



1370588



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 <i>(Attach Additional Sheets)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input type="checkbox"/> No	Name	Top	Datum
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:				

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)*

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>			PRODUCTION INTERVAL: Top _____ Bottom _____	

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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# 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. 255

4:45 PM  
③

Date	7-1-17	Sec.	33	Twp.	12	Range	14	County	Russell	State	KS	On Location		Finish	
------	--------	------	----	------	----	-------	----	--------	---------	-------	----	-------------	--	--------	--

Lease Kathleen Well No. 1 Location Russell - H to Land Rd, 1 1/4 W, N 1/2 S

Contractor Discovery 2 Owner To Quality Oilwell Cementing, Inc.  
Type Job Plug You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.

Hole Size 7 7/8" T.D. 2980' Charge To Brungardt oil & leasing

Csg. Depth Street  
Tbg. Size 4 1/2" D.P. Depth 670' City State

Tool Depth The above was done to satisfaction and supervision of owner agent or contractor.  
Cement Left in Csg. Shoe Joint Cement Amount Ordered 165 60/10 4 1/2" 1/4" 1/2" 3/4"

Meas Line Displace H2O  
EQUIPMENT Common

Pumptrk 16	No. Cementer		
	Helper	Rick	Poz. Mix
Bulktrk 15	No. Driver		Gel.
	Driver	Doug	Calcium
Bulktrk	No. Driver		
	Driver		

JOB SERVICES & REMARKS Hulls

Remarks: 670' - 50 5x Salt

Rat Hole 300' - 60 5x Flowseal

Mouse Hole 40' - 10 5x w/ plug Kol-Seal

Centralizers Ralldo - 30 5x Mud CLR 48

Baskets Mousehole - 15 5x CFL-117 or CD110 CAF 38

D/V or Port Collar Sand

Cemented Circulate Handling

Mileage

FLOAT EQUIPMENT

Guide Shoe Dry hole plug

Centralizer

Baskets

AFU Inserts

Float Shoe

Latch Down

Pumptrk Charge

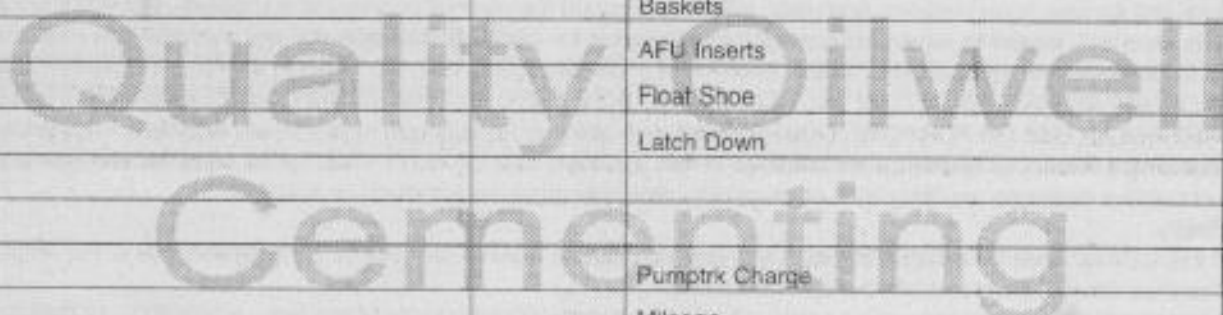
Mileage

Tax

Discount

Total Charge

X Signature *[Handwritten Signature]*



# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

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

No. 034

Phone 785-483-2025

Cell 785-324-1041

Date	6-27-16	Sec.	33	Twp.	12	Range	14	County	Russell	State	Ks	On Location	Finish
Lease	Kathleen												
Contractor	Discover Drilling												
Type Job	Done Surface												
Hole Size	12 1/4												
T.D.	640												
Depth	639												
Tbg. Size	3 1/2												
Tool	2 1/2												
Cement Left in Csg.	201												
Meas Line	Displace												

Common	Cement Amount Ordered 215 from 3/4 CC 2 1/2												
Common	The above was done to satisfaction and supervision of owner agent or contractor.												
Common	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.												
Common	Charge To Brunsgard Oil Leasing												
Common	Street												
Common	City												
Common	State												

Remarks:	JOB SERVICES & REMARKS												
Flat Hole	Pumptrk 16 No. Cementer Travis												
Mouse Hole	Pumptrk 4 No. Driver David												
Centralizers	Pumptrk 4 No. Driver David												
Baskets	Pumptrk 4 No. Driver David												
DV or Port Collar	Pumptrk 4 No. Driver David												
Sand	CFL-117 or CD110 CAF 38												
Handling	Mud CLR 48												
Mileage	Koi-Seal												
FLOAT EQUIPMENT	Flowseal												
Guide Shoe	Salt												
Centralizer	Hulls												
Baskets	Calcium												
AFI Inserts	Gal.												
Float Shoe	Poz. Mix												
Latch Down	Common												
Pumptrk Charge	Common												
Mileage	Common												
Tax	Common												
Discount	Common												
Total Charge	Common												



## DRILL STEM TEST REPORT

Prepared For: **Brungardt Oil & Leasing, Inc.**

PO Box 871  
Russell, KS 67665

ATTN: Brad Hutchison

**Kathleen #1**

**33-12S-14W Russell,KS**

Start Date: 2017.06.30 @ 12:59:24

End Date: 2017.06.30 @ 18:49:30

Job Ticket #: 63276                      DST #: 1

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

Printed: 2017.07.03 @ 10:33:08



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Brungardt Oil & Leasing, Inc.

**33-12S-14W Russell, KS**

PO Box 871  
Russell, KS 67665

**Kathleen #1**

Job Ticket: 63276

**DST#: 1**

ATTN: Brad Hutchison

Test Start: 2017.06.30 @ 12:59:24

## GENERAL INFORMATION:

Formation: **LKC "A-C"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:27:30

Time Test Ended: 18:49:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Brannan Lonsdale

Unit No: 73

Interval: **2745.00 ft (KB) To 2830.00 ft (KB) (TVD)**

Reference Elevations: 1597.00 ft (KB)

Total Depth: 2830.00 ft (KB) (TVD)

1589.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 8.00 ft

**Serial #: 8524 Outside**

Press@RunDepth: 49.89 psig @ 2746.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.06.30

End Date: 2017.06.30

Last Calib.: 2017.06.30

Start Time: 12:59:25

End Time: 18:49:30

Time On Btm: 2017.06.30 @ 15:27:00

Time Off Btm: 2017.06.30 @ 17:30:15

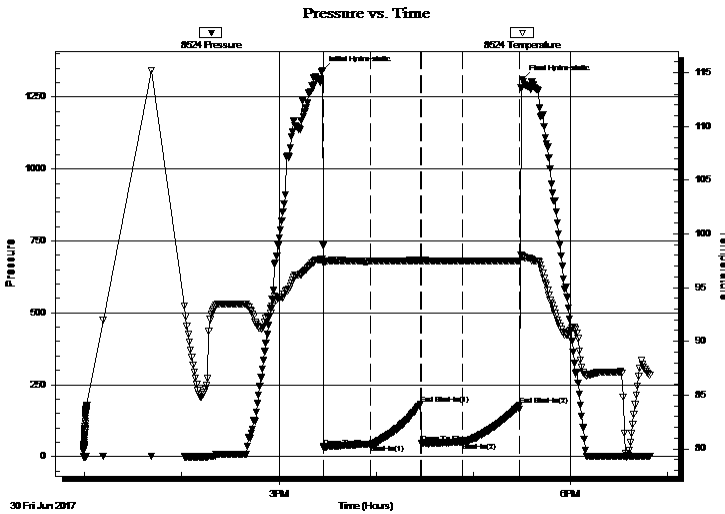
TEST COMMENT: 30- IF- Quickly built to 2 1/2" in 4 mins. Maintained 2 1/2" blow throughout

30- IS- No blow

30- FF- Weak blow built very slowly to 1"

30- FSI- No blow

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1342.04	97.67	Initial Hydro-static
1	33.31	97.32	Open To Flow (1)
30	43.10	97.48	Shut-In(1)
61	181.52	97.52	End Shut-In(1)
61	46.29	97.51	Open To Flow (2)
87	49.89	97.49	Shut-In(2)
122	177.63	97.50	End Shut-In(2)
124	1310.96	97.91	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
93.00	SOCM, 5%O 95%M	0.68

## Gas Rates

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







**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Brungardt Oil & Leasing, Inc.

**33-12S-14W Russell,KS**

PO Box 871  
Russell, KS 67665

**Kathleen #1**

Job Ticket: 63276

**DST#: 1**

ATTN: Brad Hutchison

Test Start: 2017.06.30 @ 12:59:24

## Tool Information

Drill Pipe:	Length: 2440.00 ft	Diameter: 3.82 inches	Volume: 34.59 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 310.00 ft	Diameter: 2.75 inches	Volume: 2.28 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 62000.00 lb
			<u>Total Volume: 36.87 bbl</u>	Tool Chased 4.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 44000.00 lb
Depth to Top Packer:	2745.00 ft			Final 44000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	85.00 ft			
Tool Length:	105.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			2726.00	
Shut In Tool	5.00			2731.00	
Hydraulic tool	5.00			2736.00	
Packer	5.00			2741.00	20.00 Bottom Of Top Packer
Packer	4.00			2745.00	
Stubb	1.00			2746.00	
Recorder	0.00	6838	Inside	2746.00	
Recorder	0.00	8524	Outside	2746.00	
Perforations	16.00			2762.00	
Change Over Sub	1.00			2763.00	
Drill Pipe	63.00			2826.00	
Change Over Sub	1.00			2827.00	
Bullnose	3.00			2830.00	85.00 Bottom Packers & Anchor

**Total Tool Length: 105.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Brungardt Oil & Leasing, Inc.

**33-12S-14W Russell,KS**

PO Box 871  
Russell, KS 67665

**Kathleen #1**

Job Ticket: 63276

**DST#: 1**

ATTN: Brad Hutchison

Test Start: 2017.06.30 @ 12:59:24

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

33 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.79 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5800.00 ppm

Filter Cake: inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
93.00	SOCM, 5%O 95%M	0.683

Total Length: 93.00 ft      Total Volume: 0.683 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

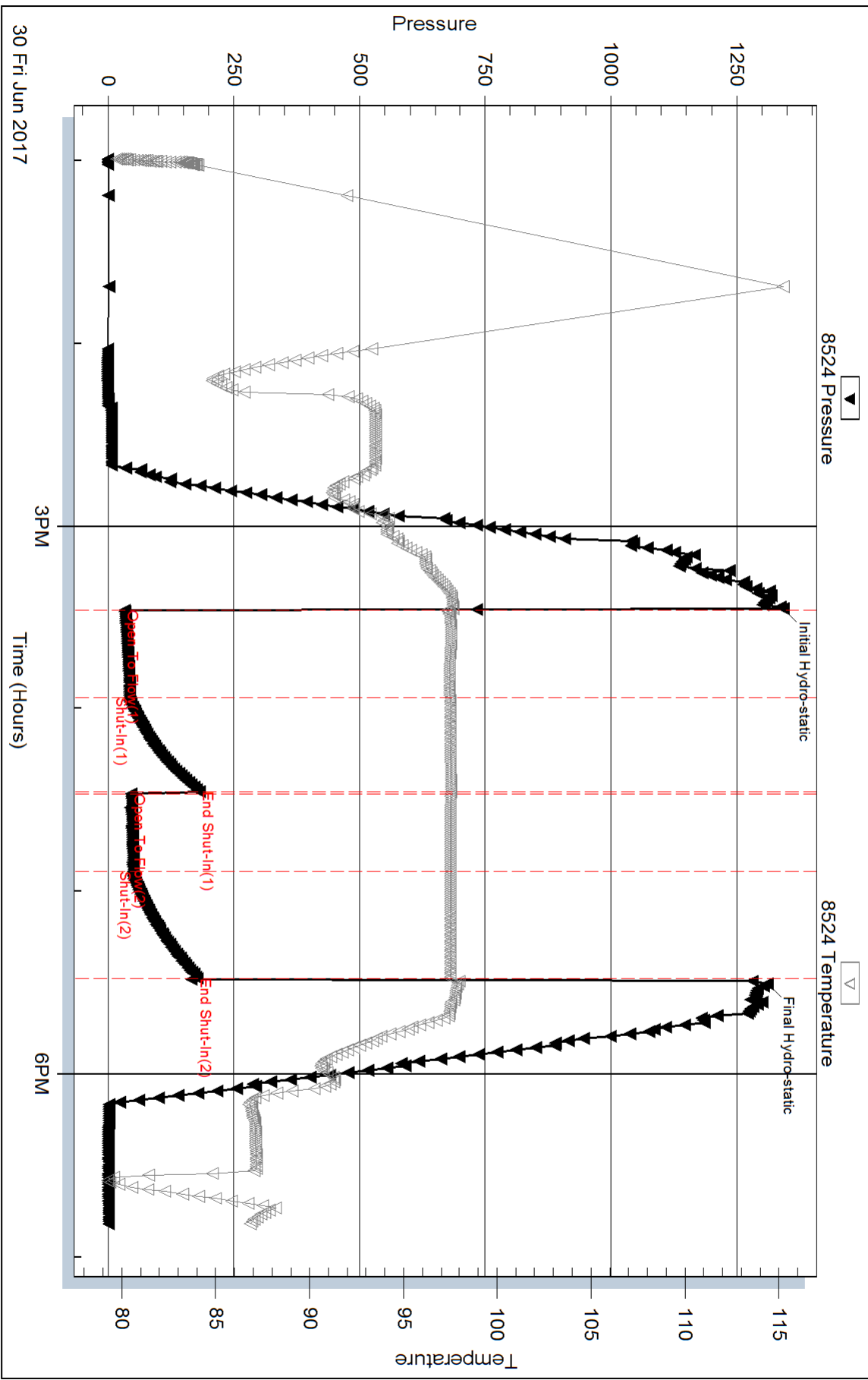
Serial #: 8524

Outside Brungardt Oil & Leasing, Inc.

Kathleen #1

DST Test Number: 1

### Pressure vs. Time



Trilobite Testing, Inc

Ref. No: 63276

Printed: 2017.07.03 @ 10:33:09

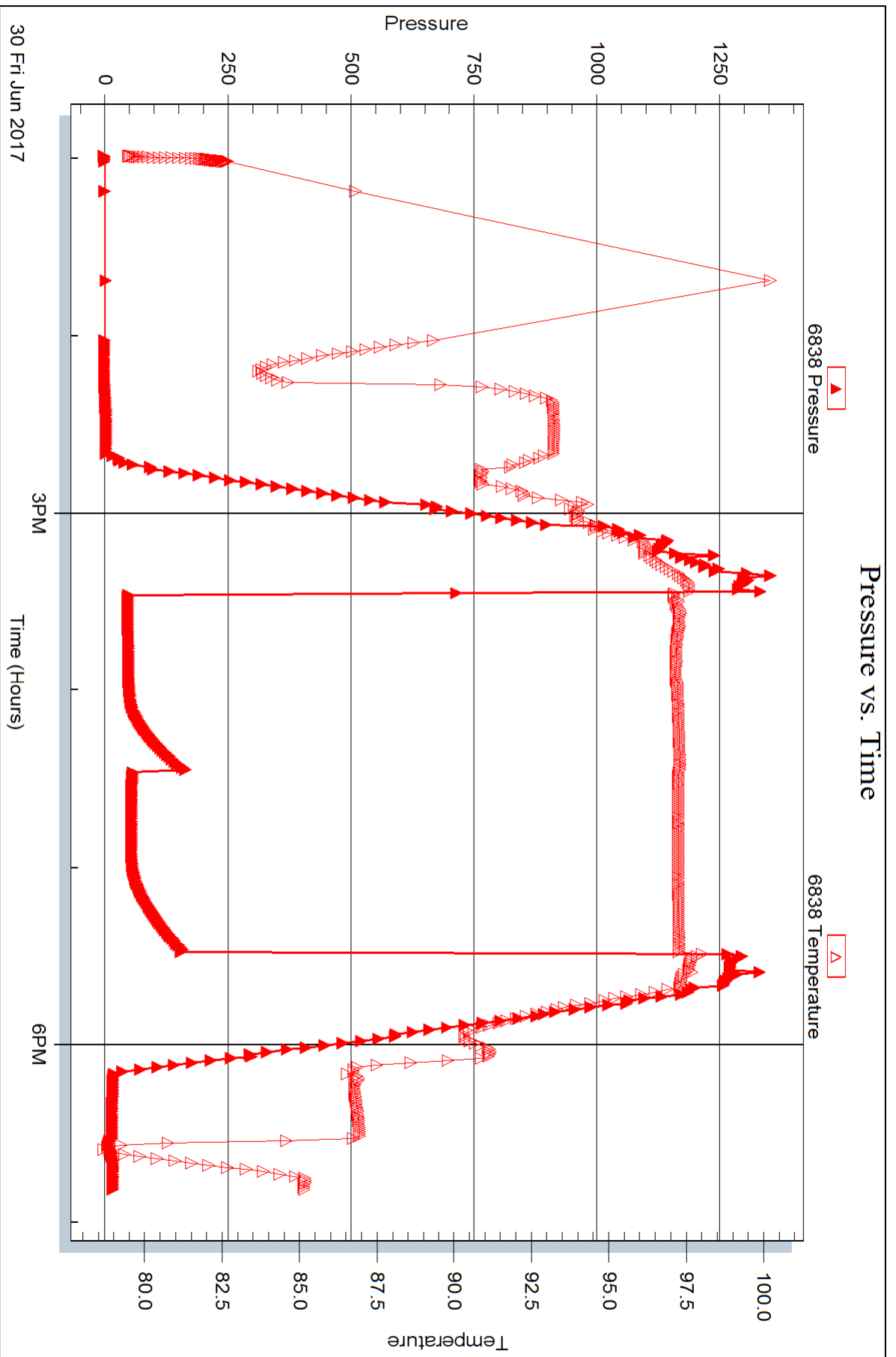
Serial #: 6838

Inside

Brungardt Oil & Leasing, Inc.

Kathleen #1

DST Test Number: 1





## DRILL STEM TEST REPORT

Prepared For: **Brungardt Oil & Leasing, Inc.**

PO Box 871  
Russell, KS 67665

ATTN: Brad Hutchison

**Kathleen #1**

**33-12S-14W Russell,KS**

Start Date: 2017.07.01 @ 05:45:00

End Date: 2017.07.01 @ 10:41:51

Job Ticket #: 63277                      DST #: 2

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

Printed: 2017.07.03 @ 10:31:57



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Brungardt Oil & Leasing, Inc.

**33-12S-14W Russell, KS**

PO Box 871  
Russell, KS 67665

**Kathleen #1**

Job Ticket: 63277

**DST#: 2**

ATTN: Brad Hutchison

Test Start: 2017.07.01 @ 05:45:00

## GENERAL INFORMATION:

Formation: **LKC "H-J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:27:51

Time Test Ended: 10:41:51

Test Type: Conventional Bottom Hole (Reset)

Tester: Brannan Lonsdale

Unit No: 73

Interval: **2900.00 ft (KB) To 2980.00 ft (KB) (TVD)**

Reference Elevations: 1597.00 ft (KB)

Total Depth: 2980.00 ft (KB) (TVD)

1589.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 8.00 ft

**Serial #: 8524 Outside**

Press@RunDepth: 25.43 psig @ 2901.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.07.01

End Date:

2017.07.01

Last Calib.: 2017.07.01

Start Time: 05:45:01

End Time:

10:41:51

Time On Btm: 2017.07.01 @ 07:27:36

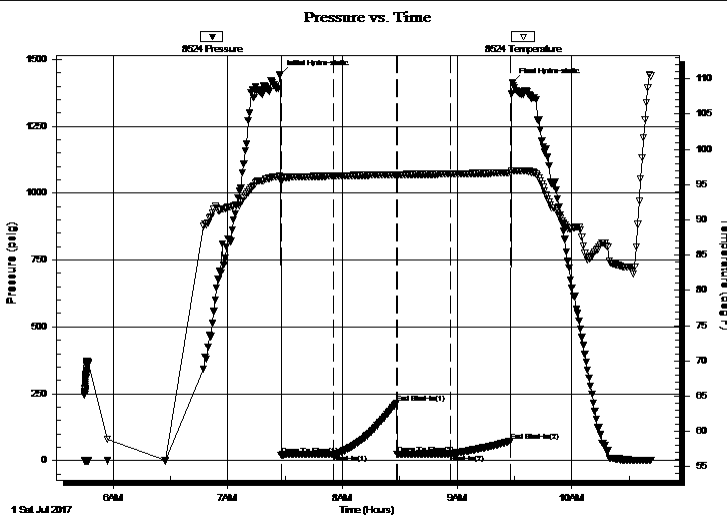
Time Off Btm: 2017.07.01 @ 09:28:51

TEST COMMENT: 30- IF- 1" blow slow ly died back to surface blow

30- IS- No blow

30- FF- No blow

30- FSI- No blow



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1444.04	96.09	Initial Hydro-static
1	19.45	95.49	Open To Flow (1)
28	23.45	96.23	Shut-In(1)
61	213.93	96.43	End Shut-In(1)
61	23.91	96.39	Open To Flow (2)
89	25.43	96.53	Shut-In(2)
121	72.66	96.67	End Shut-In(2)
122	1411.80	97.00	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
15.00	M	0.11

## Gas Rates

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

\* Recovery from multiple tests





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Brungardt Oil & Leasing, Inc.

**33-12S-14W Russell,KS**

PO Box 871  
Russell, KS 67665

**Kathleen #1**

Job Ticket: 63277

**DST#: 2**

ATTN: Brad Hutchison

Test Start: 2017.07.01 @ 05:45:00

## Tool Information

Drill Pipe:	Length: 2597.00 ft	Diameter: 3.82 inches	Volume: 36.81 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 310.00 ft	Diameter: 2.75 inches	Volume: 2.28 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 56000.00 lb
			<u>Total Volume: 39.09 bbl</u>	Tool Chased 3.00 ft
Drill Pipe Above KB:	27.00 ft			String Weight: Initial 47000.00 lb
Depth to Top Packer:	2900.00 ft			Final 47000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	80.00 ft			
Tool Length:	100.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			2881.00	
Shut In Tool	5.00			2886.00	
Hydraulic tool	5.00			2891.00	
Packer	5.00			2896.00	20.00 Bottom Of Top Packer
Packer	4.00			2900.00	
Stubb	1.00			2901.00	
Recorder	0.00	6838	Inside	2901.00	
Recorder	0.00	8524	Outside	2901.00	
Perforations	11.00			2912.00	
Change Over Sub	1.00			2913.00	
Drill Pipe	63.00			2976.00	
Change Over Sub	1.00			2977.00	
Bullnose	3.00			2980.00	80.00 Bottom Packers & Anchor

**Total Tool Length: 100.00**





**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Brungardt Oil & Leasing, Inc.

**33-12S-14W Russell,KS**

PO Box 871  
Russell, KS 67665

**Kathleen #1**

Job Ticket: 63277

**DST#: 2**

ATTN: Brad Hutchison

Test Start: 2017.07.01 @ 05:45:00

**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: 50.00 sec/qt

Cushion Volume:

bbl

Water Loss: 6.78 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5800.00 ppm

Filter Cake: inches

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
15.00	M	0.110

Total Length: 15.00 ft      Total Volume: 0.110 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

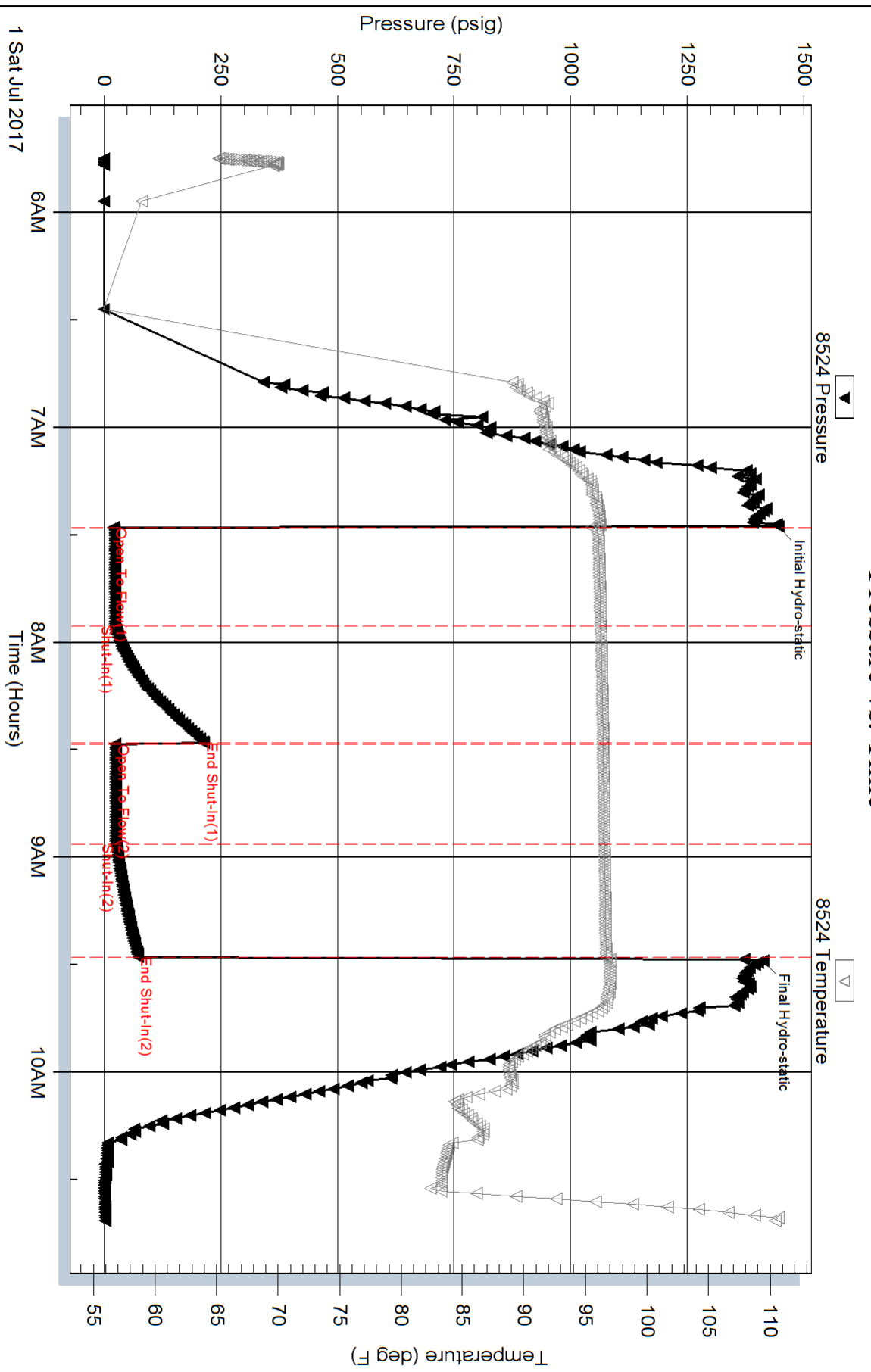
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time



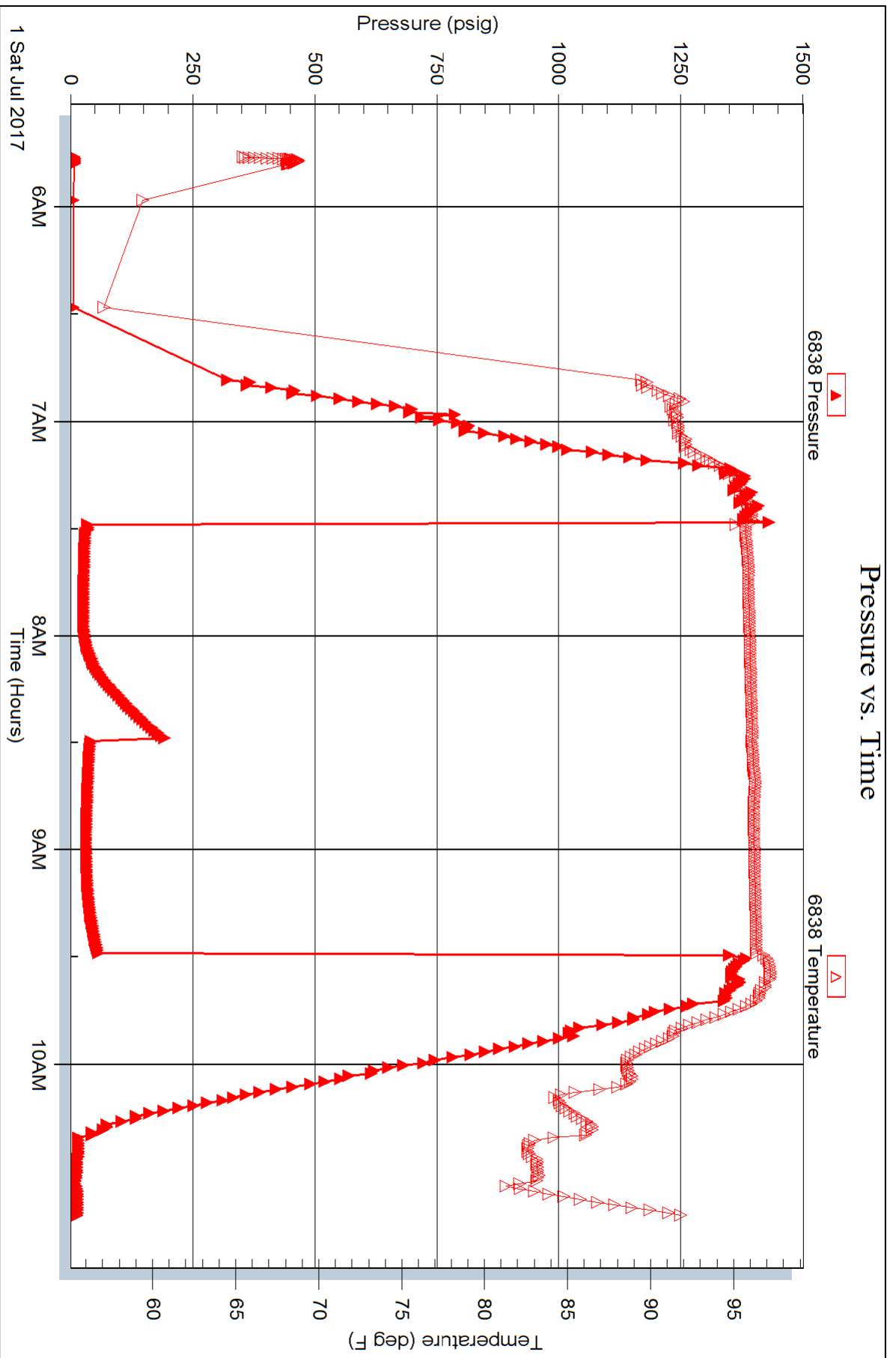
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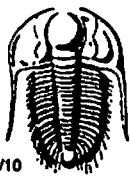
Inside

Brungardt Oil & Leasing, Inc.

Kathleen #1

DST Test Number: 2





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 63276

Well Name & No. Kathleen #1 Test No. 1 Date 6/30/97  
 Company Brungardt Oil + Leasing, Inc Elevation 1397 KB 1389 GL  
 Address 213 W. 17<sup>th</sup> St. PO Box 871 Russell, KS 67665  
 Co. Rep / Geo. Brad Hutchison Rig Discovery #2  
 Location: Sec. 33 Twp. 12 S Rge. 14 W Co. Russell State KS

Interval Tested 2745-2830 Zone Tested LKC "A-C"  
 Anchor Length 85' Drill Pipe Run 2440 Mud Wt. 9.0  
 Top Packer Depth 2740 Drill Collars Run 3105 Vis 50  
 Bottom Packer Depth 2745 Wt. Pipe Run          WL 6.8  
 Total Depth 2830 Chlorides 5800 ppm System LCM 2<sup>nd</sup>

Blow Description IF - Quickly built to 2 1/2". Maintained 2 1/2" blow  
ISI - No blow  
FF - Weak blow built very slowly to 1"  
PSI - No blow

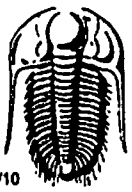
Rec	Feet of	%gas	%oil	%water	%mud
<u>93</u>	<u>SOCNA</u>		<u>5</u>		<u>95</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 93' BHT 98° Gravity 33 API RW          @          ° F Chlorides          ppm

(A) Initial Hydrostatic 1342  Test 1050 T-On Location 1245  
 (B) First Initial Flow 33  Jars          T-Started 1259  
 (C) First Final Flow 43  Safety Joint          T-Open 1527  
 (D) Initial Shut-In 182  Circ Sub          T-Pulled 1727  
 (E) Second Initial Flow 46  Hourly Standby          T-Out 1849  
 (F) Second Final Flow 50  Mileage 66 RT 49.50 Comments           
 (G) Final Shut-In 178  Sampler           
 (H) Final Hydrostatic 1311  Straddle           
 Ruined Shale Packer           
 Ruined Packer           
 Extra Copies           
 Initial Open 30  Shale Packer           
 Initial Shut-In 30  Extra Packer           
 Final Flow 30  Extra Recorder           
 Final Shut-In 30  Day Standby           
 Accessibility           
 Sub Total 1099.50 Total 1099.50 MP/DST Disc't         

Approved By          Our Representative Brannan Lonsdale

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.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 63277

Well Name & No. Kathleen #1 Test No. 2 Date 7/1/17  
 Company Brungardt Oil & Leasing, Inc. Elevation 1597 KB 1589 GL  
 Address 213 W. 7th St. PO Box 871 Russell, KS 67665  
 Co. Rep / Geo. Brad Hutchison Rig Discovery #2  
 Location: Sec. 33 Twp. 12 S Rge. 14 W Co. Russell State KS

Interval Tested 2900-2980 Zone Tested \_\_\_\_\_  
 Anchor Length 80' Drill Pipe Run 2597 Mud Wt. 9.0  
 Top Packer Depth 2895 Drill Collars Run \_\_\_\_\_ Vis 50  
 Bottom Packer Depth 2900 Wt. Pipe Run 310 WL 6.8  
 Total Depth 2980 Chlorides 5800 ppm System LCM 2#  
 Blow Description IF- 1" blow slowly died back to surface blow  
ISF- No blow  
FF- No blow  
FSI- No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>15</u>	<u>M</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 15' BHT 97° Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic <u>1444</u>	<input checked="" type="checkbox"/> Test <u>1050</u>	T-On Location <u>0530</u>
(B) First Initial Flow <u>19</u>	<input type="checkbox"/> Jars _____	T-Started <u>0545</u>
(C) First Final Flow <u>23</u>	<input type="checkbox"/> Safety Joint _____	T-Open <u>0728</u>
(D) Initial Shut-In <u>214</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>0928</u>
(E) Second Initial Flow <u>24</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>1042</u>
(F) Second Final Flow <u>25</u>	<input checked="" type="checkbox"/> Mileage <u>66 RT</u> 49.50	Comments _____
(G) Final Shut-In <u>23</u>	<input type="checkbox"/> Sampler _____	_____
(H) Final Hydrostatic <u>1412</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Packer _____
Initial Shut-In <u>30</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>30</u>	<input type="checkbox"/> Day Standby _____	Total <u>1099.50</u>
	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1099.50</u>	

Approved By \_\_\_\_\_ Our Representative Brannan Lonsdale

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.

# BRAD HUTCHINSON

119 EVES DRIVE  
RUSSELL, KANSAS 67865

785-480-04

## GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

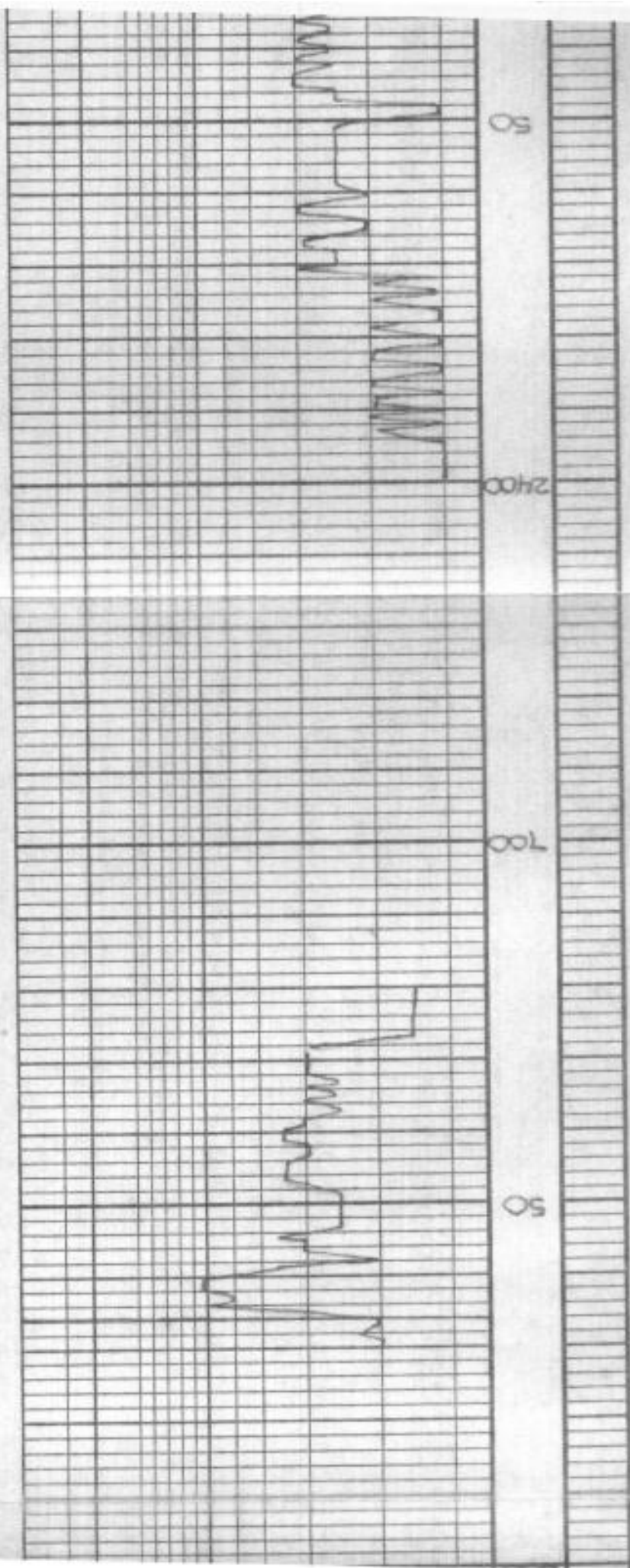
COMPANY Brunswick Oil & Services, Inc. ELEVATIONS:  
 LEASE KATHLEEN #1 KB 1597'  
 FIELD \_\_\_\_\_ DF \_\_\_\_\_  
 LOCATION 2070' FNL, 330' FEL GL 1589'  
 SEC 33 TWP 12S RGE 14W  
 COUNTY Russell STATE KANSAS  
 CONTRACTOR Discovery Drilling  
 SPUD 12/21/2017 COMP 7/21/2017  
 RTD 2980' (-1383) LTD \_\_\_\_\_  
 MUD UP 2400' TYPE MUD GENERAL

CASING  
 SURF ACE 8 5/8" @ 64  
 PRODUCTION None  
 ELECTRICAL SURVEY  
 None

SAMPLES SAVED FROM \_\_\_\_\_ TO RTD  
 DRILLING TIME KEPT FROM \_\_\_\_\_ TO RTD  
 SAMPLES EXAMINED FROM 2400' TO RTD  
 GEOLOGICAL SUPERVISION FROM \_\_\_\_\_ TO RTD  
 GEOLOGIST ON WELL Brad S. Hutchinson

FORMATION TOPS	LOG	SAMPLES	
Amyrite		634 (-1963)	
Lepidika		2490 (-893)	
Trento		2729 (-1152)	
Hepler		2711 (-1114)	
Amisak		2760 (-1109)	
Keely Total		2980 (-1383)	
Depth			33

ANALYDRITE 634 (+963)









051-2  
 30.30  
 CF. VER.  
 EF NO.  
 REC. 15  
 RESP.  
 RESP.  
 RESP.  
 RESP.  
 RESP.  
 15M 11  
 CHART

Same as  
 Sh grey - 4 gms  
 waxy  
 L2 grey D2e Bucky  
 NS  
 12 WHT-CRM EXY-ONE  
 000-8000 18 500 POC  
 PP 2 500 15 500  
 NED 50-0000  
 Sh and brand WHT OX  
 WIK CARD

L2 buff. 12 gms 000-000  
 L2 buff. 500 000 000-5000  
 DEC WHT OX

