

Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

Form ACO-1

January 2018

Form must be Typed

Form must be Signed

All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

New Well Re-Entry Workover

Oil WSW SWD

Gas DH EOR

OG GSW

CM (Coal Bed Methane)

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

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

Operator: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

Deepening Re-perf. Conv. to EOR Conv. to SWD
 Plug Back Liner Conv. to GSW Conv. to Producer

Commingled Permit #: _____

Dual Completion Permit #: _____

SWD Permit #: _____

EOR Permit #: _____

GSW Permit #: _____

Spud Date or Date Reached TD Completion Date or Recompletion Date

API No.: _____

Spot Description: _____

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

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

NE NW SE SW

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

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite:

Operator Name: _____

Lease Name: _____ License #: _____

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

County: _____ Permit #: _____

AFFIDAVIT

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

Submitted Electronically

KCC Office Use ONLY

Confidentiality Requested

Date: _____

Confidential Release Date: _____

Wireline Log Received Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT I II III Approved by: _____ Date: _____

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

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

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

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

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

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

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

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

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

TUBING RECORD:	Size:	Set At:	Packer At:	
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Form	ACO1 - Well Completion
Operator	Russell Oil, Inc.
Well Name	RUMBACK B 21-2
Doc ID	1424794

All Electric Logs Run

MICRO
SPECTRAL DENSITY DUAL SPACED NEUTRON
ARRAY COMPENSATED TRUE RESISTIVITY
ANNUAL HOLE VOLUME

Form	ACO1 - Well Completion
Operator	Russell Oil, Inc.
Well Name	RUMBACK B 21-2
Doc ID	1424794

Tops

Name	Top	Datum
ANHYDRITE	2540	+482
BASE ANHYDRITE	2568	+454
HEEBNER	3994	-972
TORONTO	4020	-998
LANSING	4036	-1014
MUNCIE CREEK	4174	-1152
STARK SHALE	4252	-1230
HUSH SHALE	NC	NC
BASE KC	4321	-1299
MARMATON	4344	-1322
PAWNEE	4446	-1424
FT SCOTT	4504	-1482
CHEROKEE SHALE	4532	-1510
JOHNSON	4573	-1551
MORROW SHALE	4600	-1578
MISSISSIPPI	4692	-1670
LTD	4692	-1670
RTD	4690	-1668

KITT NOAH

PETROLEUM GEOLOGIST
Kansas License #229



GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

ELEVATION: **KB 3022**
 GR.: **3017**
 MEASURED FROM: **KB**

#15-109-21.555

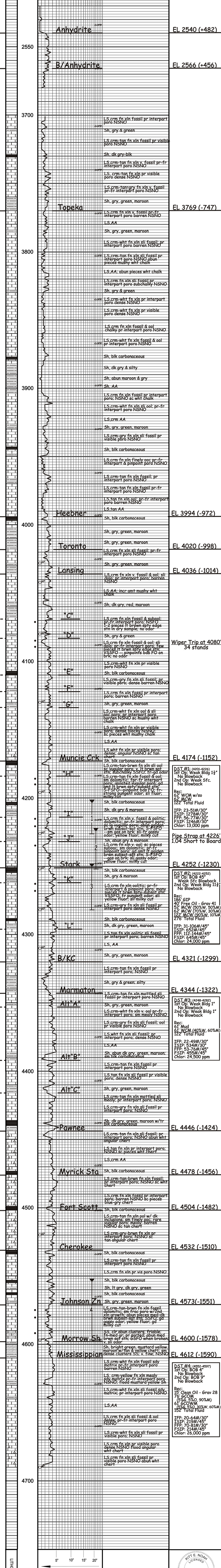
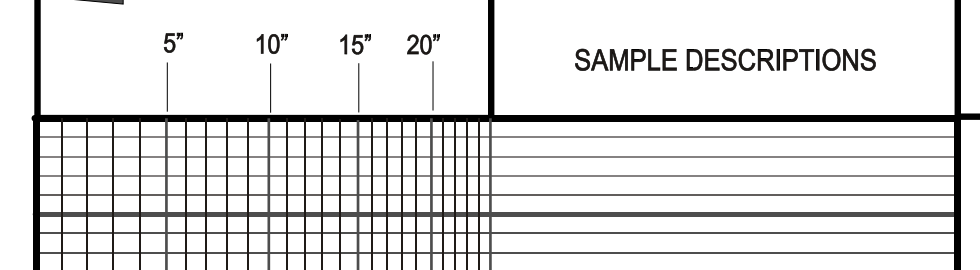
OPERATOR: **Russell Oil, Inc.**
 LEASE: **Rumback "B"** WELL NO.: **#21-2**
 LOCATION: **952'FN & 1313'FE**
 SEC.: **21** TWP: **11S** RNG.: **32W**
 COUNTY: **Logan** STATE: **Kansas**

CASING RECORD:
 SURFACE: **8 5/8" set of**
345' w/200' sk.
 PRODUCTION: **None**
 DV TOOL: _____

FORMATION	TOP LOG DATUM	CONTRACTOR
Anhydrite	2640 (+482)	WW Drilling Rig #10
B/Anhydrite	2866 (+456)	COM. 7-31-2018 COM. 8-8-2018
Heebner	3994 (-972)	RTD: 4690
Lansing	4020 (-998)	LTD: 4692
Stark	4036 (-1014)	SAMPLES SAVED FROM: 3700 to TD
B/KC	4232 (-1230)	DRILLING TIME SAVED FROM: 3700 to TD
Marmaton	4322 (-1299)	SAMPLES EXAMINED FROM: 3820 to TD
Pawnee	4446 (-1424)	GEOLOGICAL SUPERVISION FROM: 3820 to TD
Cherokee	4532 (-1510)	MUD UP: 3900 MUD TYPE: chemical
Mississippian	4612 (-1590)	Mudco - Reid Atkins
Johnson Zn	4692 (-1670)	DRILL STEM TESTS TAKEN: 4

SURVEYS: **Halliburton**
Spectral Density Dual Neutron
Microlog

LEGEND



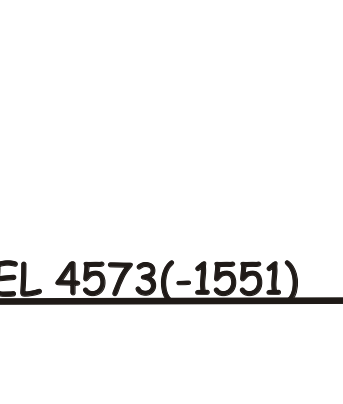
DST #1: (4201-4226)
 1st Op: Weak Bldg 1 1/2"
 No Blowback
 2nd Op: Weak Sfc.
 No Blowback
 Rec:
 62' WCM w/so
 62' MCW
 122' Total Fluid
 IFP: 23-51##/30"
 ISIP: 1278##/30"
 FFP: 56-77##/30"
 FSIP: 1246##/30"
 Chlor: 13,000 ppm

Pipe Strap at 4226'
 1.04 Short to Board

DST #2: (4222-4252)
 1st Op: BOB 45"
 Weak Sfc Blowback
 2nd Op: Weak Bldg 1 1/2"
 No Blowback
 Rec:
 61' Mud
 61' WCM (40%W, 60%M)
 122' Total Fluid
 IFP: 22-49##/30"
 ISIP: 534##/30"
 FFP: 53-76##/45"
 FSIP: 455##/45"
 Chlor: 24,500 ppm

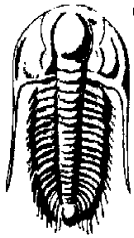
DST #3: (4248-4282)
 1st Op: Weak Bldg 1"
 No Blowback
 2nd Op: Weak Bldg 1"
 No Blowback
 Rec:
 61' Mud
 61' WCM (40%W, 60%M)
 122' Total Fluid
 IFP: 22-49##/30"
 ISIP: 534##/30"
 FFP: 53-76##/45"
 FSIP: 455##/45"
 Chlor: 24,500 ppm

DST #4: (4552-4597)
 1st Op: BOB 4"
 No Blowback
 2nd Op: BOB 9"
 No Blowback
 Rec:
 15' Clean Oil - Grav 28
 76' GCOW
 (5%G, 5%O, 90%M)
 61' GCOWM
 (3%G, 5%O, 30%W, 60%M)
 152' Total Fluid
 IFP: 20-64##/30"
 ISIP: 219##/45"
 FFP: 70-81##/30"
 FSIP: 214##/45"
 Chlor: 26,000 ppm



ELEVATION: **KB 3022**

OPERATOR: **Russell Oil, Inc.** LOCATION: **952'FN & 1313'FE**
 LEASE: **Rumback "B"** WELL NO.: **#21-2** SEC.: **21** TWP: **11S** RNG.: **32W**
 API: **15-109-21.555** FIELD: **Rumback** COUNTY: **Logan** STATE: **Kansas**



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Russell Oil Inc.

21-11s-32w Logan Co KS

P.O. Box 8050

Rumback "B" 21-2

Edmond OK

Job Ticket: 64334

DST#: 1

73083

ATTN: Kitt Noah

Test Start: 2018.08.05 @ 06:29:15

GENERAL INFORMATION:

Formation: I

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:02:00

Time Test Ended: 11:26:15

Test Type: Conventional Bottom Hole (Initial)

Tester: Mike Roberts

Unit No: 81

Interval: 4201.00 ft (KB) To 4226.00 ft (KB) (TVD)

Reference Elevations: 3022.00 ft (KB)

Total Depth: 4226.00 ft (KB) (TVD)

3017.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8647

Inside

Press@RunDepth: 77.73 psig @ 4202.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.08.05

End Date:

2018.08.05

Last Calib.:

2018.08.05

Start Time: 06:29:15

End Time:

11:26:15

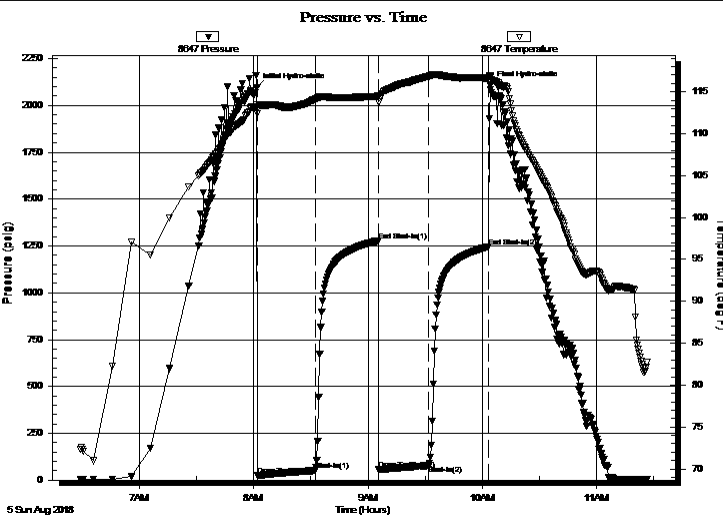
Time On Btm:

2018.08.05 @ 08:01:45

Time Off Btm:

2018.08.05 @ 10:04:00

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



PRESSURE SUMMARY

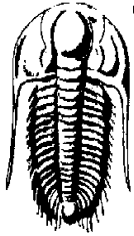
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2095.07	113.46	Initial Hydro-static
1	23.86	112.43	Open To Flow (1)
31	51.96	114.11	Shut-In(1)
64	1278.02	114.47	End Shut-In(1)
64	56.16	113.78	Open To Flow (2)
91	77.73	116.86	Shut-In(2)
122	1246.43	116.62	End Shut-In(2)
123	2108.20	116.88	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
61.00	w cm with oil spots 40%w 60%m	0.30
61.00	mcw 25%m 75%w	0.30

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Russell Oil Inc.

21-11s-32w Logan Co KS

P.O. Box 8050
Edmond OK
73083

Rumback "B" 21-2

Job Ticket: 64334

DST#: 1

ATTN: Kitt Noah

Test Start: 2018.08.05 @ 06:29:15

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:

13000 ppm

Viscosity: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.60 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2300.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
61.00	w cm w ith oil spots 40%w 60%m	0.300
61.00	mcw 25%m 75%w	0.300

Total Length: 122.00 ft Total Volume: 0.600 bbl

Num Fluid Samples: 0

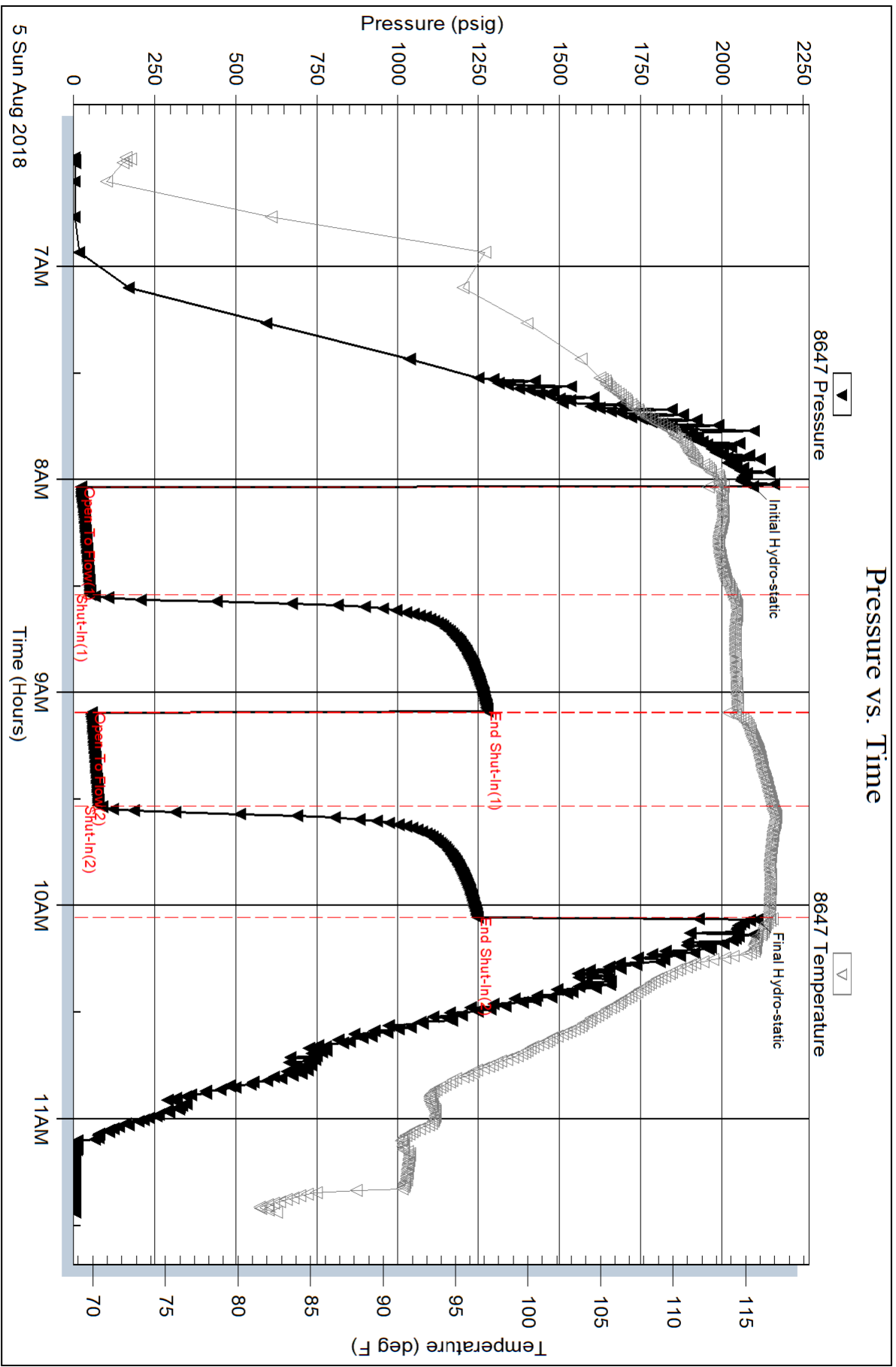
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW= .458@ 86.4= 13,000 ppm

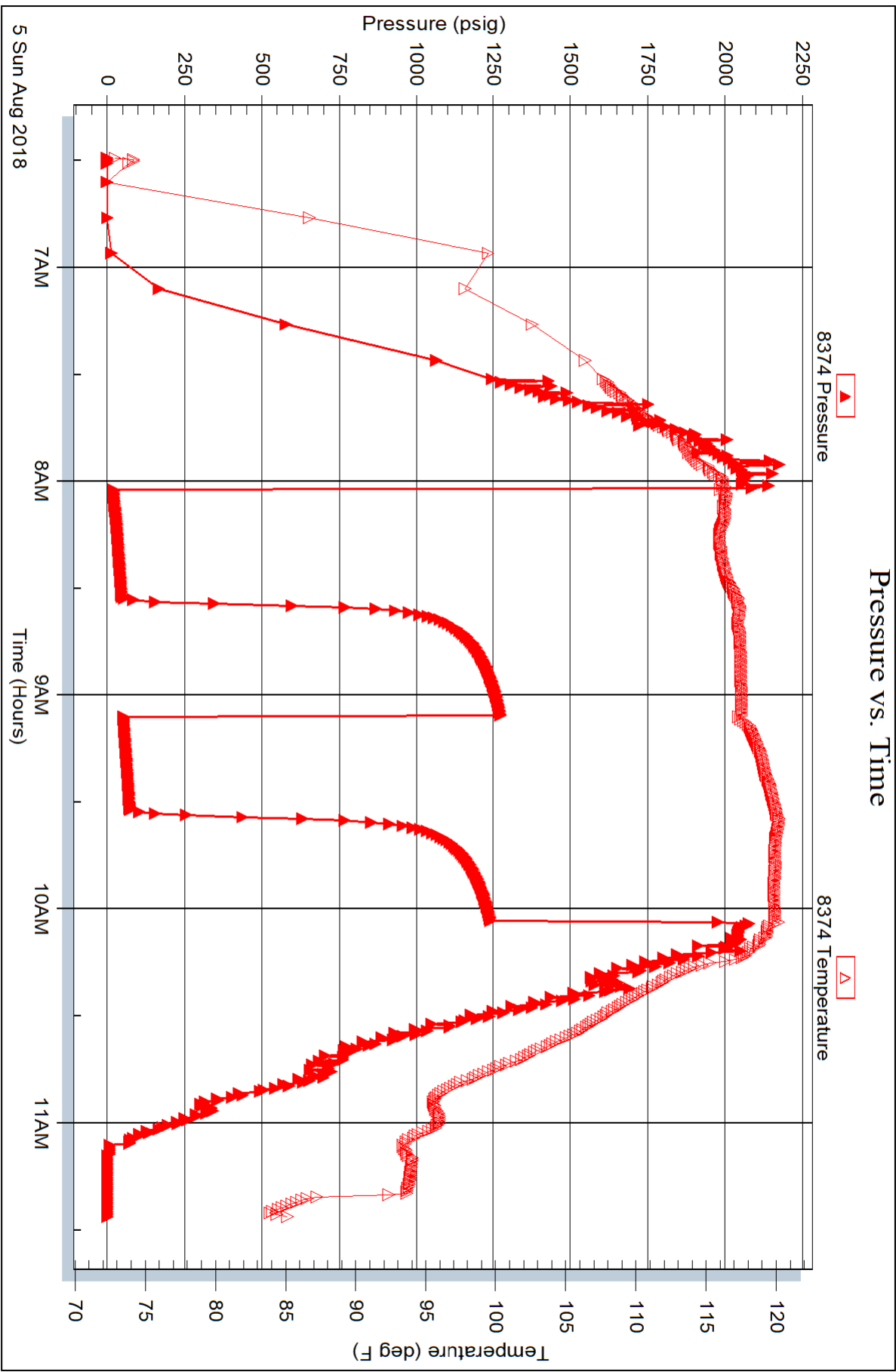


Serial #: 8374

Outside Russell Oil Inc.

Runback "B" 21-2

DST Test Number: 1





TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Russell Oil Inc.

21-11s-32w Logan Co KS

P.O. Box 8050
Edmond OK
73083

Rumback "B" 21-2

Job Ticket: 64335

DST#: 2

ATTN: Kitt Noah

Test Start: 2018.08.05 @ 17:39:15

GENERAL INFORMATION:

Formation: **J**
 Deviated: **No** Whipstock: **ft (KB)** Test Type: **Conventional Bottom Hole (Reset)**
 Time Tool Opened: 19:23:30 Tester: **Mike Roberts**
 Time Test Ended: 00:01:30 Unit No: **81**

Interval: 4222.00 ft (KB) To 4252.00 ft (KB) (TVD) Reference Elevations: **3022.00 ft (KB)**
 Total Depth: **4252.00 ft (KB) (TVD)** **3017.00 ft (CF)**
 Hole Diameter: **7.88 inches** Hole Condition: **Fair** KB to GR/CF: **5.00 ft**

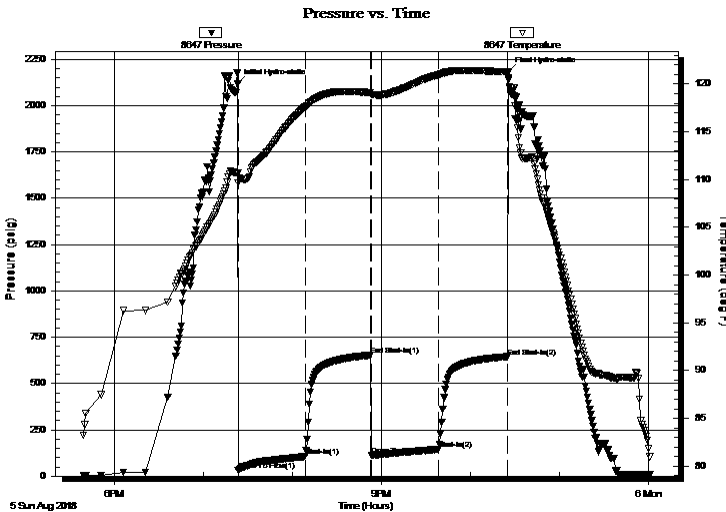
Serial #: 8647

Inside

Press@RunDepth: 144.57 psig @ 4223.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2018.08.05 End Date: 2018.08.06 Last Calib.: 2018.08.06
 Start Time: 17:39:15 End Time: 00:01:30 Time On Btm: 2018.08.05 @ 19:23:15
 Time Off Btm: 2018.08.05 @ 22:25:30

TEST COMMENT: IF:BOB in 45 min.
 IS:Weak surface blow that died
 FF:Built to 11 3/4" blow
 FS:No return blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2117.86	110.67	Initial Hydro-static
1	31.76	109.70	Open To Flow (1)
46	106.77	117.60	Shut-In(1)
90	652.69	119.07	End Shut-In(1)
90	112.44	118.92	Open To Flow (2)
136	144.57	120.96	Shut-In(2)
182	645.21	121.25	End Shut-In(2)
183	2185.20	121.26	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
122.00	mcw 10%m 90%w	0.60
62.00	mcw 30%m 70%w	0.87
52.00	mcw 50%m 50%w	0.73
40.00	Free Oil 100%o	0.56
0.00	GIP 186 ft	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.

21-11s-32w Logan Co KS

P.O. Box 8050
Edmond OK
73083

Rumback "B" 21-2

Job Ticket: 64335

DST#: 2

ATTN: Kitt Noah

Test Start: 2018.08.05 @ 17:39:15

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

41 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

24000 ppm

Viscosity: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.39 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
122.00	mcw 10%m 90%w	0.600
62.00	mcw 30%m 70%w	0.870
52.00	mcw 50%m 50%w	0.729
40.00	Free Oil 100%o	0.561
0.00	GIP 186 ft	0.000

Total Length: 276.00 ft Total Volume: 2.760 bbl

Num Fluid Samples: 0

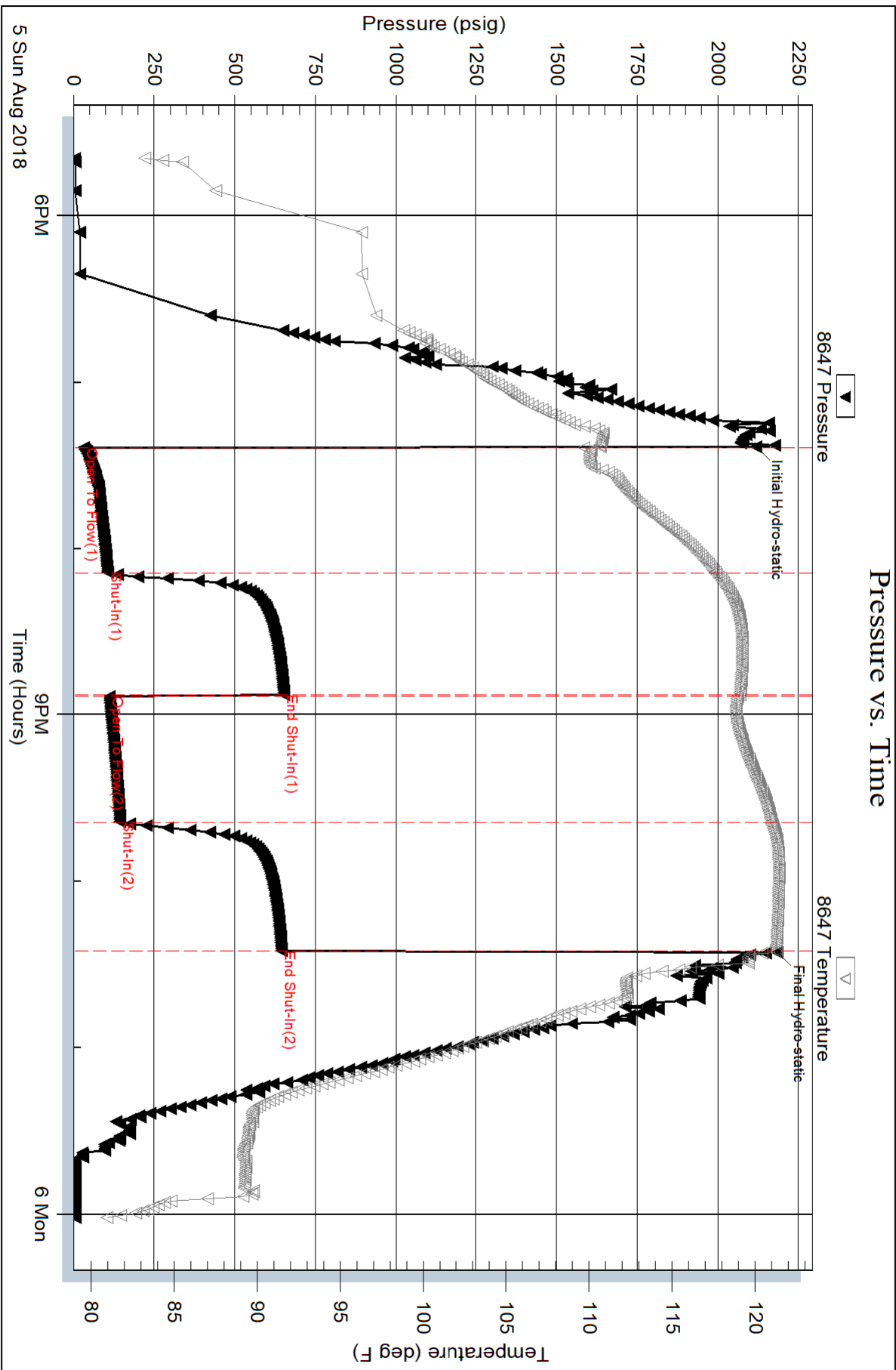
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW= .315@ 68.1= 24,000ppm



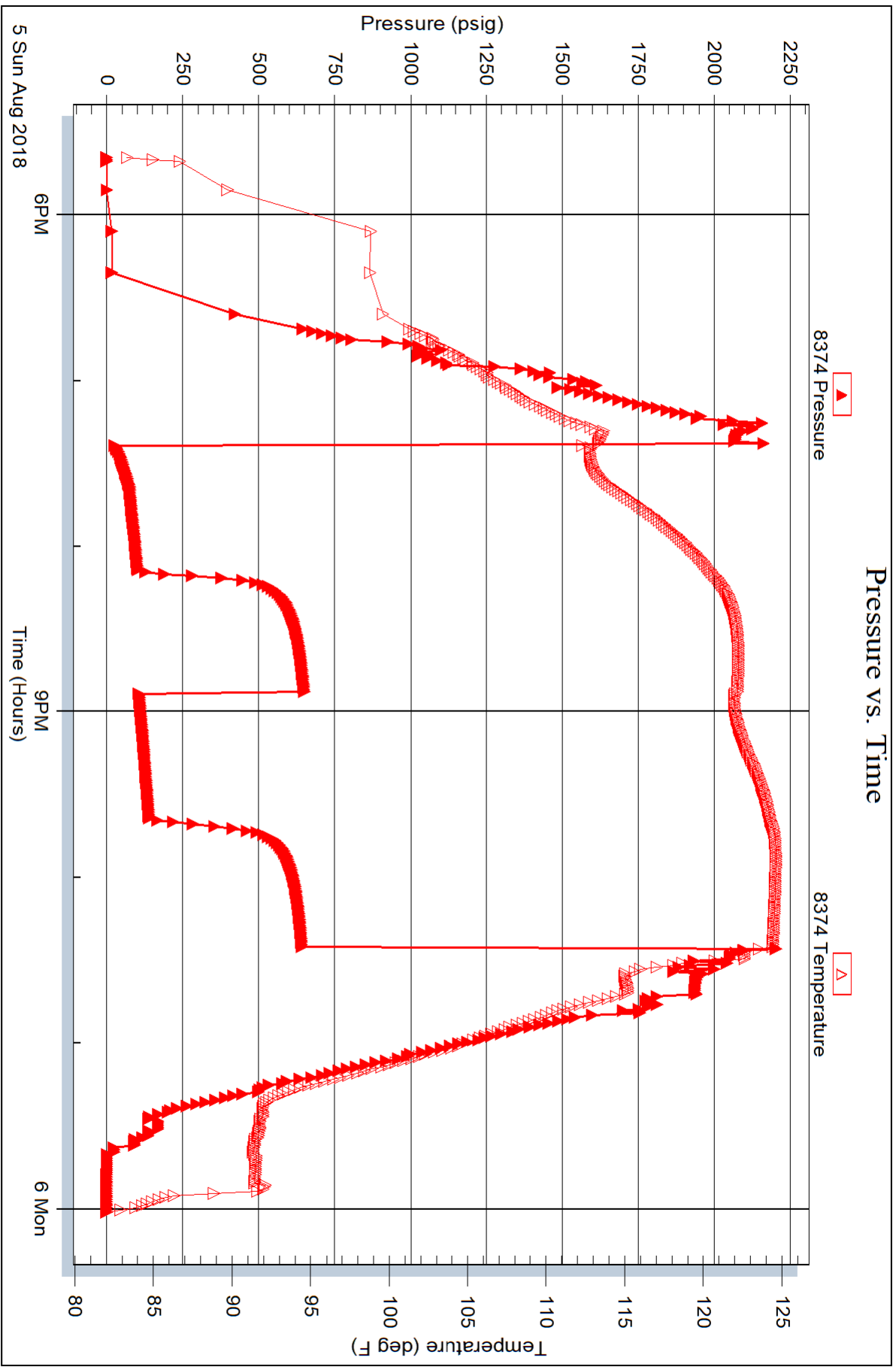
Serial #: 8374

Outside

Russell Oil Inc.

Runback "B" 21-2

DST Test Number: 2





TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Russell Oil Inc.

21-11s-32w Logan Co KS

P.O. Box 8050

Rumback "B" 21-2

Edmond OK

Job Ticket: 64336

DST#: 3

73083

ATTN: Kitt Noah

Test Start: 2018.08.06 @ 07:20:23

GENERAL INFORMATION:

Formation: **K**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 08:50:38
 Time Test Ended: 12:49:38
 Interval: **4248.00 ft (KB) To 4282.00 ft (KB) (TVD)**
 Total Depth: 4282.00 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: 3022.00 ft (KB)
 3017.00 ft (CF)
 KB to GR/CF: 5.00 ft

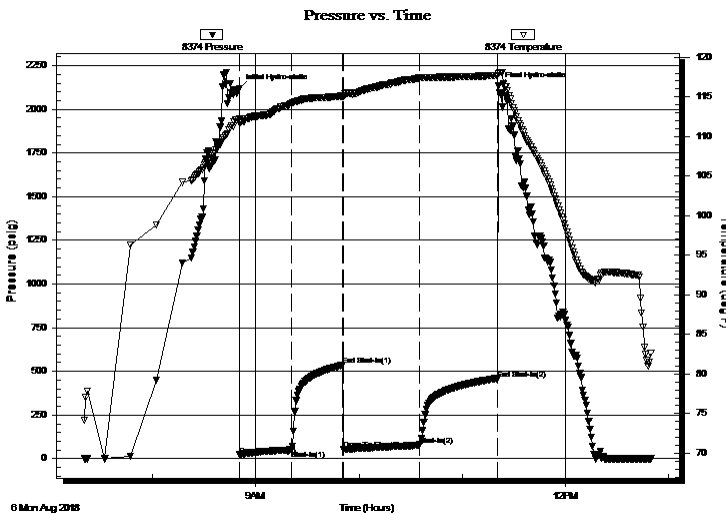
Serial #: 8374

Outside

Press@RunDepth: 76.14 psig @ 4249.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2018.08.06 End Date: 2018.08.06 Last Calib.: 2018.08.06
 Start Time: 07:20:23 End Time: 12:49:38 Time On Btm: 2018.08.06 @ 08:50:23
 Time Off Btm: 2018.08.06 @ 11:21:08

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

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2119.60	112.25	Initial Hydro-static
1	22.79	111.66	Open To Flow (1)
31	49.80	114.19	Shut-In(1)
60	534.92	115.10	End Shut-In(1)
61	53.54	115.01	Open To Flow (2)
105	76.14	117.39	Shut-In(2)
151	455.15	117.69	End Shut-In(2)
151	2132.31	117.90	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
61.00	mud 100%m	0.30
61.00	w cm 40%w 60%m	0.30

* 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.

21-11s-32w Logan Co KS

P.O. Box 8050
Edmond OK
73083

Rumback "B" 21-2

Job Ticket: 64336

DST#: 3

ATTN: Kitt Noah

Test Start: 2018.08.06 @ 07:20:23

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:

24500 ppm

Viscosity: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.39 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
61.00	mud 100%m	0.300
61.00	w cm 40%w 60%m	0.300

Total Length: 122.00 ft Total Volume: 0.600 bbl

Num Fluid Samples: 0

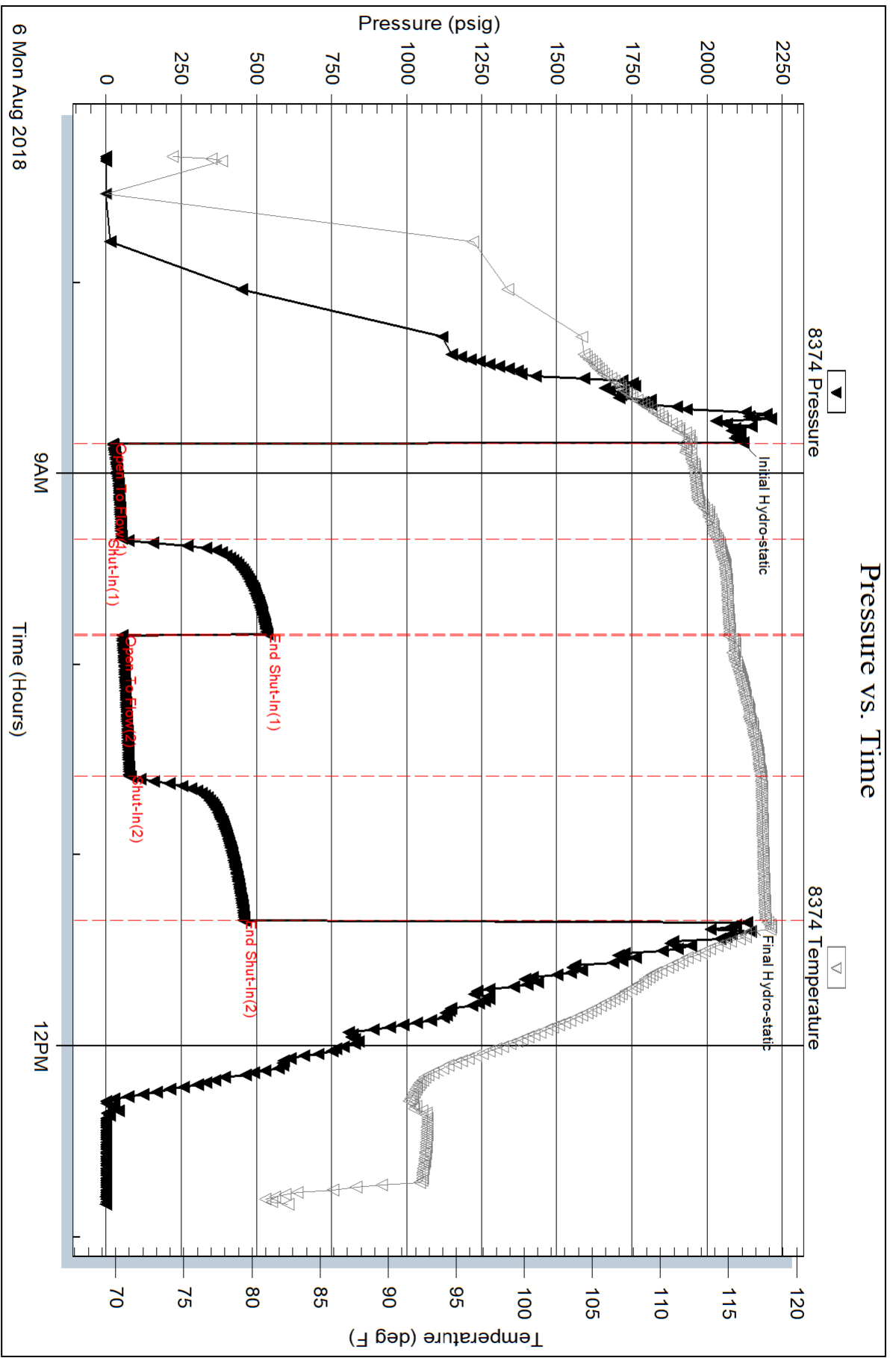
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW= .412 @ 73.2= 24,500 ppm



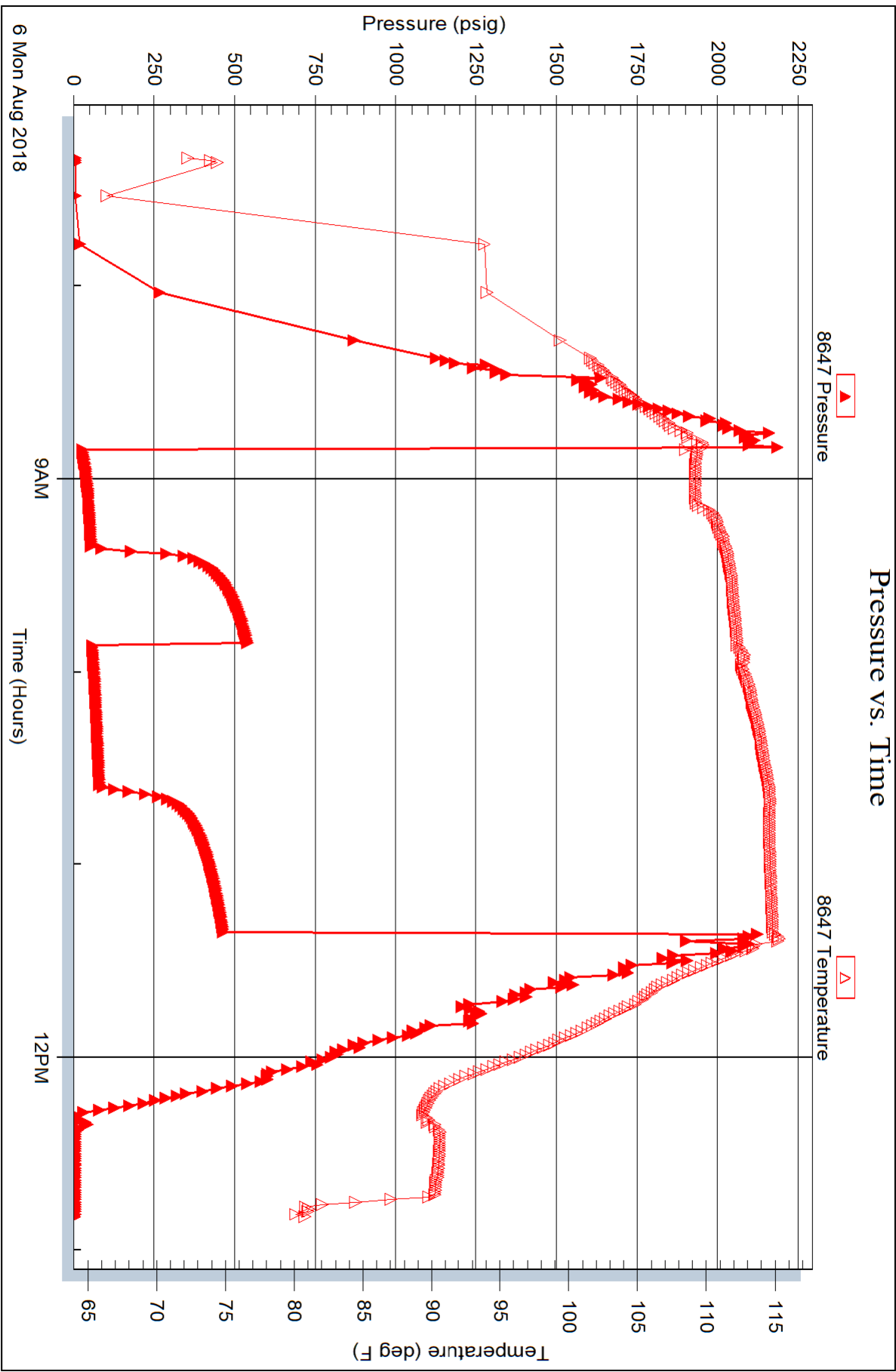
Serial #: 8647

Inside

Russell Oil Inc.

Runback "B" 21-2

DST Test Number: 3





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Russell Oil Inc.

21-11s-32w Logan Co KS

P.O. Box 8050

Rumback "B" 21-2

Edmond OK

Job Ticket: 64337

DST#: 4

73083

ATTN: Kitt Noah

Test Start: 2018.08.07 @ 17:48:15

GENERAL INFORMATION:

Formation: **Johnson**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:21:00

Time Test Ended: 23:44:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Mike Roberts

Unit No: 81

Interval: 4552.00 ft (KB) To 4597.00 ft (KB) (TVD)

Reference Elevations: 3022.00 ft (KB)

Total Depth: 4597.00 ft (KB) (TVD)

3017.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8374 Outside

Press@RunDepth: 81.04 psig @ 4553.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.08.07 End Date: 2018.08.07

Last Calib.: 2018.08.07

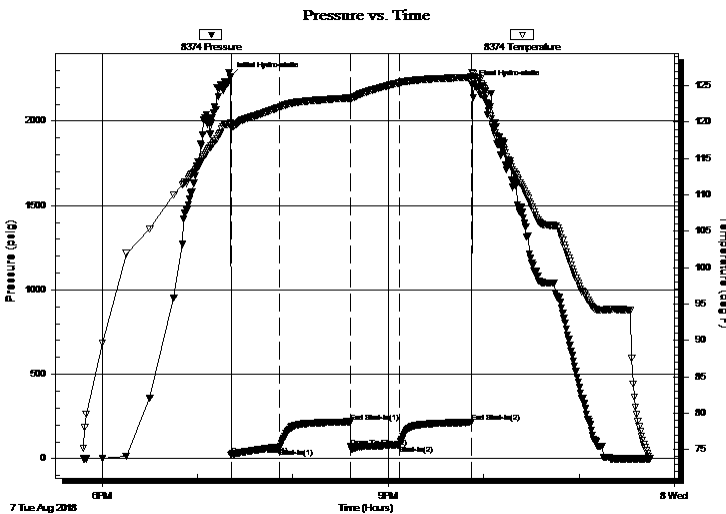
Start Time: 17:48:15 End Time: 23:44:45

Time On Btm: 2018.08.07 @ 19:20:45

Time Off Btm: 2018.08.07 @ 21:52:45

TEST COMMENT: IF:BOB in 4 min. Built to 46" (Ipro)
IS:No return blow
FF:BOB in 9 min. Built to 22 1/2" (Ipro)
FS:No return blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2263.52	119.84	Initial Hydro-static
1	20.75	119.29	Open To Flow (1)
31	64.82	122.06	Shut-In(1)
76	219.21	123.33	End Shut-In(1)
76	70.29	123.25	Open To Flow (2)
106	81.04	125.40	Shut-In(2)
152	214.55	126.18	End Shut-In(2)
152	2212.97	126.83	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
61.00	gcow m 5%g 5%o 30%w 60%m	0.30
76.00	gcom 5%g 5%o 90%m	0.51
15.00	free oil 100%o	0.21

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Russell Oil Inc.

21-11s-32w Logan Co KS

P.O. Box 8050
Edmond OK
73083

Rumback "B" 21-2

Job Ticket: 64337

DST#: 4

ATTN: Kitt Noah

Test Start: 2018.08.07 @ 17:48:15

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

28 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

26000 ppm

Viscosity: 67.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.97 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2400.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
61.00	gcow m 5%g 5%o 30%w 60%m	0.300
76.00	gcom 5%g 5%o 90%m	0.510
15.00	free oil 100%o	0.210

Total Length: 152.00 ft Total Volume: 1.020 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

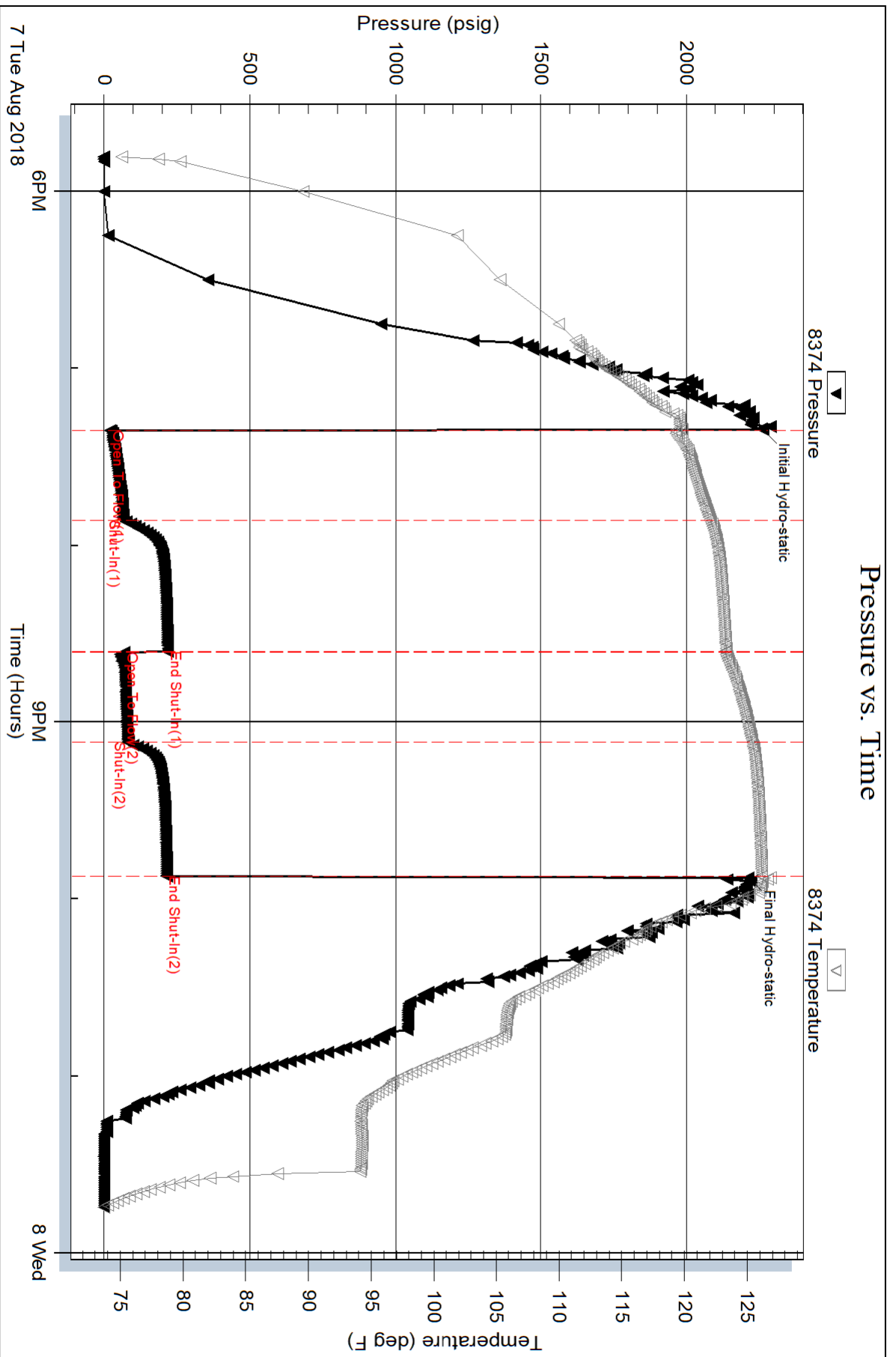
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW= .321@ 75.3= 26000 ppm

API= 26@80 corrected to 28 @ 60



Serial #: 8647

Inside

Russell Oil Inc.

Runback "B" 21-2

DST Test Number: 4

