

DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration Inc.**

8100 East 22nd ST N #700
Wichita Kansas 67278

ATTN: Max Lovely

North Six 25c

25-17s-35w-Wichita

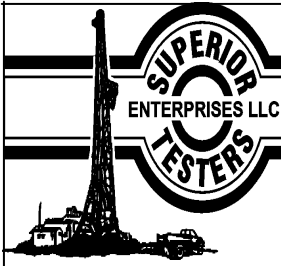
Start Date: 2013.08.16 @ 05:08:00

End Date: 2013.08.16 @ 13:12:30

Job Ticket #: 17544 DST #: 1

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

Printed: 2013.08.16 @ 23:30:32



DRILL STEM TEST REPORT

Ritchie Exploration Inc.

25-17s-35w-Wichita

8100 East 22nd ST N #700
Wichita Kansas 67278

North Six 25c

Job Ticket: 17544

DST#: 1

ATTN: Max Lovely

Test Start: 2013.08.16 @ 05:08:00

GENERAL INFORMATION:

Formation: **Lansing HI-J-K**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:43:30

Time Test Ended: 13:12:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Dustin Ellis

Unit No: 3315-Scott City-34

Interval: 4252.00 ft (KB) To 4390.00 ft (KB) (TVD)

Reference Elevations: 3180.00 ft (KB)

Total Depth: 4390.00 ft (KB) (TVD)

3175.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6839 Outside

Press @ RunDepth: 554.02 psia @ 4387.04 ft (KB)

Capacity: 5000.00 psia

Start Date: 2013.08.16

End Date: 2013.08.16

Last Calib.: 2013.08.16

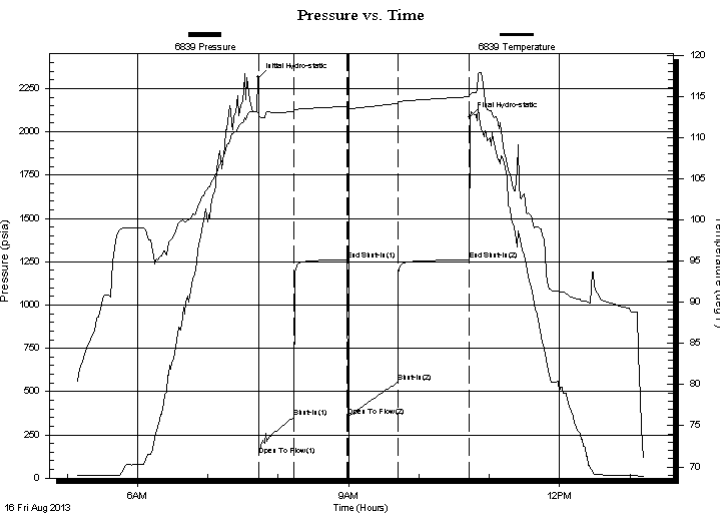
Start Time: 05:08:00

End Time: 13:12:30

Time On Btm: 2013.08.16 @ 07:43:00

Time Off Btm: 2013.08.16 @ 10:43:30

TEST COMMENT: 1st Open 30 minutes Good blow built to the bottom of a 5 gallon bucket of water in 10.5 minutes.
1st Shut in 45 minutes No blow back
2nd Open 45 minutes Good blow built to the bottom of a 5 gallon bucket of water in 15 minutes.
2nd Shut in 60 minutes No blow back



PRESSURE SUMMARY

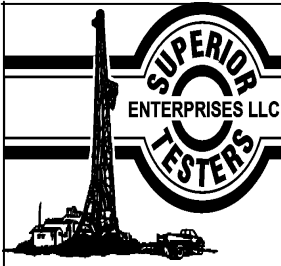
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2315.72	113.10	Initial Hydro-static
1	133.09	112.57	Open To Flow (1)
31	352.21	113.11	Shut-In(1)
76	1261.10	113.81	End Shut-In(1)
77	358.22	113.57	Open To Flow (2)
119	554.02	114.11	Shut-In(2)
180	1259.91	114.94	End Shut-In(2)
181	2085.57	115.23	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
183.00	Mud 100%	1.46
762.00	Muddy water Mud 20% Water 80%	10.69
0.00	Chlorides 46,000 .3ohms 57 Degrees	0.00

Gas Rates

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



DRILL STEM TEST REPORT

Ritchie Exploration Inc.
 8100 East 22nd ST N #700
 Wichita Kansas 67278
 ATTN: Max Lovely

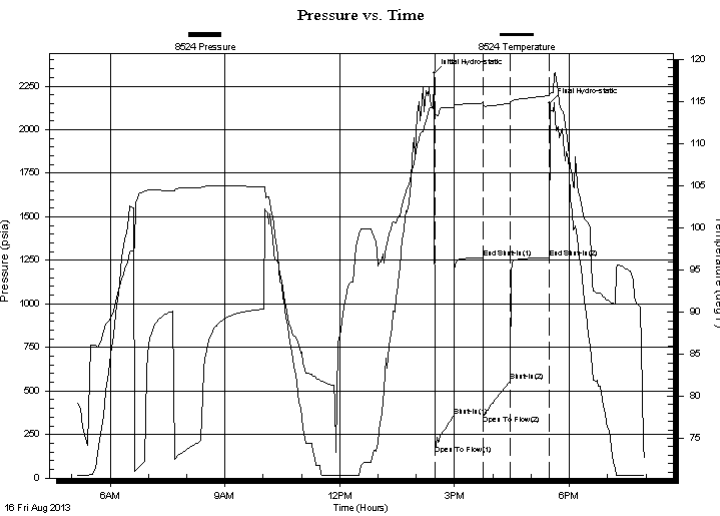
25-17s-35w-Wichita
North Six 25c
 Job Ticket: 17544 **DST#: 1**
 Test Start: 2013.08.16 @ 05:08:00

GENERAL INFORMATION:

Formation: **Lansing HI-J-K**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 07:43:30
 Time Test Ended: 13:12:30
 Interval: **4252.00 ft (KB) To 4390.00 ft (KB) (TVD)**
 Total Depth: 4390.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Dustin Ellis
 Unit No: 3315-Scott City-34
 Reference Elevations: 3180.00 ft (KB)
 3175.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 8524 Inside
 Press @ Run Depth: 1265.02 psia @ 4386.04 ft (KB) Capacity: 5000.00 psia
 Start Date: 2013.08.16 End Date: 2013.08.16 Last Calib.: 2013.08.16
 Start Time: 05:08:00 End Time: 13:12:30 Time On Btm: 2013.08.16 @ 14:28:23
 Time Off Btm: 2013.08.16 @ 17:29:23

TEST COMMENT: 1st Open 30 minutes Good blow built to the bottom of a 5 gallon bucket of water in 10.5 minutes.
 1st Shut in 45 minutes No blow back
 2nd Open 45 minutes Good blow built to the bottom of a 5 gallon bucket of water in 15 minutes.
 2nd Shut in 60 minutes No blow back



PRESSURE SUMMARY

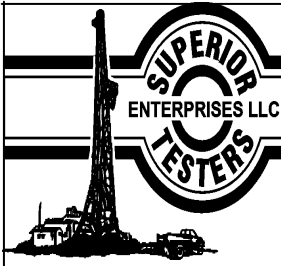
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2323.99	114.11	Initial Hydro-static
1	135.66	113.44	Open To Flow (1)
31	357.37	114.27	Shut-In(1)
76	1265.68	114.84	End Shut-In(1)
77	359.96	114.53	Open To Flow (2)
119	558.12	114.83	Shut-In(2)
180	1265.02	115.72	End Shut-In(2)
181	2154.75	115.95	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
183.00	Mud 100%	1.46
762.00	Muddy water Mud 20% Water 80%	10.69
0.00	Chlorides 46,000 .3ohms 57 Degrees	0.00

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration Inc.

25-17s-35w-Wichita

8100 East 22nd ST N #700
Wichita Kansas 67278

North Six 25c

Job Ticket: 17544

DST#: 1

ATTN: Max Lovely

Test Start: 2013.08.16 @ 05:08:00

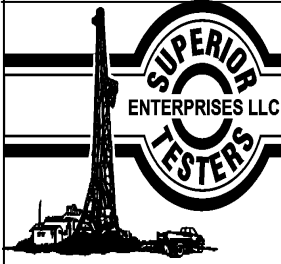
Tool Information

Drill Pipe:	Length: 4140.00 ft	Diameter: 3.80 inches	Volume: 58.07 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: 122.06 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 75000.00 lb
			<u>Total Volume: 58.67 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	30.06 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	4252.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	138.04 ft			
Tool Length:	158.04 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut-In Tool	5.00			4237.00	
Hydraulic Tool	5.00			4242.00	
Packer	5.00			4247.00	20.00 Bottom Of Top Packer
Packer	5.00			4252.00	
Anchor	5.00			4257.00	
Change Over Sub	0.75			4257.75	
Drill Pipe	94.54			4352.29	
Change Over Sub	0.75			4353.04	
Anchor	32.00			4385.04	
Recorder	1.00	8524	Inside	4386.04	
Recorder	1.00	6839	Outside	4387.04	
Bull Plug	3.00			4390.04	138.04 Bottom Packers & Anchor

Total Tool Length: 158.04



DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration Inc.

25-17s-35w-Wichita

8100 East 22nd ST N #700
Wichita Kansas 67278

North Six 25c

Job Ticket: 17544

DST#: 1

ATTN: Max Lovely

Test Start: 2013.08.16 @ 05:08:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length: ft

Water Salinity: ppm

Viscosity: 55.00 sec/qt

Cushion Volume: bbl

Water Loss: 9.60 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure: psia

Salinity: 4100.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
183.00	Mud 100%	1.455
762.00	Muddy water Mud 20% Water 80%	10.689
0.00	Chlorides 46,000 .3ohms 57 Degrees	0.000

Total Length: 945.00 ft Total Volume: 12.144 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

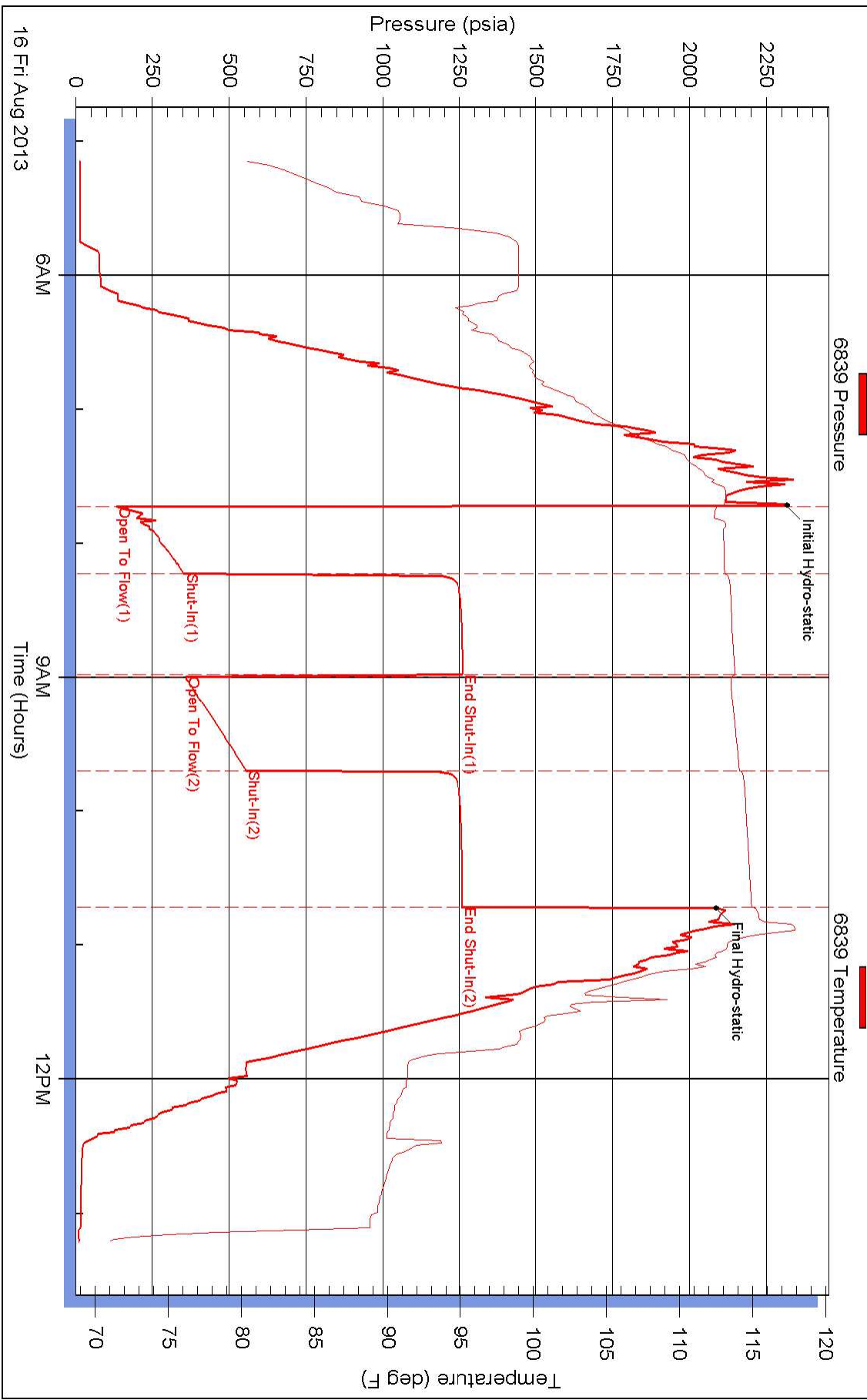
Serial #:

Laboratory Name:

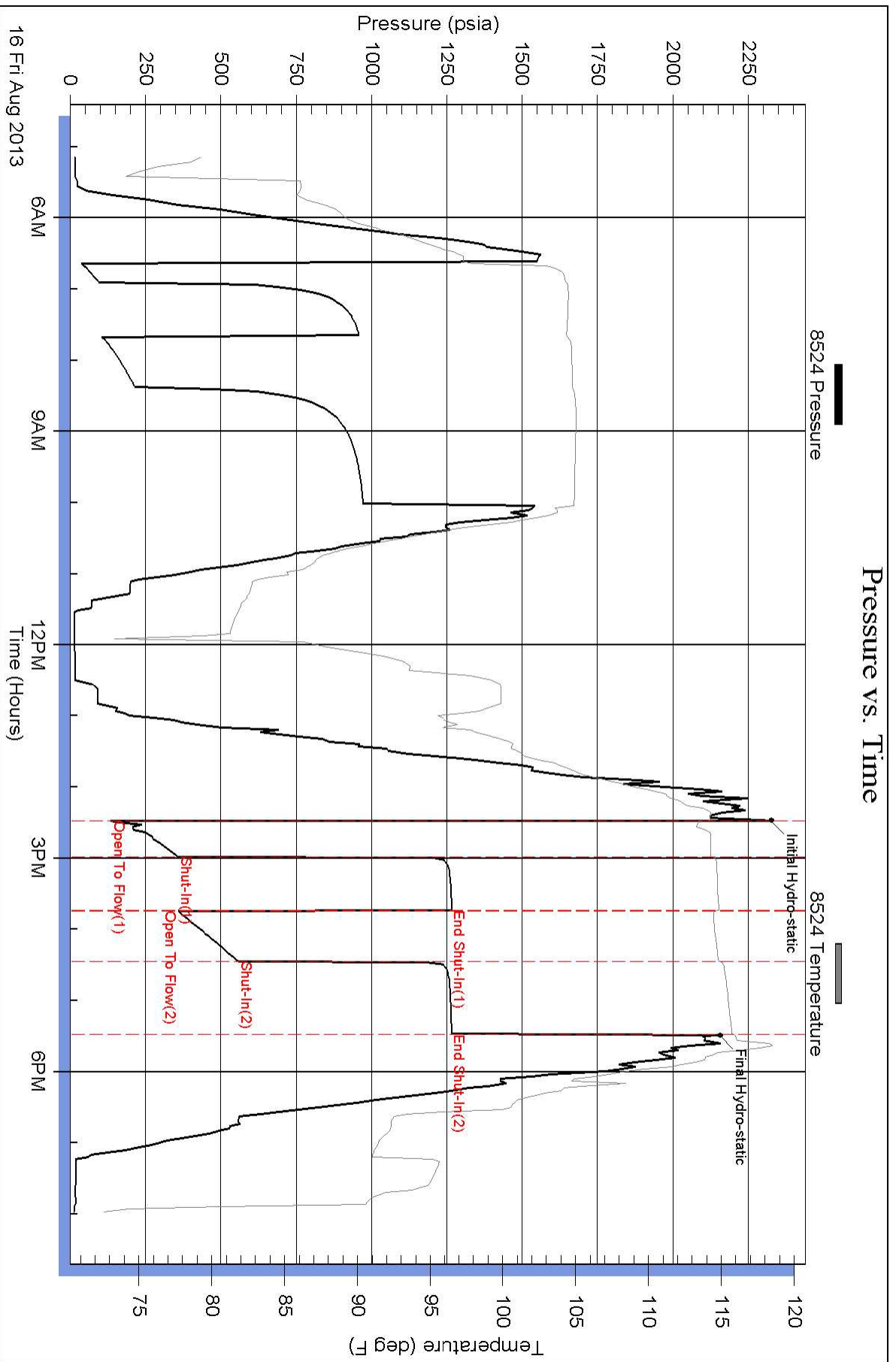
Laboratory Location:

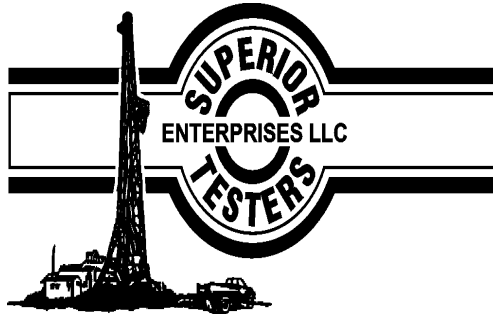
Recovery Comments:

Pressure vs. Time



Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration Inc.**

8100 East 22nd ST N #700
Wichita Kansas 67278

ATTN: Max Lovely

North Six 25c

25-17s-35w-Wichita

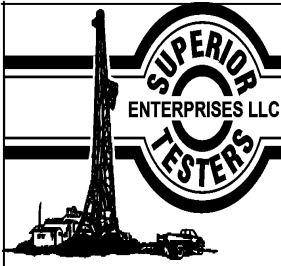
Start Date: 2013.08.17 @ 01:14:00

End Date: 2013.08.17 @ 08:30:30

Job Ticket #: 17545 DST #: 2

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

Printed: 2013.08.17 @ 18:57:03



DRILL STEM TEST REPORT

Ritchie Exploration Inc.

25-17s-35w-Wichita

8100 East 22nd ST N #700
Wichita Kansas 67278

North Six 25c

Job Ticket: 17545

DST#: 2

ATTN: Max Lovely

Test Start: 2013.08.17 @ 01:14:00

GENERAL INFORMATION:

Formation: **Pleasanton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:42:30

Time Test Ended: 08:30:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Dustin Ellis

Unit No: 3315-Scott City-34

Interval: 4436.00 ft (KB) To 4484.00 ft (KB) (TVD)

Reference Elevations: 3180.00 ft (KB)

Total Depth: 4484.00 ft (KB) (TVD)

3175.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6839 Outside

Press @ Run Depth: 227.80 psia @ 4481.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2013.08.17

End Date: 2013.08.17

Last Calib.: 2013.08.17

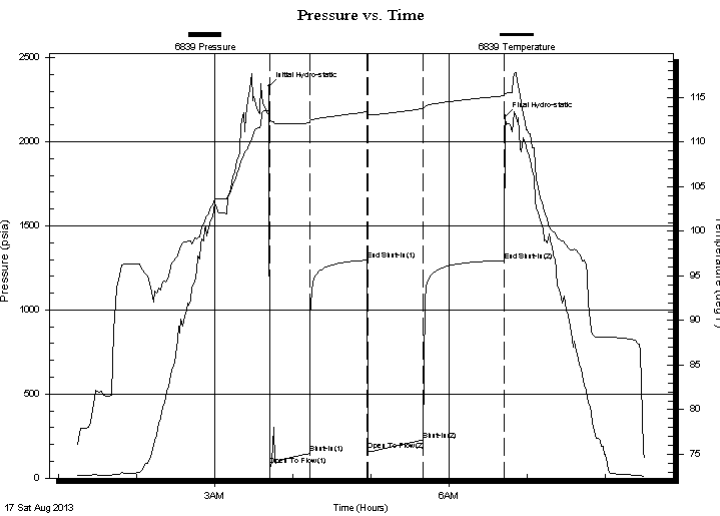
Start Time: 01:14:00

End Time: 08:30:30

Time On Btm: 2013.08.17 @ 03:42:00

Time Off Btm: 2013.08.17 @ 06:43:30

TEST COMMENT: 1st Open 30 minutes Weak building blow built to 9 inches into a 5 gallon bucket of water.
1st Shut in 45 minutes No blow back
2nd Open 45 minutes Weak building blow built to 8.5 inches into a 5 gallon bucket of water.
2nd Shut in 60 minutes No blow back



PRESSURE SUMMARY

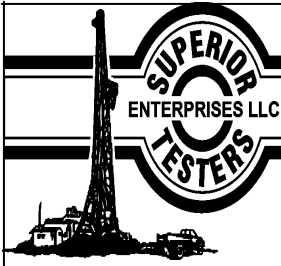
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2329.04	113.47	Initial Hydro-static
1	74.14	112.26	Open To Flow (1)
31	145.78	112.13	Shut-In(1)
76	1295.84	113.38	End Shut-In(1)
76	163.87	113.00	Open To Flow (2)
119	227.80	113.74	Shut-In(2)
181	1293.81	115.18	End Shut-In(2)
182	2150.63	115.44	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
188.00	Very lighty oil spotted mud	1.53
0.00	Mud 100%	0.00
183.00	Muddy water Mud 10% Water 90%	2.57
0.00	Chlorides 26,000-.2ohms @54 degrees	0.00

Gas Rates

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



DRILL STEM TEST REPORT

Ritchie Exploration Inc.

25-17s-35w-Wichita

8100 East 22nd ST N #700
Wichita Kansas 67278

North Six 25c

Job Ticket: 17545

DST#: 2

ATTN: Max Lovely

Test Start: 2013.08.17 @ 01:14:00

GENERAL INFORMATION:

Formation: **Pleasanton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:42:30

Time Test Ended: 08:30:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Dustin Ellis

Unit No: 3315-Scott City-34

Interval: 4436.00 ft (KB) To 4484.00 ft (KB) (TVD)

Reference Elevations: 3180.00 ft (KB)

Total Depth: 4484.00 ft (KB) (TVD)

3175.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8524 Inside

Press @ RunDepth: 1299.15 psia @ 4480.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2013.08.17

End Date: 2013.08.17

Last Calib.: 2013.08.17

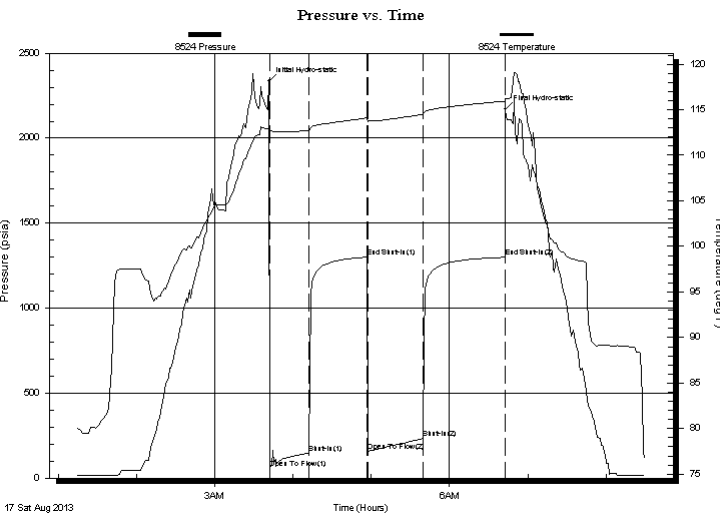
Start Time: 01:14:00

End Time: 08:30:00

Time On Btm: 2013.08.17 @ 03:41:30

Time Off Btm: 2013.08.17 @ 06:43:00

TEST COMMENT: 1st Open 30 minutes Weak building blow built to 9 inches into a 5 gallon bucket of water.
1st Shut in 45 minutes No blow back
2nd Open 45 minutes Weak building blow built to 8.5 inches into a 5 gallon bucket of water.
2nd Shut in 60 minutes No blow back



PRESSURE SUMMARY

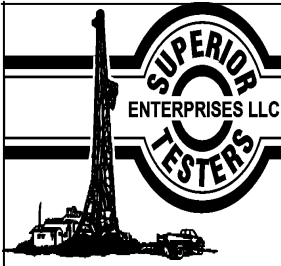
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2335.74	112.97	Initial Hydro-static
1	58.90	112.24	Open To Flow (1)
31	149.03	112.75	Shut-In(1)
76	1300.30	114.11	End Shut-In(1)
76	155.68	113.66	Open To Flow (2)
119	232.43	114.48	Shut-In(2)
181	1299.15	115.95	End Shut-In(2)
182	2169.25	116.22	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
188.00	Very lighty oil spotted mud	1.53
0.00	Mud 100%	0.00
183.00	Muddy water Mud 10% Water 90%	2.57
0.00	Chlorides 26,000-.2ohms @54 degrees	0.00

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration Inc.

25-17s-35w-Wichita

8100 East 22nd ST N #700
Wichita Kansas 67278

North Six 25c

Job Ticket: 17545

DST#: 2

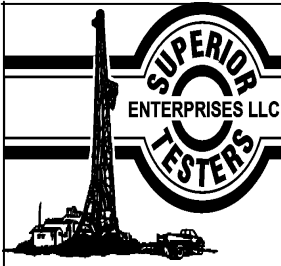
ATTN: Max Lovely

Test Start: 2013.08.17 @ 01:14:00

Tool Information

Drill Pipe:	Length: 4319.00 ft	Diameter: 3.80 inches	Volume: 60.58 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: 122.06 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose:	72000.00 lb
			<u>Total Volume: 61.18 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	33.06 ft			String Weight: Initial	60000.00 lb
Depth to Top Packer:	4436.00 ft			Final	60000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	48.00 ft				
Tool Length:	76.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			
Tool Comments:					

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut-In Tool	5.00			4413.00	
Hydraulic Tool	5.00			4418.00	
Jars	6.00			4424.00	
Safety Joint	2.00			4426.00	
Packer	5.00			4431.00	28.00 Bottom Of Top Packer
Packer	5.00			4436.00	
Anchor	43.00			4479.00	
Recorder	1.00	8524	Inside	4480.00	
Recorder	1.00	6839	Outside	4481.00	
Bull Plug	3.00			4484.00	48.00 Bottom Packers & Anchor
Total Tool Length:	76.00				



DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration Inc.

25-17s-35w-Wichita

8100 East 22nd ST N #700
Wichita Kansas 67278

North Six 25c

Job Ticket: 17545

DST#: 2

ATTN: Max Lovely

Test Start: 2013.08.17 @ 01:14:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 50.00 sec/qt
Water Loss: 10.39 in³
Resistivity: ohm.m
Salinity: 5200.00 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
188.00	Very lighty oil spotted mud	1.525
0.00	Mud 100%	0.000
183.00	Muddy w ater Mud 10% Water 90%	2.567
0.00	Chlorides 26,000-.2ohms @54 degrees	0.000

Total Length: 371.00 ft Total Volume: 4.092 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

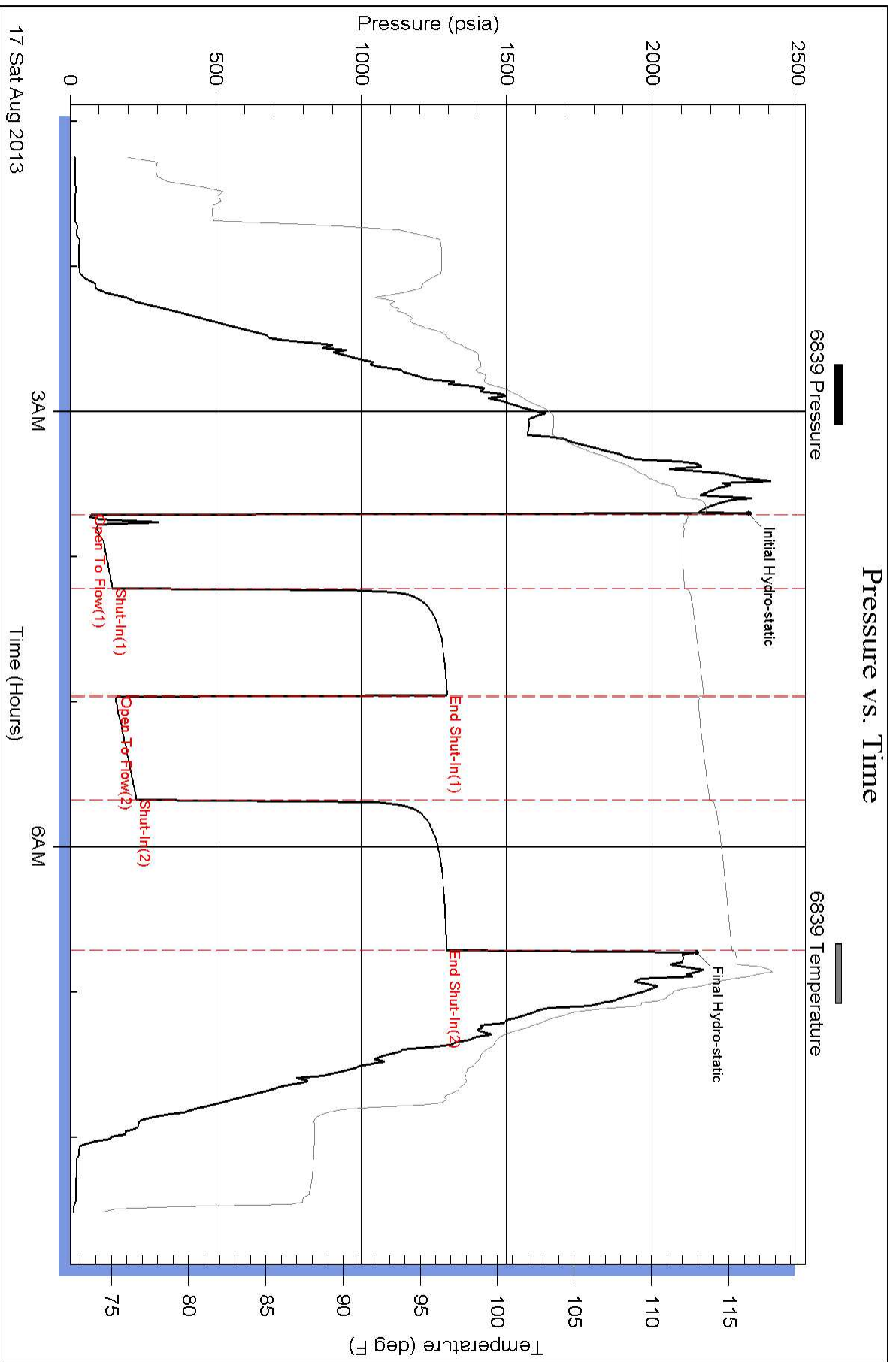
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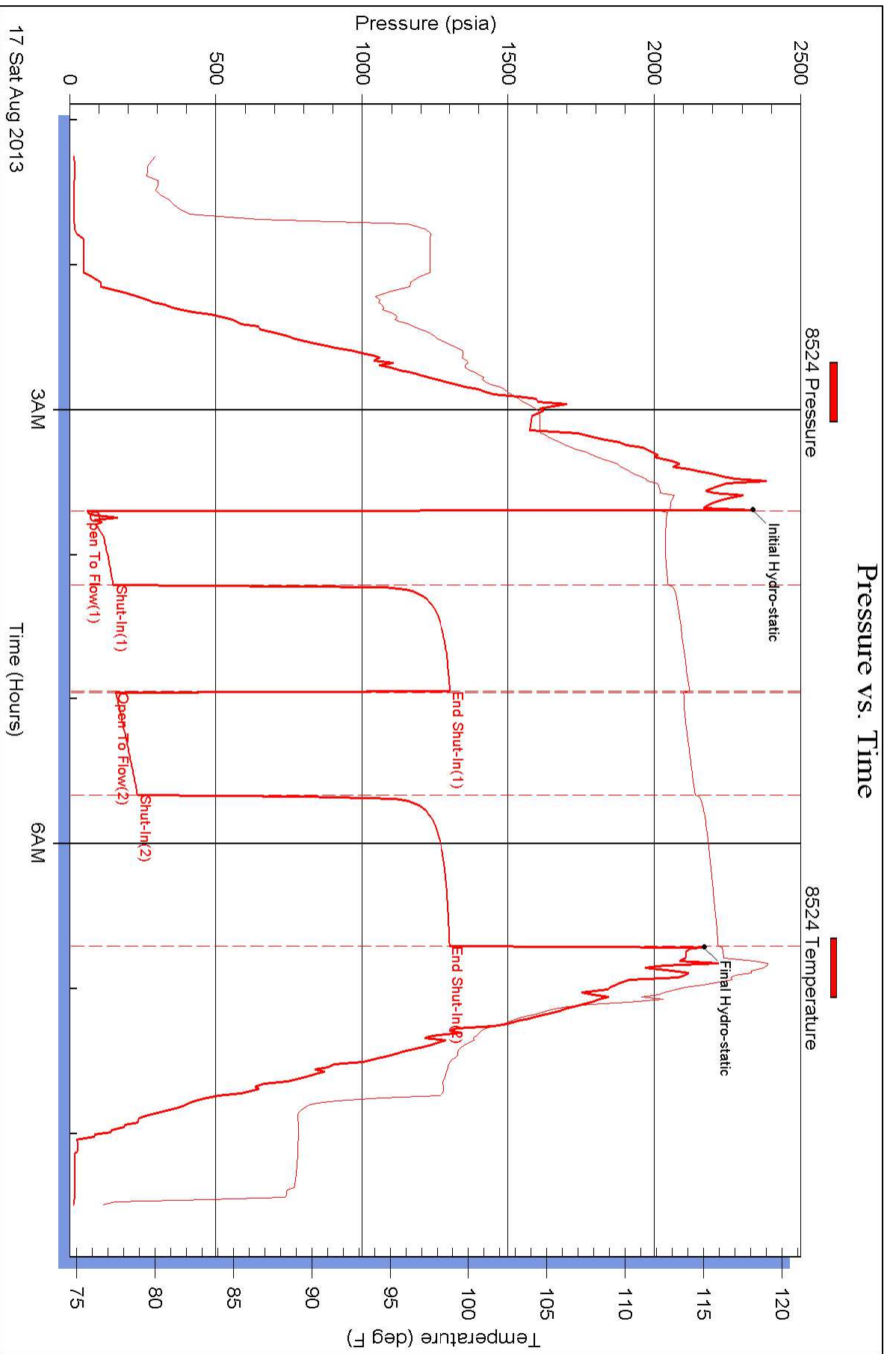
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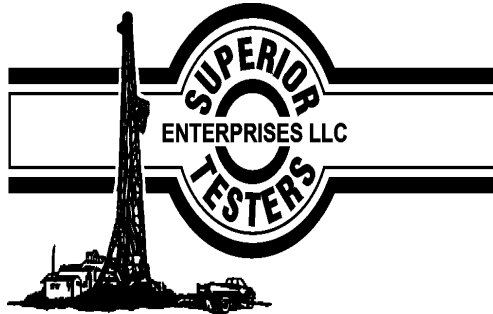
Laboratory Location:

Recovery Comments:

Pressure vs. Time







DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration Inc.**

8100 East 22nd ST N #700
Wichita Kansas 67278

ATTN: Max Lovely

North Six 25c

25-17s-35w-Wichita

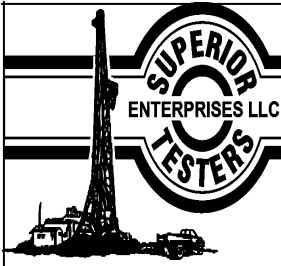
Start Date: 2013.08.18 @ 03:11:00

End Date: 2013.08.18 @ 08:38:30

Job Ticket #: 17546 DST #: 3

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

Printed: 2013.08.18 @ 18:51:15



DRILL STEM TEST REPORT

Ritchie Exploration Inc.

25-17s-35w-Wichita

8100 East 22nd ST N #700
Wichita Kansas 67278

North Six 25c

Job Ticket: 17546

DST#: 3

ATTN: Max Lovely

Test Start: 2013.08.18 @ 03:11:00

GENERAL INFORMATION:

Formation: **Altamont B-C**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:01:30

Time Test Ended: 08:38:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Dustin Ellis

Unit No: 3315-Scott City-34

Interval: 4519.00 ft (KB) To 4580.00 ft (KB) (TVD)

Reference Elevations: 3180.00 ft (KB)

Total Depth: 4580.00 ft (KB) (TVD)

3175.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8524 Inside

Press @ RunDepth: 72.99 psia @ 4576.36 ft (KB)

Capacity: 5000.00 psia

Start Date: 2013.08.18

End Date: 2013.08.18

Last Calib.: 2013.08.18

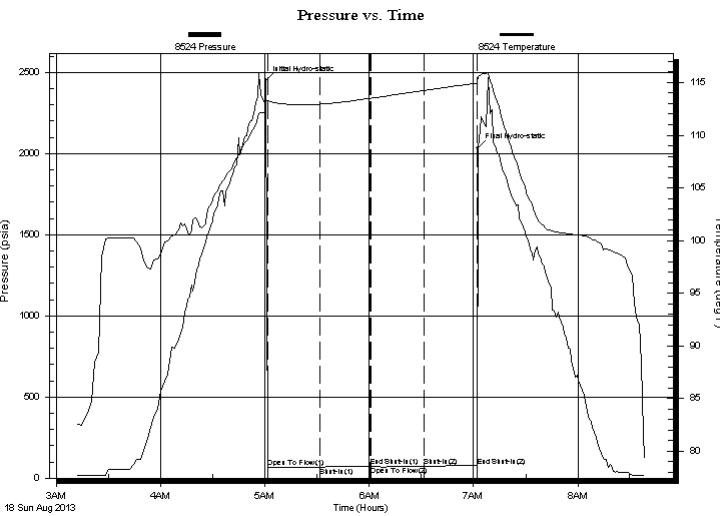
Start Time: 03:11:00

End Time: 08:38:30

Time On Btm: 2013.08.18 @ 05:00:30

Time Off Btm: 2013.08.18 @ 07:02:30

TEST COMMENT: 1st Open 30 minutes Weak surface blow for 12 minutes then died off.
1st Shut in 30 minutes No blow back
2nd Open 30 minutes Dead flushed after 10 minutes No help.
2nd Shut in 30 minutes No blow back



PRESSURE SUMMARY

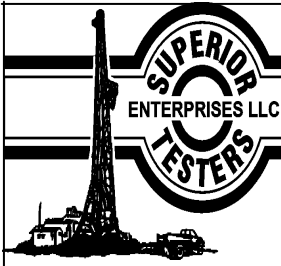
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2450.81	113.24	Initial Hydro-static
1	67.39	113.25	Open To Flow (1)
31	69.10	112.93	Shut-In(1)
60	75.11	113.49	End Shut-In(1)
61	72.61	113.50	Open To Flow (2)
91	72.99	114.23	Shut-In(2)
122	75.89	114.95	End Shut-In(2)
122	2033.72	115.53	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
2.00	Mud 100%	0.01

Gas Rates

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



DRILL STEM TEST REPORT

Ritchie Exploration Inc.
 8100 East 22nd ST N #700
 Wichita Kansas 67278
 ATTN: Max Lovely

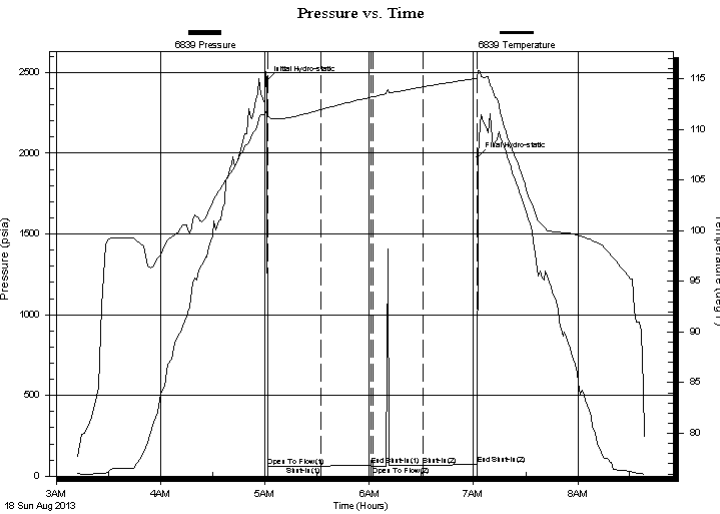
25-17s-35w-Wichita
North Six 25c
 Job Ticket: 17546 **DST#: 3**
 Test Start: 2013.08.18 @ 03:11:00

GENERAL INFORMATION:

Formation: **Altamont B-C**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 05:01:30
 Time Test Ended: 08:38:30
 Interval: **4519.00 ft (KB) To 4580.00 ft (KB) (TVD)**
 Total Depth: 4580.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Dustin Ellis
 Unit No: 3315-Scott City-34
 Reference Elevations: 3180.00 ft (KB)
 3175.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 6839 Outside
 Press @ RunDepth: 72.60 psia @ 4577.36 ft (KB) Capacity: 5000.00 psia
 Start Date: 2013.08.18 End Date: 2013.08.18 Last Calib.: 2013.08.18
 Start Time: 03:11:00 End Time: 08:39:00 Time On Btm: 2013.08.18 @ 05:01:00
 Time Off Btm: 2013.08.18 @ 07:02:30

TEST COMMENT: 1st Open 30 minutes Weak surface blow for 12 minutes then died off.
 1st Shut in 30 minutes No blow back
 2nd Open 30 minutes Dead flushed after 10 minutes No help.
 2nd Shut in 30 minutes No blow back



PRESSURE SUMMARY

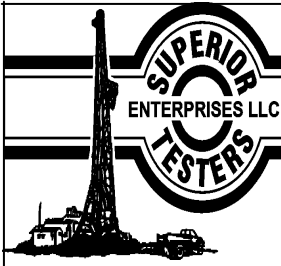
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2450.55	111.83	Initial Hydro-static
1	63.51	111.26	Open To Flow (1)
31	62.41	111.94	Shut-In(1)
60	68.27	113.18	End Shut-In(1)
61	62.90	113.22	Open To Flow (2)
90	66.72	114.19	Shut-In(2)
121	72.60	115.03	End Shut-In(2)
122	1976.69	115.82	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
2.00	Mud 100%	0.01

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration Inc.

25-17s-35w-Wichita

8100 East 22nd ST N #700
Wichita Kansas 67278

North Six 25c

Job Ticket: 17546

DST#: 3

ATTN: Max Lovely

Test Start: 2013.08.18 @ 03:11:00

Tool Information

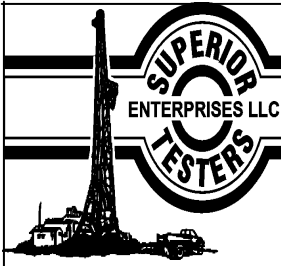
Drill Pipe:	Length: 4392.00 ft	Diameter: 3.80 inches	Volume: 61.61 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 122.06 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 75000.00 lb
			<u>Total Volume: 62.21 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	15.06 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	4519.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	61.36 ft			
Tool Length:	81.36 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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Shut-In Tool	5.00			4504.00	
Hydraulic Tool	5.00			4509.00	
Packer	5.00			4514.00	20.00 Bottom Of Top Packer
Packer	5.00			4519.00	
Anchor	5.00			4524.00	
Change Over Sub	0.75			4524.75	
Drill Pipe	31.86			4556.61	
Change Over Sub	0.75			4557.36	
Anchor	18.00			4575.36	
Recorder	1.00	8524	Inside	4576.36	
Recorder	1.00	6839	Outside	4577.36	
Bull Plug	3.00			4580.36	61.36 Bottom Packers & Anchor

Total Tool Length: 81.36



DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration Inc.

25-17s-35w-Wichita

8100 East 22nd ST N #700
Wichita Kansas 67278

North Six 25c

Job Ticket: 17546

DST#: 3

ATTN: Max Lovely

Test Start: 2013.08.18 @ 03:11:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 48.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.60 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psia

Salinity: 7200.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2.00	Mud 100%	0.010

Total Length: 2.00 ft Total Volume: 0.010 bbl

Num Fluid Samples: 0

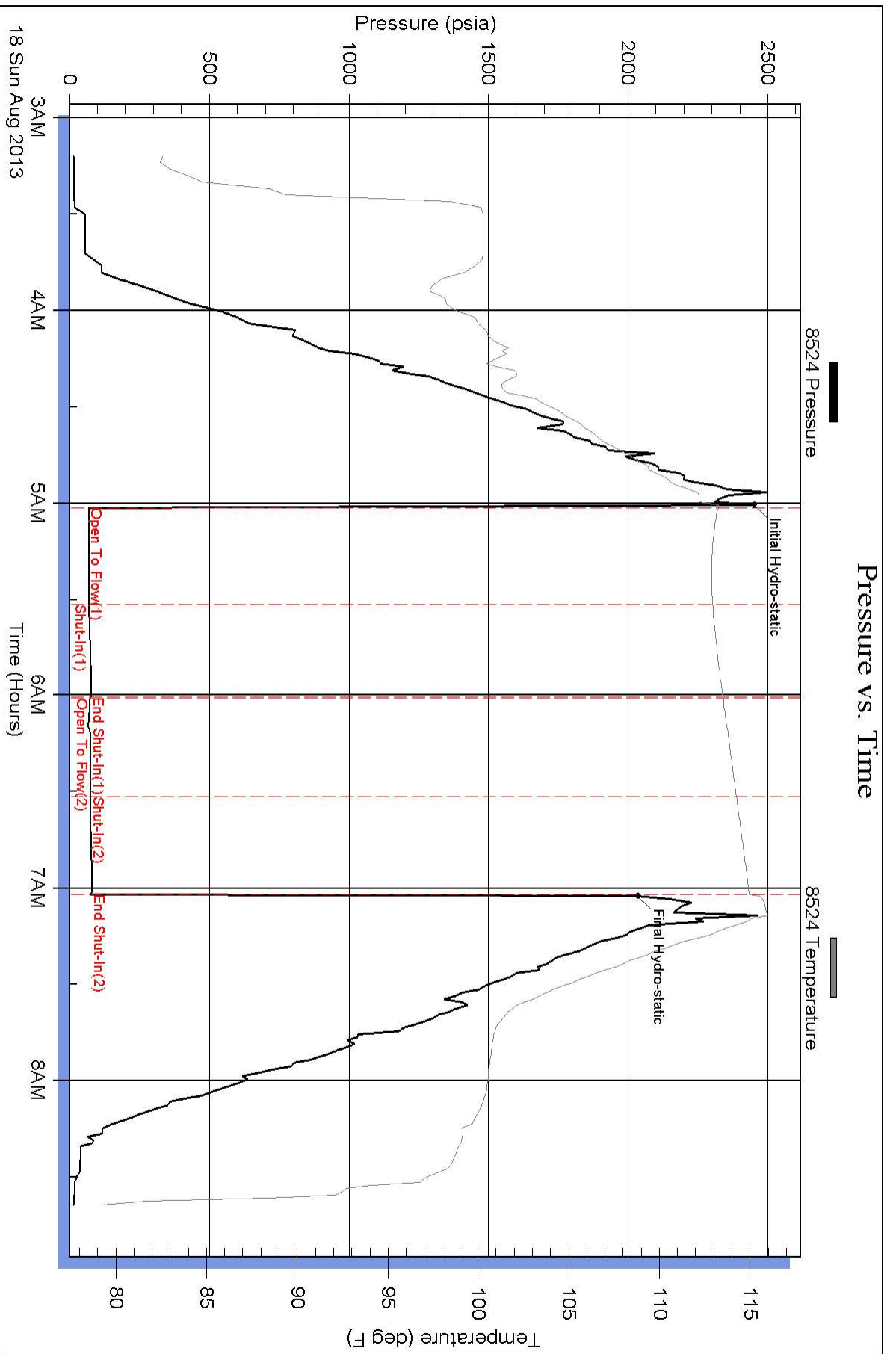
Num Gas Bombs: 0

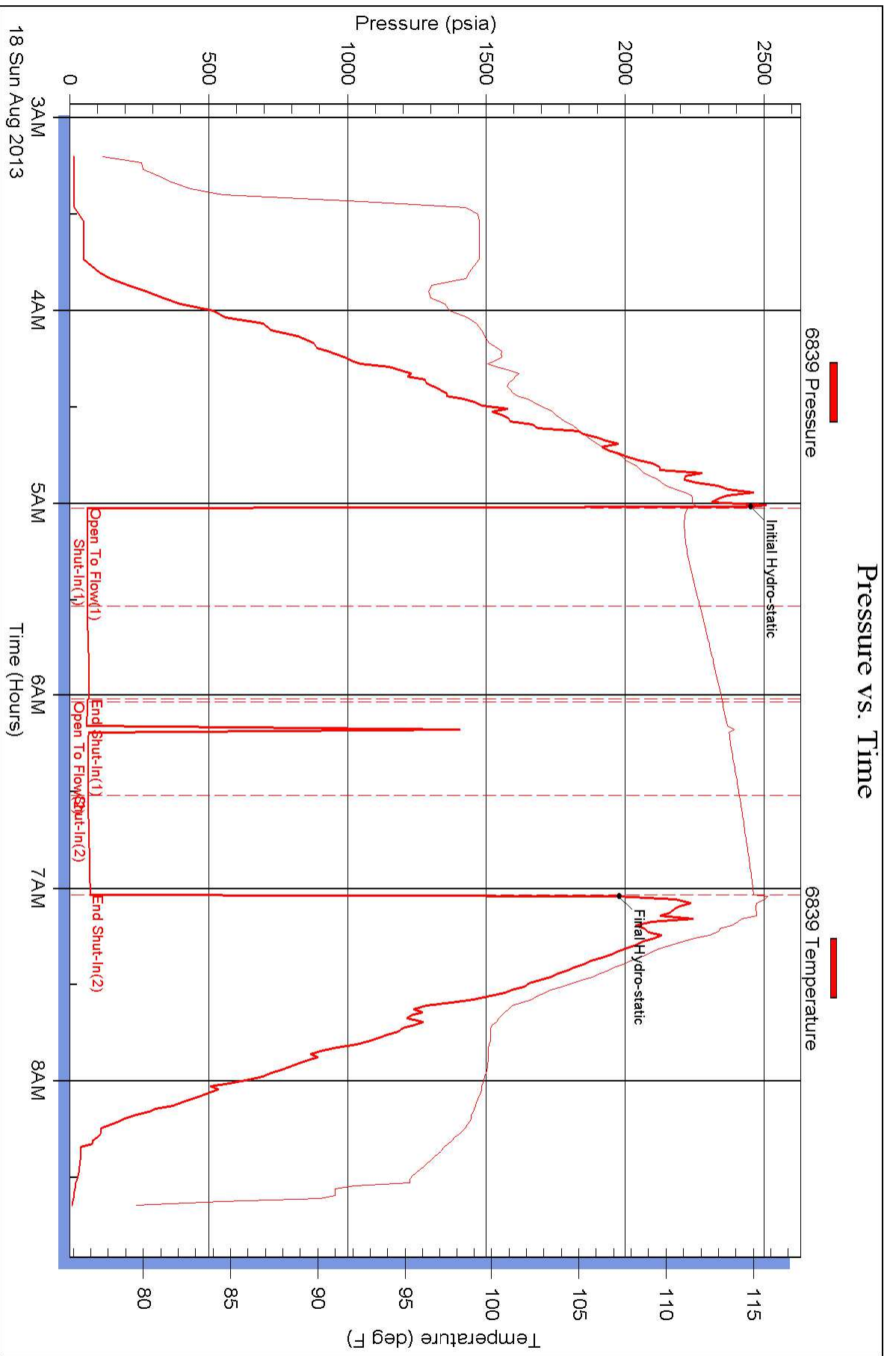
Serial #:

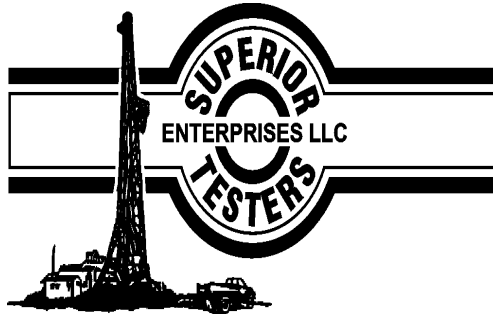
Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration Inc.**

8100 East 22nd ST N #700
Wichita Kansas 67278

ATTN: Max Lovely

North Six 25c

25-17s-35w-Wichita

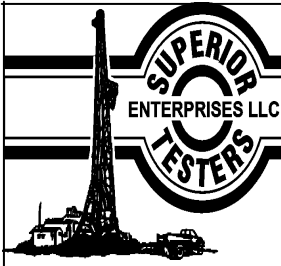
Start Date: 2013.08.21 @ 01:21:00

End Date: 2013.08.21 @ 07:29:30

Job Ticket #: 17547 DST #: 4

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

Printed: 2013.08.21 @ 05:43:37



DRILL STEM TEST REPORT

Ritchie Exploration Inc.

25-17s-35w-Wichita

8100 East 22nd ST N #700
Wichita Kansas 67278

North Six 25c

Job Ticket: 17547

DST#: 4

ATTN: Max Lovely

Test Start: 2013.08.21 @ 01:21:00

GENERAL INFORMATION:

Formation: **Pawnee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:30:30

Time Test Ended: 07:29:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Dustin Ellis

Unit No: 3315-Scott City-34

Interval: 4587.00 ft (KB) To 4624.00 ft (KB) (TVD)

Reference Elevations: 3180.00 ft (KB)

Total Depth: 4624.00 ft (KB) (TVD)

3175.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8524 Inside

Press @ RunDepth: 68.06 psia @ 4620.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2013.08.21

End Date: 2013.08.21

Last Calib.: 2013.08.21

Start Time: 01:21:00

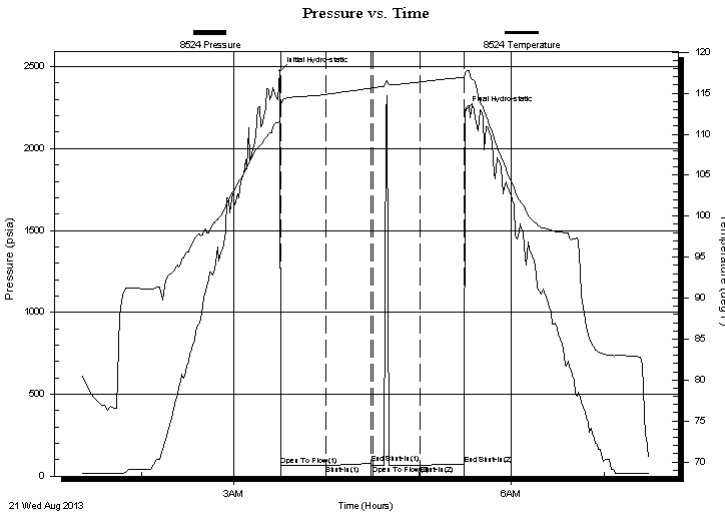
End Time: 07:29:30

Time On Btm: 2013.08.21 @ 03:30:00

Time Off Btm: 2013.08.21 @ 05:30:00

TEST COMMENT: 1st Open 30 minutes Weak surface blow though out.
1st Shut in 30 minutes No blow back
2nd Open 30 minutes Dead Flushed tool no help
2nd Shut in 30 minutes No blow back

PRESSURE SUMMARY



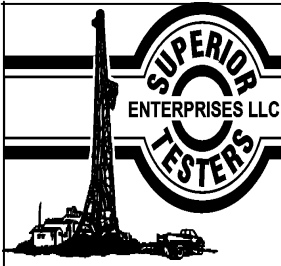
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2471.64	112.91	Initial Hydro-static
1	64.04	113.59	Open To Flow (1)
30	64.65	114.86	Shut-In(1)
59	77.21	115.63	End Shut-In(1)
60	65.91	115.66	Open To Flow (2)
91	68.06	116.38	Shut-In(2)
120	72.35	116.98	End Shut-In(2)
120	2229.92	117.57	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
4.00	Mud 100%	0.02

Gas Rates

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



DRILL STEM TEST REPORT

Ritchie Exploration Inc.

25-17s-35w-Wichita

8100 East 22nd ST N #700
Wichita Kansas 67278

North Six 25c

Job Ticket: 17547

DST#: 4

ATTN: Max Lovely

Test Start: 2013.08.21 @ 01:21:00

GENERAL INFORMATION:

Formation: **Pawnee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:30:30

Time Test Ended: 07:29:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Dustin Ellis

Unit No: 3315-Scott City-34

Interval: 4587.00 ft (KB) To 4624.00 ft (KB) (TVD)

Reference Elevations: 3180.00 ft (KB)

Total Depth: 4624.00 ft (KB) (TVD)

3175.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6839 Outside

Press @ RunDepth: 67.47 psia @ 4621.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2013.08.21

End Date: 2013.08.21

Last Calib.: 2013.08.21

Start Time: 01:21:00

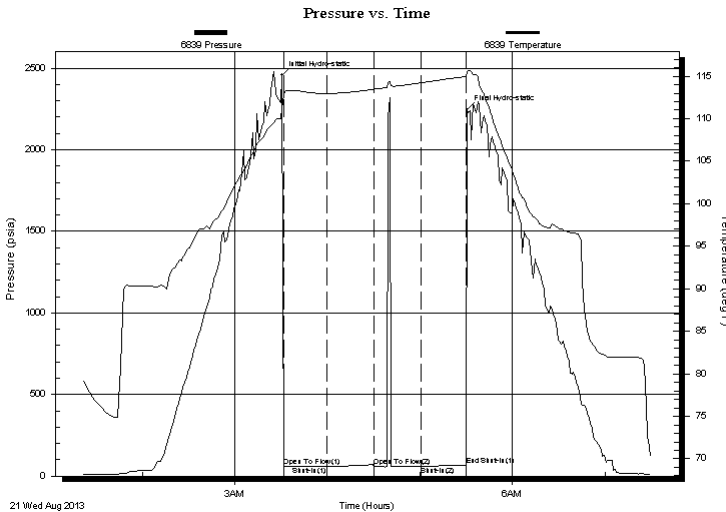
End Time: 07:29:30

Time On Btm: 2013.08.21 @ 03:30:30

Time Off Btm: 2013.08.21 @ 05:30:30

TEST COMMENT: 1st Open 30 minutes Weak surface blow though out.
1st Shut in 30 minutes No blow back
2nd Open 30 minutes Dead Flushed tool no help
2nd Shut in 30 minutes No blow back

PRESSURE SUMMARY



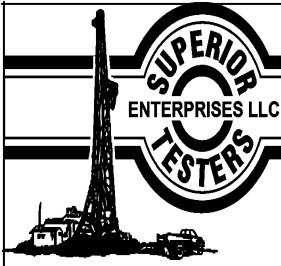
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2456.35	111.22	Initial Hydro-static
1	59.50	112.80	Open To Flow (1)
29	58.05	112.96	Shut-In(1)
60	57.78	113.44	Open To Flow (2)
91	59.65	114.23	Shut-In(2)
120	67.47	114.97	End Shut-In(1)
120	2247.58	115.50	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
4.00	Mud 100%	0.02

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration Inc.

25-17s-35w-Wichita

8100 East 22nd ST N #700
Wichita Kansas 67278

North Six 25c

Job Ticket: 17547

DST#: 4

ATTN: Max Lovely

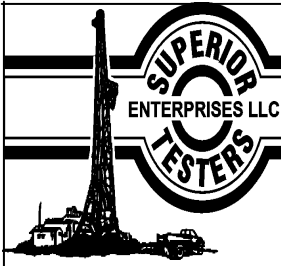
Test Start: 2013.08.21 @ 01:21:00

Tool Information

Drill Pipe:	Length: 4445.00 ft	Diameter: 3.80 inches	Volume: 62.35 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: 122.06 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 82000.00 lb
			<u>Total Volume: 62.95 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	8.06 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	4587.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	37.00 ft			
Tool Length:	65.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut-In Tool	5.00			4564.00	
Hydraulic Tool	5.00			4569.00	
Jars	6.00			4575.00	
Safety Joint	2.00			4577.00	
Packer	5.00			4582.00	28.00 Bottom Of Top Packer
Packer	5.00			4587.00	
Anchor	32.00			4619.00	
Recorder	1.00	8524	Inside	4620.00	
Recorder	1.00	6839	Outside	4621.00	
Bull Plug	3.00			4624.00	37.00 Bottom Packers & Anchor
Total Tool Length:	65.00				



DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration Inc.

25-17s-35w-Wichita

8100 East 22nd ST N #700
Wichita Kansas 67278

North Six 25c

Job Ticket: 17547

DST#: 4

ATTN: Max Lovely

Test Start: 2013.08.21 @ 01:21:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length: ft

Water Salinity: ppm

Viscosity: 56.00 sec/qt

Cushion Volume: bbl

Water Loss: 10.40 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure: psia

Salinity: 7200.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
4.00	Mud 100%	0.020

Total Length: 4.00 ft Total Volume: 0.020 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

