

## DRILL STEM TEST REPORT

Prepared For: **Ritchie exploration**

8100 E. 22nd St N #700  
P.O. Box 783188  
Wichita Ks, 67278-3188

ATTN: Adam Eldani

### **Lampe #3B**

#### **3/26s/22w/FOrd**

Start Date: 2013.10.03 @ 12:10:00

End Date: 2013.10.03 @ 18:55:30

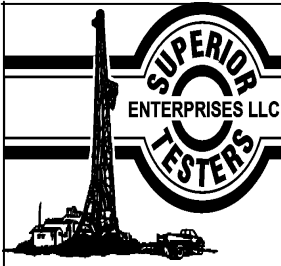
Job Ticket #: 18499                      DST #: 1

Superior Testers Enterprises LLC  
PO Box 138 Great Bend KS 67530  
1-800-792-6902

Printed: 2013.10.03 @ 19:06:31

Ritchie exploration  
3/26s/22w/FOrd  
Lampe #3B  
DST # 1  
LKC "H"  
2013.10.03





# DRILL STEM TEST REPORT

Ritchie exploration  
 8100 E. 22nd St N #700  
 P.O. Box 783188  
 Wichita Ks, 67278-3188  
 ATTN: Adam Eldani

**3/26s/22w/Ford**

**Lampe #3B**

Job Ticket: 18499

**DST#: 1**

Test Start: 2013.10.03 @ 12:10:00

## GENERAL INFORMATION:

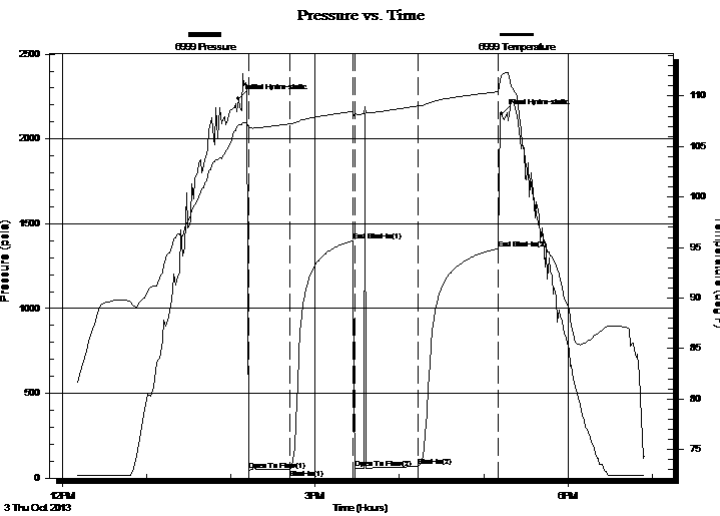
Formation: **LKC "H"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 14:12:30  
 Time Test Ended: 18:55:30  
 Interval: **4390.00 ft (KB) To 4422.00 ft (KB) (TVD)**  
 Total Depth: 4422.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Shane Konzem  
 Unit No: 3330/144/Great Bend  
 Reference Elevations: 2412.00 ft (KB)  
 2401.00 ft (CF)  
 KB to GR/CF: 11.00 ft

## Serial #: 6999

**Outside**

Press @ RunDepth: 1354.48 psia @ 4419.00 ft (KB) Capacity: 5000.00 psia  
 Start Date: 2013.10.03 End Date: 2013.10.03 Last Calib.: 2013.10.03  
 Start Time: 12:10:00 End Time: 18:55:00 Time On Btm: 2013.10.03 @ 14:05:30  
 Time Off Btm: 2013.10.03 @ 17:13:00

**TEST COMMENT:** 1st Open/ 30 Minutes. Weak blow built to 1 1/2 inches in water.  
 1st Shut In/ 45 Minutes. No blow back.  
 2nd Open/ 45 Minutes. No blow, flushed tool and gained a weak surface blow that built to 3/4 inch in water.  
 2nd Shut In/ 60 Minutes. No blow back.



## PRESSURE SUMMARY

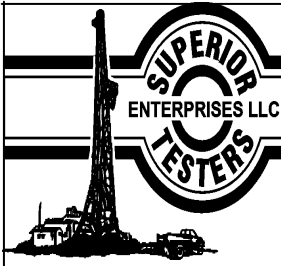
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2237.55	107.14	Initial Hydro-static
7	48.22	106.90	Open To Flow (1)
37	54.37	107.23	Shut-In(1)
82	1399.06	108.48	End Shut-In(1)
83	55.81	108.21	Open To Flow (2)
128	69.32	109.03	Shut-In(2)
185	1354.48	110.43	End Shut-In(2)
188	2149.30	112.09	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
0.00	945 feet 100% gas.	0.00
83.00	Trace oil cut 100% mud.	1.16

## Gas Rates

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



# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Ritchie exploration

**3/26s/22w/Ford**

8100 E. 22nd St N #700  
 P.O. Box 783188  
 Wichita Ks, 67278-3188  
 ATTN: Adam Eldani

**Lampe #3B**

Job Ticket: 18499

**DST#: 1**

Test Start: 2013.10.03 @ 12:10:00

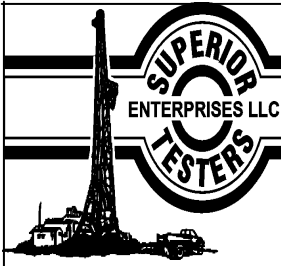
## Tool Information

Drill Pipe:	Length: 4371.00 ft	Diameter: 3.80 inches	Volume: 61.31 bbl	Tool Weight: 2000.00 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: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 61.31 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 68000.00 lb
Depth to Top Packer:	4390.00 ft			Final 68000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	32.00 ft			
Tool Length:	61.00 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			4362.00	
Shut-In Tool	5.00			4367.00	
Hydroic Tool	5.00			4372.00	
Jars	6.00			4378.00	
Safety Joint	2.00			4380.00	
Packer	5.00			4385.00	29.00 Bottom Of Top Packer
Packer	5.00			4390.00	
Perforations	27.00			4417.00	
Recorder	1.00	8400	Inside	4418.00	
Recorder	1.00	6999	Outside	4419.00	
Bullnose	3.00			4422.00	32.00 Bottom Packers & Anchor

**Total Tool Length: 61.00**



# DRILL STEM TEST REPORT

## FLUID SUMMARY

Ritchie exploration

**3/26s/22w/Ford**

8100 E. 22nd St N #700  
 P.O. Box 783188  
 Wichita Ks, 67278-3188  
 ATTN: Adam Eldani

**Lampe #3B**

Job Ticket: 18499

**DST#: 1**

Test Start: 2013.10.03 @ 12:10:00

### Mud and Cushion Information

Mud Type: Gel Chem  
 Mud Weight: 9.00 lb/gal  
 Viscosity: 62.00 sec/qt  
 Water Loss: 8.80 in<sup>3</sup>  
 Resistivity: ohm.m  
 Salinity: 5000.00 ppm  
 Filter Cake: 1.00 inches

Cushion Type:  
 Cushion Length: ft  
 Cushion Volume: bbl  
 Gas Cushion Type:  
 Gas Cushion Pressure: psia

Oil API: deg API  
 Water Salinity: ppm

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	945 feet 100% gas.	0.000
83.00	Trace oil cut 100% mud.	1.164

Total Length: 83.00 ft      Total Volume: 1.164 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

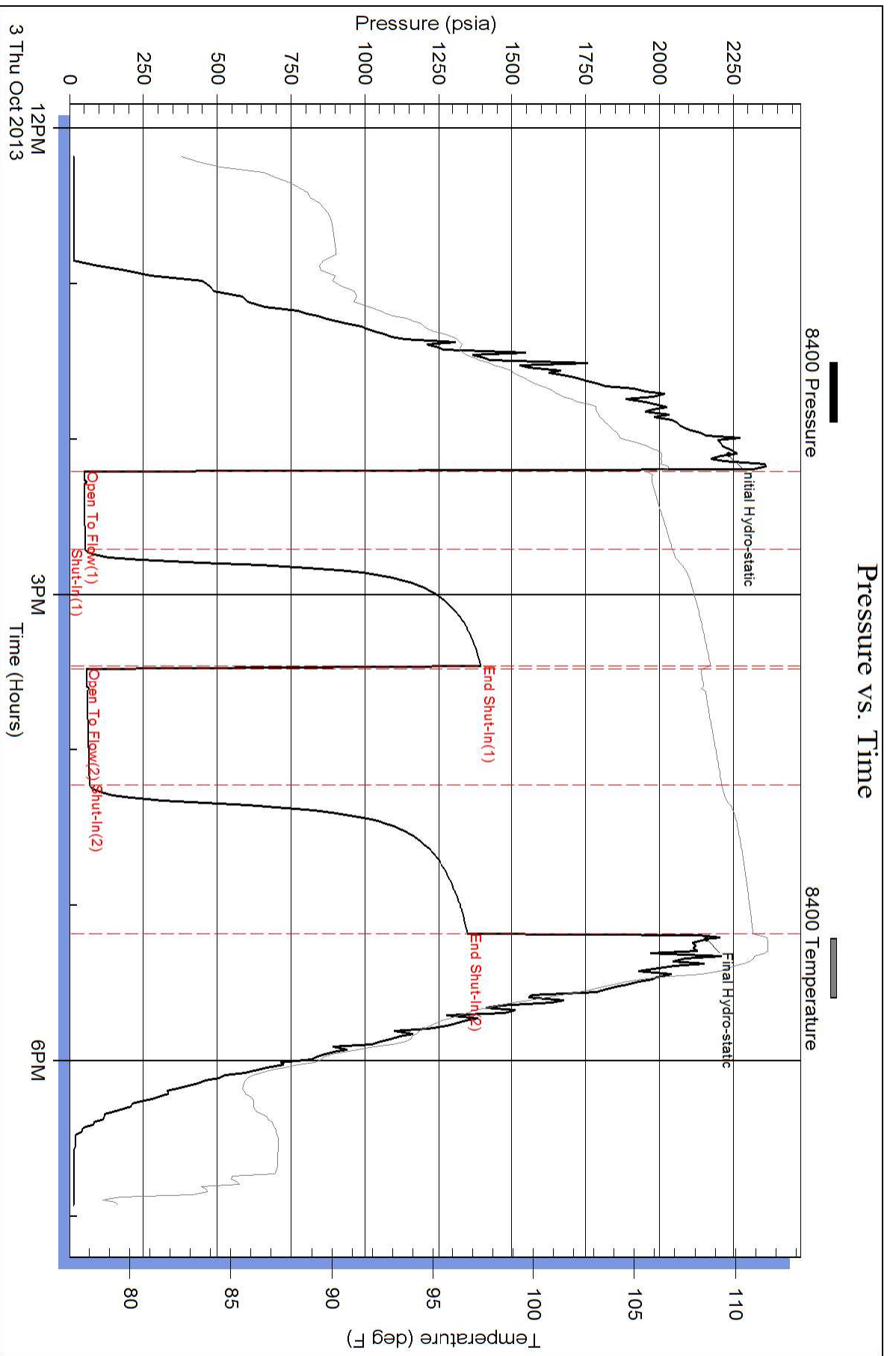
Serial #: 8400

Inside

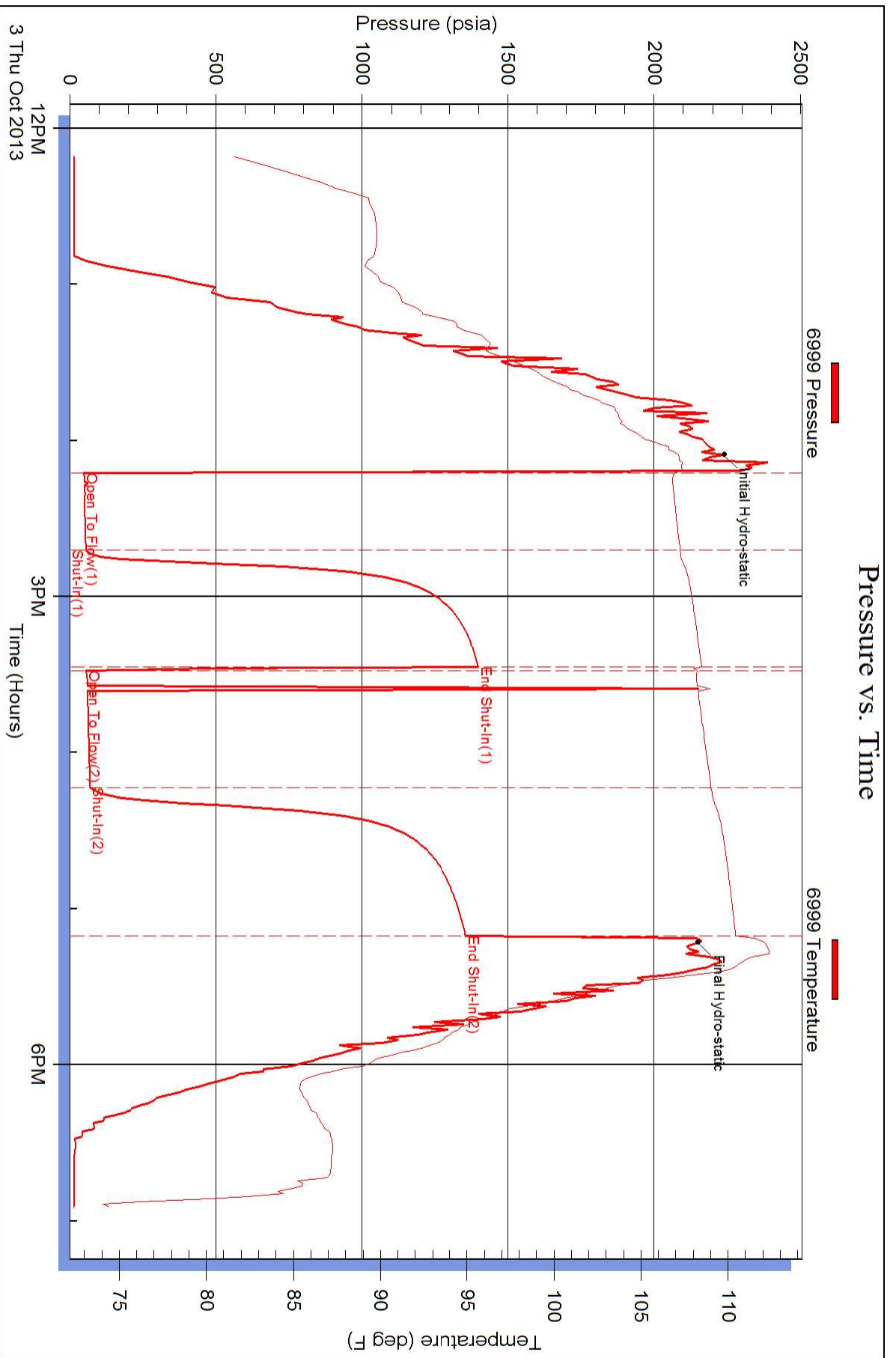
Ritche exploration

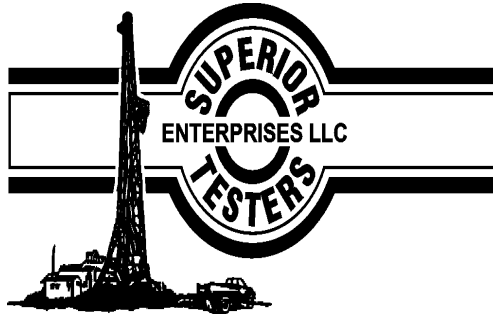
Lampe #3B

DST Test Number: 1



# Pressure vs. Time





## DRILL STEM TEST REPORT

Prepared For: **Ritchie exploration**

8100 E. 22nd St N #700  
P.O. Box 783188  
Wichita Ks, 67278-3188

ATTN: Adam Eldani

### **Lampe #3B**

### **3/26s/22w/FOrd**

Start Date: 2013.10.05 @ 20:30:00

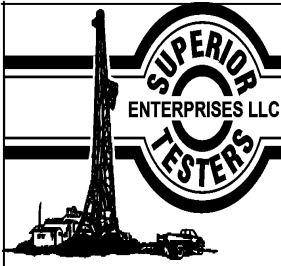
End Date: 2013.10.06 @ 03:26:30

Job Ticket #: 18500                      DST #: 2

Superior Testers Enterprises LLC  
PO Box 138 Great Bend KS 67530  
1-800-792-6902

Printed: 2013.10.05 @ 03:44:03

Ritchie exploration  
3/26s/22w/FOrd  
Lampe #3B  
DST # 2  
Marm. alt A  
2013.10.05



# DRILL STEM TEST REPORT

Ritchie exploration  
 8100 E. 22nd St N #700  
 P.O. Box 783188  
 Wichita Ks, 67278-3188  
 ATTN: Adam Eldani

**3/26s/22w/Ford**

**Lampe #3B**

Job Ticket: 18500

**DST#: 2**

Test Start: 2013.10.05 @ 20:30:00

## GENERAL INFORMATION:

Formation: **Marm. alt A**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:54:30

Time Test Ended: 03:26:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Shane Konzem

Unit No: 3330/144/Great Bend

**Interval: 4590.00 ft (KB) To 4674.00 ft (KB) (TVD)**

Total Depth: 4674.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2412.00 ft (KB)

2401.00 ft (CF)

KB to GR/CF: 11.00 ft

**Serial #: 8400 Inside**

Press @ Run Depth: 77.30 psia @ 4669.98 ft (KB)

Start Date: 2013.10.05

End Date:

2013.10.06

Start Time: 20:30:00

End Time:

03:26:30

Capacity: 5000.00 psia

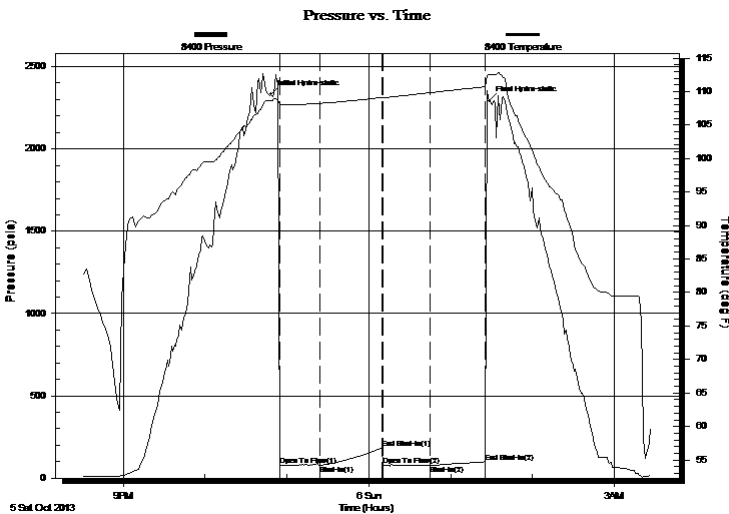
Last Calib.: 2013.10.05

Time On Btm: 2013.10.05 @ 22:48:30

Time Off Btm: 2013.10.06 @ 01:28:30

**TEST COMMENT:** 1st Open/ 30 Minutes. Weak surface blow  
 1st Shut In/ 45 Minutes. No blow back.  
 2nd Open/ 30 Minutes. No blow, flushed tool and gained no blow.  
 2nd Shut In/ 45 Minutes. No blow back.

## PRESSURE SUMMARY



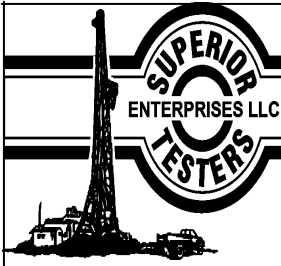
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2331.04	108.73	Initial Hydro-static
6	76.71	108.20	Open To Flow (1)
36	77.60	108.24	Shut-In(1)
81	181.32	109.11	End Shut-In(1)
82	76.55	109.09	Open To Flow (2)
116	77.30	109.82	Shut-In(2)
158	99.29	110.73	End Shut-In(2)
160	2293.36	112.58	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
0.00	No gas	0.00
15.00	100% Mud	0.21

## Gas Rates

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



# DRILL STEM TEST REPORT

Ritchie exploration  
 8100 E. 22nd St N #700  
 P.O. Box 783188  
 Wichita Ks, 67278-3188  
 ATTN: Adam Eldani

**3/26s/22w/Ford**

**Lampe #3B**

Job Ticket: 18500

**DST#: 2**

Test Start: 2013.10.05 @ 20:30:00

## GENERAL INFORMATION:

Formation: **Marm. alt A**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:54:30

Time Test Ended: 03:26:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Shane Konzem

Unit No: 3330/144/Great Bend

**Interval: 4590.00 ft (KB) To 4674.00 ft (KB) (TVD)**

Reference Elevations: 2412.00 ft (KB)

Total Depth: 4674.00 ft (KB) (TVD)

2401.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

**Serial #: 6999 Outside**

Press @ Run Depth: 101.54 psia @ 4670.98 ft (KB)

Capacity: 5000.00 psia

Start Date: 2013.10.05

End Date: 2013.10.06

Last Calib.: 2013.10.05

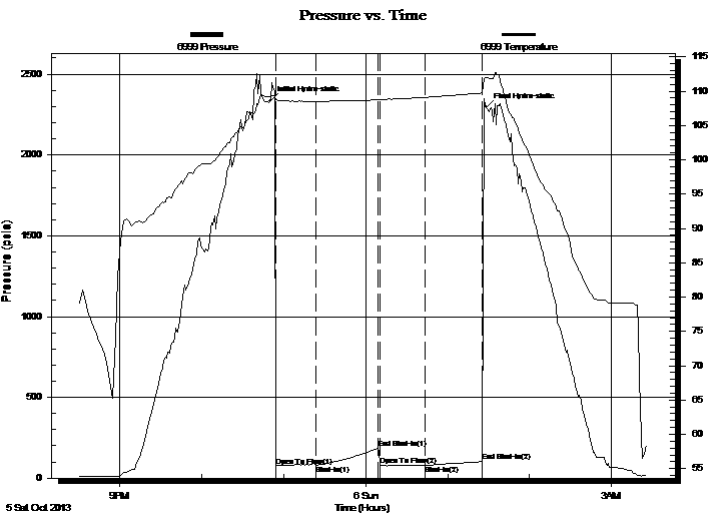
Start Time: 20:30:00

End Time: 03:25:30

Time On Btm: 2013.10.05 @ 22:50:30

Time Off Btm: 2013.10.06 @ 01:28:30

**TEST COMMENT:** 1st Open/ 30 Minutes. Weak surface blow  
 1st Shut In/ 45 Minutes. No blow back.  
 2nd Open/ 30 Minutes. No blow, flushed tool and gained no blow.  
 2nd Shut In/ 45 Minutes. No blow back.



## PRESSURE SUMMARY

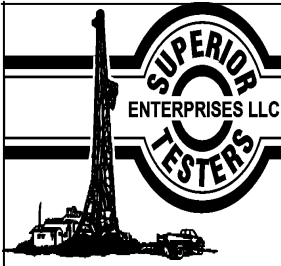
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2336.27	109.17	Initial Hydro-static
4	76.07	108.77	Open To Flow (1)
34	78.95	108.55	Shut-In(1)
79	185.42	108.75	End Shut-In(1)
80	77.74	108.75	Open To Flow (2)
113	79.16	109.11	Shut-In(2)
155	101.54	109.75	End Shut-In(2)
158	2295.93	111.99	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
0.00	No gas	0.00
15.00	100% Mud	0.21

## Gas Rates

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



# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Ritchie exploration

**3/26s/22w/Ford**

8100 E. 22nd St N #700  
 P.O. Box 783188  
 Wichita Ks, 67278-3188  
 ATTN: Adam Eldani

**Lampe #3B**

Job Ticket: 18500

**DST#: 2**

Test Start: 2013.10.05 @ 20:30:00

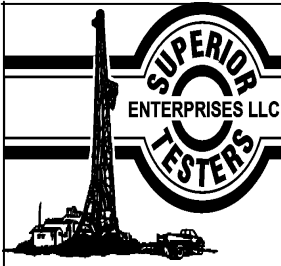
## Tool Information

Drill Pipe:	Length: 4591.00 ft	Diameter: 3.80 inches	Volume: 64.40 bbl	Tool Weight: 2000.00 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: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 86000.00 lb
			<u>Total Volume: 64.40 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 72000.00 lb
Depth to Top Packer:	4590.00 ft			Final 72000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	83.98 ft			
Tool Length:	112.98 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			4562.00	
Shut-In Tool	5.00			4567.00	
Hydroic Tool	5.00			4572.00	
Jars	6.00			4578.00	
Safety Joint	2.00			4580.00	
Packer	5.00			4585.00	29.00 Bottom Of Top Packer
Packer	5.00			4590.00	
Perforations	5.00			4595.00	
Change Over Sub	0.75			4595.75	
Drill Pipe	32.48			4628.23	
Change Over Sub	0.75			4628.98	
Perforations	40.00			4668.98	
Recorder	1.00	8400	Inside	4669.98	
Recorder	1.00	6999	Outside	4670.98	
Bullnose	3.00			4673.98	83.98 Bottom Packers & Anchor

**Total Tool Length: 112.98**



# DRILL STEM TEST REPORT

## FLUID SUMMARY

Ritchie exploration

3/26s/22w/Ford

8100 E. 22nd St N #700  
P.O. Box 783188  
Wichita Ks, 67278-3188  
ATTN: Adam Eldani

Lampe #3B

Job Ticket: 18500

DST#: 2

Test Start: 2013.10.05 @ 20:30:00

### Mud and Cushion Information

Mud Type: Gel Chem  
Mud Weight: 9.00 lb/gal  
Viscosity: 60.00 sec/qt  
Water Loss: 16.40 in<sup>3</sup>  
Resistivity: ohm.m  
Salinity: 7400.00 ppm  
Filter Cake: 2.00 inches

Cushion Type:  
Cushion Length: ft  
Cushion Volume: bbl  
Gas Cushion Type:  
Gas Cushion Pressure: psia

Oil API: deg API  
Water Salinity: ppm

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	No gas	0.000
15.00	100% Mud	0.210

Total Length: 15.00 ft      Total Volume: 0.210 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8400

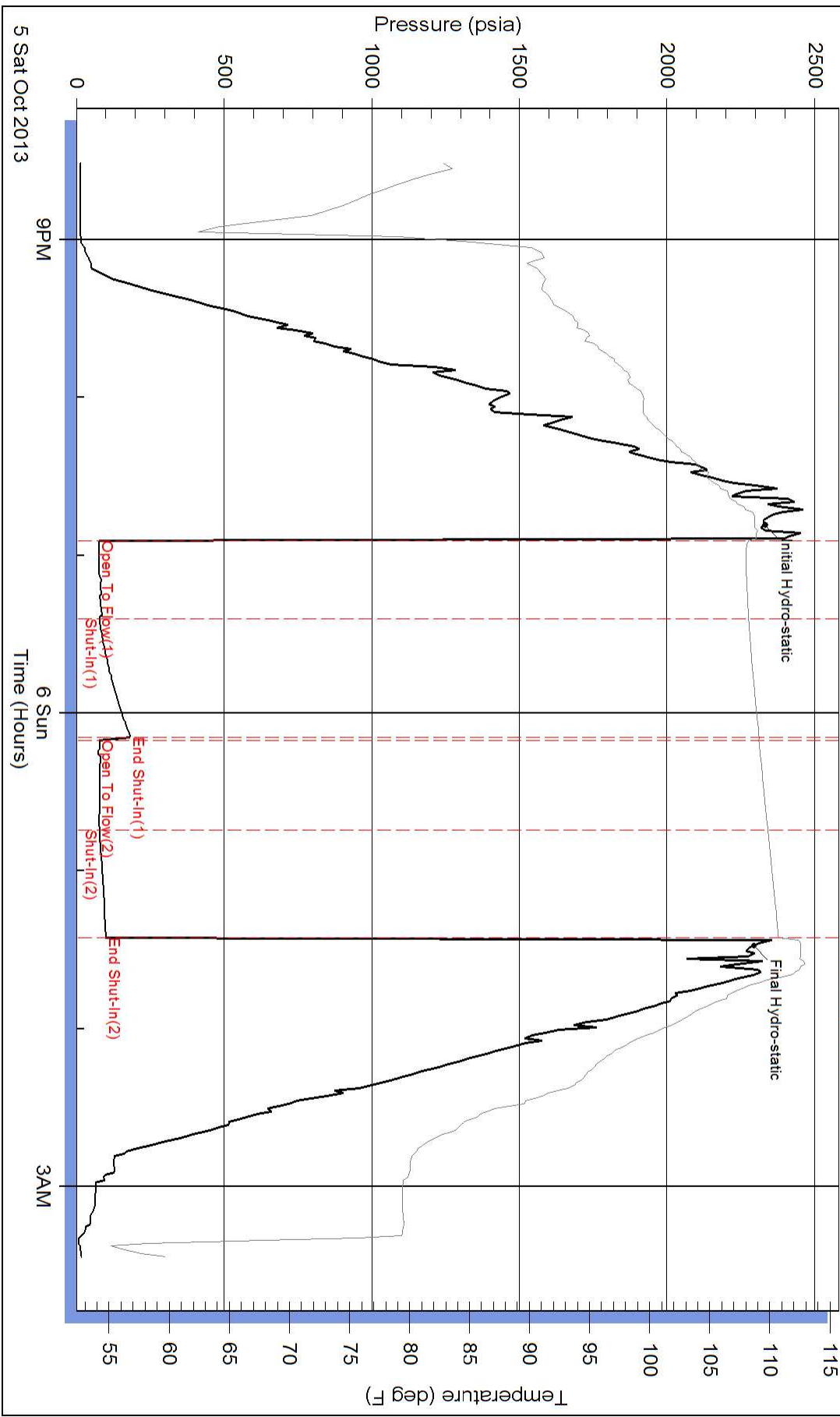
Inside

Ritchie exploration

Lampe #3B

DST Test Number: 2

### Pressure vs. Time



Superior Testers Enterprises LLC

Ref. No: 18500

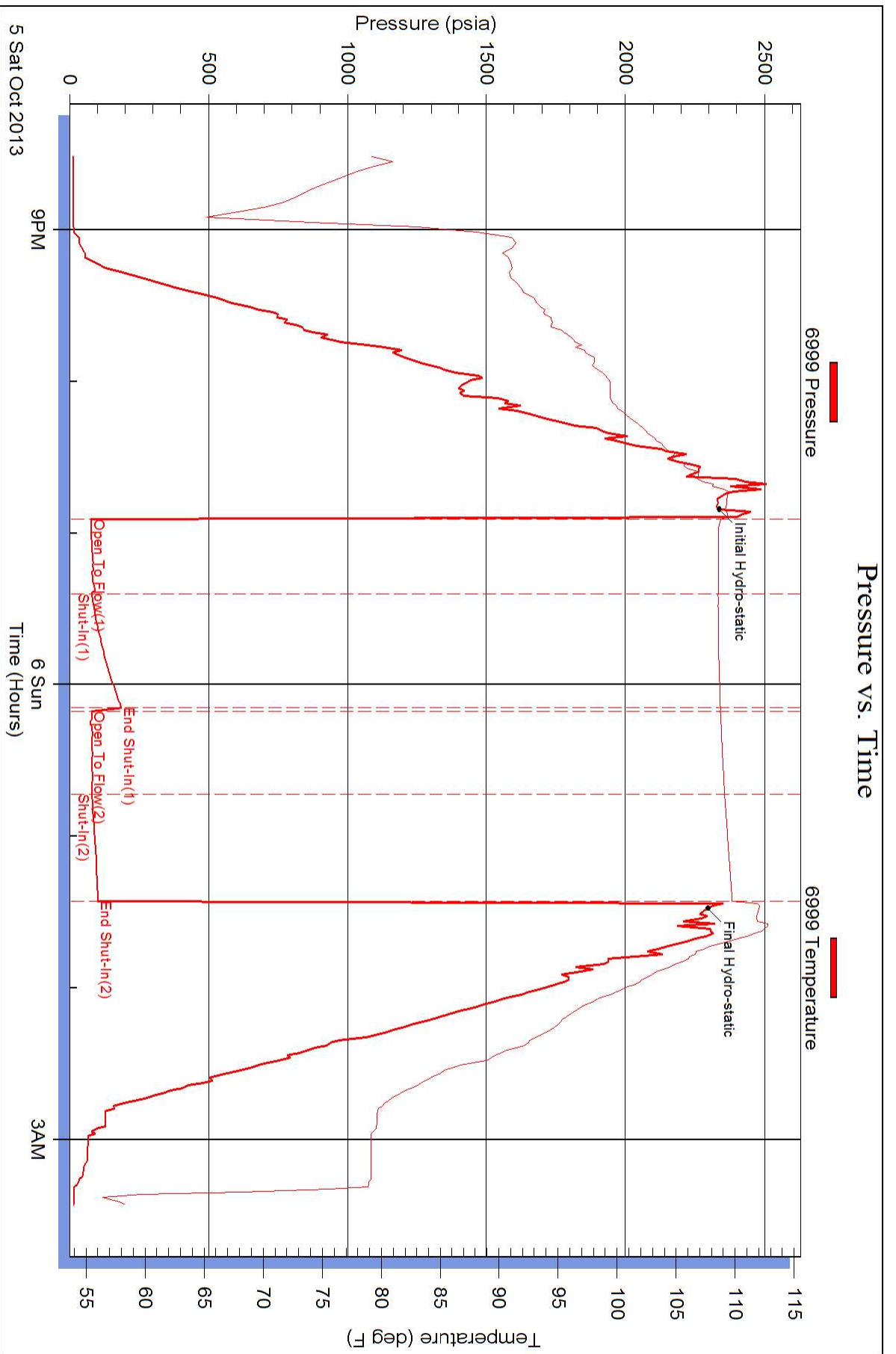
Printed: 2013.10.05 @ 03:44:04

Serial #: 6999

Outside Ritchie exploration

Lampe #3B

DST Test Number: 2





## DRILL STEM TEST REPORT

Prepared For: **Ritchie exploration**

8100 E. 22nd St N #700  
P.O. Box 783188  
Wichita Ks, 67278-3188

ATTN: Adam Eldani

### **Lampe #3B**

#### **3/26s/22w/FOrd**

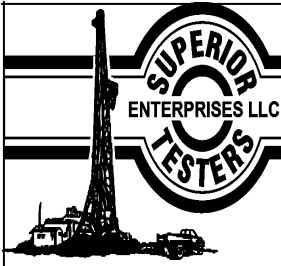
Start Date: 2013.10.05 @ 12:55:00

End Date: 2013.10.05 @ 20:32:30

Job Ticket #: 18501                      DST #: 3

Superior Testers Enterprises LLC  
PO Box 138 Great Bend KS 67530  
1-800-792-6902

Printed: 2013.10.05 @ 20:58:23



# DRILL STEM TEST REPORT

Ritchie exploration  
 8100 E. 22nd St N #700  
 P.O. Box 783188  
 Wichita Ks, 67278-3188  
 ATTN: Adam Eldani

**3/26s/22w/Ford**

**Lampe #3B**

Job Ticket: 18501

**DST#: 3**

Test Start: 2013.10.05 @ 12:55:00

## GENERAL INFORMATION:

Formation: **Alt "B-C"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 15:16:30  
 Time Test Ended: 20:32:30  
 Interval: **4632.00 ft (KB) To 4711.00 ft (KB) (TVD)**  
 Total Depth: 4711.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Shane Konzem  
 Unit No: 3330/144/Great Bend  
 Reference Elevations: 2412.00 ft (KB)  
 2401.00 ft (CF)  
 KB to GR/CF: 11.00 ft

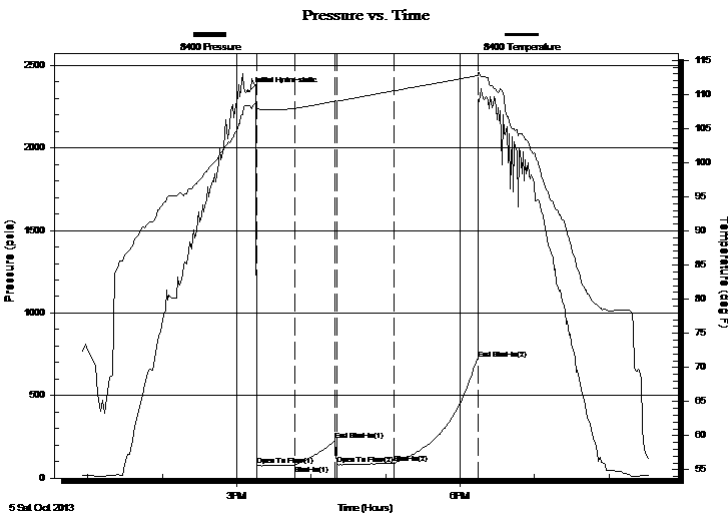
## Serial #: 8400

Inside

Press @ Run Depth: 90.80 psia @ 4706.77 ft (KB) Capacity: 5000.00 psia  
 Start Date: 2013.10.05 End Date: 2013.10.05 Last Calib.: 2013.10.05  
 Start Time: 12:55:00 End Time: 20:32:30 Time On Btm: 2013.10.05 @ 15:09:30  
 Time Off Btm:

TEST COMMENT: 1st Open/ 30 Minutes. Good blow built to 10 inches in 5 gallon bucket.  
 1st Shut In/ 30 Minutes. No blow back.  
 2nd Open/ 45 Minutes. Good blow built to bottom of bucket in 40 minutes.  
 2nd Shut In/ 60 Minutes. No blow back.

## PRESSURE SUMMARY



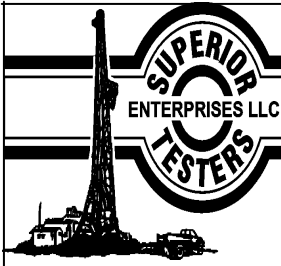
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2343.09	108.34	Initial Hydro-static
7	76.01	107.94	Open To Flow (1)
37	79.54	107.96	Shut-In(1)
70	230.82	109.03	End Shut-In(1)
71	85.25	108.99	Open To Flow (2)
118	90.80	110.55	Shut-In(2)
185	721.66	112.76	End Shut-In(2)

## Recovery

Length (ft)	Description	Volume (bbl)
0.00	2709 feet 100% gas.	0.00
65.00	5% Gas 20% Oil cut 75% Mud	0.91

## Gas Rates

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



# DRILL STEM TEST REPORT

Ritchie exploration  
 8100 E. 22nd St N #700  
 P.O. Box 783188  
 Wichita Ks, 67278-3188  
 ATTN: Adam Eldani

**3/26s/22w/Ford**

**Lampe #3B**

Job Ticket: 18501

**DST#: 3**

Test Start: 2013.10.05 @ 12:55:00

## GENERAL INFORMATION:

Formation: **Alt "B-C"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 15:16:30  
 Time Test Ended: 20:32:30  
 Interval: **4632.00 ft (KB) To 4711.00 ft (KB) (TVD)**  
 Total Depth: 4711.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Shane Konzem  
 Unit No: 3330/144/Great Bend  
 Reference Elevations: 2412.00 ft (KB)  
 2401.00 ft (CF)  
 KB to GR/CF: 11.00 ft

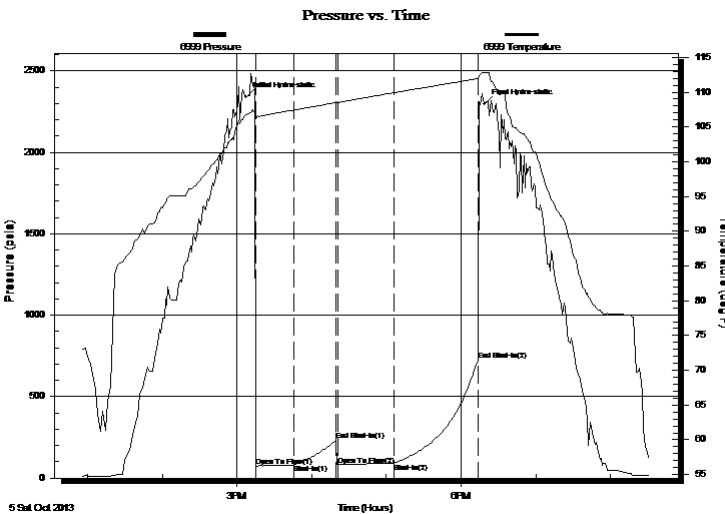
## Serial #: 6999

**Outside**

Press @ RunDepth: 725.15 psia @ 4707.77 ft (KB) Capacity: 5000.00 psia  
 Start Date: 2013.10.05 End Date: 2013.10.05 Last Calib.: 2013.10.05  
 Start Time: 12:55:00 End Time: 20:32:00 Time On Btm: 2013.10.05 @ 15:07:30  
 Time Off Btm: 2013.10.05 @ 18:19:00

**TEST COMMENT:** 1st Open/ 30 Minutes. Good blow built to 10 inches in 5 gallon bucket.  
 1st Shut In/ 30 Minutes. No blow back.  
 2nd Open/ 45 Minutes. Good blow built to bottom of bucket in 40 minutes.  
 2nd Shut In/ 60 Minutes. No blow back.

## PRESSURE SUMMARY



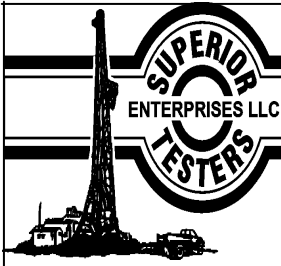
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2340.32	106.80	Initial Hydro-static
8	73.33	106.26	Open To Flow (1)
38	81.59	107.43	Shut-In(1)
73	234.47	108.51	End Shut-In(1)
74	81.81	108.53	Open To Flow (2)
119	91.46	109.94	Shut-In(2)
186	725.15	111.98	End Shut-In(2)
192	2296.30	112.82	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
0.00	2709 feet 100% gas.	0.00
65.00	5% Gas 20% Oil cut 75% Mud	0.91

## Gas Rates

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



# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Ritchie exploration

**3/26s/22w/Ford**

8100 E. 22nd St N #700  
 P.O. Box 783188  
 Wichita Ks, 67278-3188  
 ATTN: Adam Eldani

**Lampe #3B**

Job Ticket: 18501

**DST#: 3**

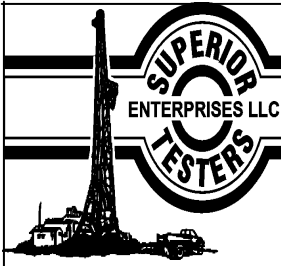
Test Start: 2013.10.05 @ 12:55:00

**Tool Information**

Drill Pipe:	Length: 4622.00 ft	Diameter: 3.80 inches	Volume: 64.83 bbl	Tool Weight:	2000.00 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: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose:	94000.00 lb
			<u>Total Volume: 64.83 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	19.00 ft			String Weight: Initial	72000.00 lb
Depth to Top Packer:	4632.00 ft			Final	76000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	78.77 ft				
Tool Length:	107.77 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			4604.00	
Shut-In Tool	5.00			4609.00	
Hydroic Tool	5.00			4614.00	
Jars	6.00			4620.00	
Safety Joint	2.00			4622.00	
Packer	5.00			4627.00	29.00 Bottom Of Top Packer
Packer	5.00			4632.00	
Perforations	5.00			4637.00	
Change Over Sub	0.75			4637.75	
Drill Pipe	31.27			4669.02	
Change Over Sub	0.75			4669.77	
Perforations	36.00			4705.77	
Recorder	1.00	8400	Inside	4706.77	
Recorder	1.00	6999	Outside	4707.77	
Bullnose	3.00			4710.77	78.77 Bottom Packers & Anchor

**Total Tool Length: 107.77**



# DRILL STEM TEST REPORT

## FLUID SUMMARY

Ritchie exploration

**3/26s/22w/Ford**

8100 E. 22nd St N #700  
 P.O. Box 783188  
 Wichita Ks, 67278-3188  
 ATTN: Adam Eldani

**Lampe #3B**

Job Ticket: 18501

**DST#: 3**

Test Start: 2013.10.05 @ 12:55:00

### Mud and Cushion Information

Mud Type: Gel Chem  
 Mud Weight: 9.00 lb/gal  
 Viscosity: 60.00 sec/qt  
 Water Loss: 16.40 in<sup>3</sup>  
 Resistivity: ohm.m  
 Salinity: 7400.00 ppm  
 Filter Cake: 2.00 inches

Cushion Type:  
 Cushion Length: ft  
 Cushion Volume: bbl  
 Gas Cushion Type:  
 Gas Cushion Pressure: psia

Oil API: deg API  
 Water Salinity: ppm

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	2709 feet 100% gas.	0.000
65.00	5% Gas 20% Oil cut 75% Mud	0.912

Total Length: 65.00 ft      Total Volume: 0.912 bbl

Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:

Laboratory Name:      Laboratory Location:

Recovery Comments:

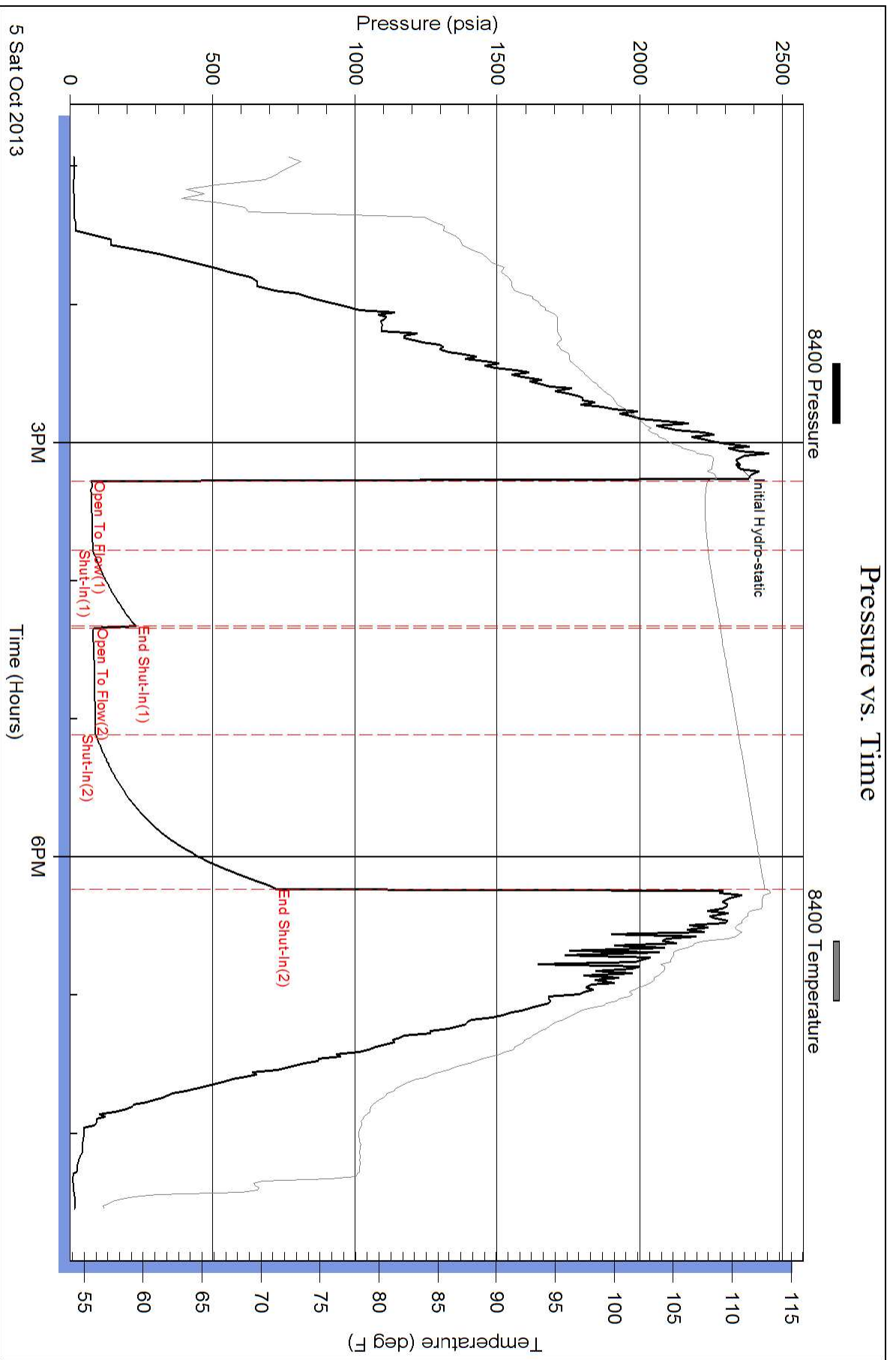
Serial #: 8400

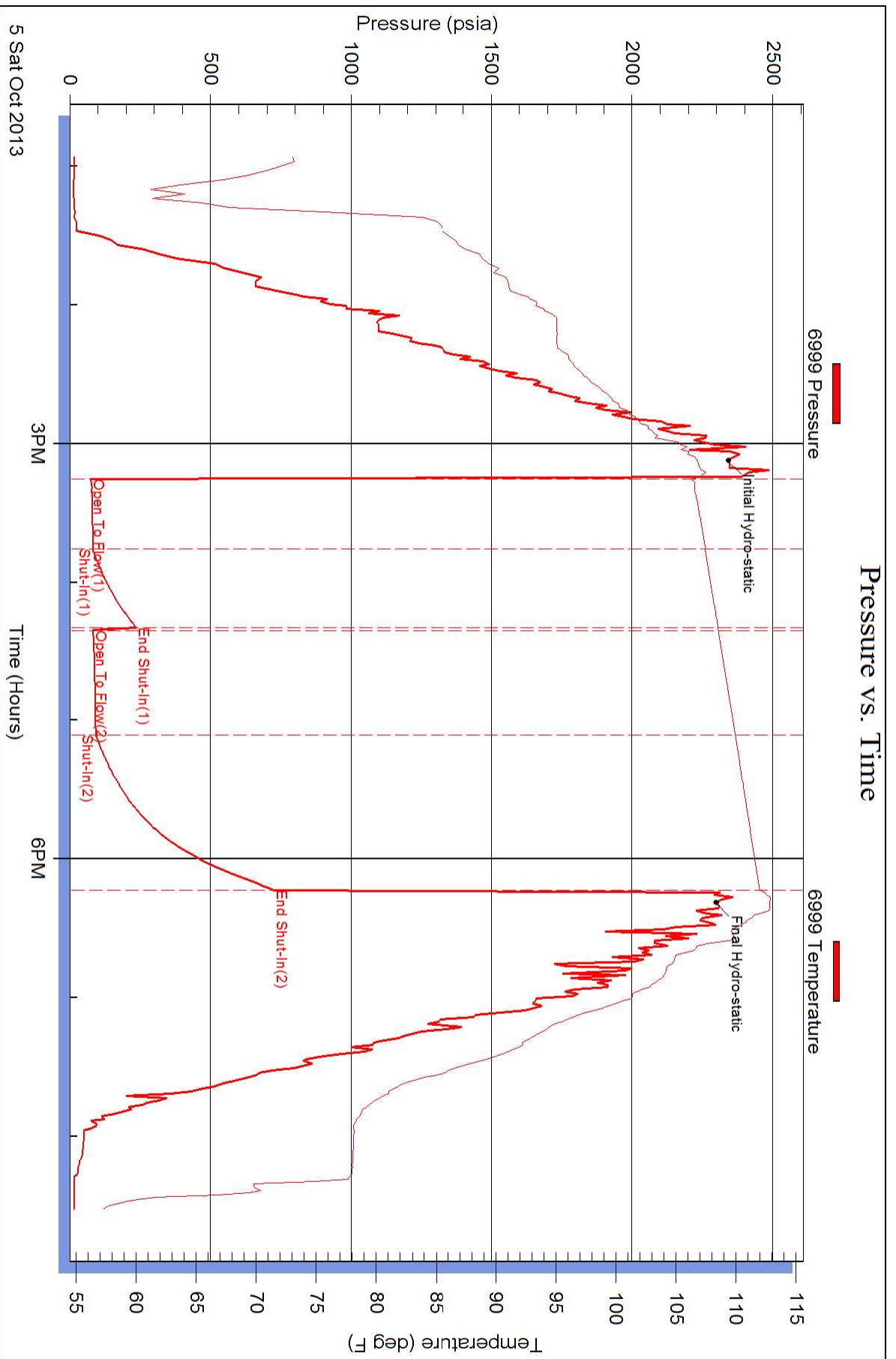
Inside

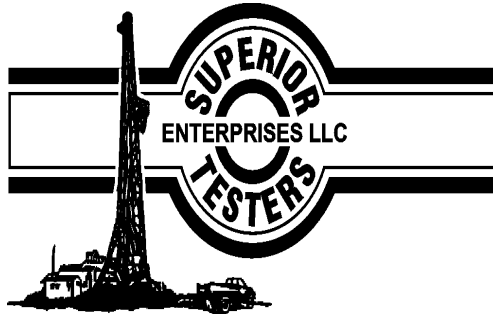
Ritchie exploration

Lampe #3B

DST Test Number: 3







## DRILL STEM TEST REPORT

Prepared For: **Ritchie exploration**

8100 E. 22nd St N #700  
P.O. Box 783188  
Wichita Ks, 67278-3188

ATTN: Adam Eldani

### **Lampe #3B**

#### **3/26s/22w/FOrd**

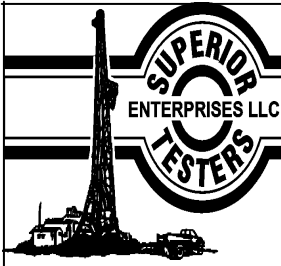
Start Date: 2013.10.06 @ 14:50:00

End Date: 2013.10.06 @ 21:49:00

Job Ticket #: 18502                      DST #: 4

Superior Testers Enterprises LLC  
PO Box 138 Great Bend KS 67530  
1-800-792-6902

Printed: 2013.10.06 @ 22:12:51



# DRILL STEM TEST REPORT

Ritchie exploration  
 8100 E. 22nd St N #700  
 P.O. Box 783188  
 Wichita Ks, 67278-3188  
 ATTN: Adam Eldani

**3/26s/22w/Ford**

**Lampe #3B**

Job Ticket: 18502

**DST#: 4**

Test Start: 2013.10.06 @ 14:50:00

## GENERAL INFORMATION:

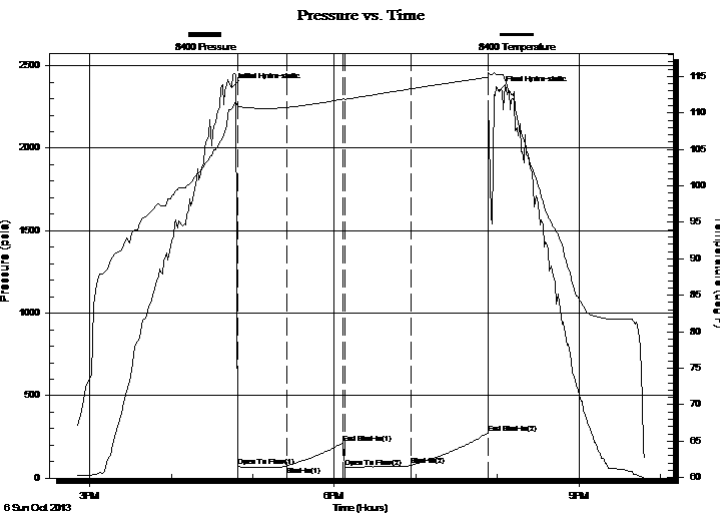
Formation: **Cherokee**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 16:48:30  
 Time Test Ended: 21:49:00  
 Interval: **4762.00 ft (KB) To 4832.00 ft (KB) (TVD)**  
 Total Depth: 4832.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Poor  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Shane Konzem  
 Unit No: 3330/144/Great Bend  
 Reference Elevations: 2412.00 ft (KB)  
 2401.00 ft (CF)  
 KB to GR/CF: 11.00 ft

## Serial #: 8400

Inside

Press @ Run Depth: 77.83 psia @ 4826.14 ft (KB) Capacity: 5000.00 psia  
 Start Date: 2013.10.06 End Date: 2013.10.06 Last Calib.: 2013.10.06  
 Start Time: 14:50:00 End Time: 21:49:00 Time On Btm: 2013.10.06 @ 16:44:30  
 Time Off Btm: 2013.10.06 @ 20:01:30

TEST COMMENT: 1st Open/ 30 Minutes. Weak blow built to 2 1/2 inches into water.  
 1st Shut In/ 45 Minutes. No blow back.  
 2nd Open/ 45 Minutes. Fair blow built to 7 inches in 5 gallon bucket of water.  
 2nd Shut In/ 60 Minutes. No blow back.



## PRESSURE SUMMARY

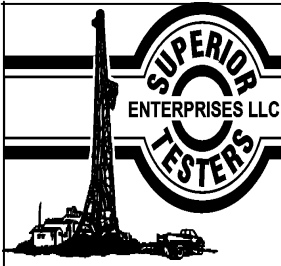
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2369.25	110.52	Initial Hydro-static
4	71.04	110.88	Open To Flow (1)
41	74.43	110.75	Shut-In(1)
82	214.27	111.89	End Shut-In(1)
83	68.72	111.86	Open To Flow (2)
132	77.83	113.31	Shut-In(2)
189	275.04	114.88	End Shut-In(2)
197	2346.58	115.27	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
0.00	1575 feet of gas.	0.00
31.00	2.5% oil, 97.5% Mud	0.43

## Gas Rates

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



# DRILL STEM TEST REPORT

Ritchie exploration  
 8100 E. 22nd St N #700  
 P.O. Box 783188  
 Wichita Ks, 67278-3188  
 ATTN: Adam Eldani

**3/26s/22w/Ford**

**Lampe #3B**

Job Ticket: 18502

**DST#: 4**

Test Start: 2013.10.06 @ 14:50:00

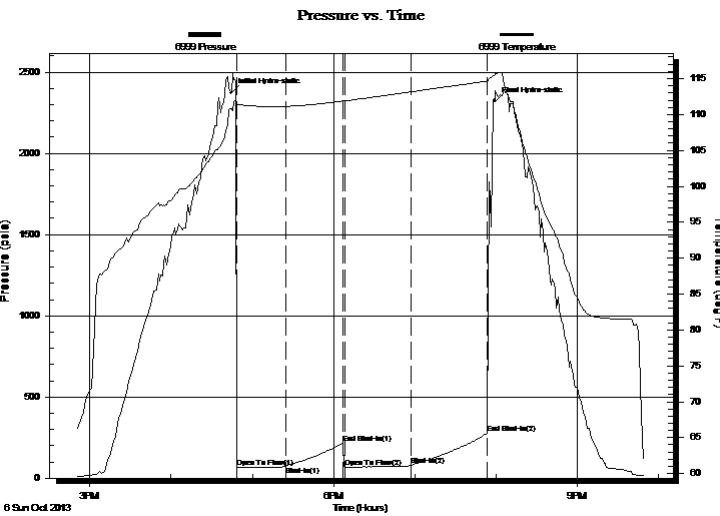
## GENERAL INFORMATION:

Formation: **Cherokee**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 16:48:30  
 Time Test Ended: 21:49:00  
 Interval: **4762.00 ft (KB) To 4832.00 ft (KB) (TVD)**  
 Total Depth: 4832.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Poor  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Shane Konzem  
 Unit No: 3330/144/Great Bend  
 Reference Elevations: 2412.00 ft (KB)  
 2401.00 ft (CF)  
 KB to GR/CF: 11.00 ft

**Serial #: 6999 Outside**

Press @ RunDepth: 275.20 psia @ 4827.14 ft (KB) Capacity: 5000.00 psia  
 Start Date: 2013.10.06 End Date: 2013.10.06 Last Calib.: 2013.10.06  
 Start Time: 14:50:00 End Time: 21:49:30 Time On Btm: 2013.10.06 @ 16:44:30  
 Time Off Btm: 2013.10.06 @ 19:59:00

**TEST COMMENT:** 1st Open/ 30 Minutes. Weak blow built to 2 1/2 inches into water.  
 1st Shut In/ 45 Minutes. No blow back.  
 2nd Open/ 45 Minutes. Fair blow built to 7 inches in 5 gallon bucket of water.  
 2nd Shut In/ 60 Minutes. No blow back.



## PRESSURE SUMMARY

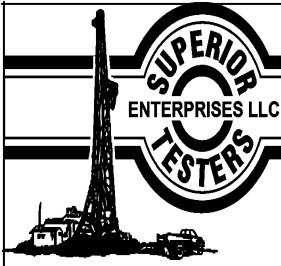
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2372.00	110.75	Initial Hydro-static
4	65.21	111.42	Open To Flow (1)
41	75.48	111.14	Shut-In(1)
83	217.25	111.89	End Shut-In(1)
84	64.68	111.89	Open To Flow (2)
133	79.96	113.16	Shut-In(2)
189	275.20	114.64	End Shut-In(2)
195	2319.65	115.50	Final Hydro-static

## Recovery

## Gas Rates

Length (ft)	Description	Volume (bbl)
0.00	1575 feet of gas.	0.00
31.00	2.5% oil, 97.5% Mud	0.43

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



# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Ritchie exploration

**3/26s/22w/Ford**

8100 E. 22nd St N #700  
 P.O. Box 783188  
 Wichita Ks, 67278-3188  
 ATTN: Adam Eldani

**Lampe #3B**

Job Ticket: 18502

**DST#: 4**

Test Start: 2013.10.06 @ 14:50:00

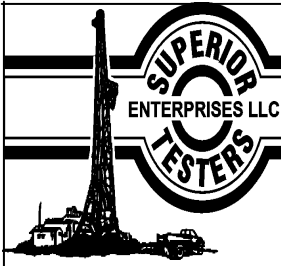
## Tool Information

Drill Pipe:	Length: 4748.00 ft	Diameter: 3.80 inches	Volume: 66.60 bbl	Tool Weight: 2000.00 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: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 100000.0 lb
			<u>Total Volume: 66.60 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 76000.00 lb
Depth to Top Packer:	4762.00 ft			Final 78000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	70.14 ft			
Tool Length:	99.14 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			4734.00	
Shut-In Tool	5.00			4739.00	
Hydroic Tool	5.00			4744.00	
Jars	6.00			4750.00	
Safety Joint	2.00			4752.00	
Packer	5.00			4757.00	29.00 Bottom Of Top Packer
Packer	5.00			4762.00	
Perforations	5.00			4767.00	
Change Over Sub	0.75			4767.75	
Drill Pipe	31.64			4799.39	
Change Over Sub	0.75			4800.14	
Perforations	25.00			4825.14	
Recorder	1.00	8400	Inside	4826.14	
Recorder	1.00	6999	Outside	4827.14	
Bullnose	5.00			4832.14	70.14 Bottom Packers & Anchor

**Total Tool Length: 99.14**



# DRILL STEM TEST REPORT

## FLUID SUMMARY

Ritchie exploration

**3/26s/22w/Ford**

8100 E. 22nd St N #700  
P.O. Box 783188  
Wichita Ks, 67278-3188  
ATTN: Adam Eldani

**Lampe #3B**

Job Ticket: 18502

**DST#: 4**

Test Start: 2013.10.06 @ 14:50:00

### Mud and Cushion Information

Mud Type: Gel Chem  
Mud Weight: 9.00 lb/gal  
Viscosity: 53.00 sec/qt  
Water Loss: 8.00 in<sup>3</sup>  
Resistivity: ohm.m  
Salinity: 6800.00 ppm  
Filter Cake: 1.00 inches

Cushion Type:  
Cushion Length: ft  
Cushion Volume: bbl  
Gas Cushion Type:  
Gas Cushion Pressure: psia

Oil API: deg API  
Water Salinity: ppm

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	1575 feet of gas.	0.000
31.00	2.5% oil, 97.5% Mud	0.435

Total Length: 31.00 ft      Total Volume: 0.435 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

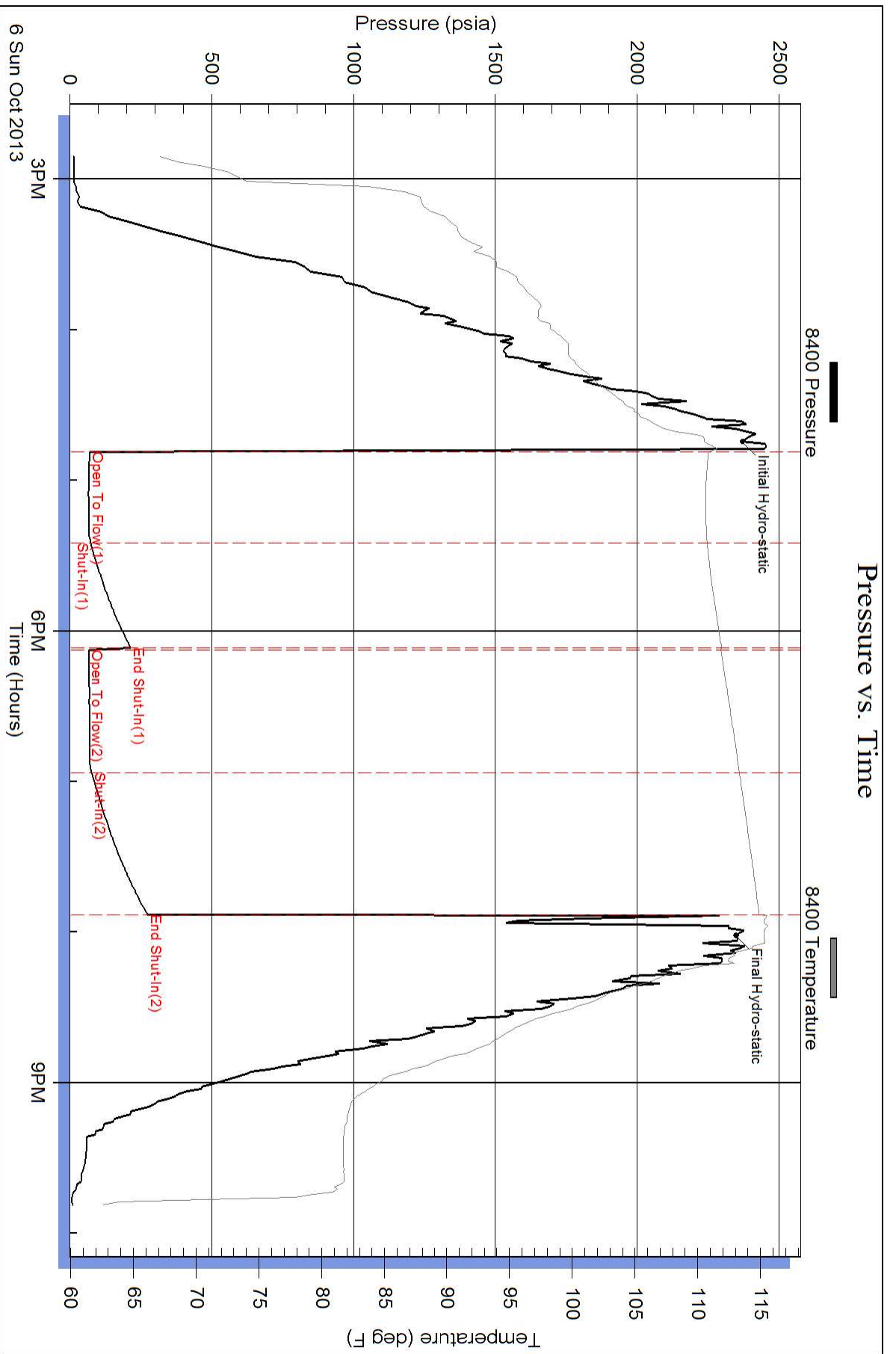
Serial #: 8400

Inside

Ritchie exploration

Lampe #3B

DST Test Number: 4

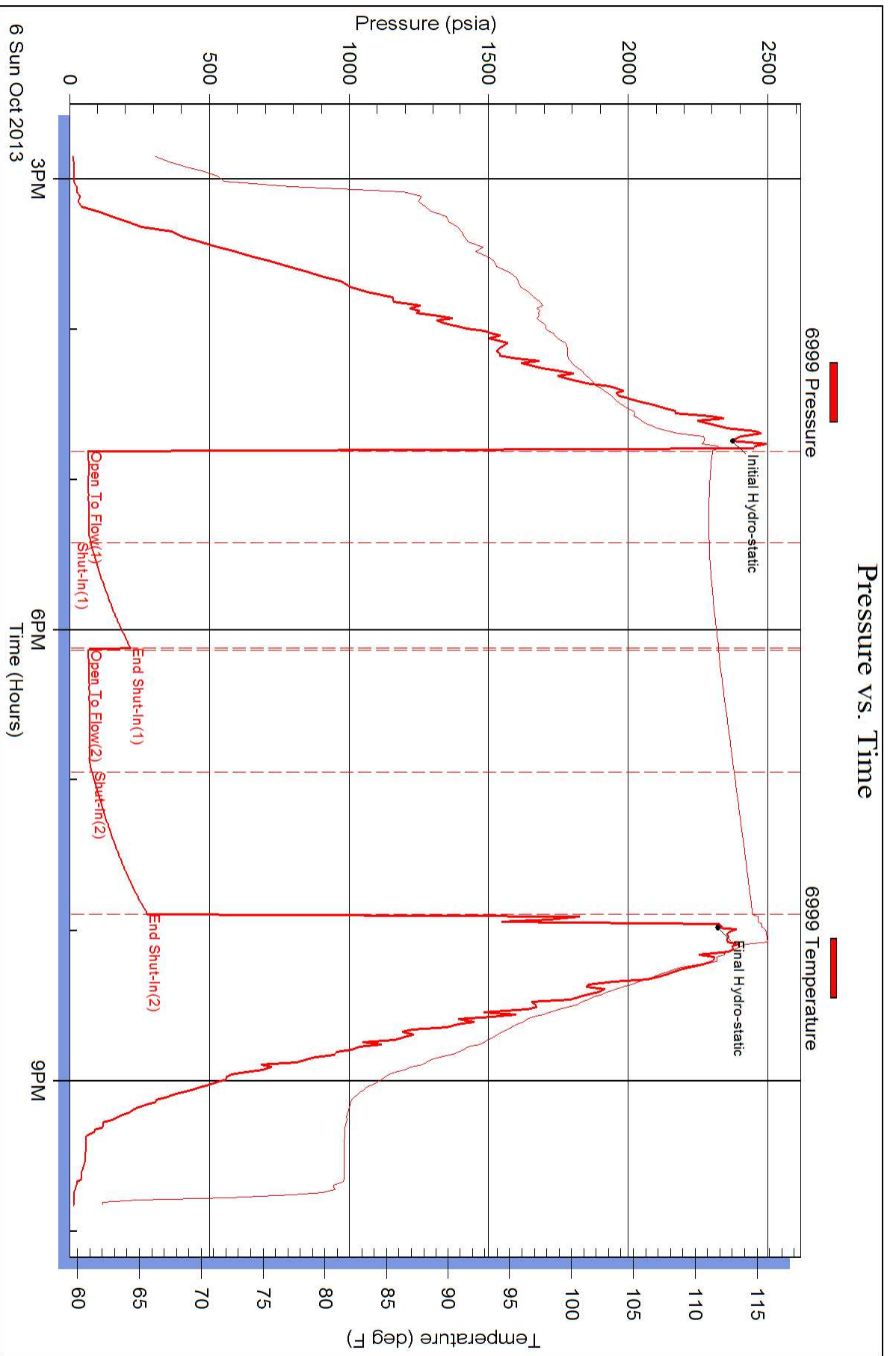


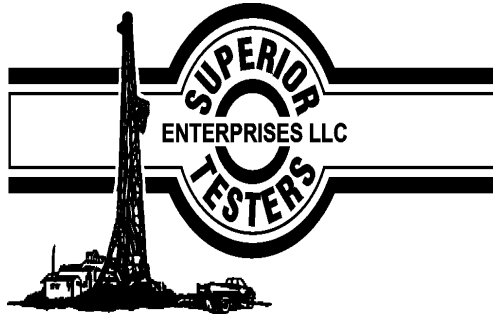
Serial #: 6999

Outside Ritchie exploration

Lampe #3B

DST Test Number: 4





## DRILL STEM TEST REPORT

Prepared For: **Ritchie exploration**

8100 E. 22nd St N #700  
P.O. Box 783188  
Wichita Ks, 67278-3188

ATTN: Adam Eldani

### **Lampe #3B**

#### **3/26s/22w/FOrd**

Start Date: 2013.10.07 @ 07:35:00

End Date: 2013.10.07 @ 15:04:00

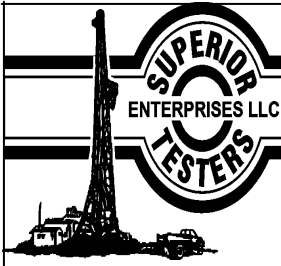
Job Ticket #: 18503                      DST #: 5

Superior Testers Enterprises LLC  
PO Box 138 Great Bend KS 67530  
1-800-792-6902

Printed: 2013.10.07 @ 15:29:35

Ritchie exploration  
3/26s/22w/FOrd  
Lampe #3B  
DST # 5  
Huck  
2013.10.07





# DRILL STEM TEST REPORT

Ritchie exploration  
 8100 E. 22nd St N #700  
 P.O. Box 783188  
 Wichita Ks, 67278-3188  
 ATTN: Adam Eldani

**3/26s/22w/Ford**

**Lampe #3B**

Job Ticket: 18503

**DST#: 5**

Test Start: 2013.10.07 @ 07:35:00

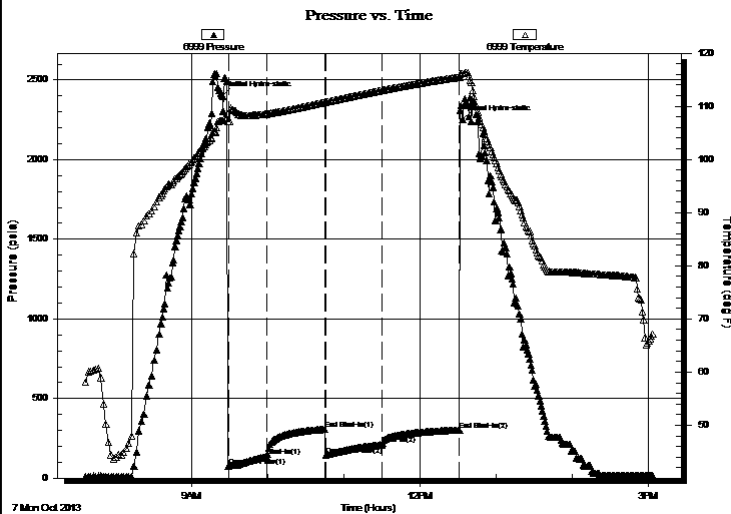
## GENERAL INFORMATION:

Formation: **Huck**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 09:29:30  
 Time Test Ended: 15:04:00  
 Interval: **4822.00 ft (KB) To 4857.00 ft (KB) (TVD)**  
 Total Depth: 4857.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Poor  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Shane Konzem  
 Unit No: 3330/144/Great Bend  
 Reference Elevations: 2412.00 ft (KB)  
 2401.00 ft (CF)  
 KB to GR/CF: 11.00 ft

## Serial #: 6999 Outside

Press @ RunDepth: 302.52 psia @ 4854.00 ft (KB) Capacity: 5000.00 psia  
 Start Date: 2013.10.07 End Date: 2013.10.07 Last Calib.: 2013.10.07  
 Start Time: 07:36:00 End Time: 15:04:00 Time On Btm: 2013.10.07 @ 09:24:00  
 Time Off Btm: 2013.10.07 @ 12:33:30

**TEST COMMENT:** 1st Open/ 30 Minutes. Good blow built to bottom of bucket in 2 1/2 minutes.  
 1st Shut In/ 45 Minutes. Good blow back built to 7 inches in 5 gallon bucket.  
 2nd Open/ 45 Minutes. Good blow built to bottom of 5 gallon bucket in 5 minutes 30 seconds.  
 2nd Shut In/ 60 Minutes. God blow back built to 6 inches in 5 gallon bucket.



## PRESSURE SUMMARY

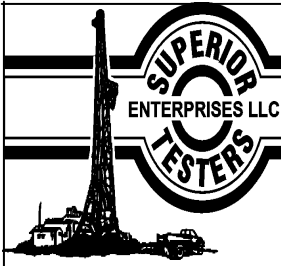
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2399.24	107.32	Initial Hydro-static
5	73.51	107.12	Open To Flow (1)
35	134.93	108.56	Shut-In(1)
81	307.08	110.75	End Shut-In(1)
82	146.79	110.77	Open To Flow (2)
126	210.10	112.99	Shut-In(2)
187	302.52	115.49	End Shut-In(2)
190	2253.15	116.17	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
0.00	2898 feet of gas	0.00
378.00	Clean 20% gas, 80% Oil	5.30
63.00	5% Gas, 15% Mud, 80% Oil	0.88
63.00	40% Gas, 25% Oil, 35% Mud	0.88
0.00	Corrected Gravity was 42.	0.00

## Gas Rates

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



# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Ritchie exploration

**3/26s/22w/Ford**

8100 E. 22nd St N #700  
 P.O. Box 783188  
 Wichita Ks, 67278-3188  
 ATTN: Adam Eldani

**Lampe #3B**

Job Ticket: 18503

**DST#: 5**

Test Start: 2013.10.07 @ 07:35:00

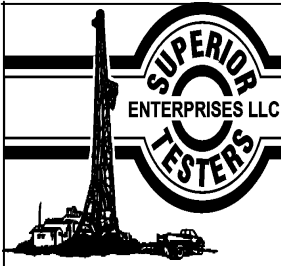
**Tool Information**

Drill Pipe:	Length: 4813.00 ft	Diameter: 3.80 inches	Volume: 67.51 bbl	Tool Weight:	2000.00 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: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose:	95000.00 lb
			<u>Total Volume: 67.51 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial	71000.00 lb
Depth to Top Packer:	4822.00 ft			Final	77000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	35.00 ft				
Tool Length:	64.00 ft				
Number of Packers:	2	Diameter:	6.75 inches		
Tool Comments:					

<b>Tool Description</b>	<b>Length (ft)</b>	<b>Serial No.</b>	<b>Position</b>	<b>Depth (ft)</b>	<b>Accum. Lengths</b>
-------------------------	--------------------	-------------------	-----------------	-------------------	-----------------------

<b>Tool Description</b>	<b>Length (ft)</b>	<b>Serial No.</b>	<b>Position</b>	<b>Depth (ft)</b>	<b>Accum. Lengths</b>
Change Over Sub	1.00			4794.00	
Shut-In Tool	5.00			4799.00	
Hydroic Tool	5.00			4804.00	
Jars	6.00			4810.00	
Safety Joint	2.00			4812.00	
Packer	5.00			4817.00	29.00 Bottom Of Top Packer
Packer	5.00			4822.00	
Perforations	30.00			4852.00	
Recorder	1.00	8400	Inside	4853.00	
Recorder	1.00	6999	Outside	4854.00	
Bullnose	3.00			4857.00	35.00 Bottom Packers & Anchor

**Total Tool Length: 64.00**



# DRILL STEM TEST REPORT

## FLUID SUMMARY

Ritchie exploration

**3/26s/22w/Ford**

8100 E. 22nd St N #700  
 P.O. Box 783188  
 Wichita Ks, 67278-3188  
 ATTN: Adam Eldani

**Lampe #3B**

Job Ticket: 18503

**DST#: 5**

Test Start: 2013.10.07 @ 07:35:00

### Mud and Cushion Information

Mud Type: Gel Chem  
 Mud Weight: 9.00 lb/gal  
 Viscosity: 53.00 sec/qt  
 Water Loss: 7.99 in<sup>3</sup>  
 Resistivity: ohm.m  
 Salinity: 6800.00 ppm  
 Filter Cake: 1.00 inches

Cushion Type:  
 Cushion Length: ft  
 Cushion Volume: bbl  
 Gas Cushion Type:  
 Gas Cushion Pressure: psia

Oil API: deg API  
 Water Salinity: ppm

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	2898 feet of gas	0.000
378.00	Clean 20% gas, 80% Oil	5.302
63.00	5% Gas, 15% Mud, 80% Oil	0.884
63.00	40% Gas, 25% Oil, 35% Mud	0.884
0.00	Corrected Gravity was 42.	0.000

Total Length: 504.00 ft      Total Volume: 7.070 bbl

Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:

Laboratory Name:      Laboratory Location:

Recovery Comments:

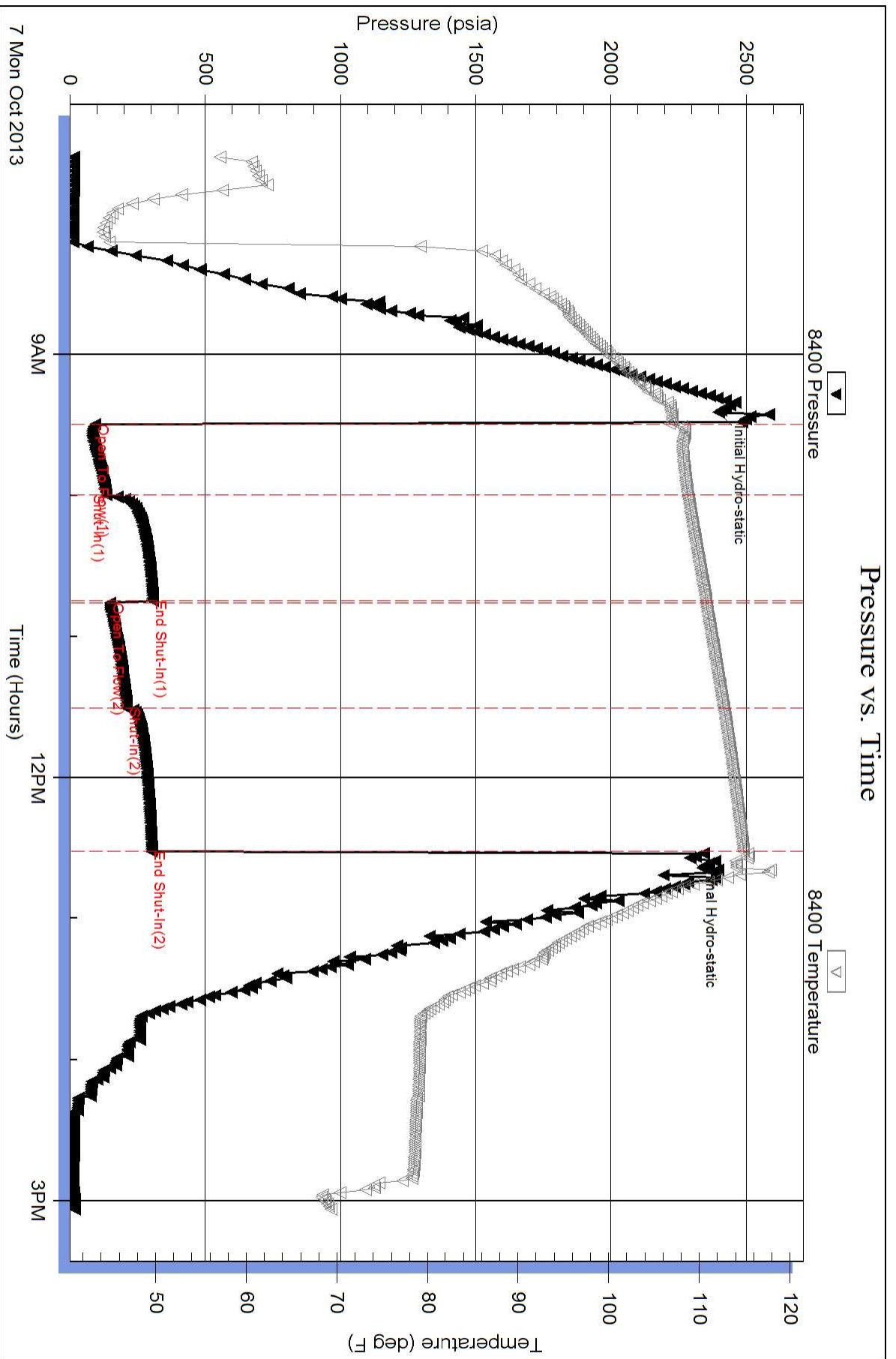
Serial #: 8400

Inside

Ritchie exploration

Lampe #3B

DST Test Number: 5



Superior Testers Enterprises LLC

Ref. No: 18503

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