opa
v.c.

v.c. shly Cgl,
NO Δ

AA

AA

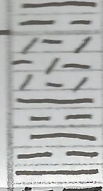
Cherokee sh (1)
3559 (-1578)
Log 3559 (-1578)

Possible Cgl
3620 (-1639)

Cgl
3646 (-1665)

Log 3650 (-1669)

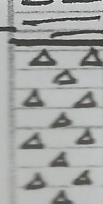
3700



Tr dolo, brn, f. xln
to f. suc.

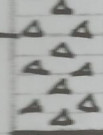
MISSISSIPPI Chert
3721 (-1740)
Log 3718 (-1737)

20



cht, wh, vit - glassy
in pt, opq/transl.
l pg. cr. xln, excl
φ, N.S.

40

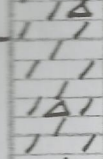


cht, tan & wh, vit
sl chiky - tr. mott.

Viola
3752 (-1769)
Log 3751 (-1770)

35

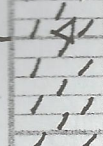
60



Dolo, wh, f-m xln,
ds, no vis φ

AA

80



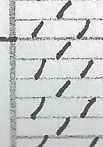
Dolo, wh, tan, f-m
xln - dec in Δ

3800



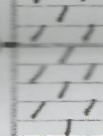
Dolo, tan, ds / f-cr
xln, gd φ in pt int
part N.S.

20



Dolo, crm, f-cr xln -
gd int. xln φ. N.S.

40



Dolo, tan, cr. xln.
V. gd vuggy & int xln
φ. N.S.

Simpson sh
3850 (-1869)
Log 3854 (-1873)

21

60

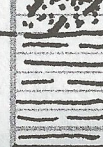


sh, green to gry

Vis
wt
wl

Simpson dolo
3872 (-1891)
Log 3878 (-1897)

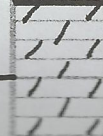
80



Dolo & sd, f. xln/ds
tan, gry - wh, & v. f. gr
Tr. sd, m-cr. grn, Qtzitic
Tr Δ, wh, vit opq

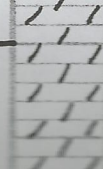
Arbuckle
3892 (-1910)
Log 3895 (-1914)

20



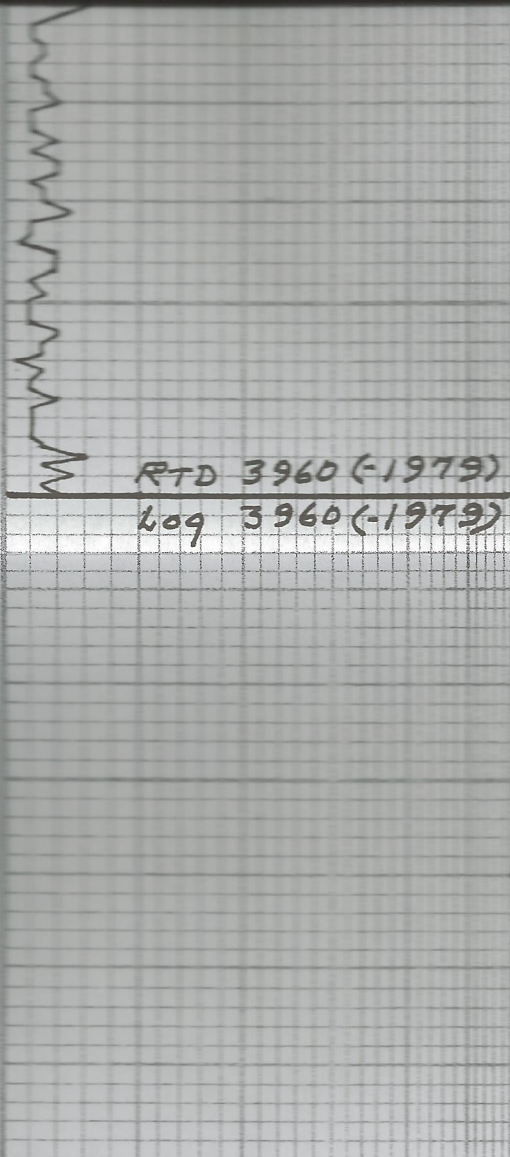
sh, grn & gry

3900



Dolo, bf to lt gry, f. xln
to ds. No vis φ

AA - Tr int xln φ. N.S.



RTD 3960 (-1979)
Log 3960 (-1979)

Der
10 60

20
Dolo, lt gry, f-cr xln
Some gd int. xln ϕ
Atd Δ , wh-gry matt N.S.
opa
Ed vuq \neq int. xln ϕ
40
Dolo, tan \neq gry
w/A, wh/tan, opa
Atd
Chty dolo AA
10 60

5" 10" 15" 20" 25"
DRILLING TIME Minutes/Foot

Rate of Penetration Decreases

DEPTH

LITHOLOGY

SAMPLE DESCRIPTIONS

OIL SHOWS

REMARKS

CONTRACTOR WW Drlg
LEASE Ratliff # 1-16 IP
ELEVATION 1981 KB RTD 3960

LOCATION S/2 SW SW
SEC 16 TWP 2 S. RNG 15 W
COUNTY Smith STATE Kansas

