

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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Form	ACO1 - Well Completion
Operator	Russell Oil, Inc.
Well Name	RUMBACK A 16-1
Doc ID	1321817

All Electric Logs Run

DUAL INDUCTION
DUAL COMPENSATED POROSITY
MICRORESISTIVITY
RADIAL BOND W/GAMMA

Form	ACO1 - Well Completion
Operator	Russell Oil, Inc.
Well Name	RUMBACK A 16-1
Doc ID	1321817

Tops

Name	Top	Datum
ANHYDRITE	2542	+483
BASE ANHYDRITE	2568	+457
HEEBNER	3995	-970
TORONTO	4021	-996
LANSING	4038	-1013
MUNCIE CREEK	4174	-1149
STARK SHALE	4258	-1233
HUSH SHALE	4290	-1265
BASE KC	4316	-1291
MARMATON	4350	-1325
PAWNEE	4450	-1425
FT SCOTT	4510	-1485
CHEROKEE SHALE	4540	-1517
JOHNSON	4581	-1556
MORROW SHALE	4598	-1573
MISSISSIPPI	4634	-1609
LTD	4700	-1675
RTD	4700	-1675

Form	ACO1 - Well Completion
Operator	Russell Oil, Inc.
Well Name	RUMBACK A 16-1
Doc ID	1321817

Perforations

Shots Per Foot	Perforation Record	Material Record	Depth
4	JOHNSON (4594'-4596')	1500 GAL 20% NE/CRA	
4	JOHNSON (4584'-4586')	1500 GAL 20% NE/CRA	

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 1774

Date	Sec.	Twp.	Range	County	State	On Location	Finish
9-14-16	16	11	32	Logan	KS		8:00pm
Lease <u>Rumbach A</u>				Well No. <u>16-1</u>		Owner	
Contractor <u>WU #2</u>				To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.			
Type Job <u>Surface</u>				Charge To <u>Russell O.I.</u>			
Hole Size <u>12 1/4</u>		T.D. <u>317</u>		Street			
Csg. <u>8 5/8</u>		Depth <u>316</u>		City			
Tbg. Size		Depth		State			
Tool		Depth		The above was done to satisfaction and supervision of owner agent or contractor.			
Cement Left In Csg. <u>15'</u>		Shoe Joint		Cement Amount Ordered <u>200 @ 20 3-1-LL 2/16/17</u>			
Meas Line		Displace <u>193L</u>		Common <u>160</u>			
EQUIPMENT							
Pumptrk <u>20</u> No. <u>20</u>		Cementier <u>Lois</u>		Poz. Mix <u>40</u>			
Bulktrk		Helper <u>N.C.K.</u>		Gel. <u>4</u>			
Bulktrk <u>9</u> No. <u>9</u>		Driver <u>Dave</u>		Calcium <u>8</u>			
JOB SERVICES & REMARKS							
Remarks:				Hulls			
Rat Hole <u>90' sand on top</u>				Salt			
Mouse Hole				Flowseal			
Centralizers				Kol-Seal			
Baskets				Mud CLR 48			
D/V or Port Collar				CFL-117 or CD110 CAF 38			
<u>8 5/8 Ben bottom Bit Circulation</u>				Sand			
<u>Mix 200 SK & D. Spacer</u>				Handling <u>210</u>			
				Mileage			
FLOAT EQUIPMENT							
				Guide Shoe			
				Centralizer			
				Baskets			
				AFU Inserts			
				Float Shoe			
				Latch Down			
				Pumptrk Charge <u>Surface</u>			
				Mileage <u>15 (min)</u>			
X Signature <u>[Signature]</u>				Tax			
				Discount			
				Total Charge			

Customer	RUSSELL C. D. INC.	Lease No.		Date	9-23-16	
Lease	RUMBITCH A	Well #	16-1			
Field Order #	74006	Station	PRATT, KS.	Casing	5 1/2	
				Depth	4696	
Type Job	PUMP - LONGSTANDING		Formation	713-4700	Legal Description	16-11-32
				County	LOGAN	
				State	KS	

PIPE DATA		PERFORATING DATA		FLUID USED		TREATMENT RESUME		
Casing Size	Tubing Size	Shots/Ft		Acid	RATE	PRESS	ISIP	
5 1/2				H ₂ O / 4.2% H ₂ O ₂				
4696	Depth	From	To	Pre-Pad	2544' - 2564'		5 Min.	
	Volume	From	To	Pad	DU TOOL		10 Min.	
	Max Press	From	To	Frac	2564'		15 Min.	
	Well Connection	Annulus Vol.	From	To		HHP Used		Annulus Pressure
	Plug Depth	Packer Depth	From	To	Flush	Gas Volume		Total Load

Customer Representative	TRID	Station Manager	KEVIN	Treater	COOK
Service Units	X3353	78982-86779	71359-73768	84980-14860	
Driver Names	KG	SCOTT	DAVID	PAUL	

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
1800					CONNECTION
					PUMP 112 THS 5 1/2 - 15.5'
					RUN FROM FRONT SITE LITCH RIG
					DU 12" MUDLINE HT 4679' 17.5'
					DU TOOL HT 2564' TC # 57
					CEJOT - 25, 8, 12, 15, 18, 53
					BISCUIT - 11, 51'
1220					THE BOTTOM 12" BALL UNDER KEVIN
					SIT 5 1/2 HT 4696'
					BOTTOM STAGE
1300	300		5	6 1/2	PUMP 5 bbl H ₂ O
	300		24	6 1/2	PUMP 24 bbl SUPERFLUSH II
	300		5	6 1/2	PUMP 5 bbl H ₂ O
	200		42	6 1/2	MIX 175 SK H ₂ O PUMP
					STRT - 11.75H LTRF - 12.1' PUMP
	0		11	6 1/2	STRT DESP w/ H ₂ O
	300		50	6 1/2	STRT DESP w/ MUD
	300		75	6 1/2	LIFT 11.75H
	600		105	3	SLOW RATE
1400	1400		111.4	3	12.40 H ₂ O - 12.1'



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Russell Oil Inc.
 PO Box 8050
 Edmond, OK 73083
 ATTN: Kitt Noah

16/11s/32w Logan KS
Rumback 'A' #16-1
 Job Ticket: 62690 **DST#: 1**
 Test Start: 2016.09.18 @ 21:45:00

GENERAL INFORMATION:

Formation: **LKC "H"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 23:42:30
 Time Test Ended: 04:36:45
 Interval: **4174.00 ft (KB) To 4194.00 ft (KB) (TVD)**
 Total Depth: 4194.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: James Winder
 Unit No: 83
 Reference Elevations: 3025.00 ft (KB)
 3020.00 ft (CF)
 KB to GR/CF: 5.00 ft

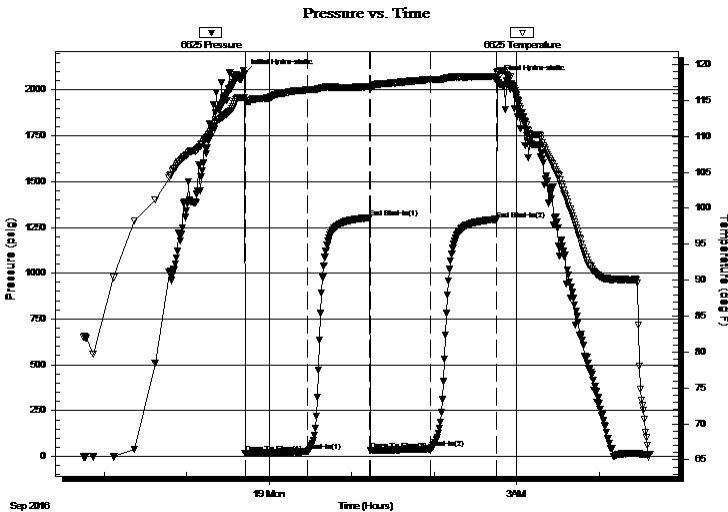
Serial #: 6625

Inside

Press @ Run Depth: 41.82 psig @ 4175.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2016.09.18 End Date: 2016.09.19 Last Calib.: 2016.09.19
 Start Time: 21:45:05 End Time: 04:36:44 Time On Btm: 2016.09.18 @ 23:42:00
 Time Off Btm: 2016.09.19 @ 02:46:00

TEST COMMENT: 45 - IF: Blow built to 2"
 45 - IS: No blow back
 45 - FF: Surface blow at 11 min., built to 2"
 45 - FS: No blow back

PRESSURE SUMMARY



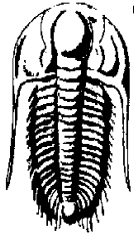
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2088.09	115.41	Initial Hydro-static
1	15.84	115.03	Open To Flow (1)
46	27.44	116.53	Shut-In(1)
91	1302.76	116.92	End Shut-In(1)
92	32.55	116.88	Open To Flow (2)
136	41.82	117.95	Shut-In(2)
183	1293.61	118.38	End Shut-In(2)
184	2054.52	118.92	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
59.00	GOCM 70% m, 15% o, 15% g	0.29
2.00	OCM 60% m, 38% o, 2% g	0.01
0.00	A few inches of free oil on top	0.00
0.00	GIP = 57'	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Russell Oil Inc.

16/11s/32w Logan KS

PO Box 8050
Edmond, OK 73083

Rumback 'A' #16-1

Job Ticket: 62690

DST#: 1

ATTN: Kitt Noah

Test Start: 2016.09.18 @ 21:45:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 62.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.19 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3400.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
59.00	GOCM 70% _m , 15% _o , 15% _g	0.290
2.00	OCM 60% _m , 38% _o , 2% _g	0.010
0.00	A few inches of free oil on top	0.000
0.00	GIP = 57'	0.000

Total Length: 61.00 ft

Total Volume: 0.300 bbl

Num Fluid Samples: 0

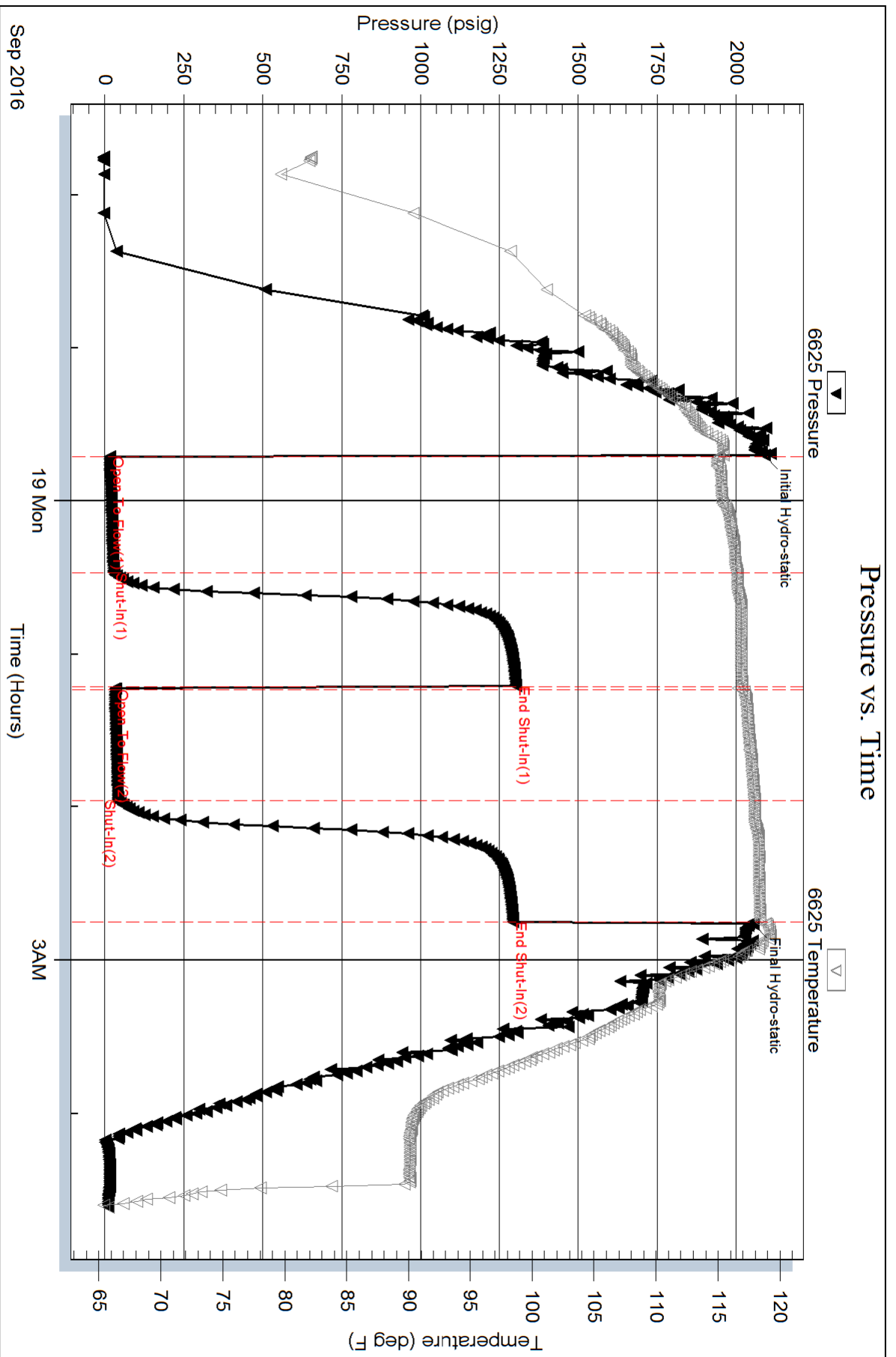
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

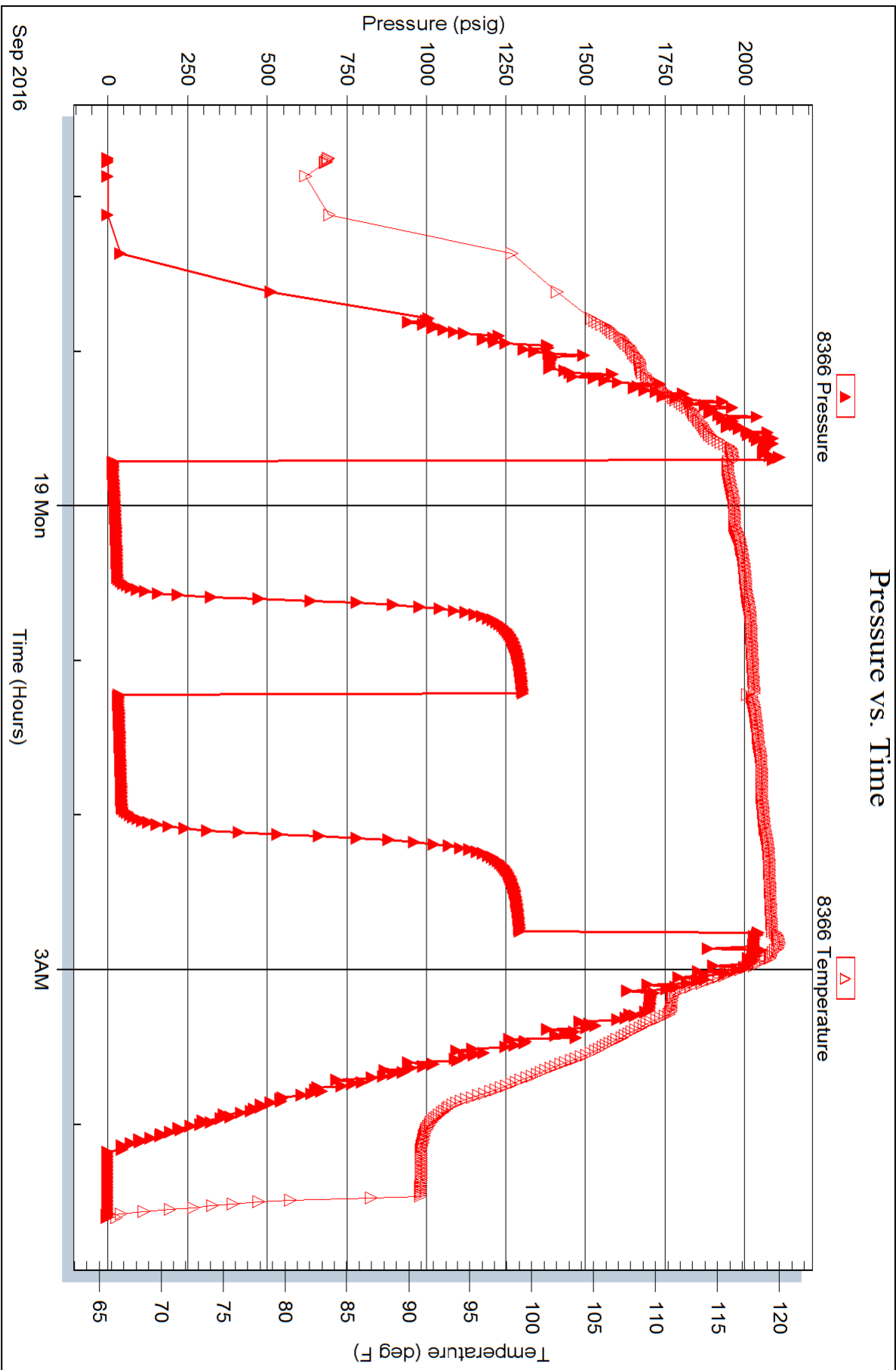


Serial #: 8366

Outside Russell Oil Inc.

Runback 'A' #16-1

DST Test Number: 1





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Russell Oil Inc.

16/11s/32w Logan KS

PO Box 8050
Edmond, OK 73083

Rumback 'A' #16-1

Job Ticket: 62691

DST#: 2

ATTN: Kitt Noah

Test Start: 2016.09.19 @ 11:45:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.79 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	OCM 63% _m , 35% _o , 2% _g	0.295
0.00	GIP = 120'+	0.000

Total Length: 60.00 ft Total Volume: 0.295 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 6625

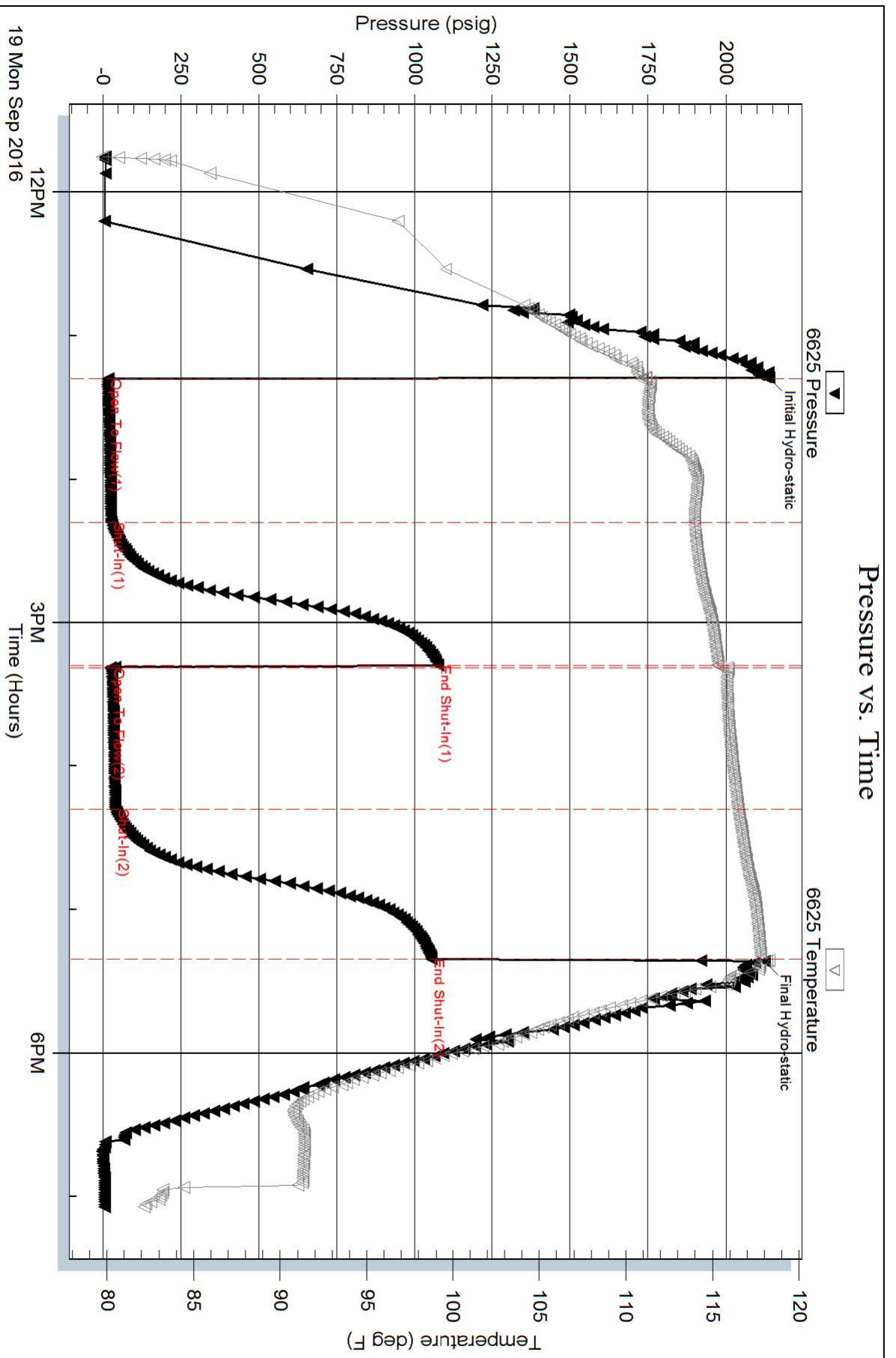
Inside

Russell Oil Inc.

Runback 'A' #16-1

DST Test Number: 2

Pressure vs. Time

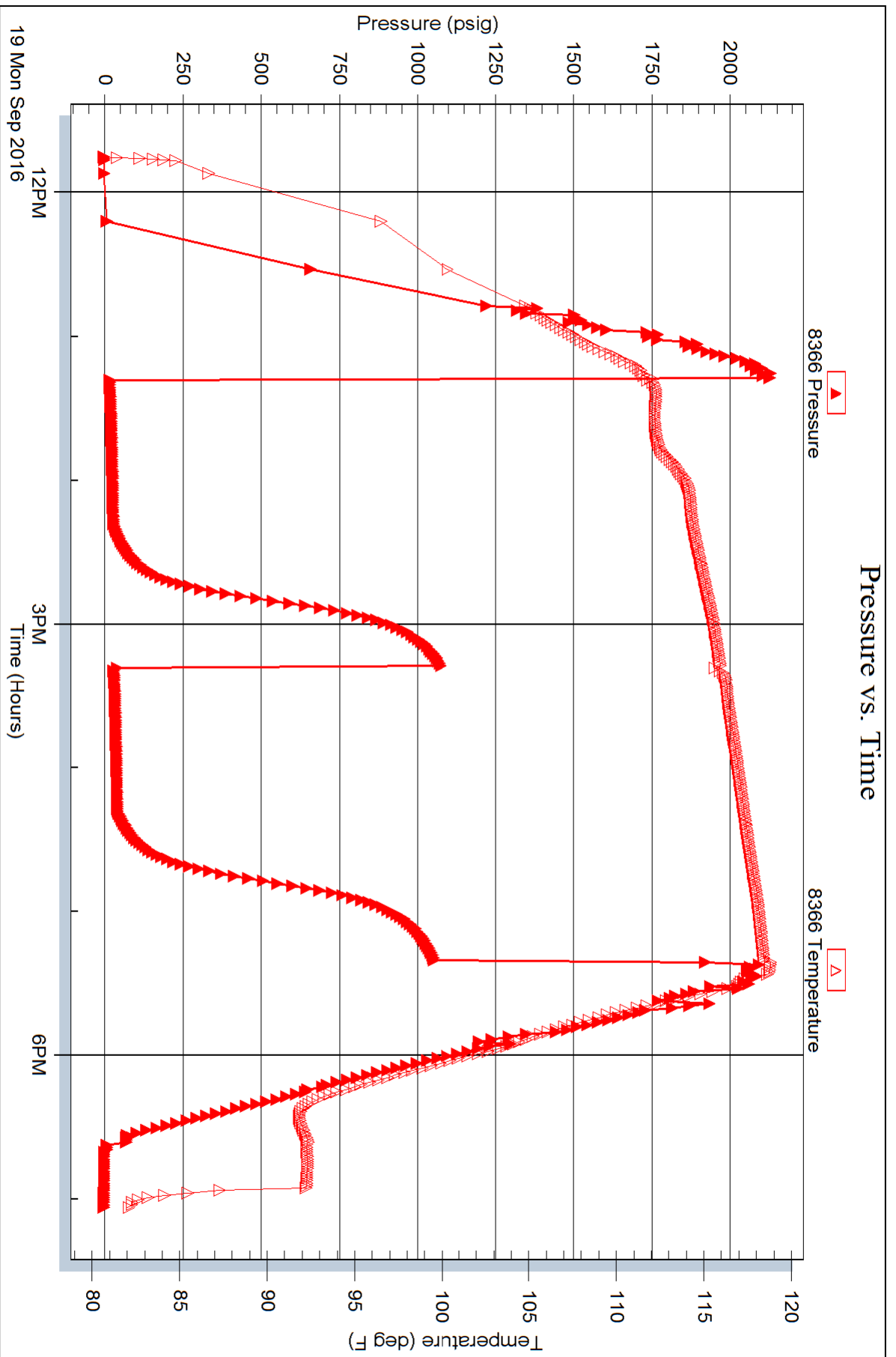


Serial #: 8366

Outside Russell Oil Inc.

Runback 'A' #16-1

DST Test Number: 2





**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Russell Oil Inc.
PO Box 8050
Edmond, OK 73083
ATTN: Kitt Noah

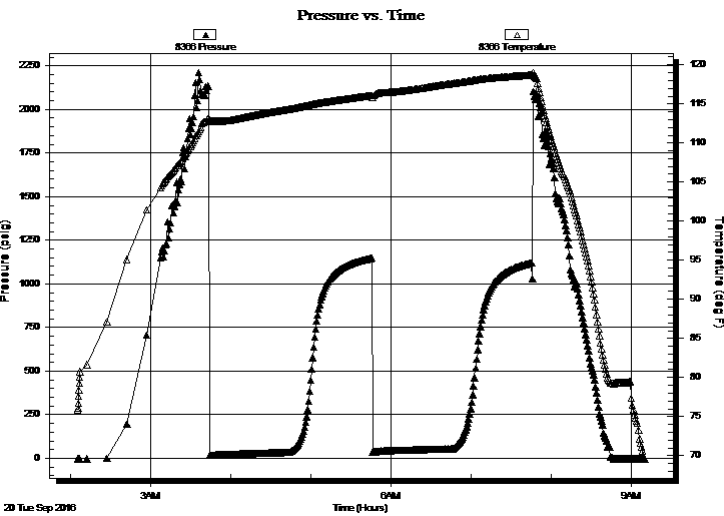
16/11s/32w Logan KS
Rumback 'A' #16-1
Job Ticket: 62692 **DST#: 3**
Test Start: 2016.09.20 @ 02:05:00

GENERAL INFORMATION:

Formation: **LKC "J"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 03:43:30
Time Test Ended: 09:11:00
Interval: **4227.00 ft (KB) To 4258.00 ft (KB) (TVD)**
Total Depth: 4258.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Reset)
Tester: James Winder
Unit No: 83
Reference Elevations: 3025.00 ft (KB)
3020.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8366 Outside
Press@RunDepth: psig @ 4228.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2016.09.20 End Date: 2016.09.20 Last Calib.: 2016.09.20
Start Time: 02:05:05 End Time: 09:10:44 Time On Btm:
Time Off Btm:

TEST COMMENT: 60 - IF: 1/4" Blow at open, built to 6 1/2"
60 - IS: No blow back
60 - FF: Blow started at 1 min., built to 7"
60 - FS: No blow back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
65.00	GOCM 57% m, 30% o, 13% g	0.32
30.00	SMCO 90% o, 7% g, 3% m	0.15
0.00	GIP = 150'	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Russell Oil Inc.

16/11s/32w Logan KS

PO Box 8050
Edmond, OK 73083

Rumback 'A' #16-1

Job Ticket: 62692

DST#: 3

ATTN: Kitt Noah

Test Start: 2016.09.20 @ 02:05:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

37.8 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 68.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.78 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
65.00	GOCM 57% <i>m</i> , 30% <i>o</i> , 13% <i>g</i>	0.320
30.00	SMCO 90% <i>o</i> , 7% <i>g</i> , 3% <i>m</i>	0.148
0.00	GIP = 150'	0.000

Total Length: 95.00 ft Total Volume: 0.468 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

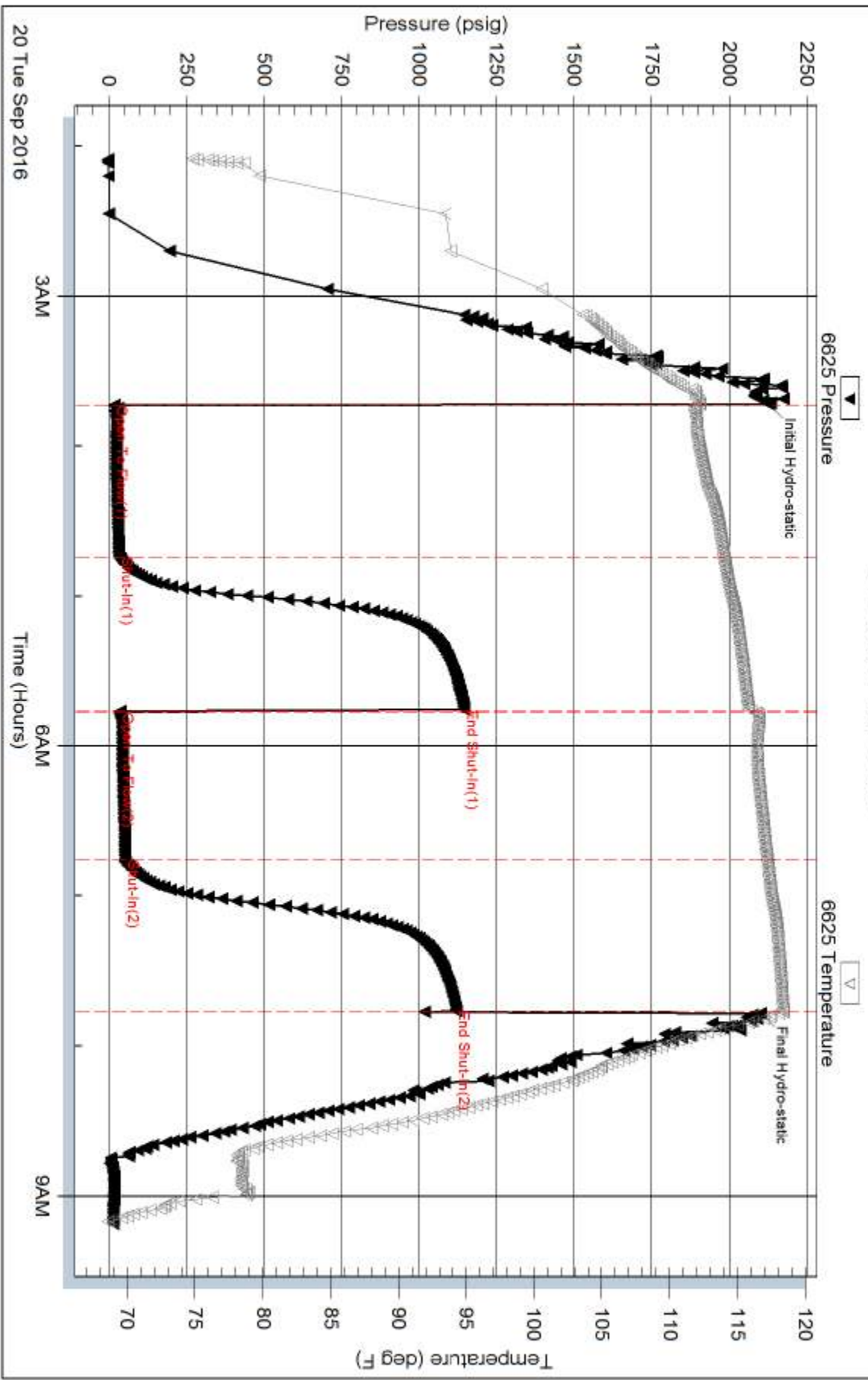
Laboratory Name:

Laboratory Location:

Recovery Comments: Gravity = 38.6 api @ 68 deg F

Corrected Gravity = 37.8 api

Pressure vs. Time

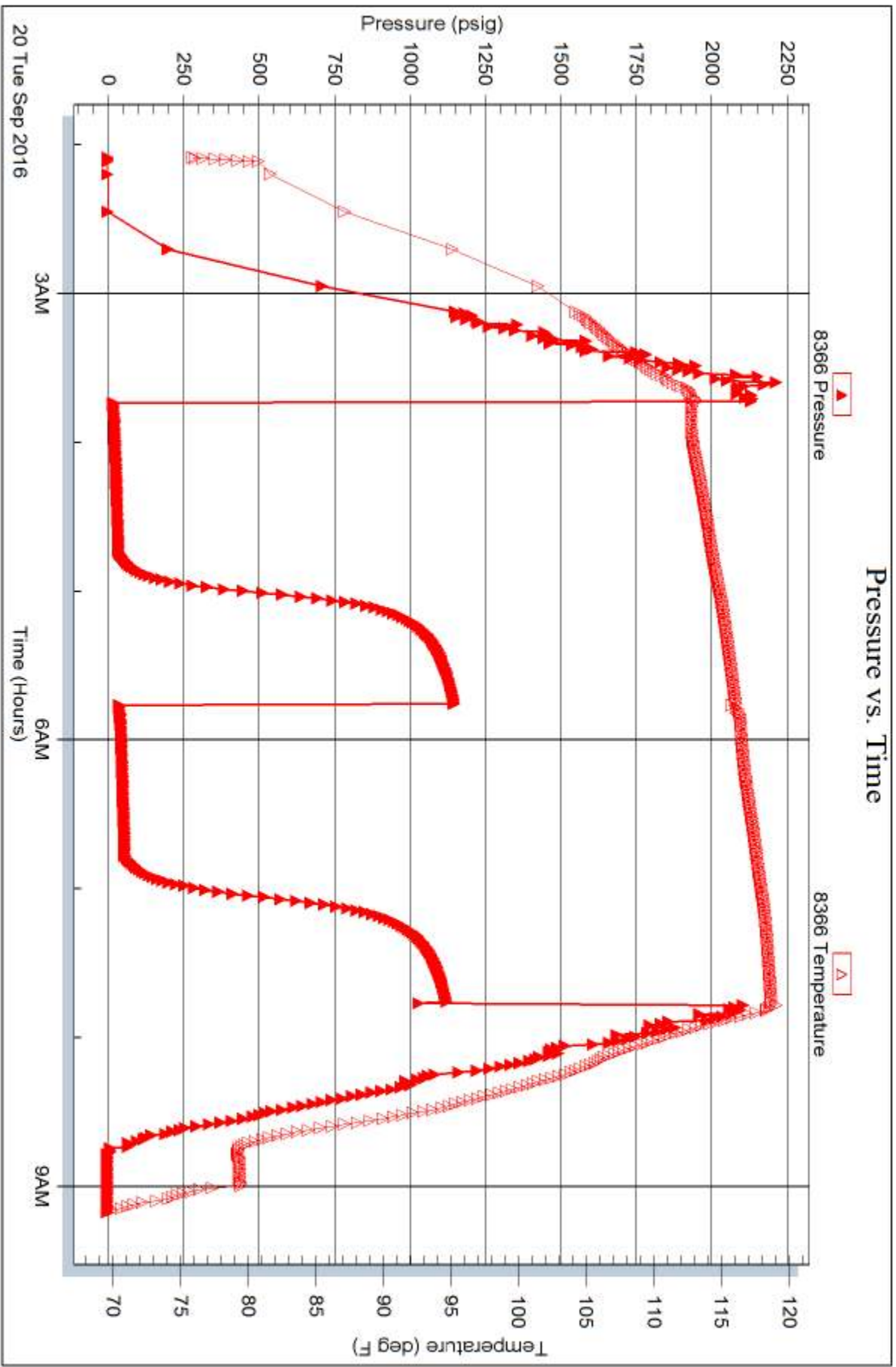


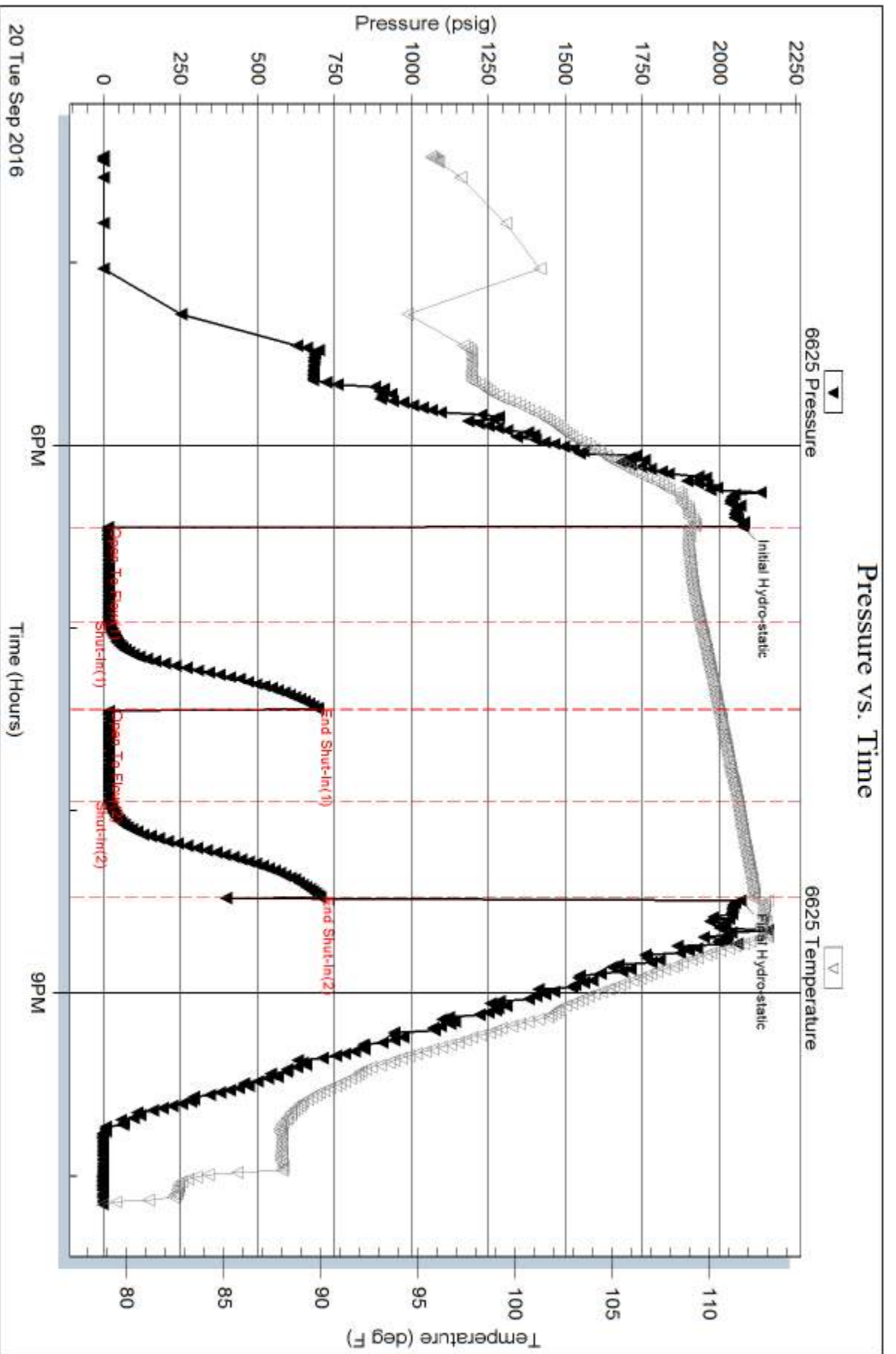
Serial #: 8366

Outside Russell Oil Inc.

Runback 'A' #16-1

DST Test Number: 3



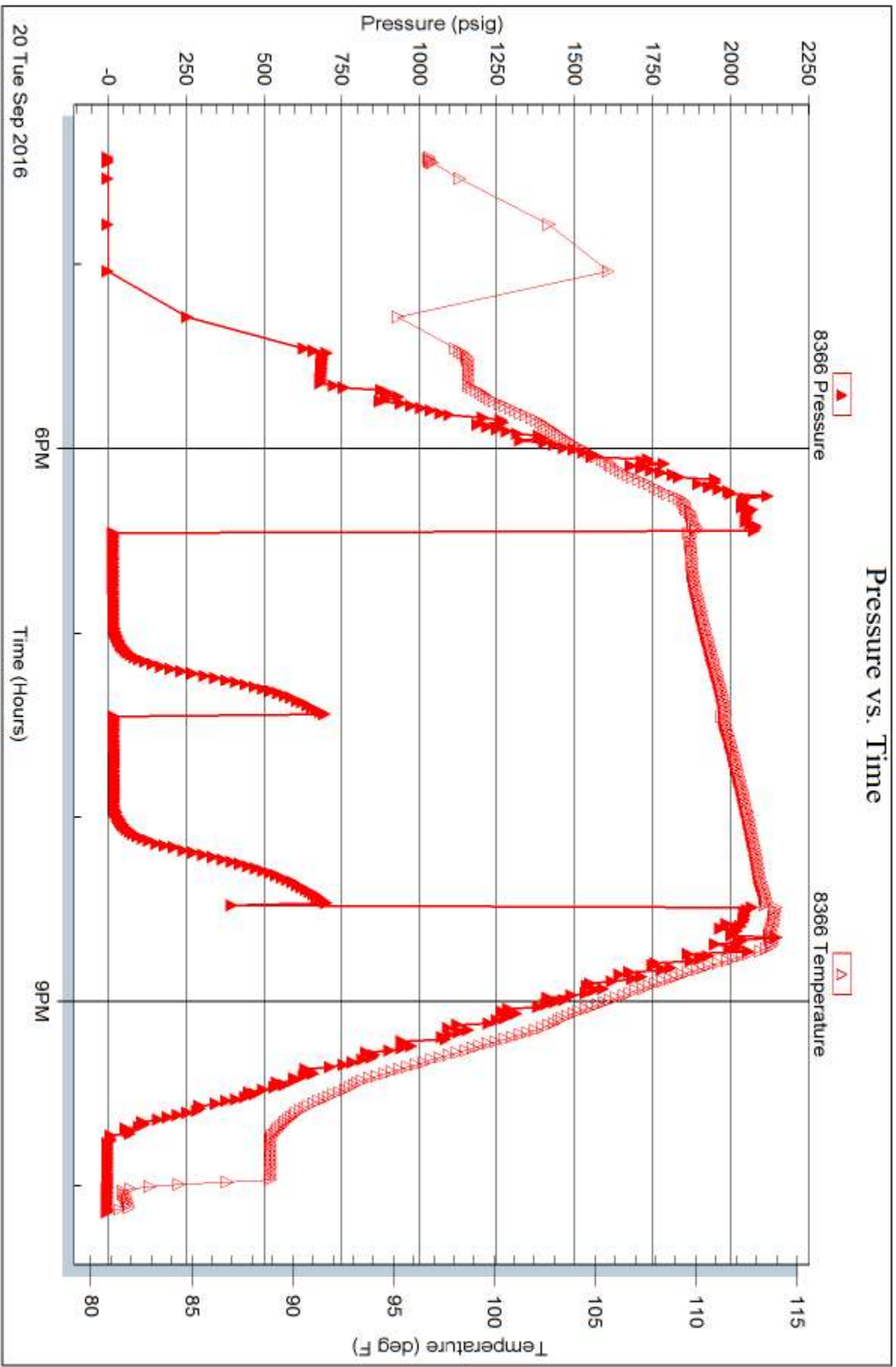


Serial #: 8366

Outside Russell Oil Inc.

Runback 'A' #16-1

DST Test Number: 4



Trilobite Testing, Inc

Ref. No: 62893

Printed: 2016.09.21 @ 07:26:49



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Russell Oil Inc.
PO Box 8050
Edmond, OK 73083
ATTN: Kitt Noah

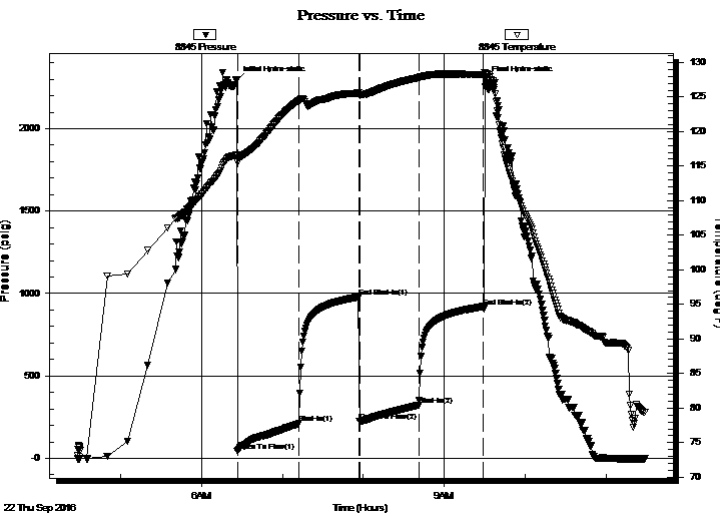
16/11s/32w Logan KS
Rumback 'A' #16-1
Job Ticket: 65566 **DST#: 5**
Test Start: 2016.09.22 @ 04:28:00

GENERAL INFORMATION:

Formation: **Johnson**
Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Reset)
Time Tool Opened: 06:26:30 Tester: Bradley Walter
Time Test Ended: 11:28:45 Unit No: 78
Interval: 4560.00 ft (KB) To 4604.00 ft (KB) (TVD) Reference Elevations: 3025.00 ft (KB)
Total Depth: 4604.00 ft (KB) (TVD) 3020.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 5.00 ft

Serial #: 8845 Outside
Press@RunDepth: 322.58 psig @ 4561.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2016.09.22 End Date: 2016.09.22 Last Calib.: 2016.09.22
Start Time: 04:28:05 End Time: 11:28:44 Time On Btm: 2016.09.22 @ 06:26:00
Time Off Btm: 2016.09.22 @ 09:30:15

TEST COMMENT: IF: BOB @ 5 1/2 minutes.
IS: 3" return.
FF: bob @ 8 minutes
FS: 4" return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2294.58	116.63	Initial Hydro-static
1	43.06	115.57	Open To Flow (1)
46	211.06	124.50	Shut-In(1)
91	978.42	125.57	End Shut-In(1)
92	222.59	125.37	Open To Flow (2)
135	322.58	127.79	Shut-In(2)
183	920.75	128.21	End Shut-In(2)
185	2295.48	128.54	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
180.00	somcw 1o 5m 94w	1.45
70.00	gomcw 10g 10o 40m 40w	0.98
130.00	gow cm 15g 30o 30w 25m	1.82
150.00	gmco 30g 20m 50o	2.10
180.00	go 25g 75o	2.52
0.00	860'GIP	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Russell Oil Inc.

16/11s/32w Logan KS

PO Box 8050
Edmond, OK 73083

Rumback 'A' #16-1

Job Ticket: 65566

DST#: 5

ATTN: Kitt Noah

Test Start: 2016.09.22 @ 04:28:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

23 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

34000 ppm

Viscosity: 63.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.20 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
180.00	somcw 1o 5m 94w	1.450
70.00	gomcw 10g 10o 40m 40w	0.982
130.00	gow cm 15g 30o 30w 25m	1.824
150.00	gmco 30g 20m 50o	2.104
180.00	go 25g 75o	2.525
0.00	860'GIP	0.000

Total Length: 710.00 ft Total Volume: 8.885 bbl

Num Fluid Samples: 0

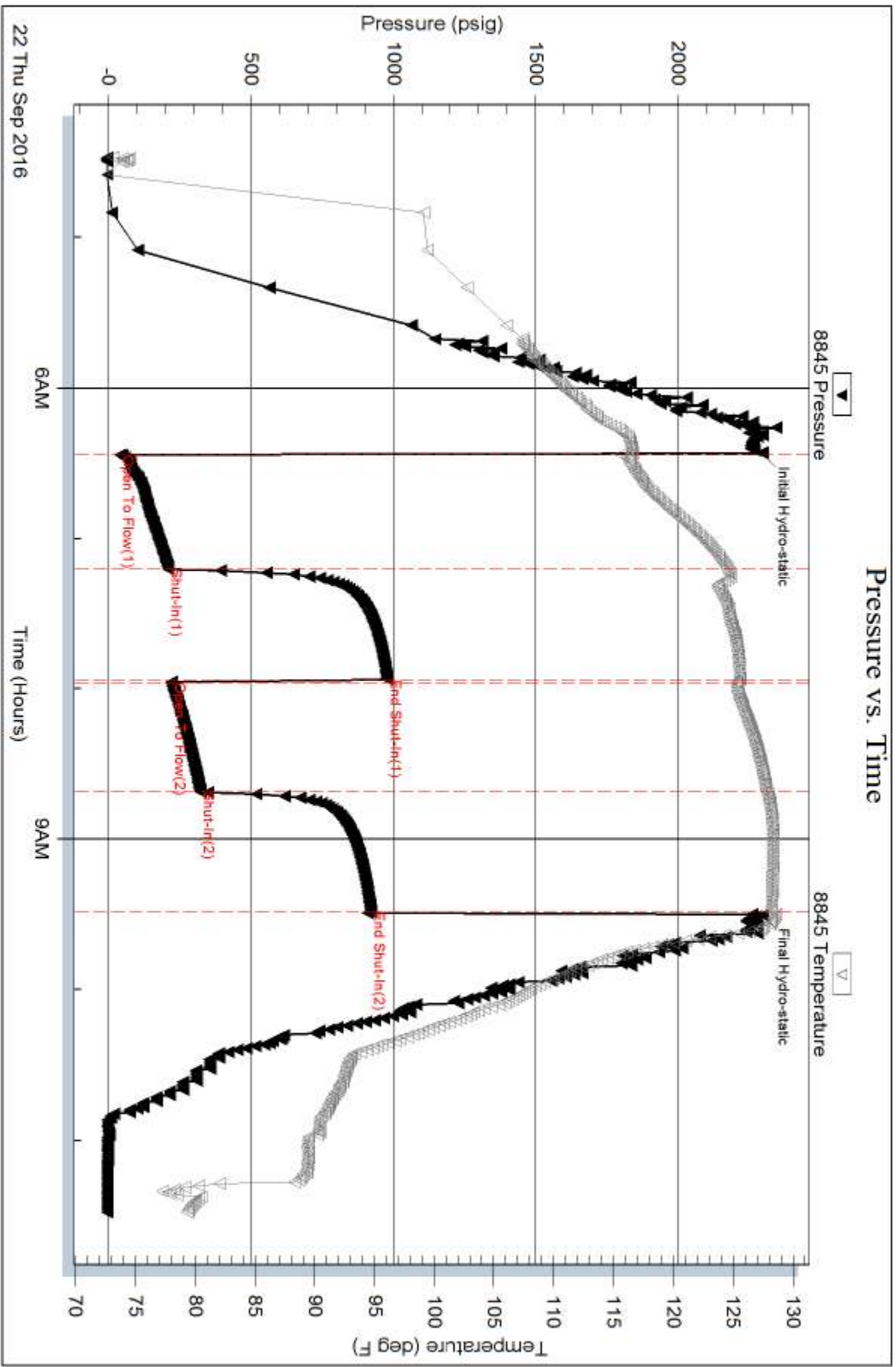
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: rw is .195 @ 76f = 34000ppm



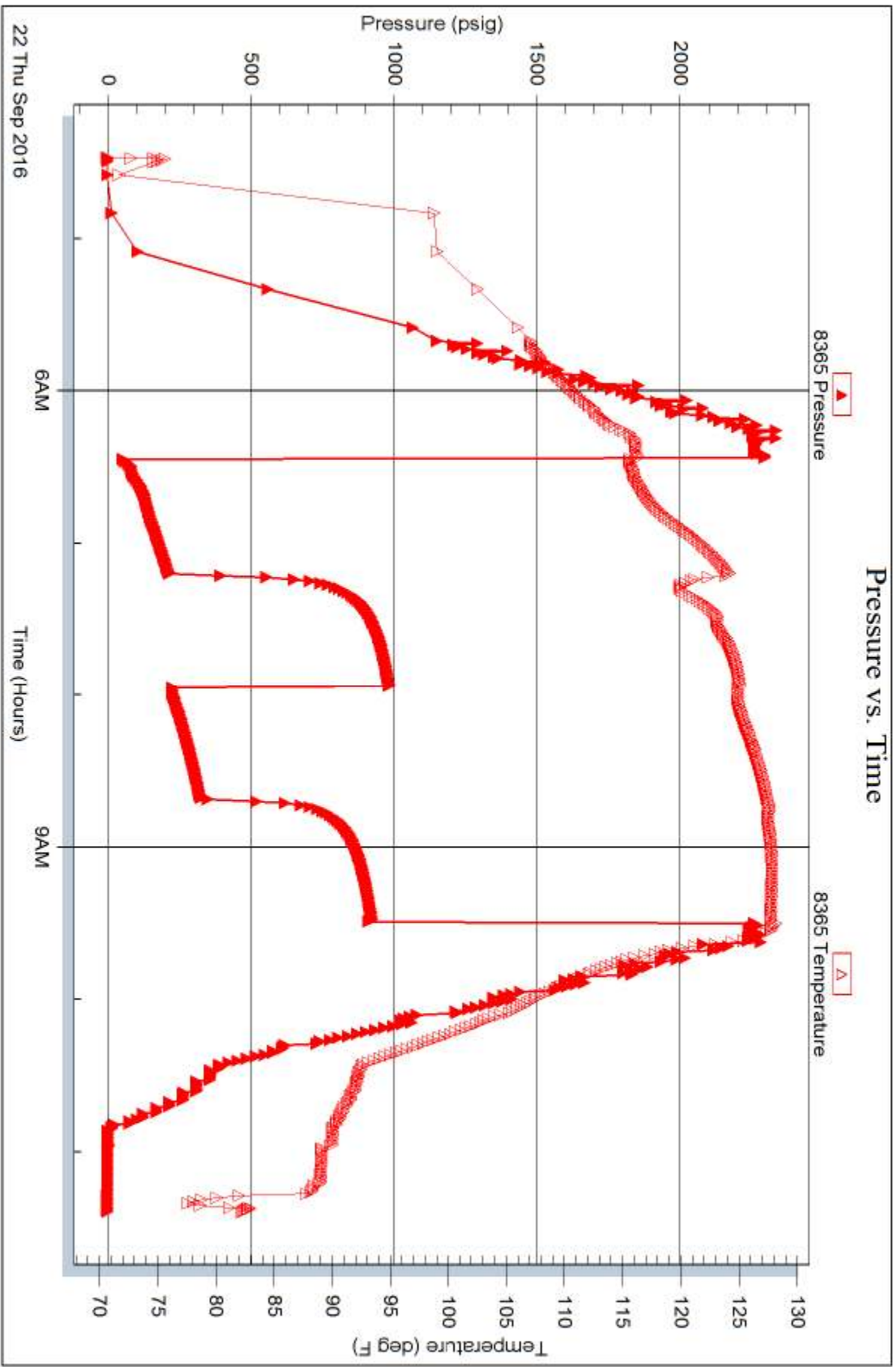
Serial #: 8365

Inside

Russell Oil Inc.

Runback 'A' #16-1

DST Test Number: 5



Trilobite Testing, Inc

Ref. No: 65566

Printed: 2016.09.22 @ 13:06:10

