



DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration, Inc.**

PO Box 83188
Wichita, KS 67278

ATTN: Max Lovely

Baker 36D #1

S36-15s-35w Logan/KS

Start Date: 2014.12.05 @ 23:30:00

End Date: 2014.12.06 @ 05:08:20

Job Ticket #: 58478 DST #: 1

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

Printed: 2014.12.12 @ 15:33:07

Ritchie Exploration, Inc.

S36-15s-35w Logan/KS

Baker 36D #1

DST # 1

Toronto - LKC 'C'

2014.12.05



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Ritchie Exploration, Inc.

PO Box 83188
Wichita, KS 67278

ATTN: Max Lovely

S36-15s-35w Logan/KS

Baker 36D #1

Job Ticket: 58478

DST#: 1

Test Start: 2014.12.05 @ 23:30:00

GENERAL INFORMATION:

Formation: **Toronto - LKC 'C'**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:57:10

Time Test Ended: 05:08:20

Test Type: Conventional Bottom Hole (Initial)

Tester: Chuck Smith

Unit No: 61

Interval: 3860.00 ft (KB) To 3969.00 ft (KB) (TVD)

Total Depth: 3969.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 3059.00 ft (KB)

3054.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8357 Inside

Press@RunDepth: 459.77 psig @ 3862.00 ft (KB)

Start Date: 2014.12.05

End Date:

2014.12.06

Start Time: 23:36:02

End Time:

05:14:19

Capacity: 8000.00 psig

Last Calib.: 2014.12.06

Time On Btm: 2014.12.06 @ 01:03:00

Time Off Btm: 2014.12.06 @ 03:18:00

TEST COMMENT: 30- B.O.B. @ 3 min.
45- No return.
15- B.O.B. @ 3 1/2 min.
60- No return.

PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1888.34	100.64	Initial Hydro-static
1	184.92	103.57	Open To Flow (1)
12	320.28	106.88	Shut-In(1)
57	1103.89	106.70	End Shut-In(1)
57	308.20	106.55	Open To Flow (2)
72	459.77	110.76	Shut-In(2)
134	1096.54	109.59	End Shut-In(2)
135	1857.14	108.71	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
430.00	MW 50m 50w	4.94
248.00	WM 5w 95m	3.48
238.00	OSM 100m	3.34

Gas Rates

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

DRILL STEM TEST REPORT

Ritchie Exploration, Inc.

PO Box 83188
Wichita, KS 67278

ATTN: Max Lovely

S36-15s-35w Logan/KS

Baker 36D #1

Job Ticket: 58478

DST#: 1

Test Start: 2014.12.05 @ 23:30:00

GENERAL INFORMATION:

Formation: **Toronto - LKC 'C'**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:57:10

Time Test Ended: 05:08:20

Test Type: Conventional Bottom Hole (Initial)

Tester: Chuck Smith

Unit No: 61

Interval: 3860.00 ft (KB) To 3969.00 ft (KB) (TVD)

Total Depth: 3969.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 3059.00 ft (KB)

3054.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 6751 Outside

Press@RunDepth: psig @ 3862.00 ft (KB)

Start Date: 2014.12.05

End Date:

2014.12.06

Start Time: 23:36:02

End Time:

05:14:19

Capacity: 8000.00 psig

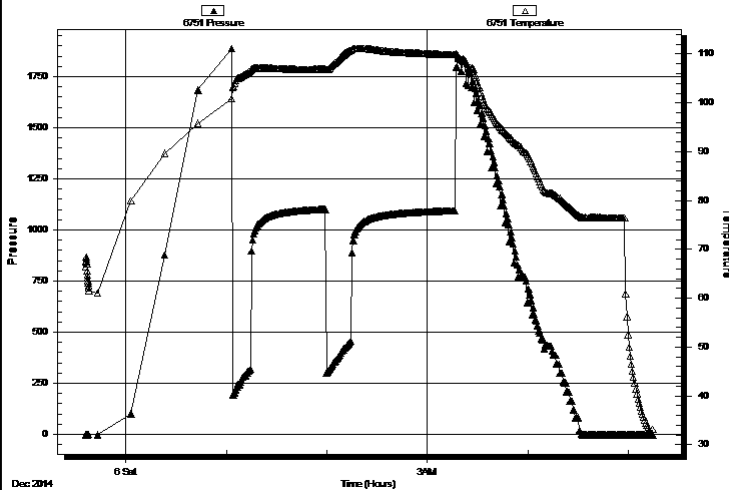
Last Calib.: 2014.12.06

Time On Btm:

Time Off Btm:

TEST COMMENT: 30- B.O.B. @ 3 min.
45- No return.
15- B.O.B. @ 3 1/2 min.
60- 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)
430.00	MW 50m 50w	4.94
248.00	WM 5w 95m	3.48
238.00	OSM 100m	3.34

Gas Rates

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



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration, Inc.

S36-15s-35w Logan/KS

PO Box 83188
Wichita, KS 67278

Baker 36D #1

Job Ticket: 58478

DST#: 1

ATTN: Max Lovely

Test Start: 2014.12.05 @ 23:30:00

Tool Information

Drill Pipe:	Length:	3730.00 ft	Diameter:	3.80 inches	Volume:	52.32 bbl	Tool Weight:	2300.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	inches	Volume:	0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length:	120.00 ft	Diameter:	2.25 inches	Volume:	0.59 bbl	Weight to Pull Loose:	80000.00 lb
					Total Volume:	52.91 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:		17.50 ft					String Weight: Initial	60000.00 lb
Depth to Top Packer:		3860.00 ft					Final	64000.00 lb
Depth to Bottom Packer:		ft						
Interval between Packers:		109.00 ft						
Tool Length:		136.50 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		3833.50	
Shut In Tool	5.00		3838.50	
Hydraulic tool	5.00		3843.50	
Jars	5.00		3848.50	
Safety Joint	2.50		3851.00	
Packer	5.00		3856.00	27.50 Bottom Of Top Packer
Packer	4.00		3860.00	
Stubb	1.00		3861.00	
Perforations	1.00		3862.00	
Recorder	0.00	8357 Inside	3862.00	
Recorder	0.00	6751 Outside	3862.00	
Perforations	6.00		3868.00	
Change Over Sub	1.00		3869.00	
Drill Pipe	96.00		3965.00	
Change Over Sub	1.00		3966.00	
Bullnose	3.00		3969.00	109.00 Bottom Packers & Anchor
Total Tool Length:	136.50			



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration, Inc.

S36-15s-35w Logan/KS

PO Box 83188
Wichita, KS 67278

Baker 36D #1

Job Ticket: 58478

DST#: 1

ATTN: Max Lovely

Test Start: 2014.12.05 @ 23:30:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 56.00 sec/qt

Water Loss: 7.17 in³

Resistivity: ohm.m

Salinity: 4000.00 ppm

Filter Cake: 1.00 inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

Water Salinity:

deg API

46000 ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
430.00	MW 50m 50w	4.939
248.00	WM 5w 95m	3.479
238.00	OSM 100m	3.339

Total Length: 916.00 ft Total Volume: 11.757 bbl

Num Fluid Samples: 0

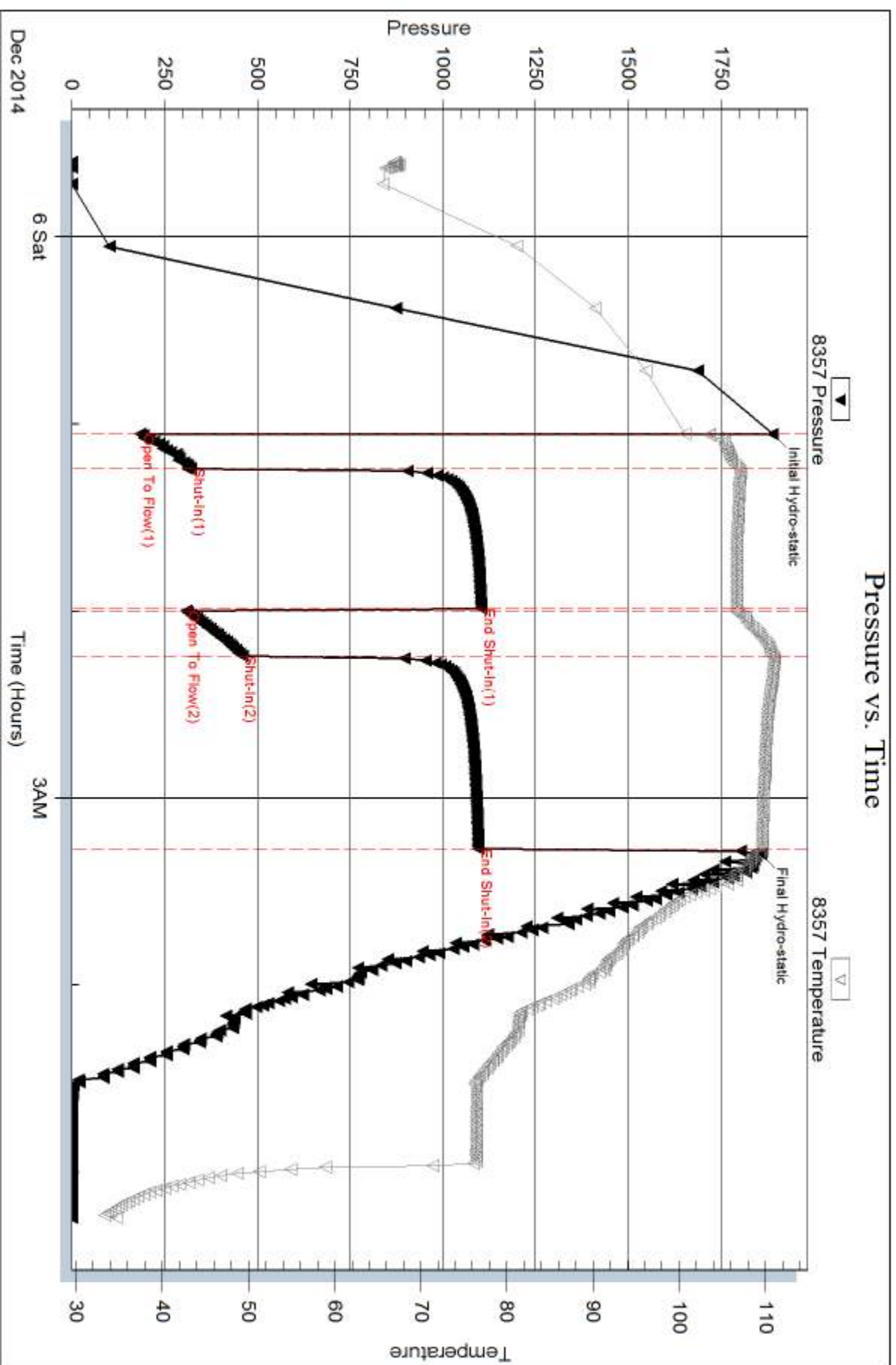
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW: .285 @ 41 Degrees F = 46000 PPM

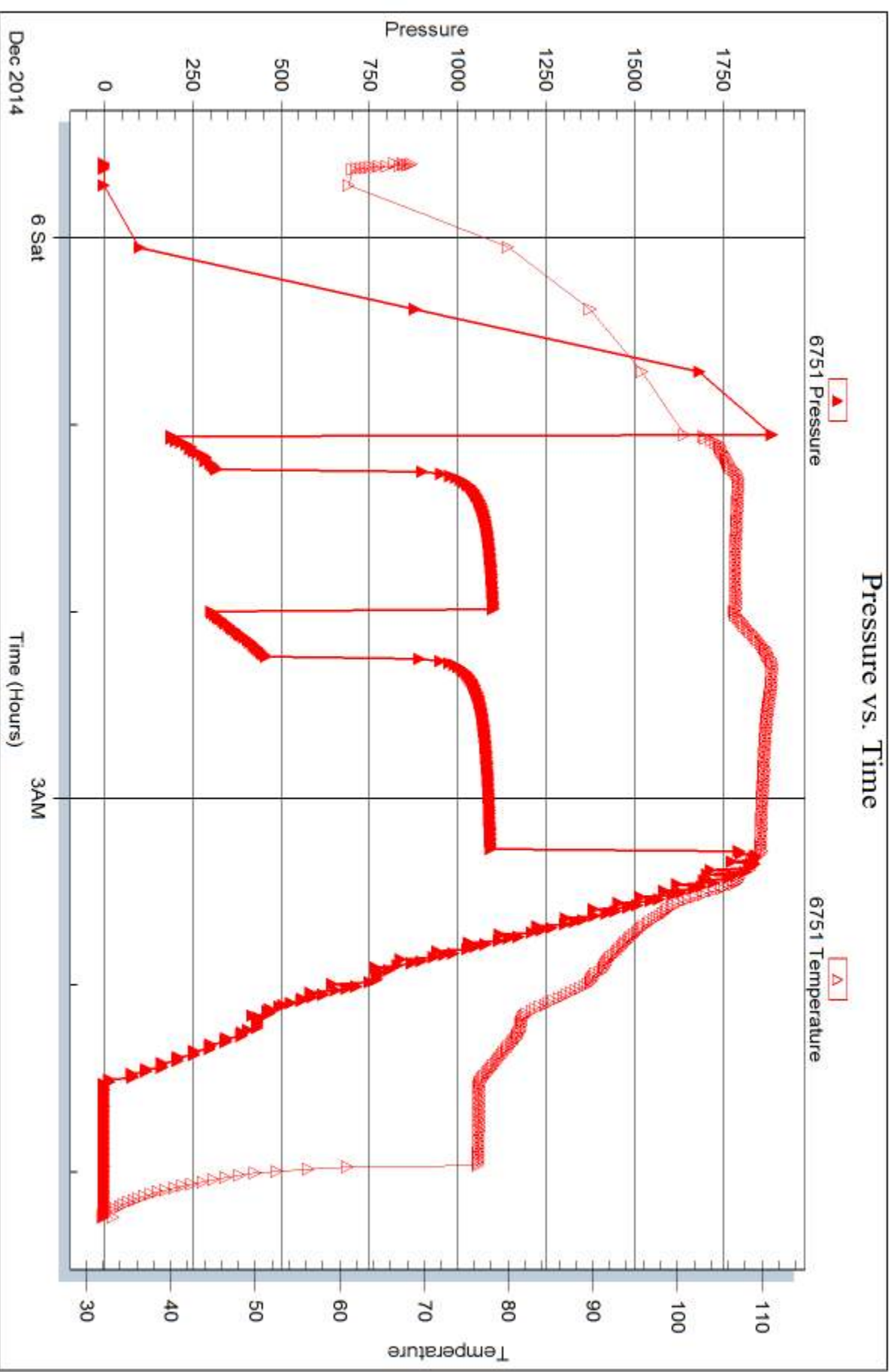


Serial #: 6751

Outside Ritchie Exploration, Inc.

Baker 36D #1

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration, Inc.**

PO Box 83188
Wichita, KS 67278

ATTN: Max Lovely

Baker 36D #1

S36-15s-35w Logan/KS

Start Date: 2014.12.06 @ 15:41:00

End Date: 2014.12.06 @ 22:57:09

Job Ticket #: 58479 DST #: 2

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

Printed: 2014.12.12 @ 15:32:44



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Ritchie Exploration, Inc.

PO Box 83188
Wichita, KS 67278

ATTN: Max Lovely

S36-15s-35w Logan/KS

Baker 36D #1

Job Ticket: 58479

DST#: 2

Test Start: 2014.12.06 @ 15:41:00

GENERAL INFORMATION:

Formation: **LKC 'E-F'**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:24:50

Time Test Ended: 22:57:09

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Smith

Unit No: 61

Interval: 3994.00 ft (KB) To 4038.00 ft (KB) (TVD)

Total Depth: 4038.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 3059.00 ft (KB)

3054.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8357

Inside

Press@RunDepth: 667.81 psig @ 3996.00 ft (KB)

Start Date: 2014.12.06

End Date:

2014.12.06

Start Time: 15:41:02

End Time:

22:57:10

Capacity: 8000.00 psig

Last Calib.: 2014.12.06

Time On Btm: 2014.12.06 @ 18:22:20

Time Off Btm: 2014.12.06 @ 20:44:40

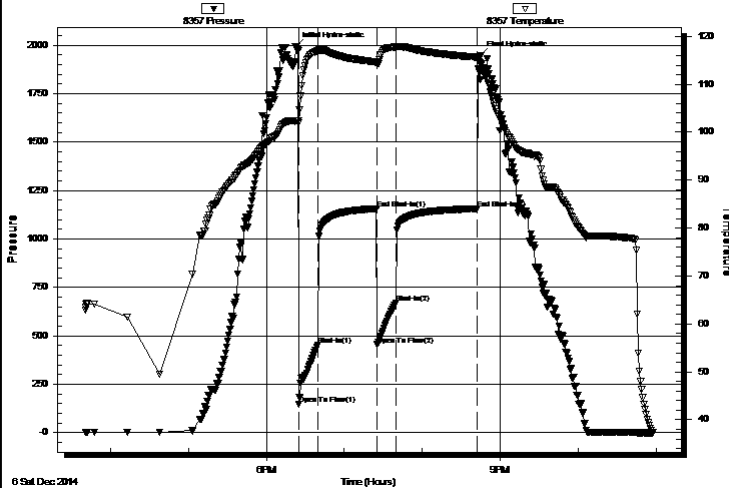
TEST COMMENT: 15- B.O.B. @ 1 3/4 min.

45- No return.

15- B.O.B. @ 2 min.

60- No return.

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1993.58	102.33	Initial Hydro-static
3	145.73	102.04	Open To Flow (1)
18	453.16	116.97	Shut-In(1)
63	1156.59	114.61	End Shut-In(1)
63	453.49	114.33	Open To Flow (2)
78	667.81	117.78	Shut-In(2)
140	1156.68	115.63	End Shut-In(2)
143	1944.63	114.40	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1112.00	MW 10m 90w	14.51
288.00	OSWM 35w 65m	4.04

Gas Rates

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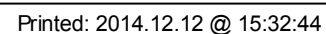
* Recovery from multiple tests



ATTN: Max Lovely

KB to GR/CF: 5.00 ft

60- No return.





TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration, Inc.

S36-15s-35w Logan/KS

PO Box 83188
Wichita, KS 67278

Baker 36D #1

Job Ticket: 58479

DST#: 2

ATTN: Max Lovely

Test Start: 2014.12.06 @ 15:41:00

Tool Information

Drill Pipe:	Length:	3858.00 ft	Diameter:	3.80 inches	Volume:	54.12 bbl	Tool Weight:	2300.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	inches	Volume:	0.00 bbl	Weight set on Packer:	20000.00 lb
Drill Collar:	Length:	120.00 ft	Diameter:	2.25 inches	Volume:	0.59 bbl	Weight to Pull Loose:	70000.00 lb
					Total Volume:	54.71 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:		4.00 ft					String Weight: Initial	60000.00 lb
Depth to Top Packer:		3994.00 ft					Final	65000.00 lb
Depth to Bottom Packer:		ft						
Interval between Packers:		44.00 ft						
Tool Length:		64.00 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			3975.00	
Shut In Tool	5.00			3980.00	
Hydraulic tool	5.00			3985.00	
Packer	5.00			3990.00	20.00 Bottom Of Top Packer
Packer	4.00			3994.00	
Stubb	1.00			3995.00	
Perforations	1.00			3996.00	
Recorder	0.00	8357	Inside	3996.00	
Recorder	0.00	6751	Outside	3996.00	
Perforations	5.00			4001.00	
Change Over Sub	1.00			4002.00	
Drill Pipe	31.00			4033.00	
Change Over Sub	1.00			4034.00	
Perforations	1.00			4035.00	
Bullnose	3.00			4038.00	44.00 Bottom Packers & Anchor

Total Tool Length: 64.00



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TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration, Inc.

S36-15s-35w Logan/KS

PO Box 83188
Wichita, KS 67278

Baker 36D #1

Job Ticket: 58479

DST#: 2

ATTN: Max Lovely

Test Start: 2014.12.06 @ 15:41:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 54.00 sec/qt

Water Loss: 7.17 in³

Resistivity: ohm.m

Salinity: 6000.00 ppm

Filter Cake: 1.00 inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

Water Salinity: 47000 ppm

deg API

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1112.00	MW 10m 90w	14.505
288.00	OSWM 35w 65m	4.040

Total Length: 1400.00 ft Total Volume: 18.545 bbl

Num Fluid Samples: 0

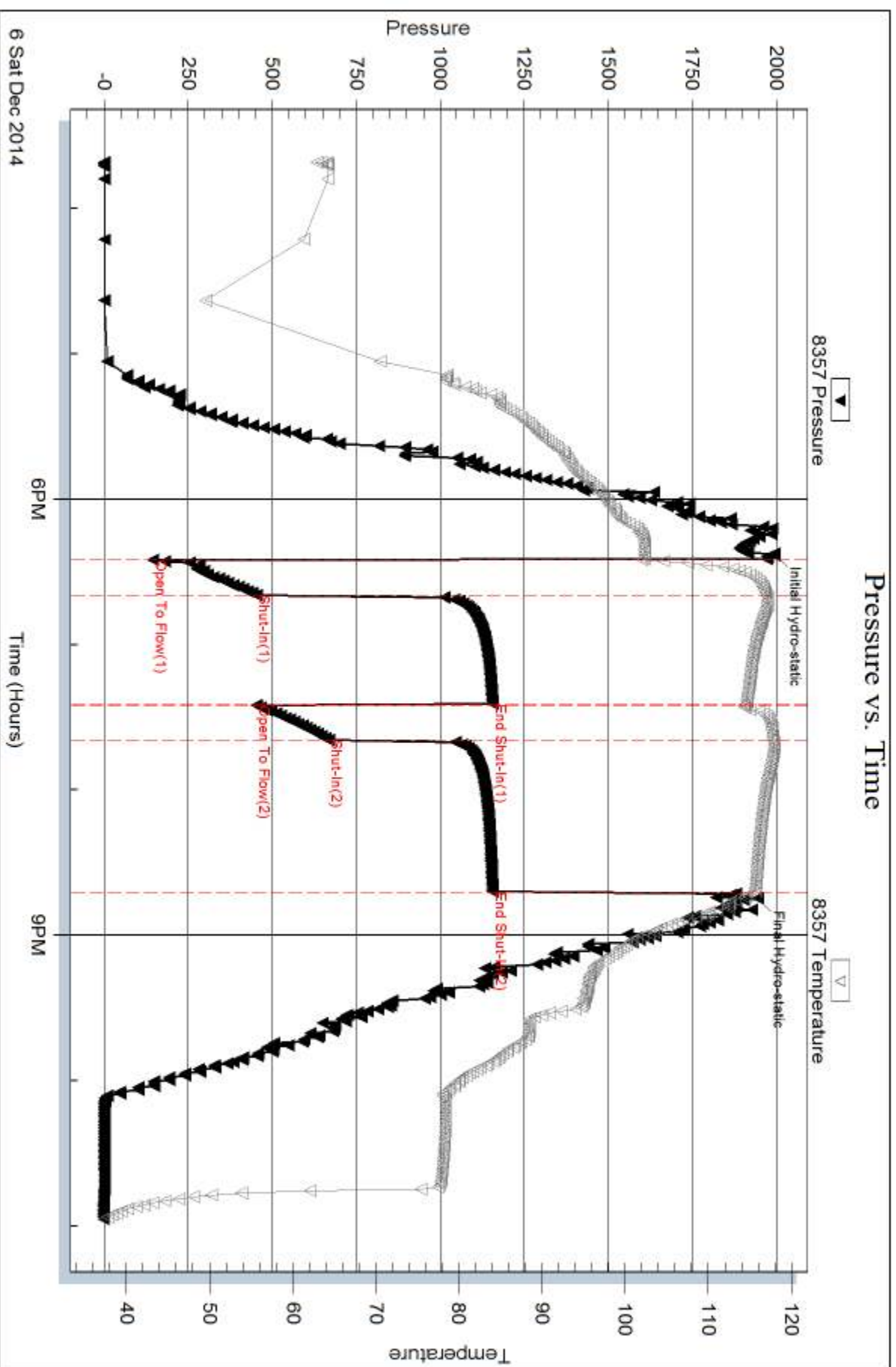
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW: .255 @ 45 Degrees F = 47000 PPM

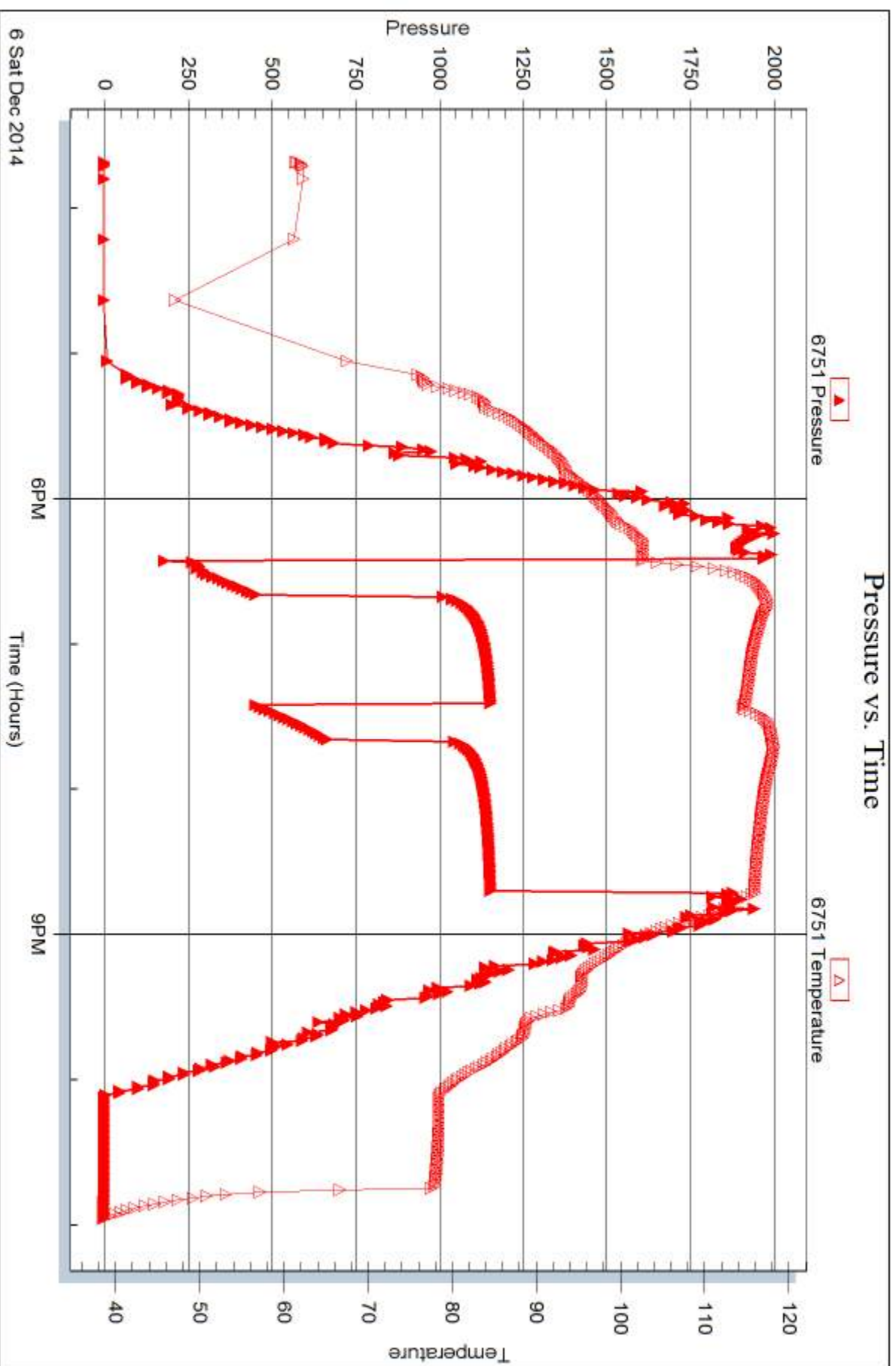


Serial #: 6751

Outside Ritchie Exploration, Inc.

Baker 36D #1

DST Test Number: 2





DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration, Inc.**

PO Box 83188
Wichita, KS 67278

ATTN: Max Lovely

Baker 36D #1

S36-15s-35w Logan/KS

Start Date: 2014.12.06 @ 11:38:00

End Date: 2014.12.06 @ 17:02:20

Job Ticket #: 58480 DST #: 3

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

Printed: 2014.12.12 @ 15:32:13



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Ritchie Exploration, Inc.

PO Box 83188
Wichita, KS 67278

ATTN: Max Lovely

S36-15s-35w Logan/KS

Baker 36D #1

Job Ticket: 58480

DST#: 3

Test Start: 2014.12.06 @ 11:38:00

GENERAL INFORMATION:

Formation: **LKC 'I'**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:26:30

Time Test Ended: 17:02:20

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Smith

Unit No: 61

Interval: 413.00 ft (KB) To 4150.00 ft (KB) (TVD)

Total Depth: 4150.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 3059.00 ft (KB)

3054.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 6751 Outside

Press@RunDepth: 27.08 psig @ 4127.00 ft (KB)

Start Date: 2014.12.06

End Date:

2014.12.06

Start Time: 11:38:02

End Time:

17:02:19

Capacity: 8000.00 psig

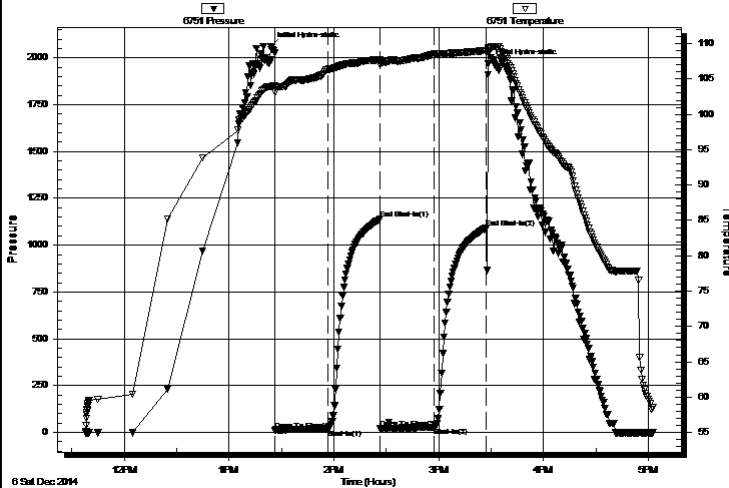
Last Calib.: 2014.12.07

Time On Btm: 2014.12.06 @ 13:24:10

Time Off Btm: 2014.12.06 @ 15:28:30

TEST COMMENT: 30- Weak surface blow died @ 10 min.
30- No return.
30- No blow, flushed tool, surge died.
30- No return.

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2060.80	103.93	Initial Hydro-static
3	12.58	103.16	Open To Flow (1)
33	18.60	106.35	Shut-In(1)
63	1138.57	107.69	End Shut-In(1)
63	22.31	107.08	Open To Flow (2)
94	27.08	108.51	Shut-In(2)
123	1089.76	109.04	End Shut-In(2)
125	1968.72	109.38	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	M 100m	0.02

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

Ritchie Exploration, Inc.

PO Box 83188
Wichita, KS 67278

ATTN: Max Lovely

S36-15s-35w Logan/KS

Baker 36D #1

Job Ticket: 58480

DST#: 3

Test Start: 2014.12.06 @ 11:38:00

GENERAL INFORMATION:

Formation: **LKC 'I'**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:26:30

Time Test Ended: 17:02:20

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Smith

Unit No: 61

Interval: 413.00 ft (KB) To 4150.00 ft (KB) (TVD)

Total Depth: 4150.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 3059.00 ft (KB)

3054.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8357 Inside

Press@RunDepth: psig @ 4127.00 ft (KB)

Start Date: 2014.12.06

End Date:

2014.12.06

Start Time: 11:38:02

End Time:

17:02:19

Capacity: 8000.00 psig

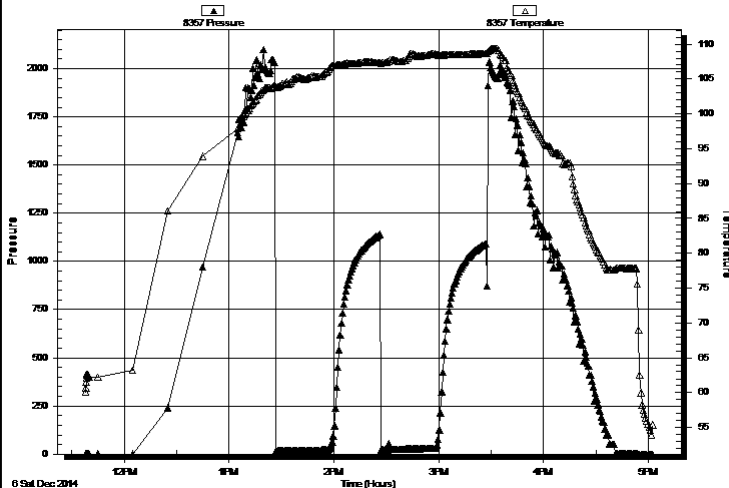
Last Calib.: 1899.12.30

Time On Btm:

Time Off Btm:

TEST COMMENT: 30- Weak surface blow died @ 10 min.
30- No return.
30- No blow, flushed tool, surge died.
30- 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)
5.00	M 100m	0.02

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

Ritchie Exploration, Inc.

S36-15s-35w Logan/KS

PO Box 83188
Wichita, KS 67278

Baker 36D #1

Job Ticket: 58480

DST#: 3

ATTN: Max Lovely

Test Start: 2014.12.06 @ 11:38:00

Tool Information

Drill Pipe:	Length:	4014.00 ft	Diameter:	3.80 inches	Volume:	56.31 bbl	Tool Weight:	2100.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	inches	Volume:	0.00 bbl	Weight set on Packer:	20000.00 lb
Drill Collar:	Length:	120.00 ft	Diameter:	2.25 inches	Volume:	0.59 bbl	Weight to Pull Loose:	75000.00 lb
					Total Volume:	56.90 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:		31.00 ft					String Weight: Initial	65000.00 lb
Depth to Top Packer:		4123.00 ft					Final	65000.00 lb
Depth to Bottom Packer:		ft						
Interval between Packers:		27.00 ft						
Tool Length:		47.00 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			4104.00	
Shut In Tool	5.00			4109.00	
Hydraulic tool	5.00			4114.00	
Packer	5.00			4119.00	20.00 Bottom Of Top Packer
Packer	4.00			4123.00	
Stubb	1.00			4124.00	
Perforations	3.00			4127.00	
Recorder	0.00	8357	Inside	4127.00	
Recorder	0.00	6751	Outside	4127.00	
Perforations	20.00			4147.00	
Bullnose	3.00			4150.00	27.00 Bottom Packers & Anchor

Total Tool Length: 47.00



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration, Inc.

S36-15s-35w Logan/KS

PO Box 83188
Wichita, KS 67278

Baker 36D #1

Job Ticket: 58480

DST#: 3

ATTN: Max Lovely

Test Start: 2014.12.06 @ 11:38:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 51.00 sec/qt

Water Loss: 7.97 in³

Resistivity: ohm.m

Salinity: 5100.00 ppm

Filter Cake: 1.00 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
5.00	M 100m	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

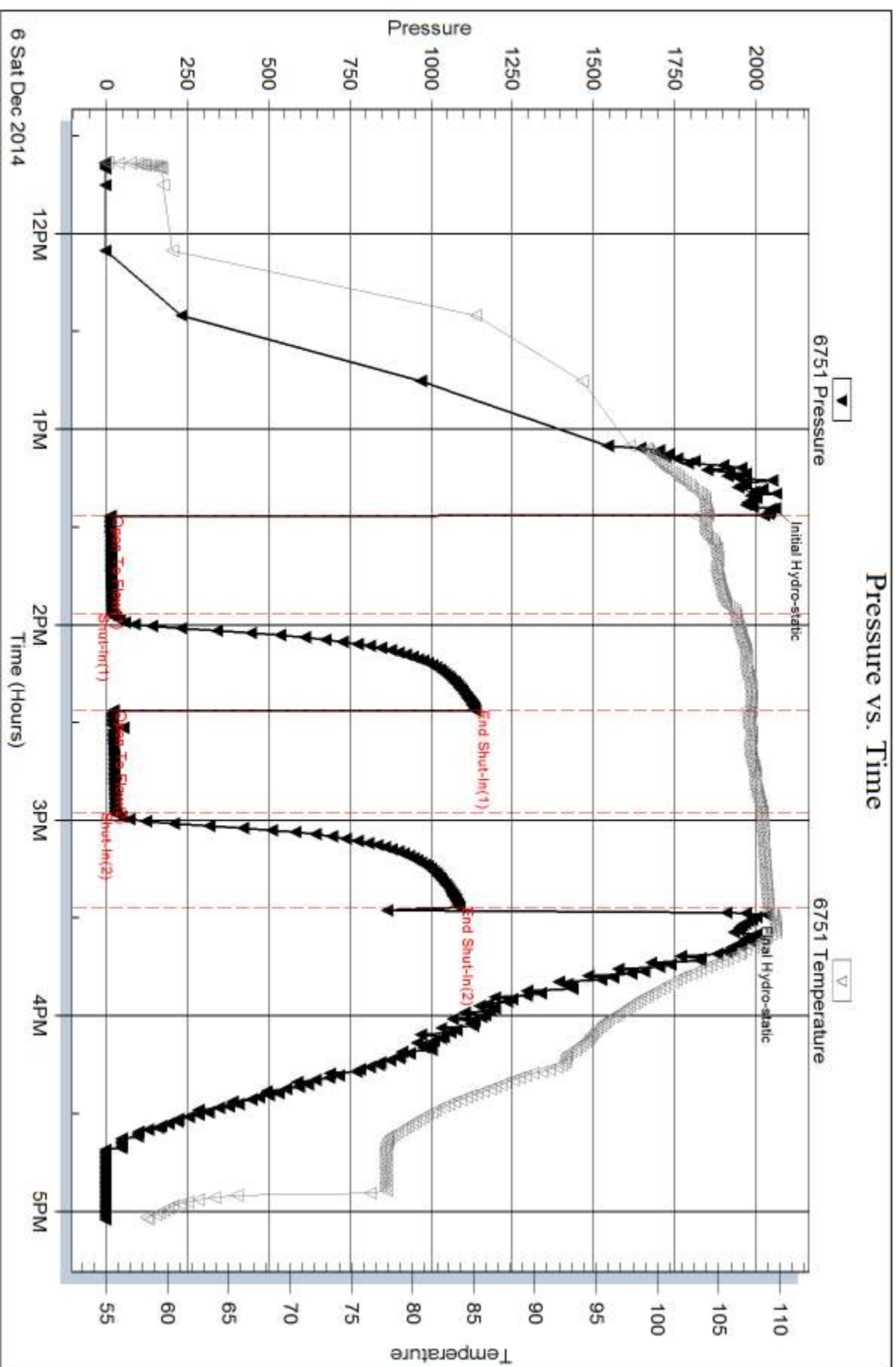
Recovery Comments:

Serial #: 6751

Outside Ritchie Exploration, Inc.

Baker 36D #1

DST Test Number: 3



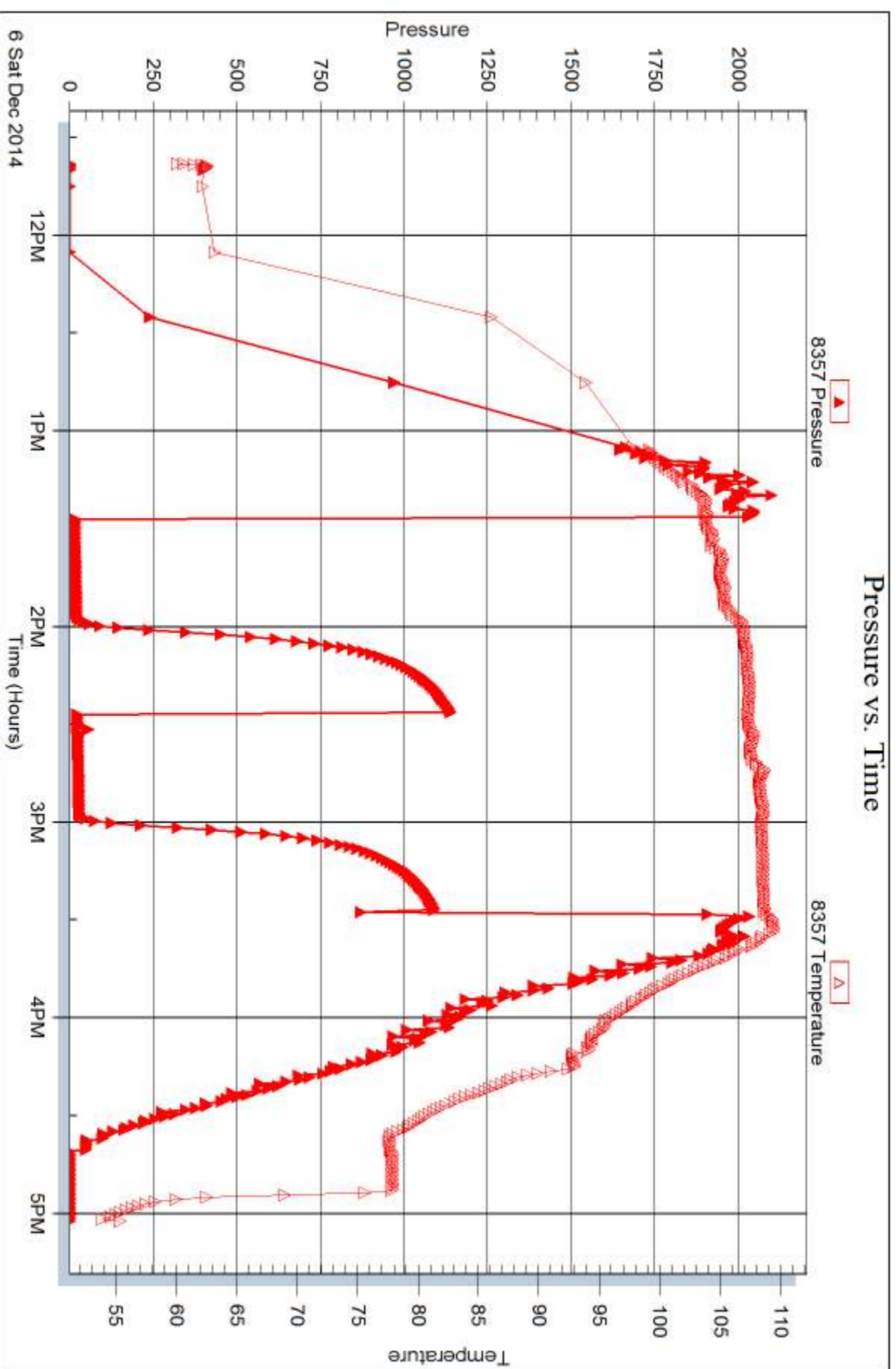
Serial #: 8357

Inside

Ritchie Exploration, Inc.

Baker 36D #1

DST Test Number: 3





DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration, Inc.**

PO Box 83188
Wichita, KS 67278

ATTN: Max Lovely

Baker 36D #1

S36-15s-35w Logan/KS

Start Date: 2014.12.08 @ 18:50:00

End Date: 2014.12.09 @ 01:51:39

Job Ticket #: 58481 DST #: 4

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

Printed: 2014.12.12 @ 15:31:18



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Ritchie Exploration, Inc.

PO Box 83188
Wichita, KS 67278

ATTN: Max Lovely

S36-15s-35w Logan/KS

Baker 36D #1

Job Ticket: 58481

DST#: 4

Test Start: 2014.12.08 @ 18:50:00

GENERAL INFORMATION:

Formation: **Altamont**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:56:50

Time Test Ended: 01:51:39

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Smith

Unit No: 61

Interval: 4281.00 ft (KB) To 4384.00 ft (KB) (TVD)

Total Depth: 4384.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 3059.00 ft (KB)

3054.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8357 Inside

Press@RunDepth: 491.98 psig @ 4285.00 ft (KB)

Start Date: 2014.12.08

End Date:

2014.12.09

Start Time: 18:50:02

End Time:

01:51:40

Capacity: 8000.00 psig

Last Calib.: 2014.12.09

Time On Btm: 2014.12.08 @ 20:54:30

Time Off Btm: 2014.12.09 @ 00:00:09

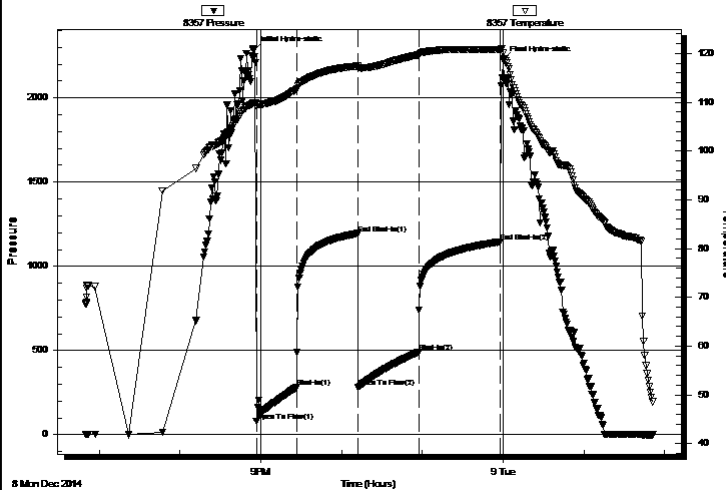
TEST COMMENT: 30- B.O.B. @ 6 1/2 min.

45- No return.

45- B.O.B. @ 9 min.

60- No return.

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2280.01	109.88	Initial Hydro-static
3	79.21	109.11	Open To Flow (1)
33	281.75	112.65	Shut-In (1)
78	1195.30	117.40	End Shut-In (1)
78	283.41	117.01	Open To Flow (2)
123	491.98	119.71	Shut-In (2)
184	1145.38	120.74	End Shut-In (2)
186	2224.38	120.11	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
368.00	MW 20m 80w	4.07
496.00	MW 40m 60w	6.96
180.00	WM 30w 70m	2.52

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Ritchie Exploration, Inc.

PO Box 83188
Wichita, KS 67278

ATTN: Max Lovely

S36-15s-35w Logan/KS

Baker 36D #1

Job Ticket: 58481

DST#: 4

Test Start: 2014.12.08 @ 18:50:00

GENERAL INFORMATION:

Formation: **Altamont**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:56:50

Time Test Ended: 01:51:39

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Smith

Unit No: 61

Interval: 4281.00 ft (KB) To 4384.00 ft (KB) (TVD)

Total Depth: 4384.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 3059.00 ft (KB)

3054.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 6751 Outside

Press@RunDepth: psig @ 4285.00 ft (KB)

Start Date: 2014.12.08

End Date:

2014.12.09

Start Time: 18:50:02

End Time:

01:51:40

Capacity: 8000.00 psig

Last Calib.: 2014.12.09

Time On Btm:

Time Off Btm:

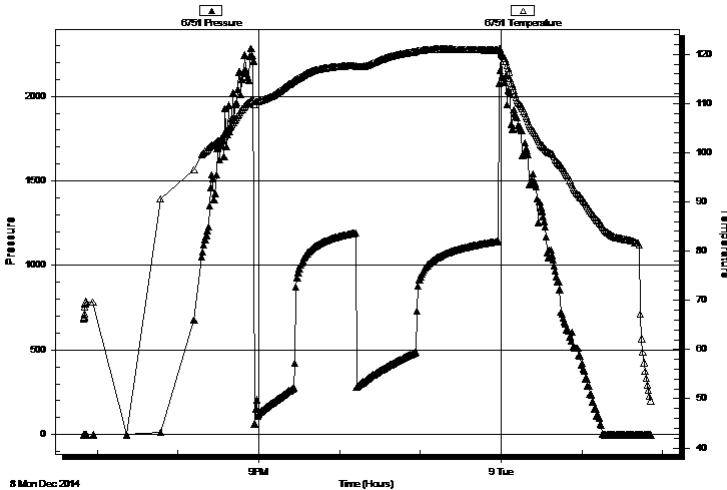
TEST COMMENT: 30- B.O.B. @ 6 1/2 min.

45- No return.

45- B.O.B. @ 9 min.

60- No return.

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
368.00	MW 20m 80w	4.07
496.00	MW 40m 60w	6.96
180.00	WM 30w 70m	2.52

Gas Rates

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

* Recovery from multiple tests



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration, Inc.

S36-15s-35w Logan/KS

PO Box 83188
Wichita, KS 67278

Baker 36D #1

Job Ticket: 58481

DST#: 4

ATTN: Max Lovely

Test Start: 2014.12.08 @ 18:50:00

Tool Information

Drill Pipe:	Length:	4139.00 ft	Diameter:	3.80 inches	Volume:	58.06 bbl	Tool Weight:	2300.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	inches	Volume:	0.00 bbl	Weight set on Packer:	20000.00 lb
Drill Collar:	Length:	120.00 ft	Diameter:	2.25 inches	Volume:	0.59 bbl	Weight to Pull Loose:	85000.00 lb
					Total Volume:	58.65 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:		5.50 ft					String Weight: Initial	62000.00 lb
Depth to Top Packer:		4281.00 ft					Final	66000.00 lb
Depth to Bottom Packer:		ft						
Interval between Packers:		103.00 ft						
Tool Length:		130.50 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		4254.50	
Shut In Tool	5.00		4259.50	
Hydraulic tool	5.00		4264.50	
Jars	5.00		4269.50	
Safety Joint	2.50		4272.00	
Packer	5.00		4277.00	27.50 Bottom Of Top Packer
Packer	4.00		4281.00	
Stubb	1.00		4282.00	
Perforations	3.00		4285.00	
Recorder	0.00	8357 Inside	4285.00	
Recorder	0.00	6751 Outside	4285.00	
Change Over Sub	1.00		4286.00	
Drill Pipe	94.00		4380.00	
Change Over Sub	1.00		4381.00	
Bullnose	3.00		4384.00	103.00 Bottom Packers & Anchor

Total Tool Length: 130.50



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration, Inc.

S36-15s-35w Logan/KS

PO Box 83188
Wichita, KS 67278

Baker 36D #1

Job Ticket: 58481

DST#: 4

ATTN: Max Lovely

Test Start: 2014.12.08 @ 18:50:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 56.00 sec/qt

Water Loss: 9.57 in³

Resistivity: ohm.m

Salinity: 6500.00 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: 73000 ppm

deg API

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
368.00	MW 20m 80w	4.069
496.00	MW 40m 60w	6.958
180.00	WM 30w 70m	2.525

Total Length: 1044.00 ft Total Volume: 13.552 bbl

Num Fluid Samples: 0

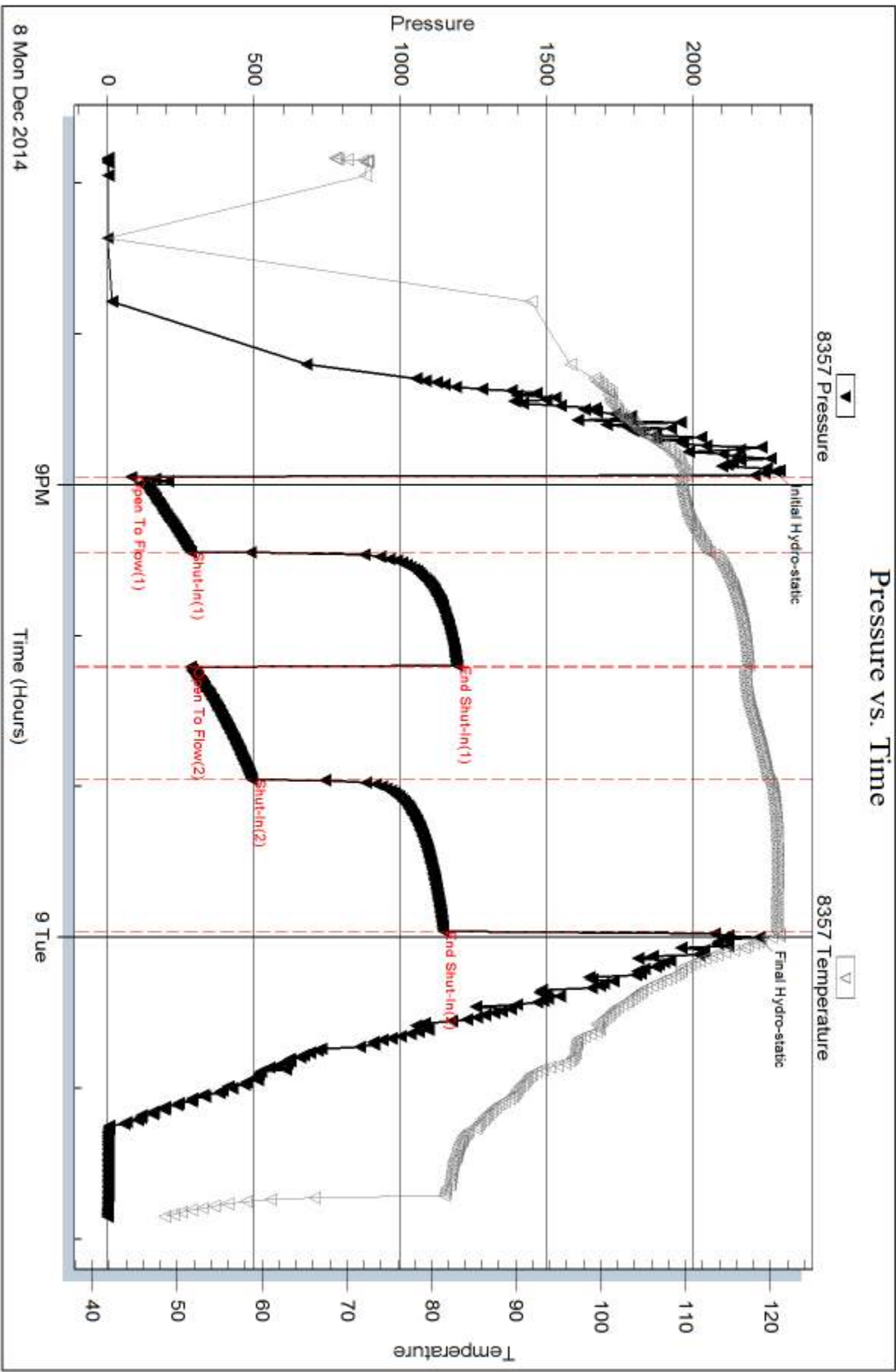
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW: . 220 @ 34 Degrees F = 73000 PPM

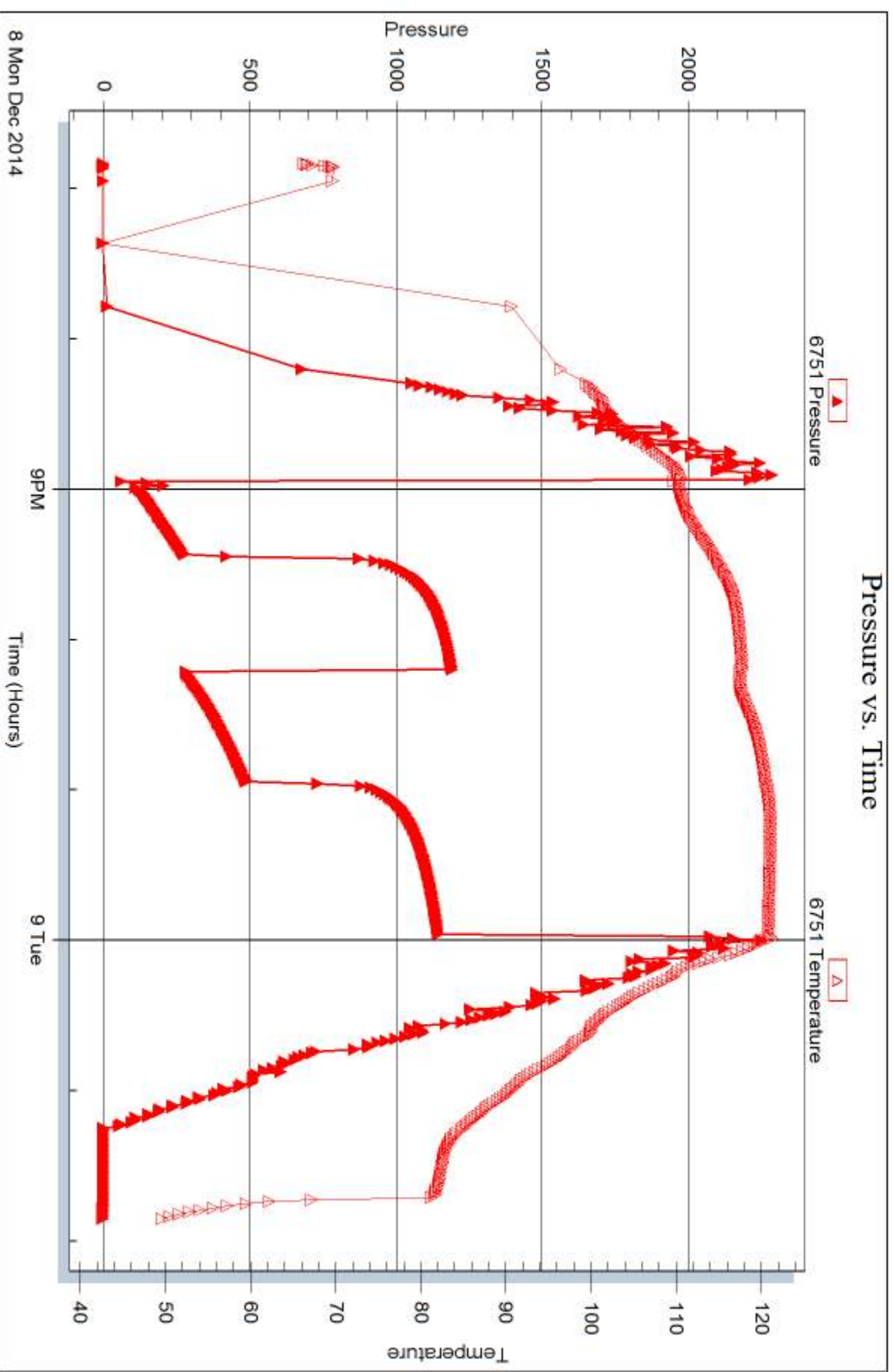


Serial #: 6751

Outside Ritchie Exploration, Inc.

Baker 36D #1

DST Test Number: 4





DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration, Inc.**

PO Box 83188
Wichita, KS 67278

ATTN: Max Lovely

Baker 36D #1

S36-15s-35w Logan/KS

Start Date: 2014.12.09 @ 15:37:00

End Date: 2014.12.09 @ 22:13:50

Job Ticket #: 58482 DST #: 5

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

Printed: 2014.12.12 @ 15:30:34

Ritchie Exploration, Inc.

S36-15s-35w Logan/KS

Baker 36D #1

DST # 5

Pawnee - Ft. Scott

2014.12.09



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Ritchie Exploration, Inc.

PO Box 83188
Wichita, KS 67278

ATTN: Max Lovely

S36-15s-35w Logan/KS

Baker 36D #1

Job Ticket: 58482

DST#: 5

Test Start: 2014.12.09 @ 15:37:00

GENERAL INFORMATION:

Formation: **Pawnee - Ft. Scott**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:37:20

Time Test Ended: 22:13:50

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Smith

Unit No: 61

Interval: 4385.00 ft (KB) To 4472.00 ft (KB) (TVD)

Total Depth: 4472.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 3059.00 ft (KB)

3054.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8357 Inside

Press@RunDepth: 62.27 psig @ 4389.00 ft (KB)

Start Date: 2014.12.09

End Date:

2014.12.09

Start Time: 15:37:02

End Time:

22:13:49

Capacity: 8000.00 psig

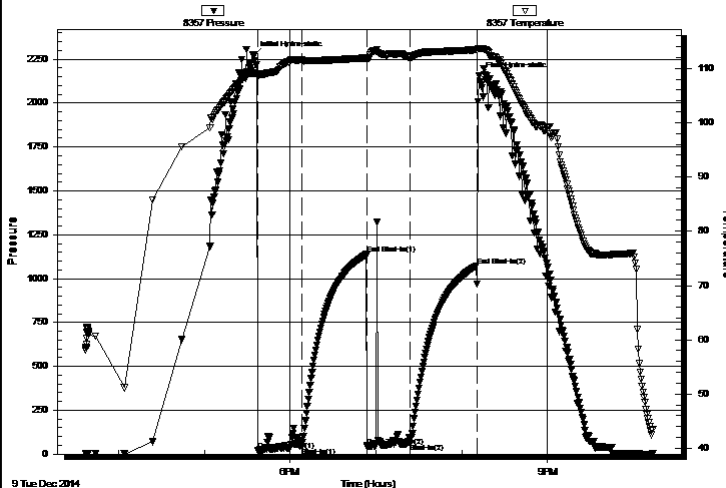
Last Calib.: 2014.12.09

Time On Btm: 2014.12.09 @ 17:34:30

Time Off Btm: 2014.12.09 @ 20:12:00

TEST COMMENT: 30- 1/4" Blow.
45- No return.
30- No blow, flushed tool, surge died.
45- No return.

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2272.30	109.10	Initial Hydro-static
3	21.58	108.46	Open To Flow (1)
34	40.77	111.54	Shut-In(1)
79	1138.27	111.95	End Shut-In(1)
80	43.86	111.79	Open To Flow (2)
110	62.27	112.03	Shut-In(2)
156	1073.01	113.43	End Shut-In(2)
158	2152.95	113.69	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
75.00	M 100m A few oil spots in tool.	0.37

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Ritchie Exploration, Inc.

PO Box 83188
Wichita, KS 67278

ATTN: Max Lovely

S36-15s-35w Logan/KS

Baker 36D #1

Job Ticket: 58482

DST#: 5

Test Start: 2014.12.09 @ 15:37:00

GENERAL INFORMATION:

Formation: **Pawnee - Ft. Scott**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:37:20

Time Test Ended: 22:13:50

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Smith

Unit No: 61

Interval: 4385.00 ft (KB) To 4472.00 ft (KB) (TVD)

Total Depth: 4472.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 3059.00 ft (KB)

3054.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 6751 Outside

Press@RunDepth: psig @ 4389.00 ft (KB)

Start Date: 2014.12.09

End Date:

2014.12.09

Start Time: 15:37:02

End Time:

22:13:49

Capacity: 8000.00 psig

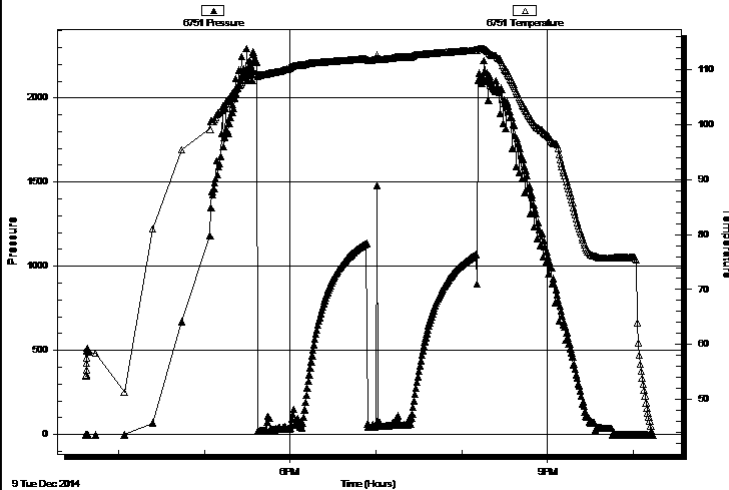
Last Calib.: 2014.12.09

Time On Btm:

Time Off Btm:

TEST COMMENT: 30- 1/4" Blow .
45- No return.
30- No blow , flushed tool, surge died.
45- 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)
75.00	M 100m A few oil spots in tool.	0.37

Gas Rates

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

* Recovery from multiple tests



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration, Inc.

S36-15s-35w Logan/KS

PO Box 83188
Wichita, KS 67278

Baker 36D #1

Job Ticket: 58482

DST#: 5

ATTN: Max Lovely

Test Start: 2014.12.09 @ 15:37:00

Tool Information

Drill Pipe:	Length:	4266.00 ft	Diameter:	3.80 inches	Volume:	59.84 bbl	Tool Weight:	2100.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	inches	Volume:	0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length:	120.00 ft	Diameter:	2.25 inches	Volume:	0.59 bbl	Weight to Pull Loose:	70000.00 lb
					Total Volume:	60.43 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:		21.00 ft					String Weight: Initial	64000.00 lb
Depth to Top Packer:		4385.00 ft					Final	64000.00 lb
Depth to Bottom Packer:		ft						
Interval between Packers:		87.00 ft						
Tool Length:		107.00 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			4366.00	
Shut In Tool	5.00			4371.00	
Hydraulic tool	5.00			4376.00	
Packer	5.00			4381.00	20.00 Bottom Of Top Packer
Packer	4.00			4385.00	
Stubb	1.00			4386.00	
Perforations	3.00			4389.00	
Recorder	0.00	8357	Inside	4389.00	
Recorder	0.00	6751	Outside	4389.00	
Perforations	15.00			4404.00	
Change Over Sub	1.00			4405.00	
Drill Pipe	63.00			4468.00	
Change Over Sub	1.00			4469.00	
Bullnose	3.00			4472.00	87.00 Bottom Packers & Anchor

Total Tool Length: 107.00



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration, Inc.

S36-15s-35w Logan/KS

PO Box 83188
Wichita, KS 67278

Baker 36D #1

Job Ticket: 58482

DST#: 5

ATTN: Max Lovely

Test Start: 2014.12.09 @ 15:37:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 53.00 sec/qt

Water Loss: 7.98 in³

Resistivity: ohm.m

Salinity: 7000.00 ppm

Filter Cake: 1.00 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
75.00	M 100m A few oil spots in tool.	0.369

Total Length: 75.00 ft

Total Volume: 0.369 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

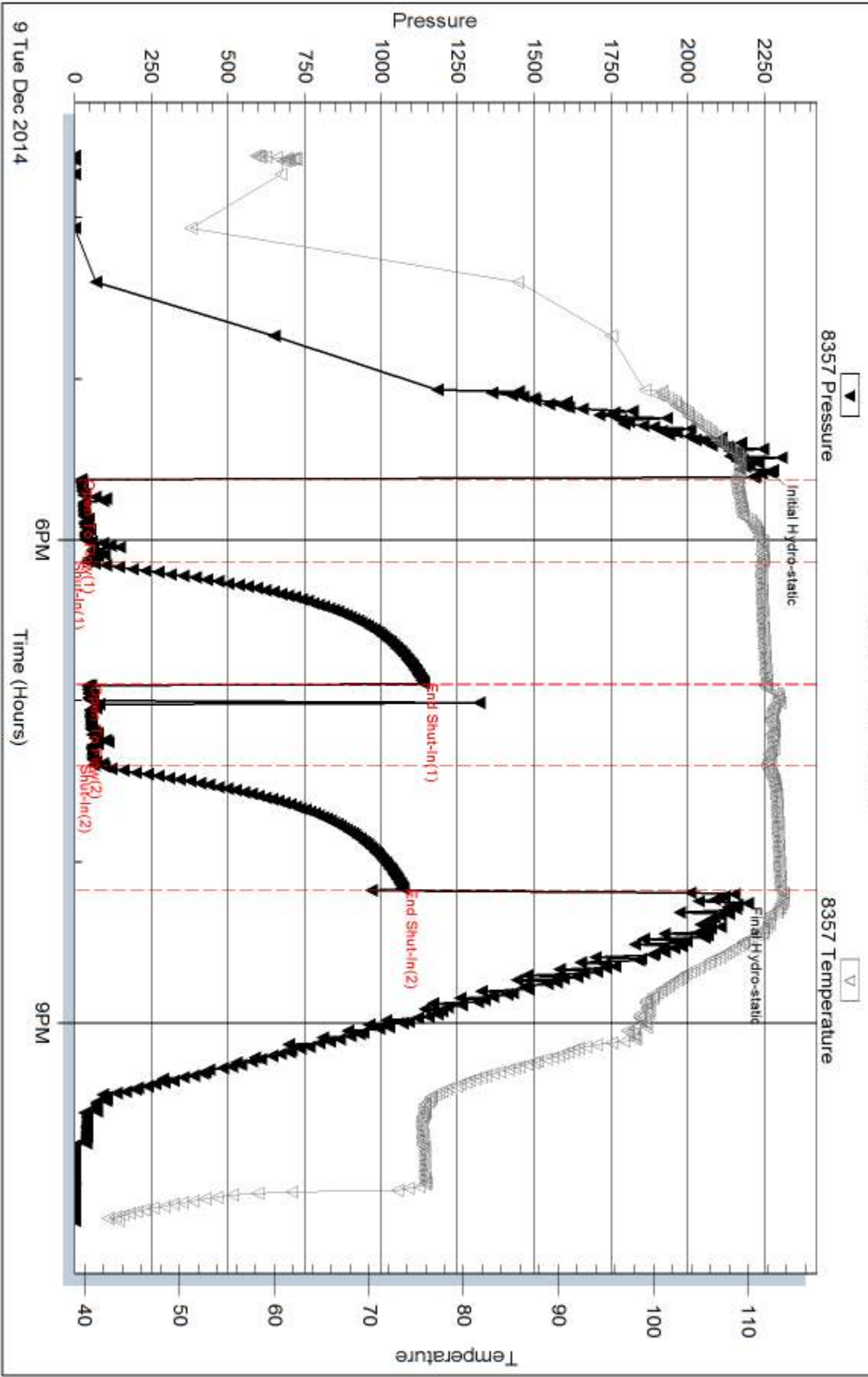
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

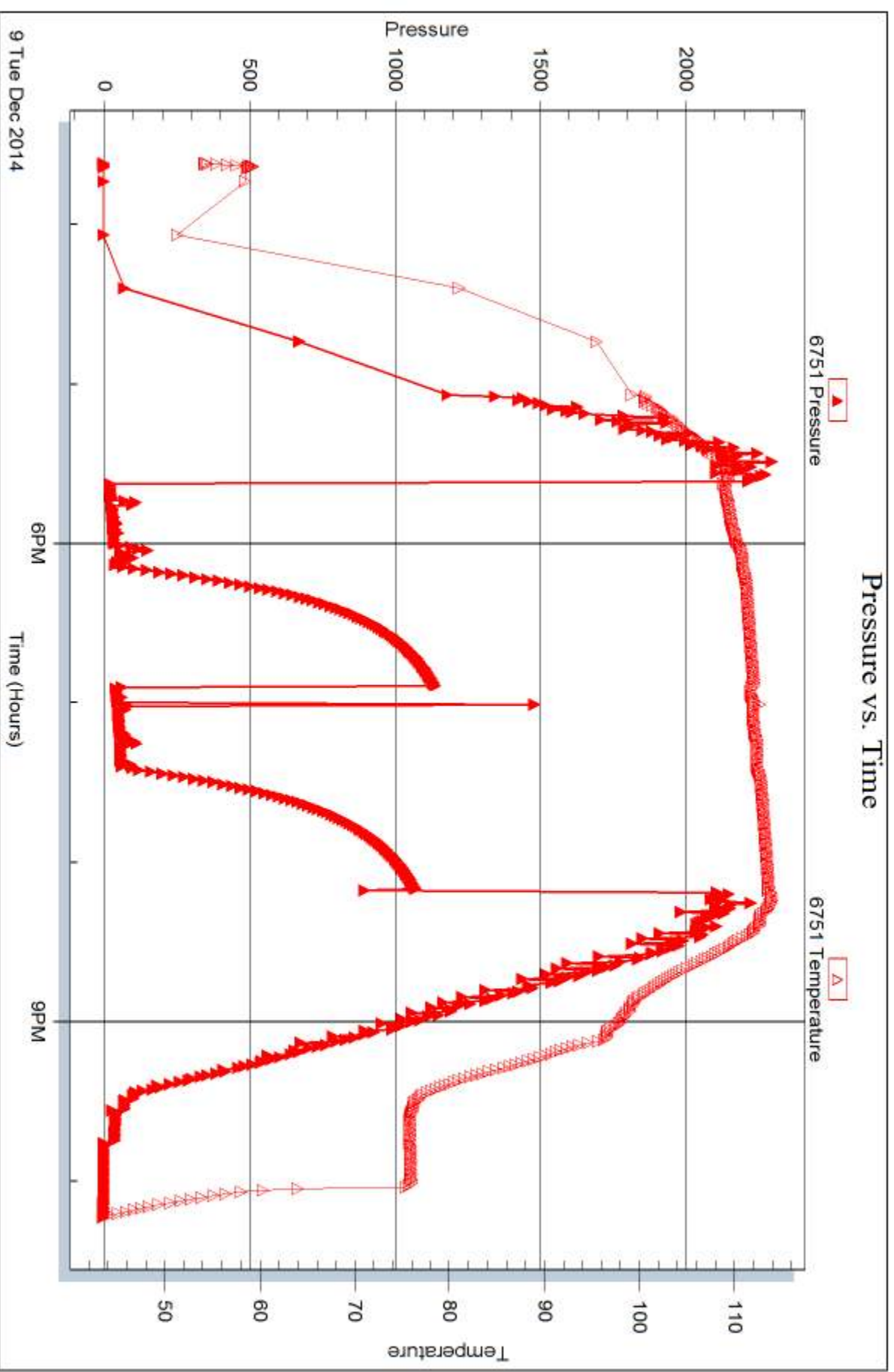


Serial #: 6751

Outside Ritchie Exploration, Inc.

Baker 36D #1

DST Test Number: 5



Trilobite Testing, Inc

Ref. No: 58482

Printed: 2014.12.12 @ 15:30:35



DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration, Inc.**

PO Box 83188
Wichita, KS 67278

ATTN: Max Lovely

Baker 36D #1

S36-15s-35w Logan/KS

Start Date: 2014.12.10 @ 08:31:00

End Date: 2014.12.10 @ 15:23:30

Job Ticket #: 58483 DST #: 6

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

Printed: 2014.12.12 @ 15:26:27



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Ritchie Exploration, Inc.

S36-15s-35w Logan/KS

PO Box 83188
Wichita, KS 67278

Baker 36D #1

Job Ticket: 58483

DST#: 6

ATTN: Max Lovely

Test Start: 2014.12.10 @ 08:31:00

GENERAL INFORMATION:

Formation: **Cherokee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:35:00

Time Test Ended: 15:23:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Smith

Unit No: 61

Interval: 4522.00 ft (KB) To 4552.00 ft (KB) (TVD)

Total Depth: 4552.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 3059.00 ft (KB)

3054.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8357 Inside

Press@RunDepth: 47.77 psig @ 4526.00 ft (KB)

Start Date: 2014.12.10

End Date:

2014.12.10

Start Time: 08:31:02

End Time:

15:23:30

Capacity: 8000.00 psig

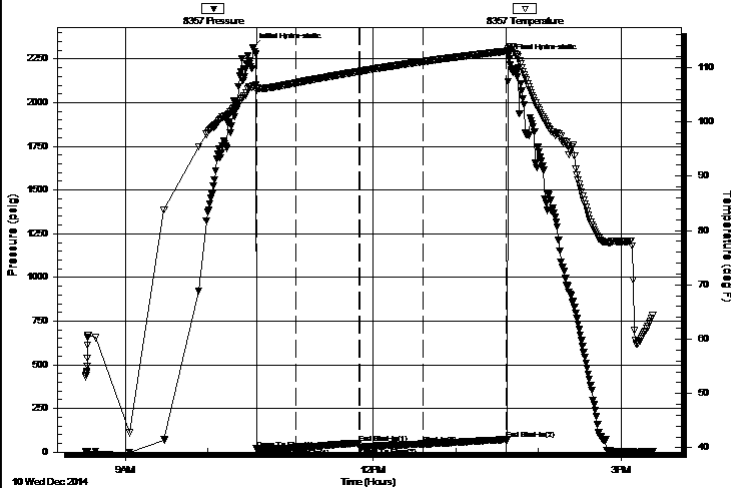
Last Calib.: 2014.12.10

Time On Btm: 2014.12.10 @ 10:32:40

Time Off Btm: 2014.12.10 @ 13:38:50

TEST COMMENT: 30- 1/2" Steady blow .
45- No return.
45- No blow .
60- No return.

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2316.59	106.63	Initial Hydro-static
3	19.17	105.79	Open To Flow (1)
32	21.96	107.18	Shut-In(1)
77	52.12	109.26	End Shut-In(1)
78	25.28	109.27	Open To Flow (2)
124	47.77	111.09	Shut-In(2)
184	73.18	112.98	End Shut-In(2)
187	2251.13	113.87	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	OSM 100m	0.02

Gas Rates

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

* Recovery from multiple tests



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Ritchie Exploration, Inc.

PO Box 83188
Wichita, KS 67278

ATTN: Max Lovely

S36-15s-35w Logan/KS

Baker 36D #1

Job Ticket: 58483

DST#: 6

Test Start: 2014.12.10 @ 08:31:00

GENERAL INFORMATION:

Formation: **Cherokee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:35:00

Time Test Ended: 15:23:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Smith

Unit No: 61

Interval: 4522.00 ft (KB) To 4552.00 ft (KB) (TVD)

Total Depth: 4552.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 3059.00 ft (KB)

3054.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 6751 Outside

Press@RunDepth: psig @ 4526.00 ft (KB)

Start Date: 2014.12.10

End Date:

2014.12.10

Start Time: 08:31:02

End Time:

15:23:30

Capacity: 8000.00 psig

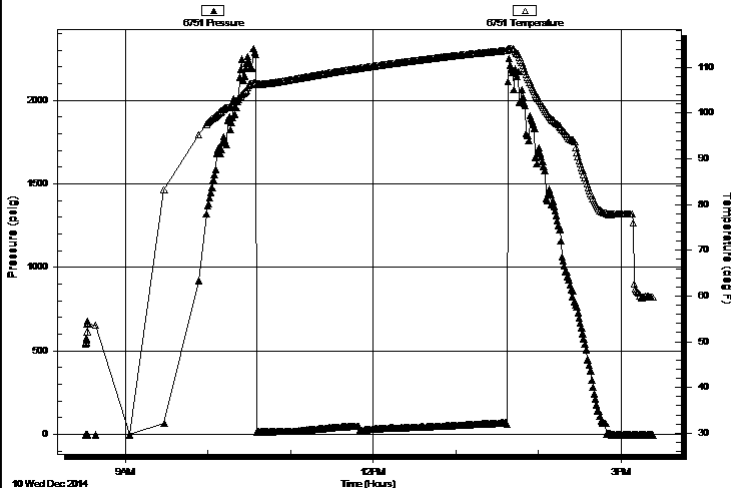
Last Calib.: 2014.12.10

Time On Btm:

Time Off Btm:

TEST COMMENT: 30- 1/2" Steady blow .
45- No return.
45- No blow .
60- No return.

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
5.00	OSM 100m	0.02

Gas Rates

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

* Recovery from multiple tests



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration, Inc.

S36-15s-35w Logan/KS

PO Box 83188
Wichita, KS 67278

Baker 36D #1

Job Ticket: 58483

DST#: 6

ATTN: Max Lovely

Test Start: 2014.12.10 @ 08:31:00

Tool Information

Drill Pipe:	Length:	4393.00 ft	Diameter:	3.80 inches	Volume:	61.62 bbl	Tool Weight:	2100.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	inches	Volume:	0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length:	120.00 ft	Diameter:	2.25 inches	Volume:	0.59 bbl	Weight to Pull Loose:	80000.00 lb
					Total Volume:	62.21 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:		11.00 ft					String Weight: Initial	64000.00 lb
Depth to Top Packer:		4522.00 ft					Final	64000.00 lb
Depth to Bottom Packer:		ft						
Interval between Packers:		30.00 ft						
Tool Length:		50.00 ft						
Number of Packers:		2	Diameter:	6.75 inches				
Tool Comments:								

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

Change Over Sub	1.00			4503.00	
Shut In Tool	5.00			4508.00	
Hydraulic tool	5.00			4513.00	
Packer	5.00			4518.00	20.00 Bottom Of Top Packer
Packer	4.00			4522.00	
Stubb	1.00			4523.00	
Perforations	3.00			4526.00	
Recorder	0.00	8357	Inside	4526.00	
Recorder	0.00	6751	Outside	4526.00	
Perforations	23.00			4549.00	
Bullnose	3.00			4552.00	30.00 Bottom Packers & Anchor

Total Tool Length: 50.00



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration, Inc.

S36-15s-35w Logan/KS

PO Box 83188
Wichita, KS 67278

Baker 36D #1

Job Ticket: 58483

DST#: 6

ATTN: Max Lovely

Test Start: 2014.12.10 @ 08:31:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 54.00 sec/qt

Water Loss: 8.77 in³

Resistivity: ohm.m

Salinity: 7400.00 ppm

Filter Cake: 1.00 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
5.00	OSM 100m	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

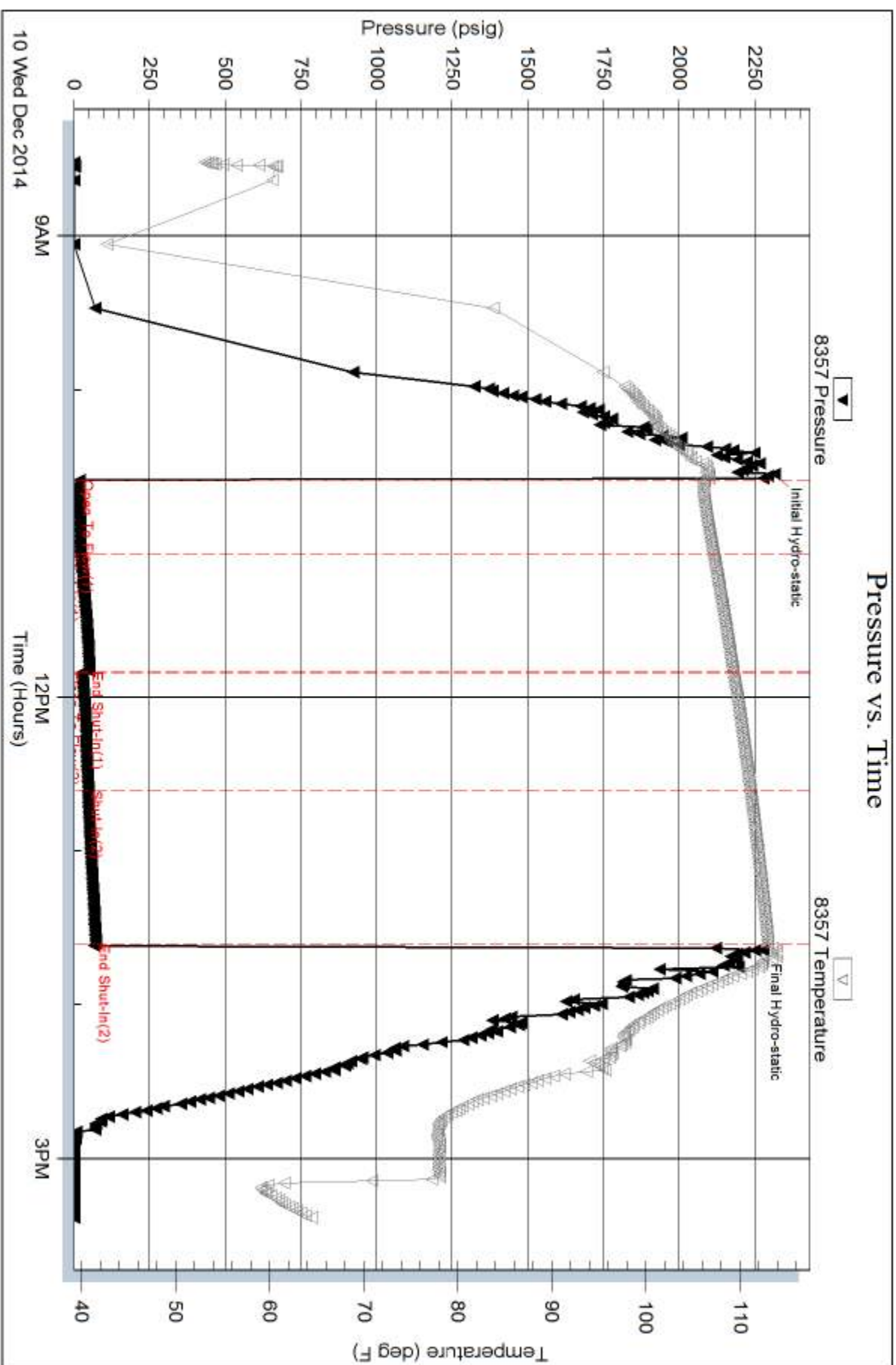
Serial #: 8357

Inside

Ritchie Exploration, Inc.

Baker 36D #1

DST Test Number: 6



Trilobite Testing, Inc

Ref. No: 58483

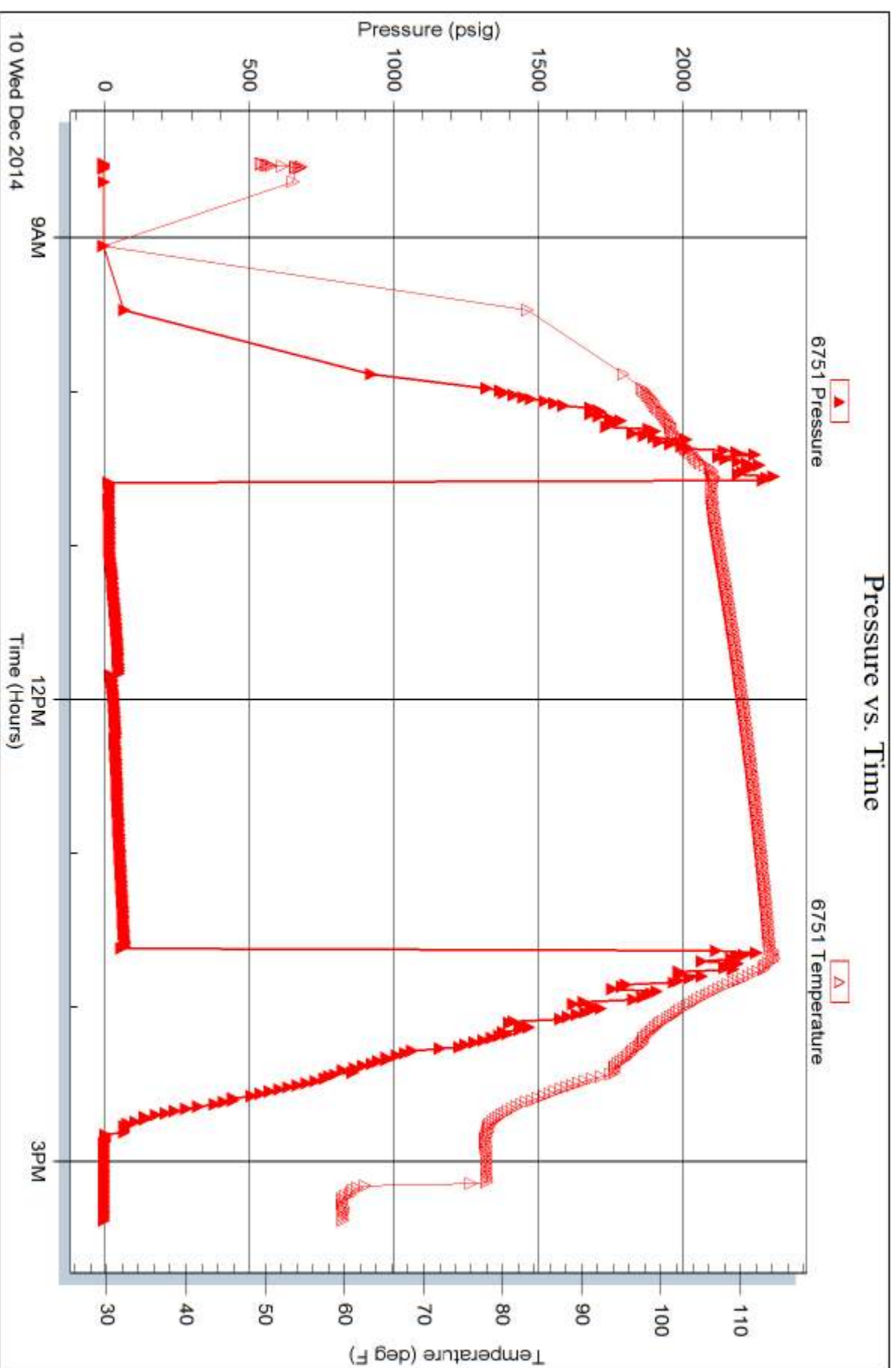
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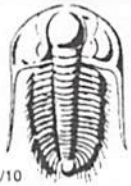
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Outside Ritchie Exploration, Inc.

Baker 36D #1

DST Test Number: 6





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 58478

Well Name & No. #1 Baker 36.D Test No. 1 Date 12-5-14
 Company Ritchie Exploration Elevation 3059 KB 3054 GL
 Address POB 83188 Wichita, KS 67278
 Co. Rep / Geo. Max Lovely Rig WW#2
 Location: Sec. 36 Twp. 15s Rge. 35w Co. Logan State KS

Interval Tested 3860 - 3969 Zone Tested Toronto - Lansing 'c'
 Anchor Length 109 Drill Pipe Run 3730 Mud Wt. 8.8
 Top Packer Depth 3856 Drill Collars Run 120 Vis 56
 Bottom Packer Depth 3860 Wt. Pipe Run 0 WL 7.2
 Total Depth 3969 Chlorides 4000 ppm System LCM 1"
 Blow Description B.O.B. @ 3 min.
No return.
B.O.B. @ 3 1/2 min.
No return.

Rec	Feet of	%gas	%oil	%water	%mud
Rec <u>238</u>	Feet of <u>OSM</u>	%gas	%oil	%water <u>100</u>	%mud
Rec <u>248</u>	Feet of <u>WM</u>	%gas	%oil	<u>5</u> %water <u>95</u>	%mud
Rec <u>430</u>	Feet of <u>MW</u>	%gas	%oil	<u>50</u> %water <u>50</u>	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 916 BHT 110 Gravity — API RW 285 @ 41 °F Chlorides 46000 ppm
 (A) Initial Hydrostatic 1888 ☒ Test 1150 T-On Location 22:30
 (B) First Initial Flow 185 ☒ Jars 250 T-Started 23:36
 (C) First Final Flow 320 ☒ Safety Joint 75 T-Open 1:03
 (D) Initial Shut-In 1104 ☒ Circ Sub NIC T-Pulled 3:17
 (E) Second Initial Flow 308 ☐ Hourly Standby T-Out 5:14
 (F) Second Final Flow 460 ☒ Mileage 61RT 94.55 Comments
 (G) Final Shut-In 1097 ☐ Sampler
 (H) Final Hydrostatic 1857 ☐ Straddle

☐ Shale Packer
☐ Extra Packer
☐ Extra Recorder
☐ Day Standby
☐ Accessibility
☐ Ruined Shale Packer
☐ Ruined Packer
☐ Extra Copies
 Initial Open 15
 Initial Shut-In 45
 Final Flow 15
 Final Shut-In 60
 Sub Total 1569.55
 Sub Total 1569.55

Approved By Max Lovely Our Representative Chuck Smith

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 58479

Well Name & No. #1 Baker 360 Test No. 2 Date 12-6-14
 Company Ritchie Exploration Elevation 3059 KB 3054 GL
 Address POB 83188 Wichita, KS 67278
 Co. Rep / Geo. Max Lovely Rig WW#2
 Location: Sec. 36 Twp. 15s Rge. 35w Co. Logan State Ks

Interval Tested 3994-4038 Zone Tested Lansing E+F
 Anchor Length 44 Drill Pipe Run 3858 Mud Wt. 8.9
 Top Packer Depth 3990 Drill Collars Run 120 Vis 54
 Bottom Packer Depth 3994 Wt. Pipe Run 0 WL 7.2
 Total Depth 4038 Chlorides 6000 ppm System LCM 2*

Blow Description BOB. @ 1 3/4 min
No return.
B.O.B. @ 2 min.
No return.

Rec	Feet of	%gas	%oil	%water	%mud
Rec <u>288</u>	Feet of <u>OSWM</u>	%gas	%oil	<u>35</u> %water	<u>65</u> %mud
Rec <u>1112</u>	Feet of <u>MW</u>	%gas	%oil	<u>90</u> %water	<u>10</u> %mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

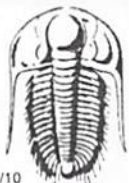
Rec Total 1400 BHT 116 Gravity — API RW .255 @ 45 °F Chlorides 47000 ppm

(A) Initial Hydrostatic <u>1994</u>	☒ Test <u>1250</u>	T-On Location <u>15:39</u>
(B) First Initial Flow <u>146</u>	☐ Jars	T-Started <u>15:41</u>
(C) First Final Flow <u>453</u>	☐ Safety Joint	T-Open <u>18:25</u>
(D) Initial Shut-In <u>1157</u>	☒ Circ Sub <u>NIC</u>	T-Pulled <u>20:42</u>
(E) Second Initial Flow <u>453</u>	☐ Hourly Standby	T-Out <u>22:57</u>
(F) Second Final Flow <u>668</u>	☒ Mileage <u>61RT</u> <u>94.55</u>	Comments
(G) Final Shut-In <u>1157</u>	☐ Sampler	
(H) Final Hydrostatic <u>1945</u>	☐ Straddle	

Initial Open <u>15</u>	☐ Shale Packer	☐ Ruined Shale Packer
Initial Shut-In <u>45</u>	☐ Extra Packer	☐ Ruined Packer
Final Flow <u>15</u>	☐ Extra Recorder	☐ Extra Copies
Final Shut-In <u>60</u>	☐ Day Standby	Sub Total <u>0</u>
	☐ Accessibility	Total <u>1344.55</u>
	Sub Total <u>1344.55</u>	MP/DST Disc't

Approved By [Signature] Our Representative Chuck Amick

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 58480

Well Name & No. #1 Baker 36D Test No. 3 Date 12-7-14
 Company Ritchie Exploration Elevation 3059 KB 3054 GL
 Address POB 83188 Wichita, KS 67278
 Co. Rep / Geo. Max Lovely Rig WW #2
 Location: Sec. 36 Twp. 15S Rge. 35W Co. Logan State KS

Interval Tested 4123 - 4150 Zone Tested Lansing 'I'
 Anchor Length 27 Drill Pipe Run 4014 Mud Wt. 9.1
 Top Packer Depth 4119 Drill Collars Run 120 Vis 51
 Bottom Packer Depth 4123 Wt. Pipe Run 0 WL 8.0
 Total Depth 4150 Chlorides 5100 ppm System LCM 2nd

Blow Description Weak surface blow died @ 10 min.
No return.
No blow, flushed tool, surged died.
No return.

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

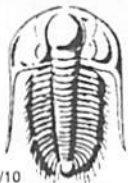
Rec Total 5 BHT 109 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic <u>2061</u>	☒ Test <u>1250</u>	T-On Location <u>11:35</u>
(B) First Initial Flow <u>13</u>	☐ Jars	T-Started <u>11:38</u>
(C) First Final Flow <u>19</u>	☐ Safety Joint	T-Open <u>13:27</u>
(D) Initial Shut-In <u>1139</u>	☒ Circ Sub <u>N/C</u>	T-Pulled <u>15:27</u>
(E) Second Initial Flow <u>22</u>	☐ Hourly Standby	T-Out <u>17:02</u>
(F) Second Final Flow <u>27</u>	☒ Mileage <u>61RT</u> 94.55	Comments
(G) Final Shut-In <u>1090</u>	☐ Sampler	
(H) Final Hydrostatic <u>1969</u>	☐ Straddle	

Initial Open <u>30</u>	☐ Shale Packer	☐ Ruined Shale Packer
Initial Shut-In <u>30</u>	☐ Extra Packer	☐ Ruined Packer
Final Flow <u>30</u>	☐ Extra Recorder	☐ Extra Copies
Final Shut-In	☐ Day Standby	Sub Total <u>0</u>
	☐ Accessibility	Total <u>1344.55</u>
	Sub Total <u>1344.55</u>	MP/DST Disc't

Approved By Max Lovely Our Representative Chuck Smith

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 58481

Well Name & No. #1 Baker 36D Test No. 4 Date 12-8-14
 Company Ritchie Exploration Elevation 3059 KB 3054 GL
 Address POB 83188 Wichita, KS
 Co. Rep / Geo. Max Lovely Rig WW#2
 Location: Sec. 36 Twp. 15s Rge. 35w Co. Logan State KS

Interval Tested 4281-4384 Zone Tested Altament
 Anchor Length 103 Drill Pipe Run 4139 Mud Wt. 9.1
 Top Packer Depth 4277 Drill Collars Run 120 Vis 56
 Bottom Packer Depth 4281 Wt. Pipe Run 0 WL 9.6
 Total Depth 4384 Chlorides 6500 ppm System LCM 2*

Blow Description B.O.B. @ 6 1/2 min.

No return.

B.O.B. @ 9 min.

No return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>180</u>	<u>WM</u>			<u>30</u>	<u>70</u>
<u>796</u>	<u>MW</u>			<u>60</u>	<u>40</u>
<u>368</u>	<u>MW</u>			<u>80</u>	<u>20</u>

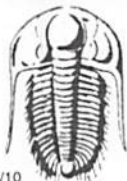
Rec Total 1044 BHT 121 Gravity — API RW 220 @ 34 °F Chlorides 73000 ppm

(A) Initial Hydrostatic <u>2280</u>	☒ Test <u>1250</u>	T-On Location <u>18:50</u>
(B) First Initial Flow <u>79</u>	☒ Jars <u>250</u>	T-Started <u>18:53</u>
(C) First Final Flow <u>282</u>	☒ Safety Joint <u>75</u>	T-Open <u>20:57</u>
(D) Initial Shut-In <u>1195</u>	☒ Circ Sub <u>N/C</u>	T-Pulled <u>23:58</u>
(E) Second Initial Flow <u>283</u>	☐ Hourly Standby	T-Out <u>1:52</u>
(F) Second Final Flow <u>492</u>	☒ Mileage <u>61RT</u> <u>94.55</u>	Comments
(G) Final Shut-In <u>1145</u>	☐ Sampler	
(H) Final Hydrostatic <u>2224</u>	☐ Straddle	

Initial Open <u>30</u>	☐ Shale Packer	☐ Ruined Shale Packer
Initial Shut-In <u>45</u>	☐ Extra Packer	☐ Ruined Packer
Final Flow <u>45</u>	☐ Extra Recorder	☐ Extra Copies
Final Shut-In <u>60</u>	☐ Day Standby	Sub Total <u>0</u>
	☐ Accessibility	Total <u>1669.55</u>
	Sub Total <u>1669.55</u>	MP/DST Disc't

Approved By [Signature] Our Representative Chuck Smith

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 58482

Well Name & No. #1 Baker 36D Test No. 5 Date 12-9-14
 Company Ritchie Exploration Elevation 3059 KB 3054 GL
 Address POB 83188 Wichita, KS 67278
 Co. Rep / Geo. Max Lovely Rig WW#2
 Location: Sec. 36 Twp. 15s Rge. 35w Co. Logan State KS

Interval Tested 4385-4472 Zone Tested Pawnee - Ft. Scott
 Anchor Length 87 Drill Pipe Run 4266 Mud Wt. 9.0
 Top Packer Depth 4381 Drill Collars Run 120 Vis 53
 Bottom Packer Depth 4385 Wt. Pipe Run 0 WL 8.0
 Total Depth 4472 Chlorides 7000 ppm System LCM 2"

Blow Description 14" Blow.
No return.
No blow, Flushed tool, surge died.
No return.

Rec	Feet of	%gas	%oil	%water	%mud
Rec <u>75</u>	Feet of <u>on oil spots in tool</u>	%gas	%oil	%water <u>100</u>	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 75 BHT 113 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic <u>2272</u>	☒ Test <u>1250</u>	T-On Location <u>15:35</u>
(B) First Initial Flow <u>22</u>	☐ Jars	T-Started <u>15:37</u>
(C) First Final Flow <u>4138 41</u>	☐ Safety Joint	T-Open <u>13:37</u>
(D) Initial Shut-In <u>1138 44</u>	☒ Circ Sub <u>N/C</u>	T-Pulled <u>20:10</u>
(E) Second Initial Flow <u>4462</u>	☐ Hourly Standby	T-Out <u>22:14</u>
(F) Second Final Flow <u>62</u>	☒ Mileage <u>61RT</u> 97.55	Comments
(G) Final Shut-In <u>1073</u>	☐ Sampler	
(H) Final Hydrostatic <u>2153</u>	☐ Straddle	

Initial Open 30
 Initial Shut-In 45
 Final Flow 30
 Final Shut-In 45
 Sub Total 1344.55

Approved By [Signature] Our Representative Chuck Smith

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 58483

Well Name & No. #1 Baker 36D Test No. 6 Date 12-10-14
 Company Ritchie Exploration Elevation 3059 KB 3054 GL
 Address POB 83188 Wichita, KS 67278
 Co. Rep / Geo. Max Lovely Rig WW#2
 Location: Sec. 36 Twp. 15s Rge. 35w Co. Logan State KS

Interval Tested 4522 - 4552 Zone Tested Cherokee
 Anchor Length 30 Drill Pipe Run 4393 Mud Wt. 8.9
 Top Packer Depth 4518 - Drill Collars Run 120 Vis 54
 Bottom Packer Depth 4522 Wt. Pipe Run 0 WL 8.8
 Total Depth 4552 Chlorides 7400 ppm System LCM 2#

Blow Description 1/2" Steady blow.
No return.
No blow.
No return.

Rec	Feet of	%gas	%oil	%water	%mud
Rec <u>5</u>	Feet of <u>0.5M</u>	%gas	%oil	%water <u>100</u>	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 5 BHT 113 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic <u>2317</u>	☒ Test <u>1250</u>	T-On Location <u>8:30</u>
(B) First Initial Flow <u>19</u>	☐ Jars	T-Started <u>8:31</u>
(C) First Final Flow <u>22</u>	☐ Safety Joint	T-Open <u>10:35</u>
(D) Initial Shut-In <u>52</u>	☒ Circ Sub <u>N/C</u>	T-Pulled <u>13:36</u>
(E) Second Initial Flow <u>25</u>	☐ Hourly Standby	T-Out <u>15:24</u>
(F) Second Final Flow <u>48</u>	☒ Mileage <u>x2</u> 189.10	Comments <u>Picked up tool 12/2</u>
(G) Final Shut-In <u>73</u>	☐ Sampler	<u>1:00am.</u>
(H) Final Hydrostatic <u>2251</u>	☐ Straddle	☐ Ruined Shale Packer

Initial Open <u>30</u>	☐ Shale Packer	☐ Ruined Packer
Initial Shut-In <u>45</u>	☐ Extra Packer	☐ Extra Copies
Final Flow <u>45</u>	☐ Extra Recorder	Sub Total <u>0</u>
Final Shut-In <u>60</u>	☐ Day Standby	Total <u>1439.10</u>
	☐ Accessibility	MP/DST Disc't
	Sub Total <u>1439.10</u>	

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