

ALT ☐ I ☐ II ☐ III Approved by: _____ Date: _____

Form	ACO1 - Well Completion
Operator	Red Oak Energy, Inc.
Well Name	MUMM 1-34
Doc ID	1725777

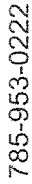
Tops

Name	Top	Datum
B/Anhy	2708	224
Topeka	3749	-817
Heebner	3914	-982
Lansing	3964	-1032
Muncie Creek	4064	-1132
Stark	4129	-1197
B/KC	4182	-1250
Pawnee	4296	-1364
Cherokee	4380	-1448

Form	ACO1 - Well Completion
Operator	Red Oak Energy, Inc.
Well Name	MUMM 1-34
Doc ID	1725777

Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
Surface	12.25	8.875	23	263	Common	185	3%cc/2%gel



HP OILFIELD SERVICES, LLC

TICKET NUMBER 2746K-C
LOCATION Houston, Ks
FOREMAN Walter Dinkel

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
6-19-23		Murphy #1-34	34	43	31 W	Rawlins
CUSTOMER						
MAILING ADDRESS		Red Oak Energy, Inc	TRUCK #	DRIVER	TRUCK #	DRIVER
			103	Corey D.		
			841-857	John E.		
CITY		STATE	ZIP CODE			
JOB TYPE		HOLE SIZE	HOLE DEPTH	CASING SIZE & WEIGHT		895" 23#
SURFACE		12 1/4"	263'	OTHER		
CASING DEPTH		263'	TUBING	CEMENT LEFT in CASING		15'-20'
SLURRY WEIGHT		15.2	WATER gal/sk	RATE		
DISPLACEMENT		15.5	MIX PSI			
			DISPLACEMENT PSI			
REMARKS: Safety meeting, Rig up on Murphy #3, CIP. Casing on bottom.						
mix 125 5% class A, 3% class C, 2% class D. Displace 15 1/2 Bbl H ₂ O, Shut in						

Cement Dvd Circle
Appendix 4 BBL to PPT

Thank You
W. H. C. A.

[illegible]

AUTHORIZATION John Baker

TITLE Pizz her

DATE 6-18-23

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



DRILL STEM TEST REPORT

Prepared For: **Red Oak Energy, Inc.**

7701 E Kellogg Dr. Ste 710
Wichita, KS 67207

ATTN: Ryan Davis

Mumm #1-34

34-4s-31w Rawlins,KS

Start Date: 2023.06.22 @ 22:55:00

End Date: 2023.06.23 @ 06:27:30

Job Ticket #: 70957 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2023.06.29 @ 17:00:01



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Red Oak Energy, Inc.

7701 E Kellogg Dr. Ste 710
Wichita, KS 67207

ATTN: Ryan Davis

34-4s-31w Rawlins, KS

Mumm #1-34

Job Ticket: 70957

DST#: 1

Test Start: 2023.06.22 @ 22:55:00

GENERAL INFORMATION:

Formation: **Toronto- LKC A**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:51:00

Time Test Ended: 06:27:30

Test Type: Conventional Bottom Hole (Initial)

Tester: David Urban

Unit No: 67

Interval: 3906.00 ft (KB) To 3980.00 ft (KB) (TVD)

Reference Elevations: 2932.00 ft (KB)

Total Depth: 3980.00 ft (KB) (TVD)

2927.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8677 Outside

Press@RunDepth: 119.87 psig @ 3907.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2023.06.22

End Date:

2023.06.23

Last Calib.: 2023.06.23

Start Time: 22:55:05

End Time:

06:27:29

Time On Btm: 2023.06.23 @ 01:50:30

Time Off Btm: 2023.06.23 @ 04:08:00

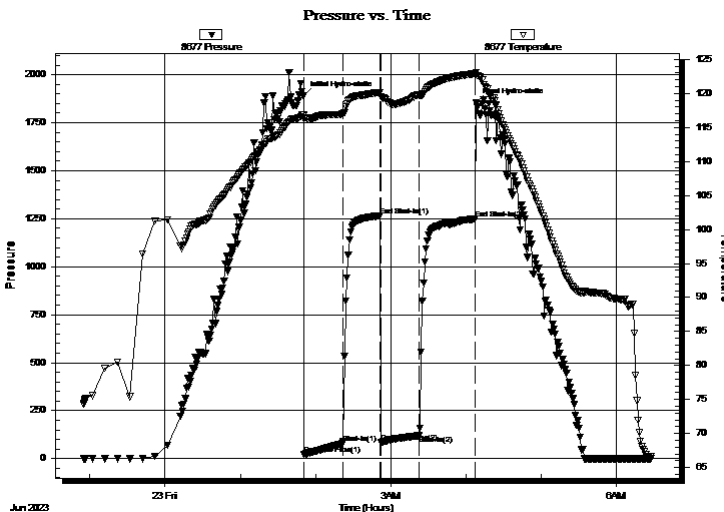
TEST COMMENT: IF- Weak surface blow , Built to 2" in 10 minutes; Final built to 3 3/4".

IS- No return.

FF- Weak surface blow , Built to 1 1/4" in 10 minutes; Final built to 3".

FS- No return.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1889.93	116.78	Initial Hydro-static
1	21.90	116.25	Open To Flow (1)
31	79.37	116.99	Shut-In(1)
61	1265.20	120.15	End Shut-In(1)
62	86.06	119.52	Open To Flow (2)
92	119.87	119.70	Shut-In(2)
137	1248.52	122.88	End Shut-In(2)
138	1852.45	123.08	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
59.00	MW w / oil spots- 60%W, 40%M	0.29
32.00	MW w / oil spots- 60%W, 40%M	0.16

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Red Oak Energy, Inc.

7701 E Kellogg Dr. Ste 710
Wichita, KS 67207

ATTN: Ryan Davis

34-4s-31w Rawlins, KS

Mumm #1-34

Job Ticket: 70957

DST#: 1

Test Start: 2023.06.22 @ 22:55:00

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Time Tool Opened: 01:51:00

Time Test Ended: 06:27:30

Test Type: Conventional Bottom Hole (Initial)

Tester: David Urban

Unit No: 67

Interval: 3906.00 ft (KB) To 3980.00 ft (KB) (TVD)

Total Depth: 3980.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2932.00 ft (KB)

2927.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8018 Inside

Press@RunDepth: psig @ 3907.00 ft (KB)

Start Date: 2023.06.22

End Date:

2023.06.23

Start Time: 22:55:05

End Time:

06:27:29

Capacity: 8000.00 psig

Last Calib.: 2023.06.23

Time On Btm:

Time Off Btm:

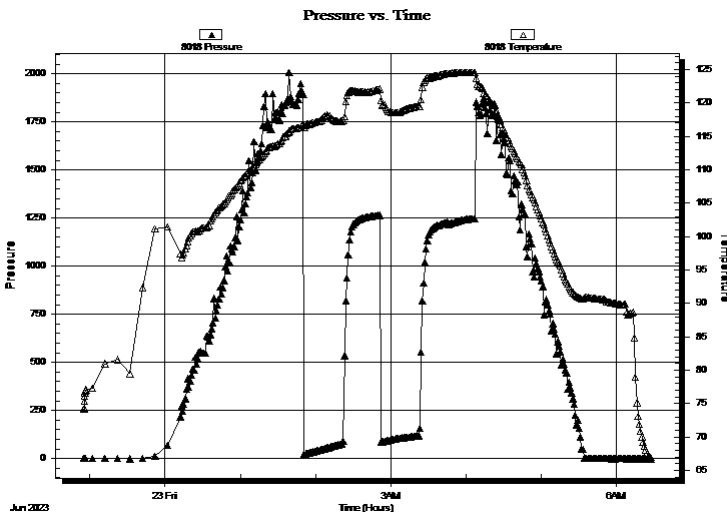
TEST COMMENT: IF- Weak surface blow , Built to 2" in 10 minutes; Final built to 3 3/4".

IS- No return.

FF- Weak surface blow , Built to 1 1/4" in 10 minutes; Final built to 3".

FS- No return.

PRESSURE SUMMARY



Time
(Min.)

Pressure
(psig)

Temp
(deg F)

Annotation

Recovery

Length (ft)	Description	Volume (bbl)
59.00	MW w / oil spots- 60%W, 40%M	0.29
32.00	MW w / oil spots- 60%W, 40%M	0.16

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Red Oak Energy, Inc.

34-4s-31w Rawlins,KS

7701 E Kellogg Dr. Ste 710
Wichita, KS 67207

Mumm #1-34

Job Ticket: 70957

DST#: 1

ATTN: Ryan Davis

Test Start: 2023.06.22 @ 22:55:00

Tool Information

Drill Pipe:	Length:	3718.00 ft	Diameter:	3.80 inches	Volume:	52.15 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	Weight set on Packer:	20000.00 lb
Drill Collar:	Length:	179.00 ft	Diameter:	2.25 inches	Volume:	0.88 bbl	Weight to Pull Loose:	4000.00 lb
					Total Volume:	53.03 bbl	Tool Chased	ft
Drill Pipe Above KB:		23.00 ft					String Weight: Initial	94000.00 lb
Depth to Top Packer:		3906.00 ft					Final	94000.00 lb
Depth to Bottom Packer:		ft						
Interval between Packers:		74.00 ft						
Tool Length:		106.00 ft						
Number of Packers:		2	Diameter:	6.75 inches				
Tool Comments:								

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Stubb	1.00		Fluid	3875.00	
Shut In Tool	5.00			3880.00	
Hydraulic tool	5.00			3885.00	
Jars	5.00			3890.00	
EM Tool	4.00			3894.00	
Safety Joint	3.00			3897.00	
Packer	5.00			3902.00	32.00 Bottom Of Top Packer
Packer	4.00			3906.00	
Stubb	1.00			3907.00	
Recorder	0.00	8677	Outside	3907.00	
Recorder	0.00	8018	Inside	3907.00	
Perforations	36.00			3943.00	
Change Over Sub	1.00			3944.00	
Drill Pipe	32.00			3976.00	
Change Over Sub	1.00			3977.00	
Bullnose	3.00			3980.00	74.00 Bottom Packers & Anchor
Total Tool Length:	106.00				



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Red Oak Energy, Inc.

34-4s-31w Rawlins,KS

7701 E Kellogg Dr. Ste 710
Wichita, KS 67207

Mumm #1-34

Job Ticket: 70957

DST#: 1

ATTN: Ryan Davis

Test Start: 2023.06.22 @ 22:55:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 58.00 sec/qt

Water Loss: 6.38 in³

Resistivity: ohm.m

Salinity: 1000.00 ppm

Filter Cake: 2.00 inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

Water Salinity: 30000 ppm

deg API

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
59.00	MW w / oil spots- 60%W, 40%M	0.290
32.00	MW w / oil spots- 60%W, 40%M	0.157

Total Length: ft Total Volume: 1.329 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

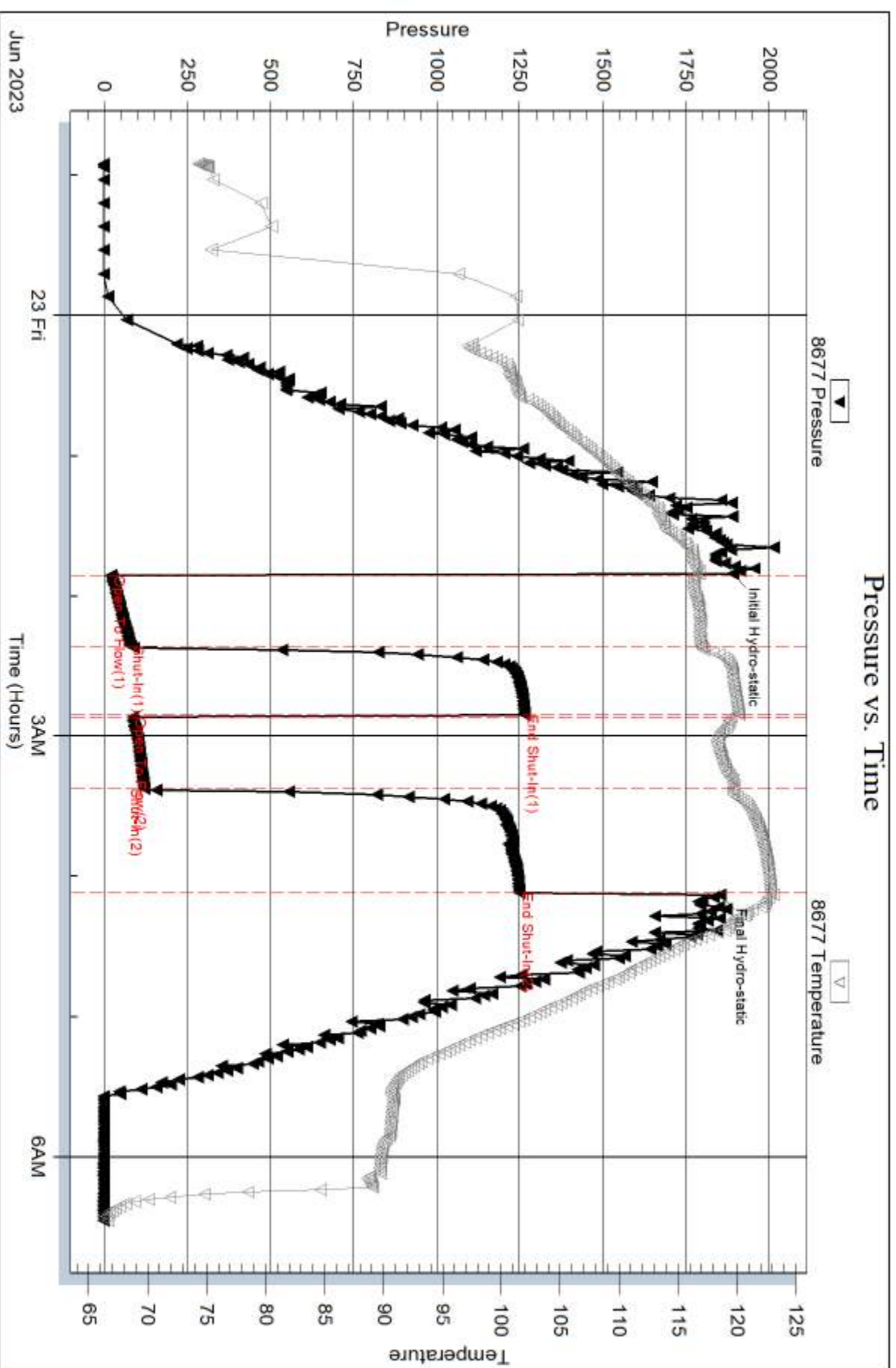
Recovery Comments: LCM-1.5#

Serial #: 8677

Outside Red Oak Energy, Inc.

Mummm #1-34

DST Test Number: 1



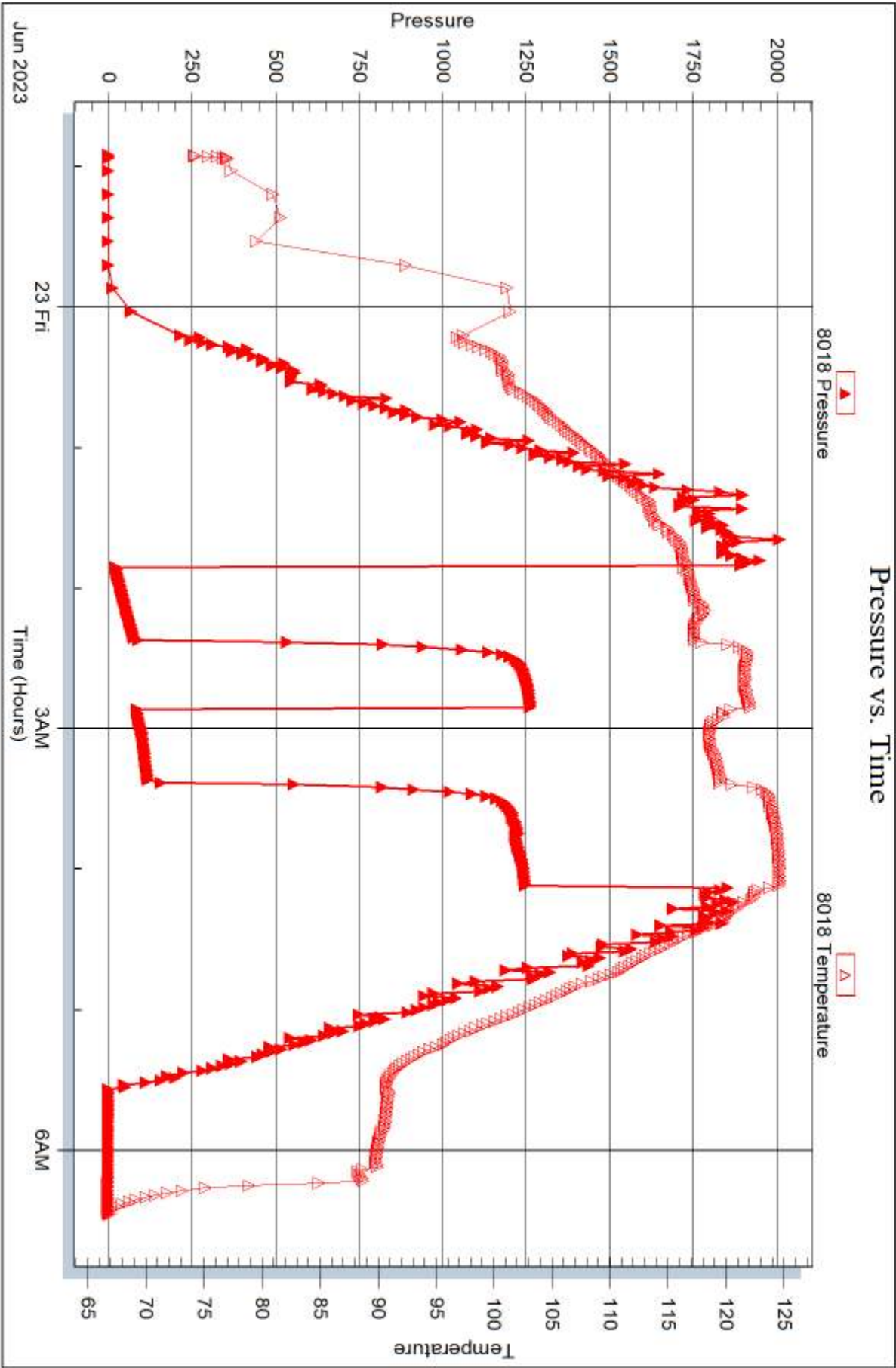
Serial #: 8018

Inside

Red Oak Energy, Inc.

Murnm #1-34

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Red Oak Energy, Inc.**

7701 E Kellogg Dr. Ste 710
Wichita, KS 67207

ATTN: Ryan Davis

Mumm #1-34

34-4s-31w Rawlins,KS

Start Date: 2023.06.23 @ 13:00:00

End Date: 2023.06.23 @ 18:44:00

Job Ticket #: 70958 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2023.06.29 @ 16:56:56



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Red Oak Energy, Inc.

7701 E Kellogg Dr. Ste 710
Wichita, KS 67207

ATTN: Ryan Davis

34-4s-31w Rawlins, KS

Mumm #1-34

Job Ticket: 70958

DST#: 2

Test Start: 2023.06.23 @ 13:00:00

GENERAL INFORMATION:

Formation: **LKC, B**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:17:30

Time Test Ended: 18:44:00

Test Type: Conventional Bottom Hole (Reset)

Tester: David Urban

Unit No: 67

Interval: 3972.00 ft (KB) To 3992.00 ft (KB) (TVD)

Reference Elevations: 2932.00 ft (KB)

Total Depth: 3992.00 ft (KB) (TVD)

2927.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8677 Outside

Press@RunDepth: 19.09 psig @ 3973.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2023.06.23

End Date:

2023.06.23

Last Calib.: 2023.06.23

Start Time: 13:00:05

End Time:

18:43:59

Time On Btm: 2023.06.23 @ 15:17:00

Time Off Btm: 2023.06.23 @ 16:19:30

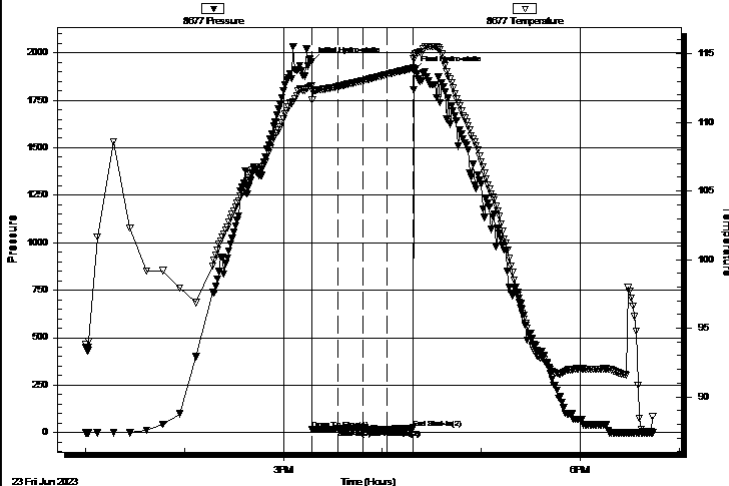
TEST COMMENT: IF- Very weak surface blow , Died off after 8 minutes.

IS- No return.

FF- No blow .

FS- No return.

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1954.08	112.67	Initial Hydro-static
1	18.40	111.64	Open To Flow (1)
16	19.41	112.61	Shut-In(1)
31	25.19	113.04	End Shut-In(1)
32	18.53	113.06	Open To Flow (2)
46	19.09	113.50	Shut-In(2)
62	24.78	113.94	End Shut-In(2)
63	1903.47	114.88	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1.00	SOCWM- 1%W, 99%O	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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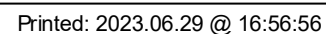
* Recovery from multiple tests



Test Start: 2023.06.23 @ 13:00:00

KB to GR/CF: 5.00 ft

FSI- No return.





TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Red Oak Energy, Inc.

34-4s-31w Rawlins,KS

7701 E Kellogg Dr. Ste 710
Wichita, KS 67207

Mumm #1-34

Job Ticket: 70958

DST#: 2

ATTN: Ryan Davis

Test Start: 2023.06.23 @ 13:00:00

Tool Information

Drill Pipe:	Length:	3781.00 ft	Diameter:	3.80 inches	Volume:	53.04 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	Weight set on Packer:	20000.00 lb
Drill Collar:	Length:	179.00 ft	Diameter:	2.25 inches	Volume:	0.88 bbl	Weight to Pull Loose:	15000.00 lb
					Total Volume:	53.92 bbl	Tool Chased	ft
Drill Pipe Above KB:		20.00 ft					String Weight: Initial	90000.00 lb
Depth to Top Packer:		3972.00 ft					Final	90000.00 lb
Depth to Bottom Packer:		ft						
Interval between Packers:		20.00 ft						
Tool Length:		52.00 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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Stubb	1.00		Fluid	3941.00	
Shut In Tool	5.00			3946.00	
Hydraulic tool	5.00			3951.00	
Jars	5.00			3956.00	
EM Tool	4.00			3960.00	
Safety Joint	3.00			3963.00	
Packer	5.00			3968.00	32.00 Bottom Of Top Packer
Packer	4.00			3972.00	
Stubb	1.00			3973.00	
Recorder	0.00	8677	Outside	3973.00	
Recorder	0.00	8018	Inside	3973.00	
Perforations	16.00			3989.00	
Bullnose	3.00			3992.00	20.00 Bottom Packers & Anchor

Total Tool Length: 52.00



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Red Oak Energy, Inc.

34-4s-31w Rawlins,KS

7701 E Kellogg Dr. Ste 710
Wichita, KS 67207

Mumm #1-34

Job Ticket: 70958

DST#: 2

ATTN: Ryan Davis

Test Start: 2023.06.23 @ 13:00:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 57.00 sec/qt

Water Loss: 7.18 in³

Resistivity: ohm.m

Salinity: 1200.00 ppm

Filter Cake: 2.00 inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

Oil API:

Water Salinity:

deg API

ppm

ft

bbl

psig

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1.00	SOCWM- 1%W, 99%O	0.005

Total Length: 1.00 ft Total Volume: 0.005 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

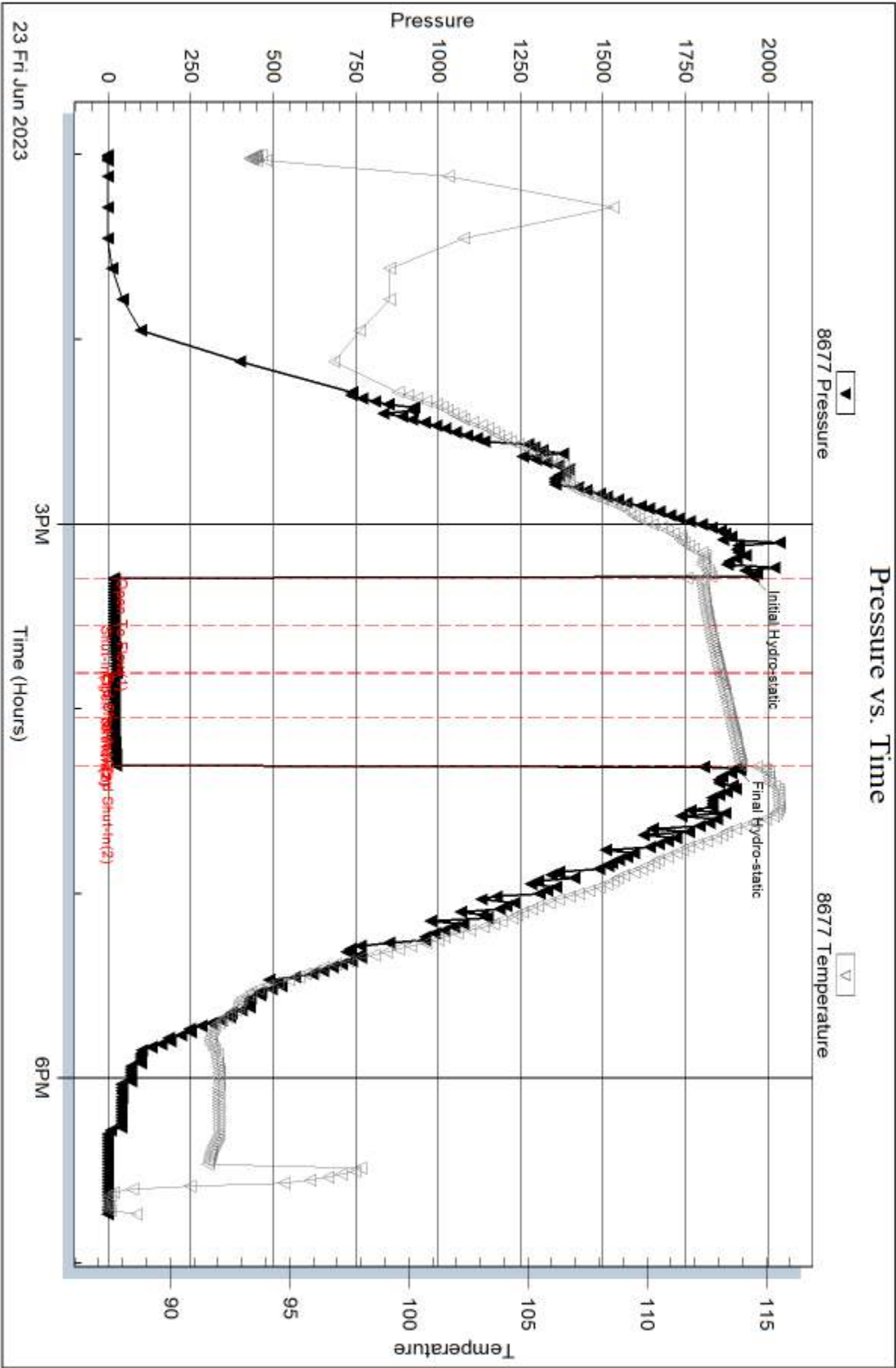
Recovery Comments: LCM- 1.5#

Serial #: 8677

Outside Red Oak Energy, Inc.

Mumn#1-34

DST Test Number: 2



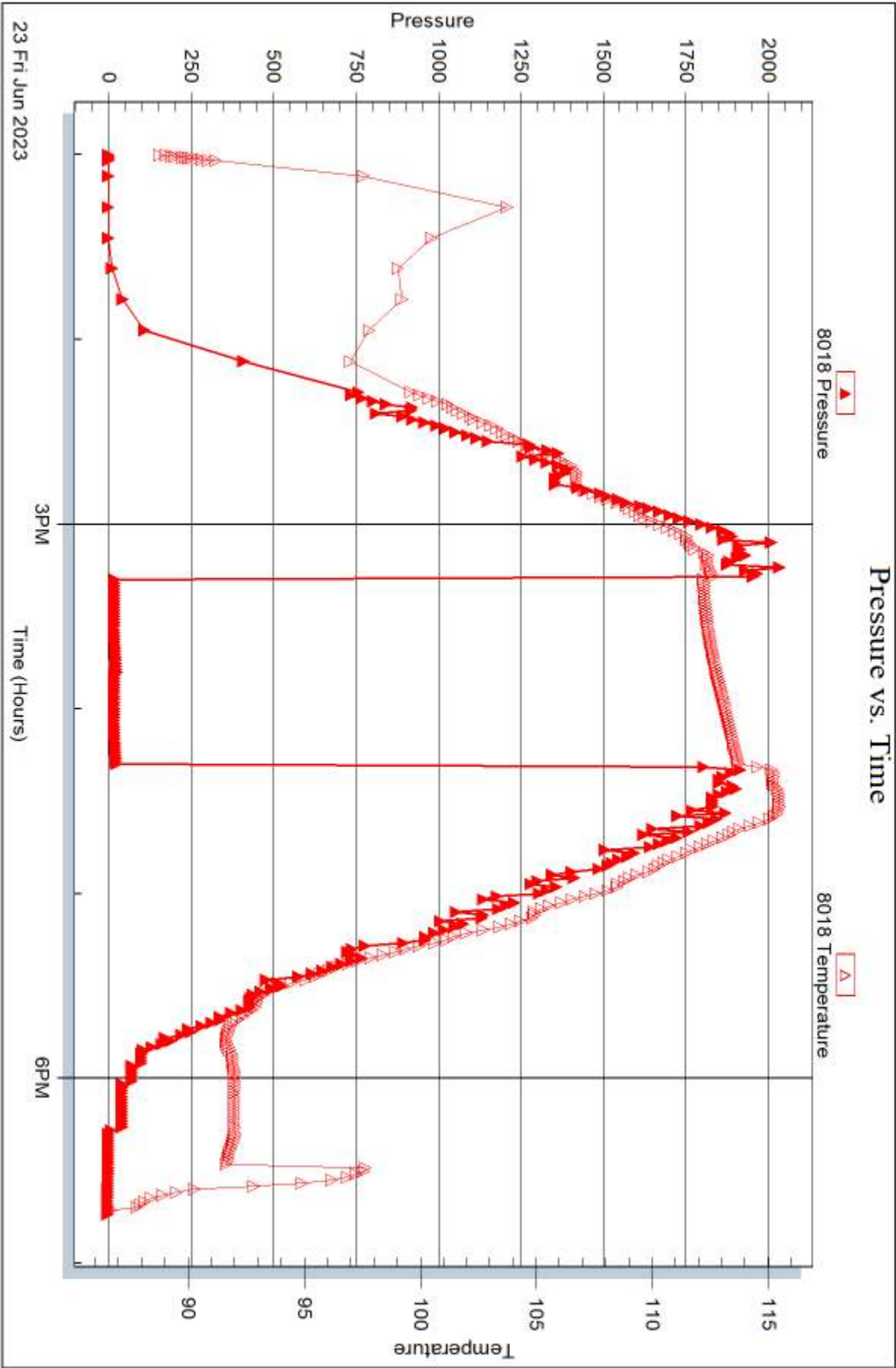
Serial #: 8018

Inside

Red Oak Energy, Inc.

Mumn #1-34

DST Test Number: 2





DRILL STEM TEST REPORT

Prepared For: **Red Oak Energy, Inc.**

7701 E Kellogg Dr. Ste 710
Wichita, KS 67207

ATTN: Ryan Davis

Mumm #1-34

34-4s-31w Rawlins,KS

Start Date: 2023.06.24 @ 04:15:00

End Date: 2023.06.24 @ 11:52:30

Job Ticket #: 70959 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2023.06.29 @ 16:56:07

Red Oak Energy, Inc.

34-4s-31w Rawlins,KS

Mumm #1-34

DST # 3

LKC E - G

2023.06.24



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Red Oak Energy, Inc.

34-4s-31w Rawlins, KS

7701 E Kellogg Dr. Ste 710
Wichita, KS 67207

Mumm #1-34

Job Ticket: 70959

DST#: 3

ATTN: Ryan Davis

Test Start: 2023.06.24 @ 04:15:00

GENERAL INFORMATION:

Formation: **LKC E - G**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:42:30

Time Test Ended: 11:52:30

Test Type: Conventional Bottom Hole (Reset)

Tester: David Urban

Unit No: 67

Interval: 4008.00 ft (KB) To 4044.00 ft (KB) (TVD)

Reference Elevations: 2932.00 ft (KB)

Total Depth: 4044.00 ft (KB) (TVD)

2927.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8677 Outside

Press@RunDepth: 68.51 psig @ 4009.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2023.06.24

End Date:

2023.06.24

Last Calib.: 2023.06.24

Start Time: 04:15:05

End Time:

11:52:29

Time On Btm: 2023.06.24 @ 06:42:00

Time Off Btm: 2023.06.24 @ 09:48:00

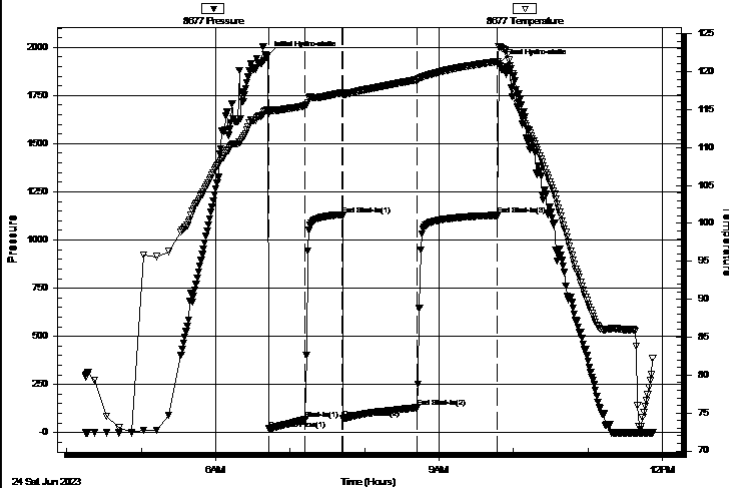
TEST COMMENT: IF- Weak surface blow , Built to 1 3/4" in 10 minutes; Final built to 4".

IS- No return.

FF- Weak surface blow , Built to 1" in 10 minutes; Final built to 4 1/2".

FS- No return.

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1955.69	114.94	Initial Hydro-static
1	19.31	114.52	Open To Flow (1)
30	68.51	115.50	Shut-In (1)
60	1131.96	117.21	End Shut-In (1)
61	73.20	116.93	Open To Flow (2)
120	129.19	118.93	End Shut-In (2)
185	1128.26	121.32	End Shut-In (3)
186	1916.77	123.24	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
59.00	MW w / oil spots- 90%W, 10%M	0.29
120.00	MW w / oil spots- 95%W, 5%M	0.59
62.00	MW w / oil spots- 70%W, 30%M	0.87
0.00	1' G- 100%G	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Red Oak Energy, Inc.

7701 E Kellogg Dr. Ste 710
Wichita, KS 67207

ATTN: Ryan Davis

34-4s-31w Rawlins, KS

Mumm #1-34

Job Ticket: 70959

DST#: 3

Test Start: 2023.06.24 @ 04:15:00

GENERAL INFORMATION:

Formation: **LKC E - G**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:42:30

Time Test Ended: 11:52:30

Test Type: Conventional Bottom Hole (Reset)

Tester: David Urban

Unit No: 67

Interval: 4008.00 ft (KB) To 4044.00 ft (KB) (TVD)

Total Depth: 4044.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2932.00 ft (KB)

2927.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8018 Inside

Press@RunDepth: psig @ 4009.00 ft (KB)

Start Date: 2023.06.24

End Date:

2023.06.24

Start Time: 04:15:05

End Time:

11:52:29

Capacity: 8000.00 psig

Last Calib.: 2023.06.24

Time On Btm:

Time Off Btm:

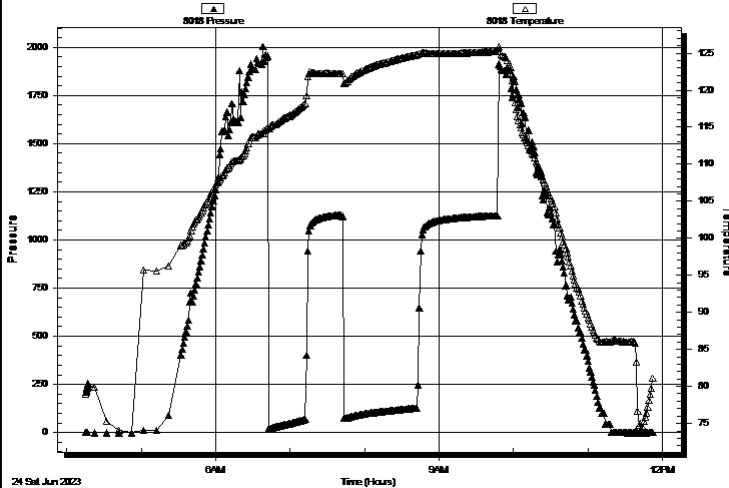
TEST COMMENT: IF- Weak surface blow , Built to 1 3/4" in 10 minutes; Final built to 4".

IS- No return.

FF- Weak surface blow , Built to 1" in 10 minutes; Final built to 4 1/2".

FS- No return.

Pressure vs. Time



PRESSURE SUMMARY

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

Length (ft)	Description	Volume (bbl)
59.00	MW w / oil spots- 90%W, 10%M	0.29
120.00	MW w / oil spots- 95%W, 5%M	0.59
62.00	MW w / oil spots- 70%W, 30%M	0.87
0.00	1' G- 100%G	0.00

Gas Rates

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

* Recovery from multiple tests



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Red Oak Energy, Inc.

34-4s-31w Rawlins,KS

7701 E Kellogg Dr. Ste 710
Wichita, KS 67207

Mumm #1-34

Job Ticket: 70959

DST#: 3

ATTN: Ryan Davis

Test Start: 2023.06.24 @ 04:15:00

Tool Information

Drill Pipe:	Length:	3812.00 ft	Diameter:	3.80 inches	Volume:	53.47 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	Weight set on Packer:	20000.00 lb
Drill Collar:	Length:	179.00 ft	Diameter:	2.25 inches	Volume:	0.88 bbl	Weight to Pull Loose:	18000.00 lb
					Total Volume:	54.35 bbl	Tool Chased	ft
Drill Pipe Above KB:		15.00 ft					String Weight: Initial	90000.00 lb
Depth to Top Packer:		4008.00 ft					Final	94000.00 lb
Depth to Bottom Packer:		ft						
Interval between Packers:		36.00 ft						
Tool Length:		68.00 ft						
Number of Packers:		2	Diameter:	6.75 inches				
Tool Comments:								

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

Stubb	1.00		Fluid	3977.00	
Shut In Tool	5.00			3982.00	
Hydraulic tool	5.00			3987.00	
Jars	5.00			3992.00	
EM Tool	4.00			3996.00	
Safety Joint	3.00			3999.00	
Packer	5.00			4004.00	32.00 Bottom Of Top Packer
Packer	4.00			4008.00	
Stubb	1.00			4009.00	
Recorder	0.00	8677	Outside	4009.00	
Recorder	0.00	8018	Inside	4009.00	
Perforations	32.00			4041.00	
Bullnose	3.00			4044.00	36.00 Bottom Packers & Anchor

Total Tool Length: 68.00



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Red Oak Energy, Inc.

34-4s-31w Rawlins,KS

7701 E Kellogg Dr. Ste 710
Wichita, KS 67207

Mumm #1-34

Job Ticket: 70959

DST#: 3

ATTN: Ryan Davis

Test Start: 2023.06.24 @ 04:15:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 57.00 sec/qt

Water Loss: 7.18 in³

Resistivity: ohm.m

Salinity: 1200.00 ppm

Filter Cake: 2.00 inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

Water Salinity:

deg API

ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
59.00	MW w / oil spots- 90%W, 10%M	0.290
120.00	MW w / oil spots- 95%W, 5%M	0.590
62.00	MW w / oil spots- 70%W, 30%M	0.870
0.00	1' G- 100%G	0.000

Total Length: 241.00 ft

Total Volume: 1.750 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

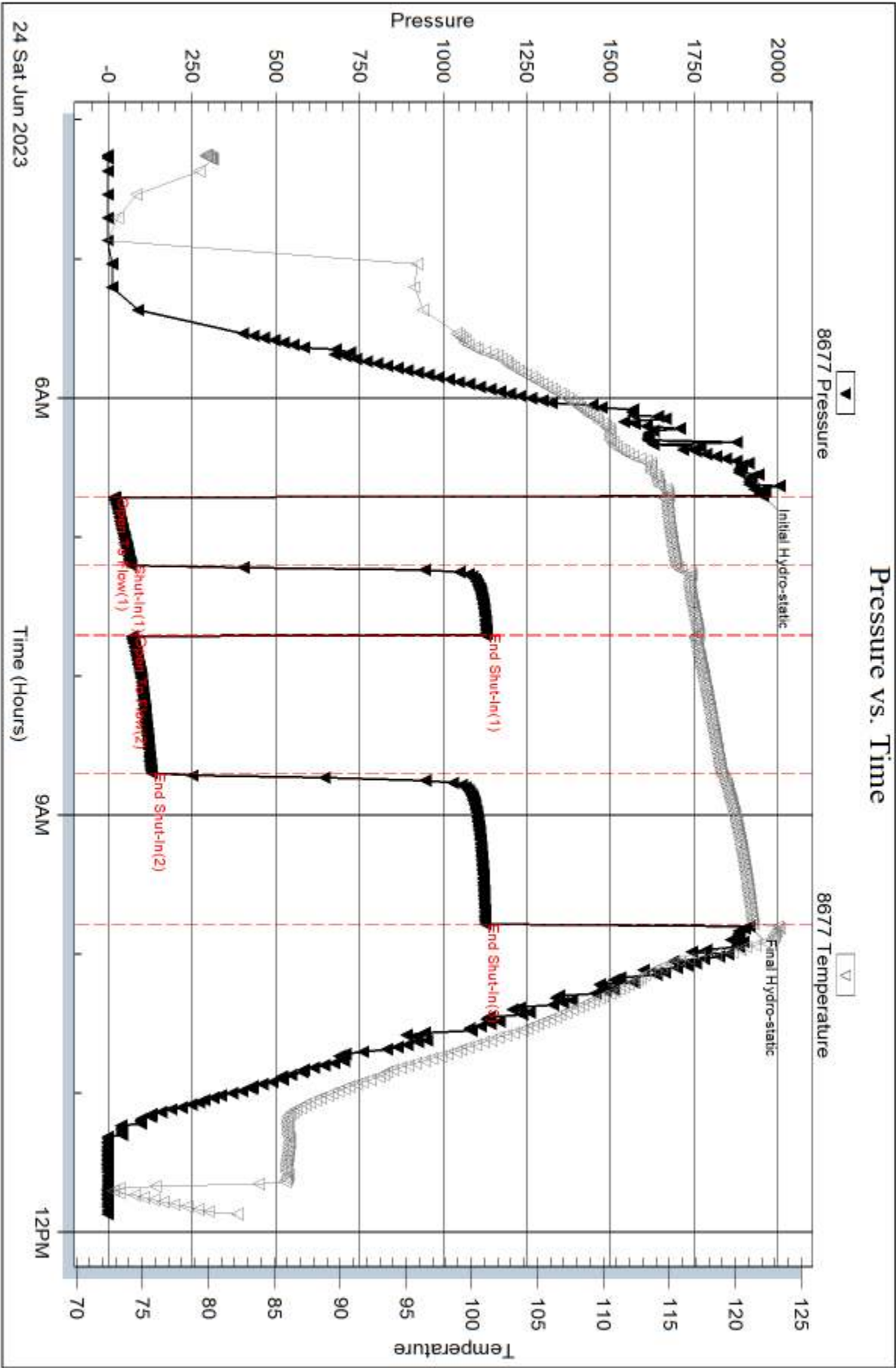
Recovery Comments: LCM- 1.5#

Serial #: 8677

Outside Red Oak Energy, Inc.

Murnm #1-34

DST Test Number: 3



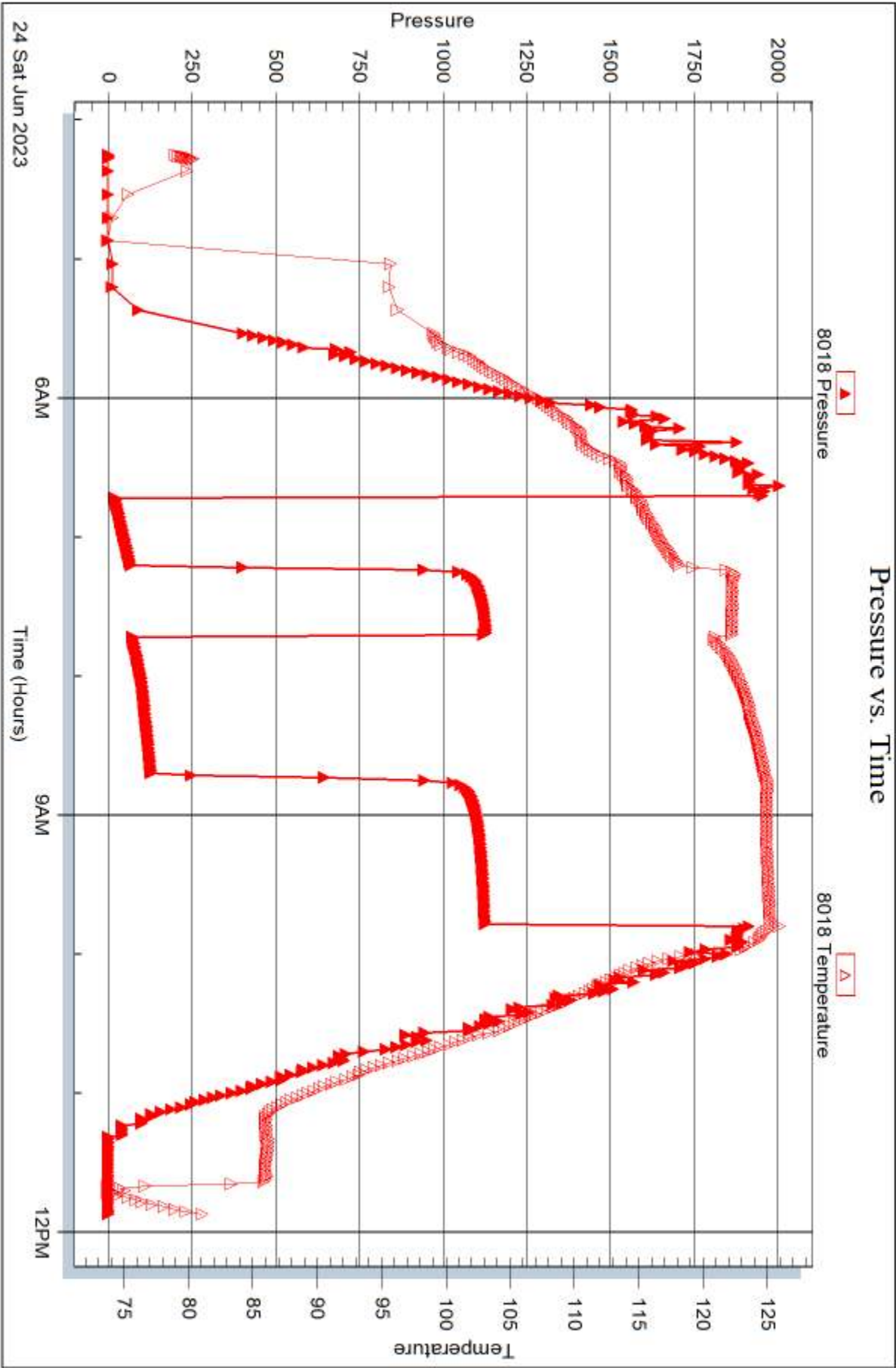
Serial #: 8018

Inside

Red Oak Energy, Inc.

Mumn#1-34

DST Test Number: 3





DRILL STEM TEST REPORT

Prepared For: **Red Oak Energy, Inc.**

7701 E Kellogg Dr. Ste 710
Wichita, KS 67207

ATTN: Ryan Davis

Mumm #1-34

34-4s-31w Rawlins,KS

Start Date: 2023.06.24 @ 23:26:00

End Date: 2023.06.25 @ 06:04:00

Job Ticket #: 70960 DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2023.06.29 @ 16:54:51



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Red Oak Energy, Inc.

34-4s-31w Rawlins, KS

7701 E Kellogg Dr. Ste 710
Wichita, KS 67207

Mumm #1-34

Job Ticket: 70960

DST#: 4

ATTN: Ryan Davis

Test Start: 2023.06.24 @ 23:26:00

GENERAL INFORMATION:

Formation: **LKC- H-J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:42:00

Time Test Ended: 06:04:00

Test Type: Conventional Bottom Hole (Reset)

Tester: David Urban

Unit No: 67

Interval: 4064.00 ft (KB) To 4130.00 ft (KB) (TVD)

Total Depth: 4130.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2932.00 ft (KB)

2927.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8677 Outside

Press@RunDepth: 24.18 psig @ 4065.00 ft (KB)

Start Date: 2023.06.24

End Date:

2023.06.25

Start Time: 23:26:05

End Time:

06:03:59

Capacity: 8000.00 psig

Last Calib.: 2023.06.25

Time On Btm: 2023.06.25 @ 01:41:30

Time Off Btm: 2023.06.25 @ 03:44:30

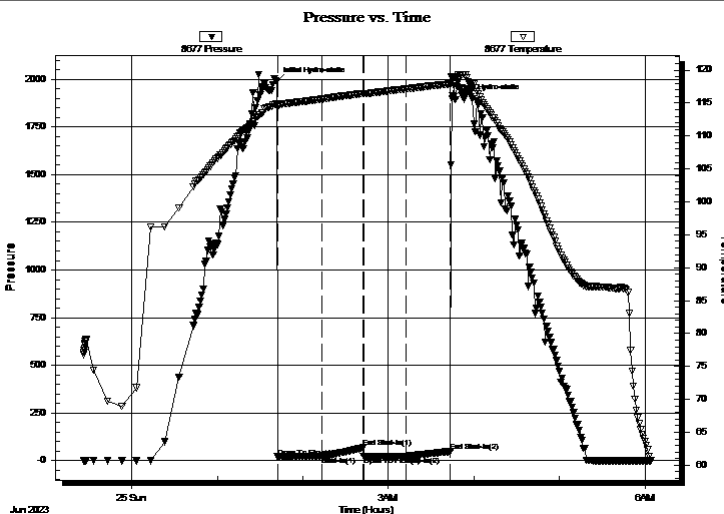
TEST COMMENT: IF- Weak surface blow , Built to 1/2" after 10 minutes; Final 1/2".

IS- No return.

FF- No blow .

FS- No return.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1987.25	114.89	Initial Hydro-static
1	20.34	114.35	Open To Flow (1)
32	22.56	115.58	Shut-In(1)
61	67.79	116.44	End Shut-In(1)
61	23.02	116.43	Open To Flow (2)
91	24.18	117.15	Shut-In(2)
122	48.60	117.89	End Shut-In(2)
123	1897.81	118.75	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
2.00	OCM- 15%O, 85%M	0.01
0.00	59" G- 100%G	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Red Oak Energy, Inc.

7701 E Kellogg Dr. Ste 710
Wichita, KS 67207

ATTN: Ryan Davis

34-4s-31w Rawlins, KS

Mumm #1-34

Job Ticket: 70960

DST#: 4

Test Start: 2023.06.24 @ 23:26:00

GENERAL INFORMATION:

Formation: **LKC- H-J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:42:00

Time Test Ended: 06:04:00

Test Type: Conventional Bottom Hole (Reset)

Tester: David Urban

Unit No: 67

Interval: 4064.00 ft (KB) To 4130.00 ft (KB) (TVD)

Total Depth: 4130.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2932.00 ft (KB)

2927.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8018 Inside

Press@RunDepth: psig @ 4065.00 ft (KB)

Start Date: 2023.06.24

End Date:

2023.06.25

Start Time: 23:26:05

End Time:

06:03:59

Capacity: 8000.00 psig

Last Calib.: 2023.06.25

Time On Btm:

Time Off Btm:

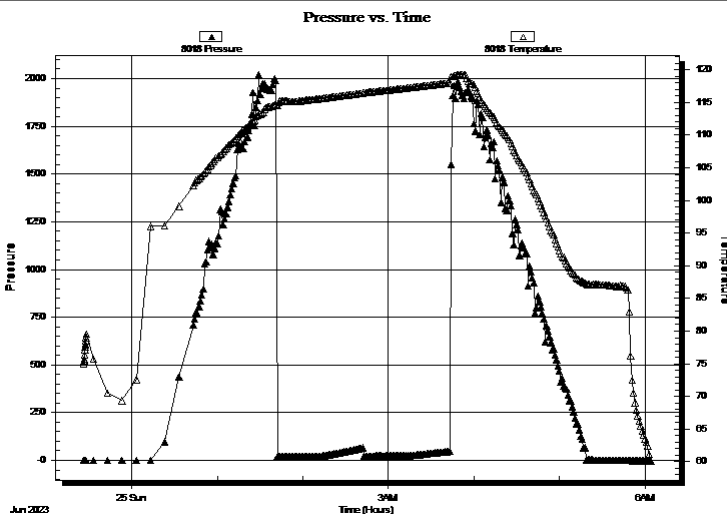
TEST COMMENT: IF- Weak surface blow , Built to 1/2" after 10 minutes; Final 1/2".

IS- No return.

FF- No blow .

FS- No return.

PRESSURE SUMMARY



Time
(Min.)

Pressure
(psig)

Temp
(deg F)

Annotation

Recovery

Length (ft)	Description	Volume (bbl)
2.00	OCM- 15%O, 85%M	0.01
0.00	59" G- 100%G	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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* Recovery from multiple tests



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Red Oak Energy, Inc.

34-4s-31w Rawlins,KS

7701 E Kellogg Dr. Ste 710
Wichita, KS 67207

Mumm #1-34

Job Ticket: 70960

DST#: 4

ATTN: Ryan Davis

Test Start: 2023.06.24 @ 23:26:00

Tool Information

Drill Pipe:	Length:	3875.00 ft	Diameter:	3.80 inches	Volume:	54.36 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	Weight set on Packer:	20000.00 lb
Drill Collar:	Length:	179.00 ft	Diameter:	2.25 inches	Volume:	0.88 bbl	Weight to Pull Loose:	30000.00 lb
					Total Volume:	55.24 bbl	Tool Chased	ft
Drill Pipe Above KB:		22.00 ft					String Weight: Initial	90000.00 lb
Depth to Top Packer:		4064.00 ft					Final	90000.00 lb
Depth to Bottom Packer:		ft						
Interval between Packers:		66.00 ft						
Tool Length:		98.00 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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Stubb	1.00		Fluid	4033.00	
Shut In Tool	5.00			4038.00	
Hydraulic tool	5.00			4043.00	
Jars	5.00			4048.00	
EM Tool	4.00			4052.00	
Safety Joint	3.00			4055.00	
Packer	5.00			4060.00	32.00 Bottom Of Top Packer
Packer	4.00			4064.00	
Stubb	1.00			4065.00	
Recorder	0.00	8677	Outside	4065.00	
Recorder	0.00	8018	Inside	4065.00	
Perforations	28.00			4093.00	
Change Over Sub	1.00			4094.00	
Drill Pipe	32.00			4126.00	
Change Over Sub	1.00			4127.00	
Bullnose	3.00			4130.00	66.00 Bottom Packers & Anchor
Total Tool Length:	98.00				



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Red Oak Energy, Inc.

34-4s-31w Rawlins,KS

7701 E Kellogg Dr. Ste 710
Wichita, KS 67207

Mumm #1-34

Job Ticket: 70960

DST#: 4

ATTN: Ryan Davis

Test Start: 2023.06.24 @ 23:26:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 50.00 sec/qt

Water Loss: 7.19 in³

Resistivity: ohm.m

Salinity: 2000.00 ppm

Filter Cake: 2.00 inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

Water Salinity:

deg API

ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2.00	OCM- 15%O, 85%M	0.010
0.00	59" G- 100%G	0.000

Total Length: 2.00 ft Total Volume: 0.010 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: LCM- 1#

Not enough oil for gravity.

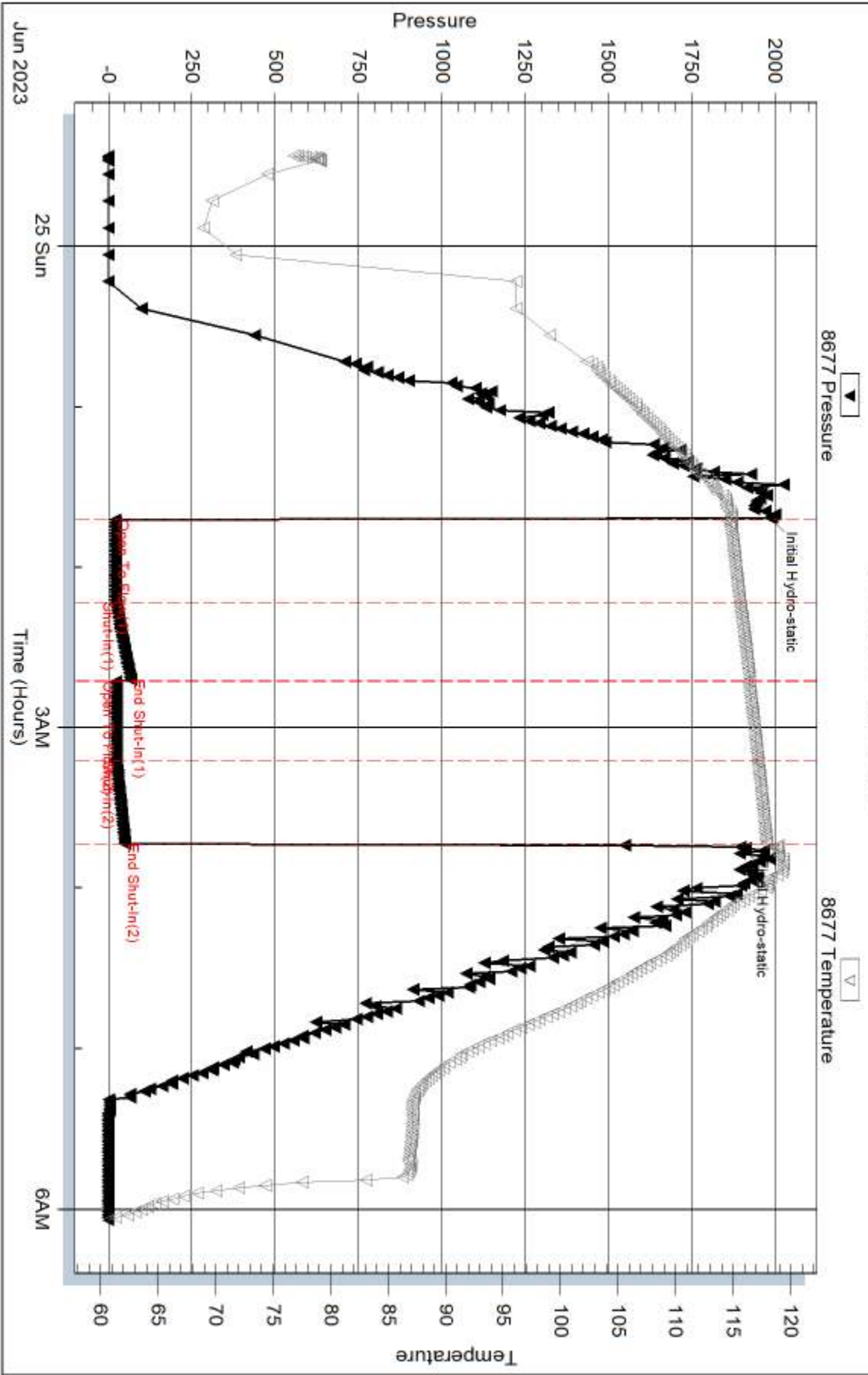
Serial #: 8677

Outside Red Oak Energy, Inc.

Murnm #1-34

DST Test Number: 4

Pressure vs. Time



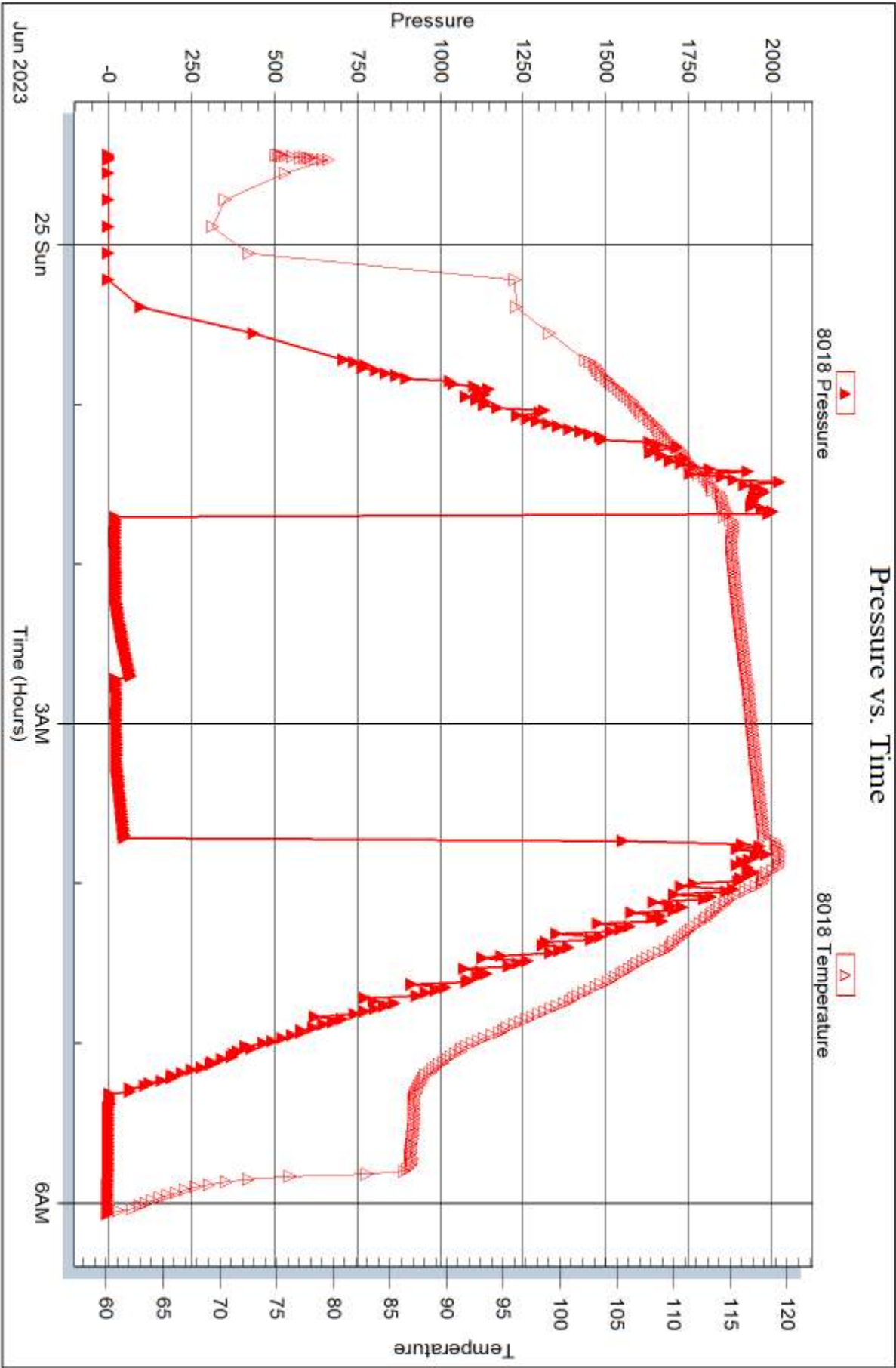
Serial #: 8018

Inside

Red Oak Energy, Inc.

Mumn #1-34

DST Test Number: 4





DRILL STEM TEST REPORT

Prepared For: **Red Oak Energy, Inc.**

7701 E Kellogg Dr. Ste 710
Wichita, KS 67207

ATTN: Ryan Davis

Mumm #1-34

34-4s-31w Rawlins,KS

Start Date: 2023.06.25 @ 15:26:00

End Date: 2023.06.25 @ 20:57:30

Job Ticket #: 70961 DST #: 5

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2023.06.29 @ 15:56:15



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Red Oak Energy, Inc.

7701 E Kellogg Dr. Ste 710
Wichita, KS 67207

ATTN: Ryan Davis

34-4s-31w Rawlins, KS

Mumm #1-34

Job Ticket: 70961

DST#: 5

Test Start: 2023.06.25 @ 15:26:00

GENERAL INFORMATION:

Formation: **LKC K-L**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:38:30

Time Test Ended: 20:57:30

Test Type: Conventional Bottom Hole (Reset)

Tester: David Urban

Unit No: 67

Interval: 4127.00 ft (KB) To 4178.00 ft (KB) (TVD)

Reference Elevations: 2932.00 ft (KB)

Total Depth: 4178.00 ft (KB) (TVD)

2927.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8677 Outside

Press@RunDepth: 20.95 psig @ 4128.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2023.06.25

End Date:

2023.06.25

Last Calib.:

2023.06.25

Start Time: 15:26:05

End Time:

20:57:29

Time On Btm:

2023.06.25 @ 17:38:00

Time Off Btm:

2023.06.25 @ 18:43:30

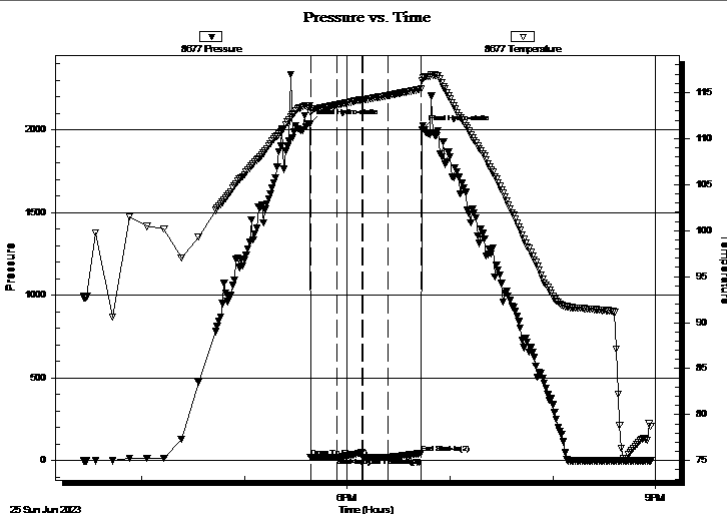
TEST COMMENT: IF-Weak surface blow , Remained weak surface blow after 10 minutes; Final weak surface blow .

IS- No return.

FF- No blow .

FS- No return.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2036.44	113.60	Initial Hydro-static
1	18.83	112.79	Open To Flow (1)
16	20.53	113.67	Shut-In(1)
31	49.22	114.24	End Shut-In(1)
31	20.72	114.23	Open To Flow (2)
46	20.95	114.68	Shut-In(2)
65	44.22	115.38	End Shut-In(2)
66	2004.25	116.29	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
2.00	SOCM 1%O, 99%M	0.01

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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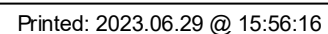
* Recovery from multiple tests



Test Start: 2023.06.25 @ 15:26:00

KB to GR/CF: 5.00 ft

FST- No return.





TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Red Oak Energy, Inc.

34-4s-31w Rawlins,KS

7701 E Kellogg Dr. Ste 710
Wichita, KS 67207

Mumm #1-34

Job Ticket: 70961

DST#: 5

ATTN: Ryan Davis

Test Start: 2023.06.25 @ 15:26:00

Tool Information

Drill Pipe:	Length:	3938.00 ft	Diameter:	3.80 inches	Volume:	55.24 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	Weight set on Packer:	20000.00 lb
Drill Collar:	Length:	179.00 ft	Diameter:	2.25 inches	Volume:	0.88 bbl	Weight to Pull Loose:	25000.00 lb
					Total Volume:	56.12 bbl	Tool Chased	ft
Drill Pipe Above KB:		22.00 ft					String Weight: Initial	94000.00 lb
Depth to Top Packer:		4127.00 ft					Final	96000.00 lb
Depth to Bottom Packer:		ft						
Interval between Packers:		51.00 ft						
Tool Length:		83.00 ft						
Number of Packers:		2	Diameter:	6.75 inches				
Tool Comments:								

Tool Description

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

Stubb	1.00		Fluid	4096.00		
Shut In Tool	5.00			4101.00		
Hydraulic tool	5.00			4106.00		
Jars	5.00			4111.00		
EM Tool	4.00			4115.00		
Safety Joint	3.00			4118.00		
Packer	5.00			4123.00	32.00	Bottom Of Top Packer
Packer	4.00			4127.00		
Stubb	1.00			4128.00		
Recorder	0.00	8677	Outside	4128.00		
Recorder	0.00	8018	Inside	4128.00		
Perforations	13.00			4141.00		
Change Over Sub	1.00			4142.00		
Drill Pipe	32.00			4174.00		
Change Over Sub	1.00			4175.00		
Bullnose	3.00			4178.00	51.00	Bottom Packers & Anchor
Total Tool Length:	83.00					



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Red Oak Energy, Inc.

34-4s-31w Rawlins,KS

7701 E Kellogg Dr. Ste 710
Wichita, KS 67207

Mumm #1-34

Job Ticket: 70961

DST#: 5

ATTN: Ryan Davis

Test Start: 2023.06.25 @ 15:26:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 67.00 sec/qt

Water Loss: 6.39 in³

Resistivity: ohm.m

Salinity: 3000.00 ppm

Filter Cake: 2.00 inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

Water Salinity:

deg API

ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2.00	SOCM 1%O, 99%M	0.010

Total Length: 2.00 ft Total Volume: 0.010 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

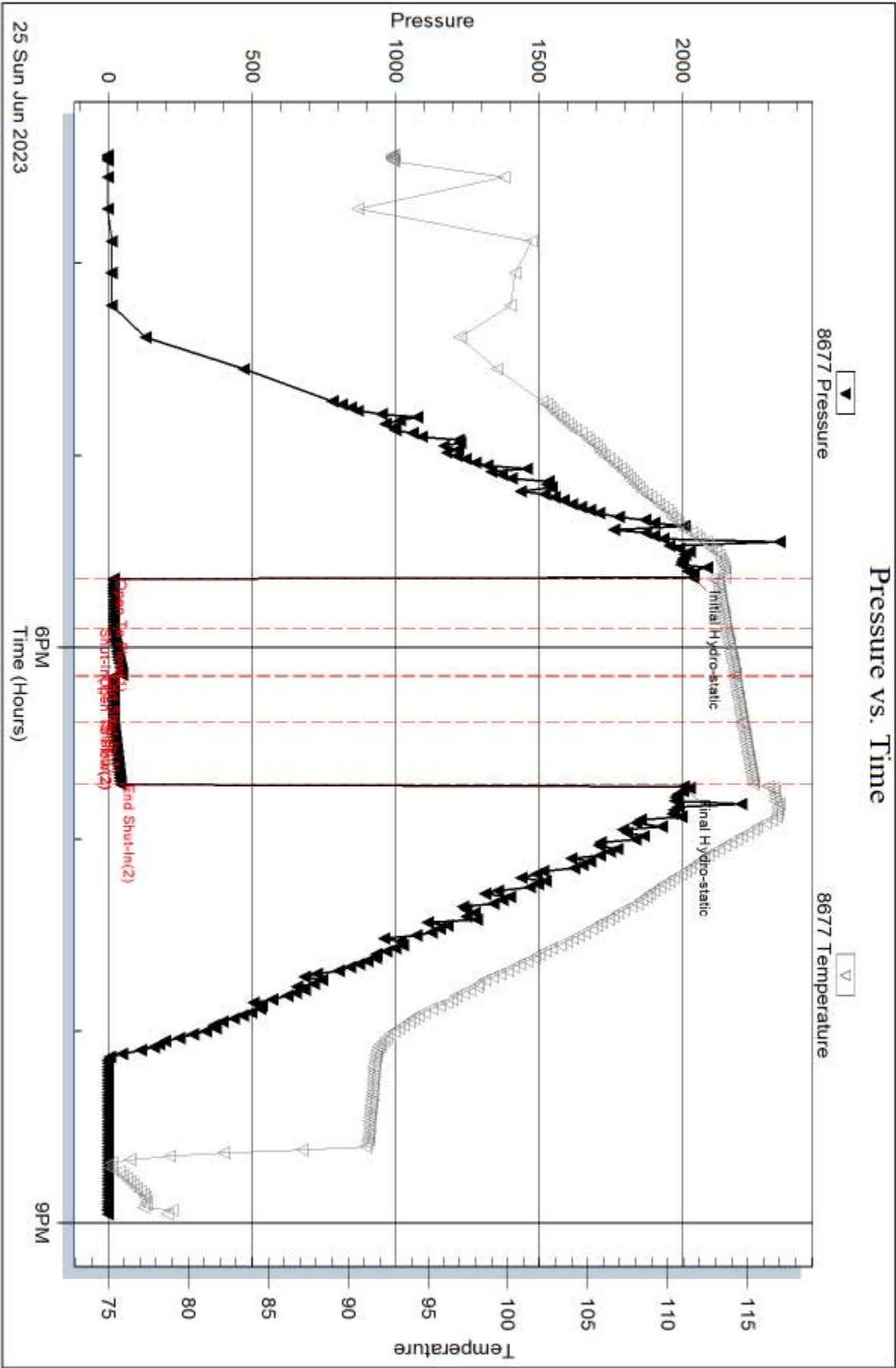
Recovery Comments: LCM- 2#

Serial #: 8677

Outside Red Oak Energy, Inc.

Murnm #1-34

DST Test Number: 5



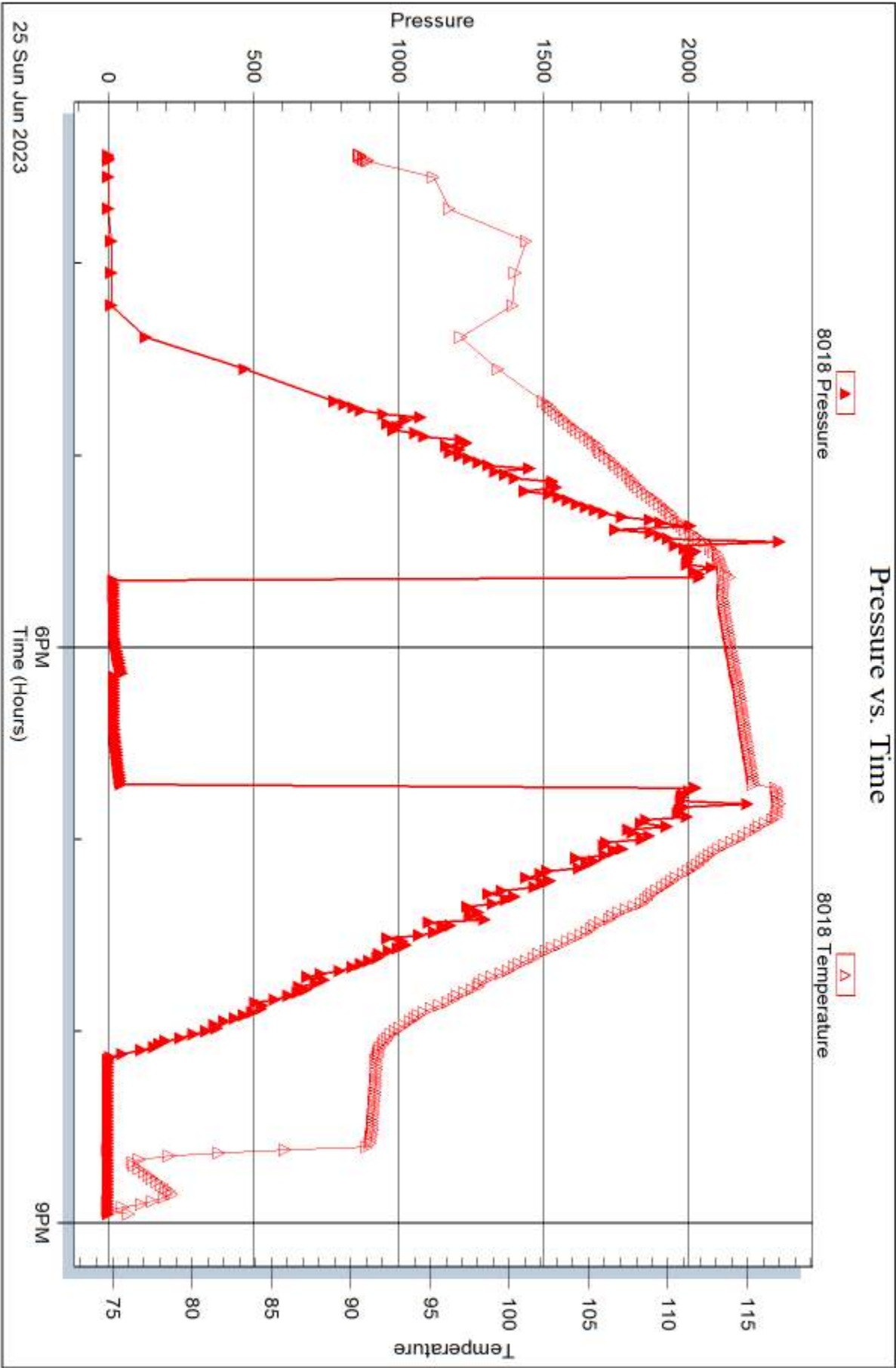
Serial #: 8018

Inside

Red Oak Energy, Inc.

Mumn #1-34

DST Test Number: 5





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 70957

Well Name & No. Mumion #1-34 Test No. 1 Date 6/22/23
Company Red Oak Energy, Inc Elevation 2932 KB 2927 GL
Address 7701 E Kellogg Dr, Ste 710 Wichita, KS, 67207
Co. Rep / Geo Bryan Davis Rig Murkin #8
Location: Sec. 34 Twp 4S Rge. 3W Co. Bowling State KS

Interval Tested 3960-3980 Zone Tested Toronto-LKC, "A"
Anchor Length 74 Drill Pipe Run 3718 Mud Wt. 9.0
Top Packer Depth 3890 Drill Collars Run 179 Vis 58
Bottom Packer Depth 3895 Wt. Pipe Run 0 WL 6.4
Total Depth 3980 Chlorides 1000 ppm System LCM 1.6

Blow Description IF-Weak surface blow, Built to 2" in 10 minutes; Final 3 3/4"
ISF-No return
EF-Weak surface blow, Built to 1 1/4" in 10 minutes; Final built to 3"
FSF-No return

Rec <u>32</u>	Feet of <u>MW w/oil spots</u>	%gas	%oil	<u>60</u> %water	<u>40</u> %mud
Rec <u>59</u>	Feet of <u>MW w/oil spots</u>	%gas	%oil	<u>60</u> %water	<u>40</u> %mud
Rec <u>120</u>	Feet of <u>MW w/oil spots</u>	%gas	%oil	<u>80</u> %water	<u>20</u> %mud
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 211 BHT 123 Gravity — API RW — @ — °F Chlorides 30,000 ppm

Initial Hydrostatic 1890 ☒ Test 1800 ☐ Ruined Shale Packer
Initial Flow 22 to 79 ☒ Jars 300 ☐ Ruined Packer
Initial Shut-In 1265 ☐ Circ Sub ☐ Hotel
Final Flow 86 to 120 ☐ Hourly Standby ☒ EM Tool Successful -175
Final Shut-In 1249 ☒ Mileage 54 RT 94.50 ☐ Accessibility
Final Hydrostatic 1852 ☐ Sampler ☐ Gas Sample

T-On Location 7:14:51 ☐ Straddle ☐ Oversized Hole
Initial Flow 30 T-Started 22:55 ☒ Shale Packer 250 ☐ Sub Total -175
Initial Shut-In 30 T-Open 1:51 6/23 ☐ Extra Packer ☐ Total 2269.50
Final Flow 30 T-Pulled 4:06 6/23 ☐ Extra Recorder ☐ Tool Loaded @
Final Shut-In 45 T-Out 6:28 6/23 ☐ Day Standby ☐ MP/DST Disc't

Comments Safety Joint.

Approved By _____ Our Representative [Signature]

Trilobite Testing Inc. shall not be liable for damage of any kind of 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. 70958

Well Name & No. Mumm #1-34 Test No. 2 Date 6/23/23
Company Red Oak Energy, Inc Elevation 2932 KB 2927 GL
Address 7701 E. Kellogg Dr. Ste 710 Wichita, KS 67207
Co. Rep / Geo Ryan Davis Rig Murkin #8
Location: Sec. 34 Twp 4s Rge. 31w Co. Rawlins State KS

Interval Tested 3972-3992 Zone Tested LKC, B
Anchor Length 20 Drill Pipe Run 3781 Mud Wt. 9.2
Top Packer Depth 3968 Drill Collars Run 179 Vis 57
Bottom Packer Depth 3972 Wt. Pipe Run 0 WL 7.2
Total Depth 3992 Chlorides 1200 ppm System LCM 1.5#

Blow Description IF - Very weak surface blow, Died off after 8 minutes.

ISI - No return

FF - No blow

FSI - No return

Rec <u>1</u>	Feet of <u>SOCWM</u>	%gas	%oil	<u>1</u> %water	<u>99</u> %mud
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	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 1 BHT 115 Gravity — API RW — @ — °F Chlorides — ppm

Initial Hydrostatic 1954 ☒ Test 1800 ☐ Ruined Shale Packer

Initial Flow 18 to 19 ☒ Jars 300 ☐ Ruined Packer

Initial Shut-In 25 ☐ Circ Sub ☐ Hotel

Final Flow 19 to 19 ☐ Hourly Standby ☒ EM Tool Successful

Final Shut-In 25 ☒ Mileage 54 RT 94.50 ☐ Accessibility

Final Hydrostatic 1903 ☐ Sampler ☐ Gas Sample

T-On Location 12:20 ☐ Straddle ☐ Oversized Hole

Initial Flow 15 T-Started 13:00 ☒ Shale Packer 250 ☐ Sub Total 0

Initial Shut-In 15 T-Open 15:18 ☐ Extra Packer ☐ Total 2444.50

Final Flow 15 T-Pulled 16:18 ☐ Extra Recorder ☐ Tool Loaded @

Final Shut-In 15 T-Out 18:44 ☐ Day Standby ☐ MP/DST Disc't

Comments Safety Joint. Not enough water for salinity.

Approved By _____ Our Representative [Signature]

Trilobite Testing Inc. shall not be liable for damage of any kind of 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. 70959

Well Name & No. Mumm #1-34 Test No. 3 Date 6/24/23
Company Red Oak Energy, Inc Elevation 2932 KB 2927 GL
Address 7701 E. Kellogg Dr. Ste 710 Wichita, KS 67207
Co. Rep / Geo Ryan Davis Rig Murfin #8
Location: Sec. 34 Twp 4s Rge. 3W Co. Rawlins State KS

Interval Tested 4008-4044 Zone Tested LKC, E, F, G
Anchor Length 36 Drill Pipe Run 3812' Mud Wt. 9.2
Top Packer Depth 4003 Drill Collars Run 179 Vis 57
Bottom Packer Depth 4008 Wt. Pipe Run 0 WL 7.2
Total Depth 4044 Chlorides 1200 ppm System LCM 1.5#

Blow Description IF-Weak surface blow, Built to 1 3/4" in 10 minutes; Final built to 4"

ISF- No return.

EF- Weak surface blow, built to 1" in 10 minutes; Final ~~1 3/4~~" Built to 4 1/2"

ESI- No return

Rec <u>62</u>	Feet of <u>MW w/oil spots</u>	%gas	%oil	<u>90</u> %water	<u>10</u> %mud
Rec <u>120</u>	Feet of <u>MW w/oil spots</u>	%gas	%oil	<u>95</u> %water	<u>5</u> %mud
Rec <u>59</u>	Feet of <u>MW w/oil spots</u>	%gas	%oil	<u>70</u> %water	<u>30</u> %mud
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 241' 1" G BHT 123°F Gravity — API RW — @ — °F Chlorides 42000 ppm

Initial Hydrostatic 1956 ☒ Test 1950 ☐ Ruined Shale Packer

Initial Flow 19 to 69 ☒ Jars 300 ☐ Ruined Packer

Initial Shut-In 1132 ☐ Circ Sub ☐ Hotel

Final Flow 73 to 129 ☐ Hourly Standby ☒ EM Tool Successful

Final Shut-In 1128 ☒ Mileage 54 94.50 ☐ Accessibility

Final Hydrostatic 1917 ☐ Sampler ☐ Gas Sample

T- On Location 3:05 ☐ Straddle ☐ Oversized Hole

Initial Flow 30 T-Started 4:15 ☒ Shale Packer 250 ☐ Sub Total 0

Initial Shut-In 30 T-Open 6:42 ☐ Extra Packer ☐ Total 2594.50

Final Flow 60 T-Pulled 9:47 ☐ Extra Recorder ☐ Tool Loaded @

Final Shut-In 60 T-Out 11:52 ☐ Day Standby ☐ MP/DST Disc't

Comments Safety Joint.

Approved By _____ Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 70960

Well Name & No. Mumm-#1-34 Test No. 4 Date 6/24/23
Company Red Oak Energy, Inc. Elevation 2932 KB 2927 GL
Address 7701 E. Kellogg Dr. Ste 710 Wichita, KS 67207
Co. Rep / Geo Ryan Davis Rig Murfin #8
Location: Sec. 34 Twp 4s Rge. 31w Co. Rawlins State KS

Interval Tested 4064-4130 Zone Tested LKC: H-J
Anchor Length 66 Drill Pipe Run 3875 Mud Wt. 9.1
Top Packer Depth 4059 Drill Collars Run 179 Vis 50
Bottom Packer Depth 4064 Wt. Pipe Run 0 WL 7.2
Total Depth 4130 Chlorides 2000 ppm System LCM 1#

Blow Description IF-Weak surface blow, Built to 1/2" after 10 minutes; Final 1 1/2"

ISI- No return

EF- No blow

BT- No return

Rec <u>2</u>	Feet of <u>OCM</u>	%gas <u>15</u>	%oil	%water <u>85</u>	%mud
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	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 2/59'G BHT 119 Gravity — API RW — @ — °F Chlorides — ppm

Initial Hydrostatic 1987 ☒ Test 1950 ☒ Ruined Shale Packer 550

Initial Flow 20 to 23 ☒ Jars 300 ☐ Ruined Packer

Initial Shut-In 68 ☐ Circ Sub ☐ Hotel

Final Flow 23 to 24 ☐ Hourly Standby ☒ EM Tool Successful

Final Shut-In 49 ☒ Mileage 54 RT 94.50 ☐ Accessibility

Final Hydrostatic 1898 ☐ Sampler ☐ Gas Sample

T- On Location 22:15 ☐ Straddle ☐ Oversized Hole

Initial Flow 30 T-Started 23:26 ☒ Shale Packer 250 ☐ Sub Total 550

Initial Shut-In 30 T-Open 1:43 6/25 ☐ Extra Packer ☐ Total 3144.50

Final Flow 30 T-Pulled 3:48 6/25 ☐ Extra Recorder ☐ Tool Loaded @

Final Shut-In 30 T-Out 6:05 6/25 ☐ Day Standby ☐ MP/DST Disc't

Comments Safety Joint. Not enough oil for gravity

Approved By _____ Our Representative Davis

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 70961

Well Name & No. Mumm #1-34 Test No. 5 Date 6/25/23
Company Red Oak Energy, Inc Elevation 2932 KB 2972 GL
Address 7701 E Kellogg Dr. Ste. 710 Wichita, KS, 67207
Co. Rep / Geo Ryan Davis Rig Mudfin #8
Location: Sec. 34 Twp 4s Rge. 31w Co. Rawlins State KS

Interval Tested 4127-4178 Zone Tested LKC-K-L
Anchor Length 51 Drill Pipe Run 3938 Mud Wt. 9.1
Top Packer Depth 4122 Drill Collars Run 179 Vis 67
Bottom Packer Depth 4127 Wt. Pipe Run 0 WL 64
Total Depth 4178 Chlorides 3000 ppm System LCM 2#

Blow Description IF weak surface blow, Remained weak surface blow after 10 minutes, Final Weak surface blow
ISI-No Return

EF-No blow

ESI-No return

Rec <u>2</u>	Feet of <u>SOCM</u>	%gas	1 %oil	%water	99 %mud
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	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 2 BHT 116 Gravity — API RW — @ — °F Chlorides — ppm

Initial Hydrostatic 2036 ☒ Test 1950 ☐ Ruined Shale Packer

Initial Flow 19 to 21 ☒ Jars 300 ☐ Ruined Packer

Initial Shut-In 49 ☐ Circ Sub ☐ Hotel

Final Flow 21 to 21 ☐ Hourly Standby ☒ EM Tool Successful -175

Final Shut-In 44 ☒ Mileage 54 RT 94.50 + 94.50 ☐ Accessibility

Final Hydrostatic 2004 ☐ Sampler ☐ Gas Sample

T-On Location 15:05 ☐ Straddle ☐ Oversized Hole

Initial Flow 15 T-Started 15:26 ☒ Shale Packer 250 ☐ Sub Total 800 - 175

Initial Shut-In 15 T-Open 17:39 ☐ Extra Packer ☐ Total 3314

Final Flow 15 T-Pulled 18:44 ☐ Extra Recorder ☒ Tool Loaded 428 @ 3:45

Final Shut-In 15 T-Out 20:58 ☒ Day Standby 1d 18h ☐ MP/DST Disc't

Comments Safety Joint. Not enough oil for gravity

Approved By _____ Our Representative [Signature]

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MUD LOG
WellSight Systems
Scale 1:240 (5"=100') Imperial
Measured Depth Log

Well Name: Mumm #1-34
API: 15-153-21318
Location: 1475' FNL & 990' FEL Sec 34-4S-31W
License Number: 3581
Spud Date: 6/19/2023
Surface Coordinates: NAD27 Long: -100.7812423
NAD27 Lat: 39.6652024
Region: NW KS
Drilling Completed: 6/27/2023
Bottom Hole Coordinates:
Ground Elevation (ft): 2927 K.B. Elevation (ft): 2932
Logged Interval (ft): 3600 To: 4450 Total Depth (ft): 4425
Formation: Cherokee
Type of Drilling Fluid: Chemical Mud

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

OPERATOR

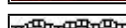
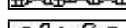
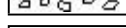
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Address: 7701 E. Kellogg Dr. Ste. 710
Wichita, KS 67207

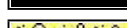
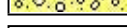
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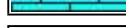
Name: Ryan Davis
Company: Red Oak Energy, Inc.
Address: 7701 E. Kellogg Dr. Ste. 710
Wichita, KS 67207

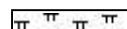
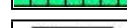
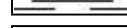
Comments

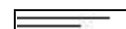
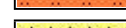
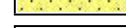
ROCK TYPES

 Anhy
 Bent
 Brec
 Cht

 Clyst
 Coal
 Congl
 Dol

 Gyp
 Igne
 Lmst
 Meta

 Mrlst
 Salt
 Shale
 Shcol

 Shgy
 Sltst
 Ss
 Till

ACCESSORIES

MINERAL

Anhy
 Arggrn
 Arg
 Bent
 Bit
 Breccfrag
 Calc
 Carb
 Chtdk
 Chtlt
 Dol
 Feldspar
 Ferrpel
 Ferr
 Glau

Gyp
 Hvymin
 Kaol
 Marl
 Minxl
 Nodule
 Phos
 Pyr
 Salt
 Sandy
 Silt
 Sil
 Sulphur
 Tuff

FOSSIL

Algae
 Amph
 Belm
 Bioclst
 Brach
 Bryozoa
 Cephal
 Coral
 Crin
 Echin
 Fish
 Foram
 Fossil
 Gastro
 Oolite

Ostra
 Pelec
 Pellet
 Pisolite
 Plant
 Strom

STRINGER

Anhy
 Arg
 Bent
 Coal
 Dol
 Gyp
 Ls
 Mrst

Sltstrg
 Ssstrg

TEXTURE

Boundst
 Chalky
 Cryxln
 Earthy
 Finexln
 Grainst
 Lithogr
 Microxln
 Mudst
 Packst
 Wackest

OTHER SYMBOLS

POROSITY

Earthy
 Fenest
 Fracture
 Inter
 Moldic
 Organic
 Pinpoint

Vuggy

SORTING

Well
 Moderate
 Poor

ROUNDING

Rounded
 Subrnd
 Subang
 Angular

OIL SHOW

Even

Spotted

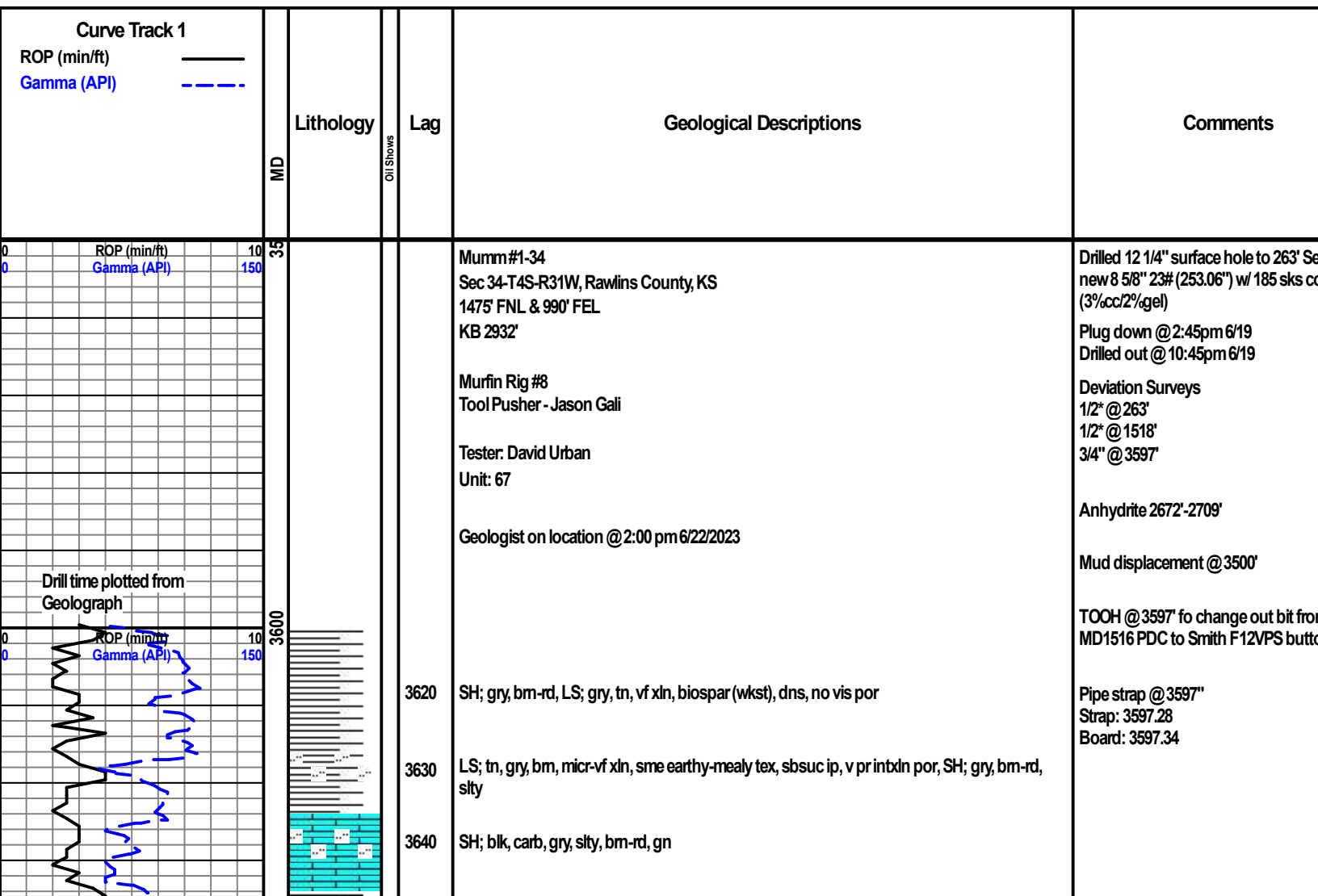
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 Dead

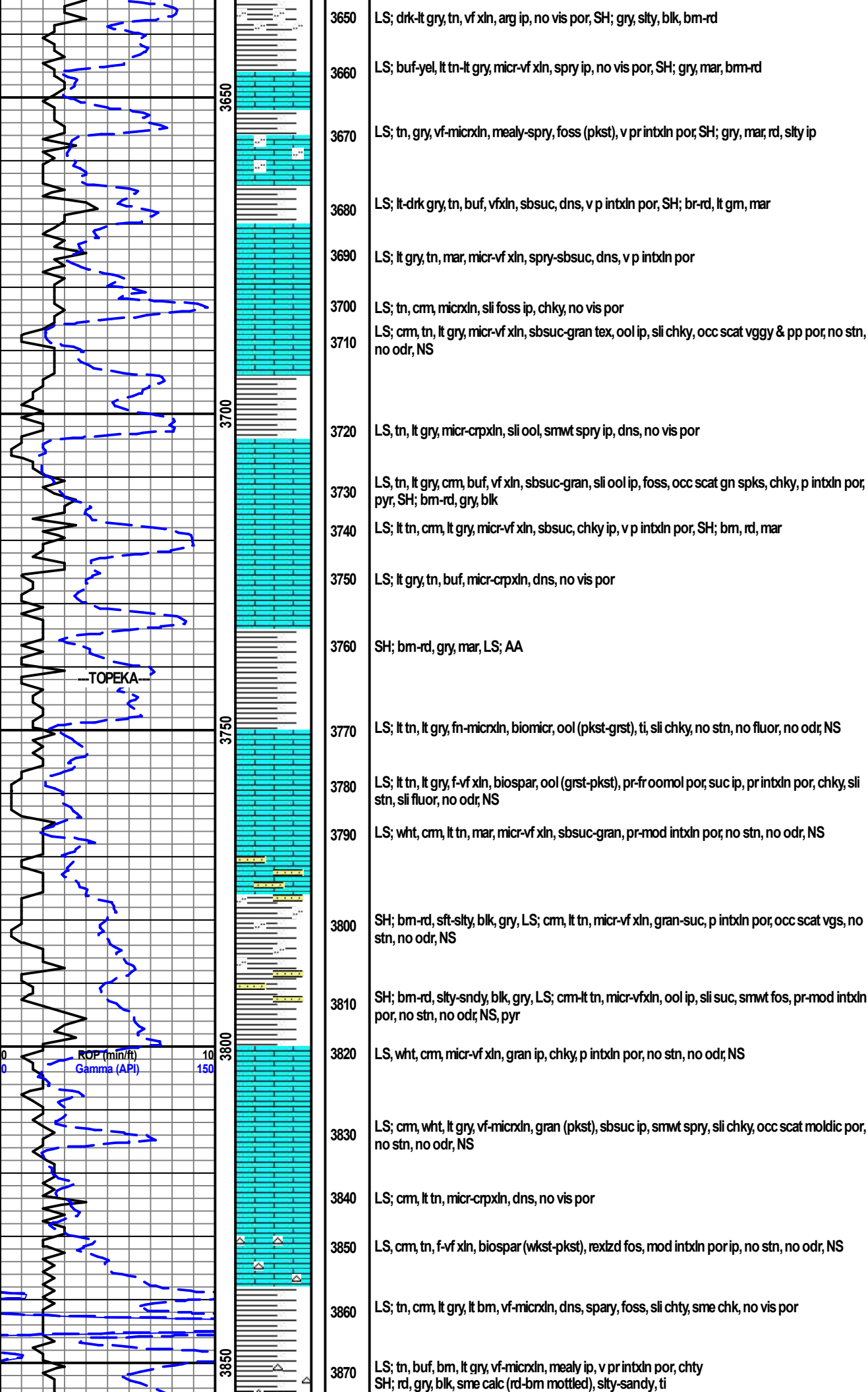
INTERVAL

Core
 Dst

EVENT

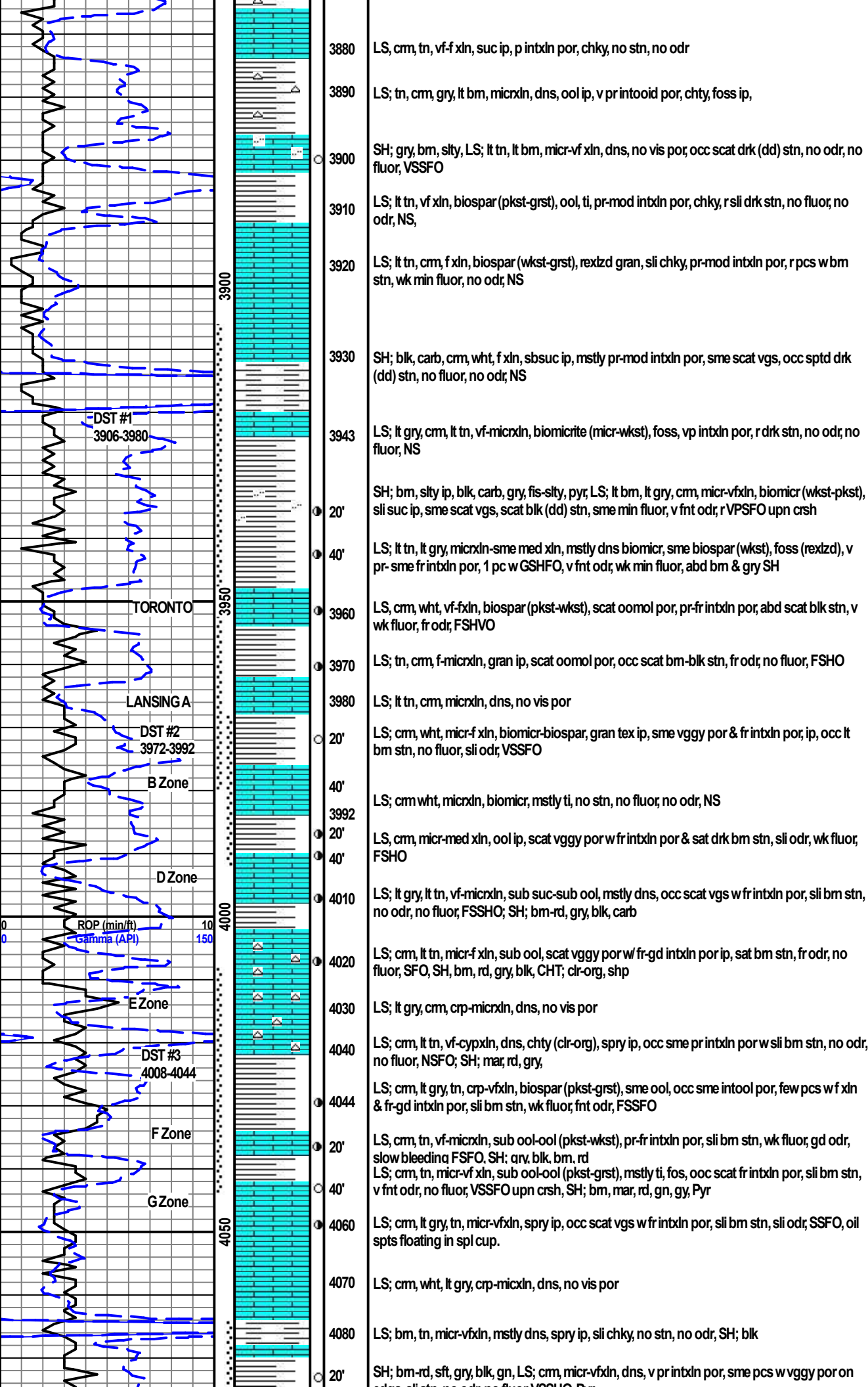
Rft
 Sidewall





Mud Co check @ 3693'
Vis: 58
Mud Wt: 9.0
LCM: 1.5
CHL: 1,000

TOPEKA 3742 (-810)



DST #1
3906-3980 (LKC Tor-A)
30-30-30-45
IF: Weak surface blow, built to 3.75"
ISI: No return
FF: Weak surface blow, built to 3"
FSI: No return
Rec: 211' MW w oil spots (60% ω 40%)
IFPs: 22-79#
FFPs: 86-120#
SIPs: 1265-1249#
HSPs: 1890-1852#
BHT: 123; CHL: 30,000

HEEBNER 3915 (-983)

TORONTO 3948 (-1016)

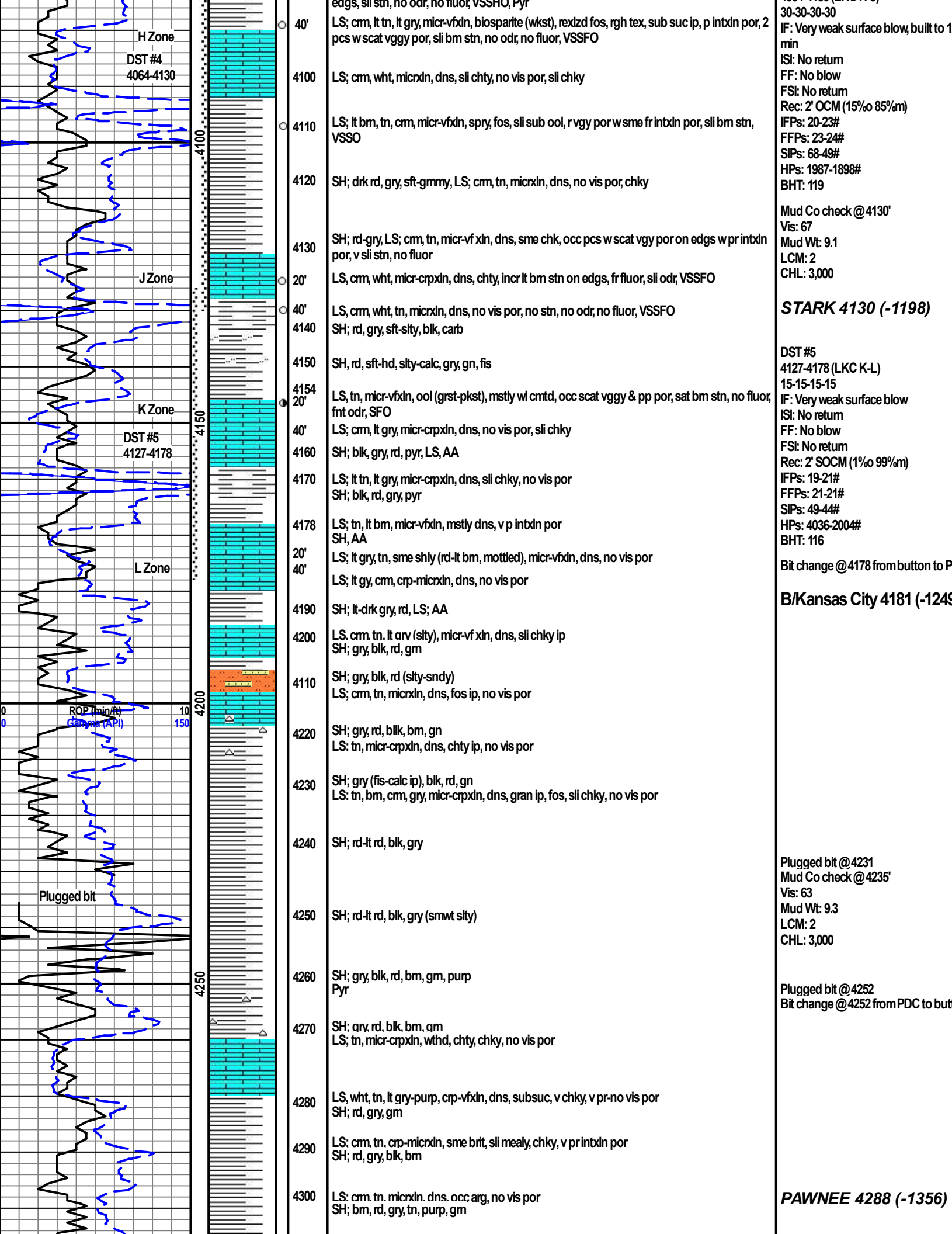
LANSING 3960 (-1028)

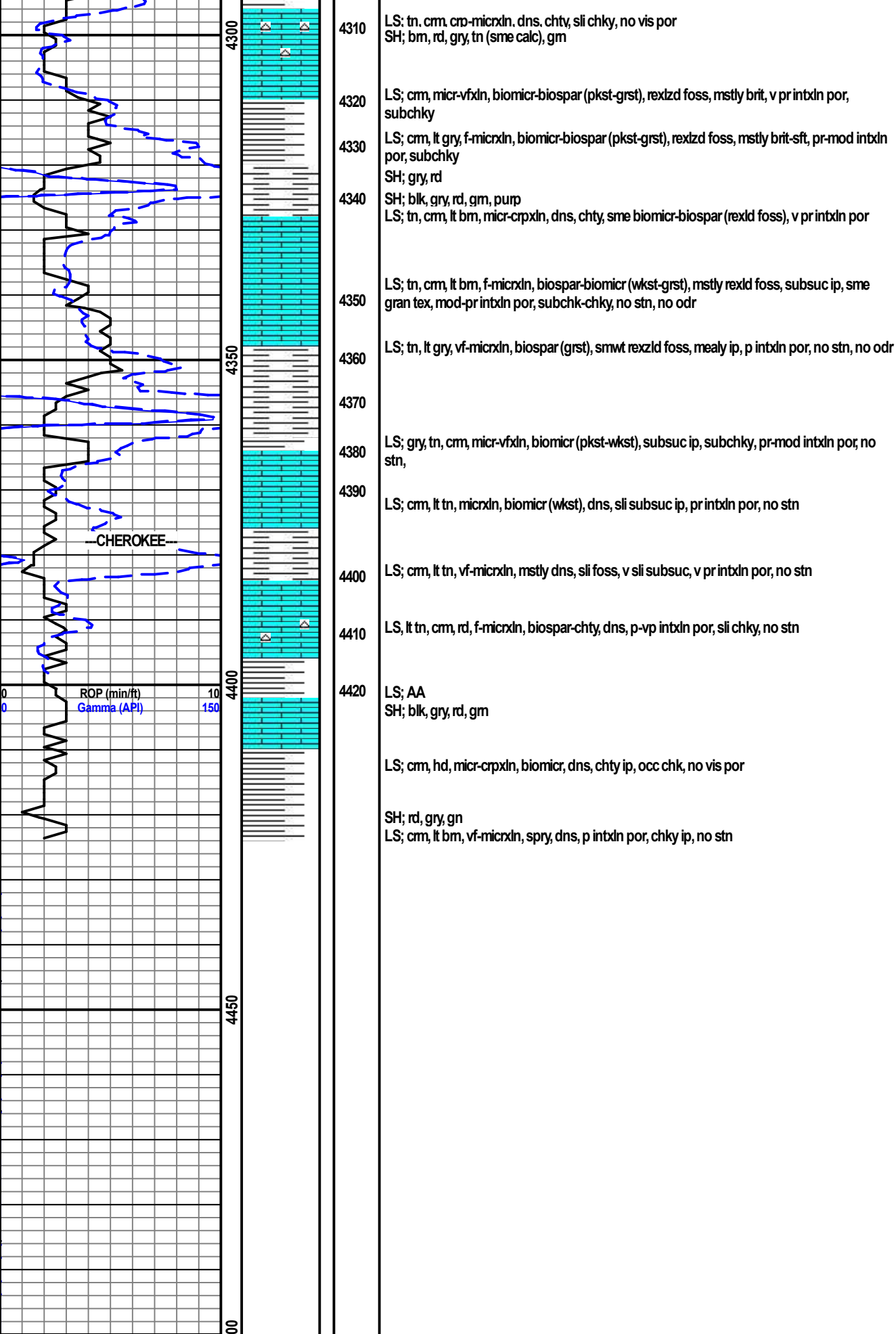
Mud Co check @3980'
Vis: 57
Mud Wt: 9.2
LCM: 1.5
CHL: 1,200
DST #2
3972-3992 (LKC B)
15-15-15-15
IF: Very weak surface blow, died after
ISI: No return
FF: No blow
FSI: No return
Rec: 1' SOCWM (1% ω 99% α m)
IFPs: 18-19#
FFPs: 19-19#
SIPs: 25-25#
HPS: 1954-1903#
BHT: 115

DST #3
4008-4044 (LKC E-G)
30-30-60-60
IF: Weak surface blow, built to 4"
ISI: No return
FF: Weak surface blow built to 4.5"
FSI: No return
Rec: 241' MW (85% ω 15% α m)
IFPs: 19-69#
FFPs: 73-129#
SIPs: 1132-1128#
HPS: 1256-1917#
BHT: 123
CHL: 42,000

MUNCIE CREEK 4065 (-1133)

DST #4
4064-4130 (LKC H-J)





CHEROKEE 4378 (-144

RTD 4425 @ 4:30 am 6/27/23

785-953-0222

TICKET NUMBER 2750K-C

LOCATION	LOCATION DIS

FOREMAN

FIELD TICKET & TREATMENT REPORT

CEMENT

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
6-27-23		Mary #1-34	34	45	36	Rowland
CUSTOMER						
		Red Oak Energy				
MAILING ADDRESS			TRUCK #	DRIVER	TRUCK #	DRIVER
			10.3	Cory D.		
				Jan E.		
CITY	STATE	ZIP CODE				

JOB TYPE PTA HOLE SIZE 17 1/8 HOLE DEPTH 4425' CASING SIZE & WEIGHT _____
CASING DEPTH _____ DRILL PIPE 4 1/2 X 4 1/2 TUBING _____ OTHER _____
SLURRY WEIGHT 13.5 SLURRY VOL _____ WATER gal/sk _____ CEMENT LEFT in CASING _____
DISPLACEMENT _____ DISPLACEMENT PSI _____ MIX PSI _____ RATE _____

REMARKS: Setback, meeting: Rig up on Muffin D.L. #8, Plug as ordered

50 3450 2700'

100 5162 1700

50 5/4 = 3.25

10 5152 40

77-2608

1776-1777

Walt + Co

N of SERVICES or PRODUCT

[illegible]

AUTHORIZATION _____

TITLE
236.1256

DATE 6-22-22

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