



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1173102
OIL & GAS CONSERVATION DIVISION

Form ACO-1
August 2013

Form must be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

- New Well Re-Entry Workover
- Oil WSW SWD SIOW
- Gas D&A ENHR SIGW
- OG GSW Temp. Abd.
- CM (Coal Bed Methane)
- Cathodic Other (Core, Expl., etc.): _____

If Workover/Re-entry: Old Well Info as follows:

Operator: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

- Deepening Re-perf. Conv. to ENHR Conv. to SWD
- Plug Back Conv. to GSW Conv. to Producer
- Commingled Permit #: _____
- Dual Completion Permit #: _____
- SWD Permit #: _____
- ENHR Permit #: _____
- GSW Permit #: _____

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
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API No. 15 - _____

Spot Description: _____

_____ - _____ - _____ Sec. _____ Twp. _____ S. R. _____ East West

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE NW SE SW

GPS Location: Lat: _____, Long: _____
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite: _____

Operator Name: _____

Lease Name: _____ License #: _____

Quarter _____ Sec. _____ Twp. _____ S. R. _____ East West

County: _____ Permit #: _____

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

- Confidentiality Requested
Date: _____
- Confidential Release Date: _____
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT I II III Approved by: _____ Date: _____

1173102

Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ East West County: _____

INSTRUCTIONS: Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <i>(Attach Additional Sheets)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input type="checkbox"/> No	Name	Top	Datum
Cores Taken	<input type="checkbox"/> Yes <input type="checkbox"/> No			
Electric Log Run	<input type="checkbox"/> Yes <input type="checkbox"/> No			
List All E. Logs Run:				

CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate				
<input type="checkbox"/> Protect Casing				
<input type="checkbox"/> Plug Back TD				
<input type="checkbox"/> Plug Off Zone				

Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*

Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? Yes No *(If No, fill out Page Three of the ACO-1)*

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD: Size: _____ Set At: _____ Packer At: _____ Liner Run: Yes No

Date of First, Resumed Production, SWD or ENHR: _____ Producing Method: Flowing Pumping Gas Lift Other *(Explain)* _____

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025
Cell 785-324-1041

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

No. 7653

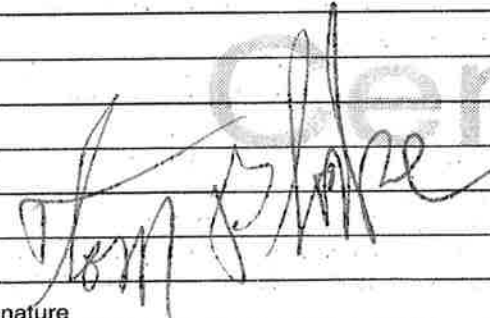
Date	11-30-13	Sec.	6	Twp.	18	Range	14	County	Barton	State	KS	On Location		Finish	11:30AM
								Location							
								Olmits, 2E							

Lease	Maurice Nordman	Well No.	1	Owner	To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.
Contractor	Royal #2			Charge To	RJM
Type Job	Surface	T.D.	942	Street	
Hole Size	12 1/4	Depth	942.23	City	State
Csg.	8 5/8	Depth		The above was done to satisfaction and supervision of owner agent or contractor.	
Tbg. Size		Depth		Cement Amount Ordered 350sx Com 3%cc 2%gel	
Tool		Depth		Meas Line Displace 57661	
Cement Left in Csg.		Shoe Joint	42.48		

EQUIPMENT			Common
Pumptrk	5	No. Cementer Helper Lonnie W.	Poz. Mix
Bulktrk	12	No. Driver Driver Doug	Gel.
Bulktrk	PU	No. Driver Driver Travis	Calcium

JOB SERVICES & REMARKS	
Remarks:	Cement did circulate
Rat Hole	
Mouse Hole	
Centralizers	
Baskets	
D/V or Port Collar	

FLOAT EQUIPMENT	
Guide Shoe	
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	
1 baffle plate	
1 Rubber plug	
Pumptrk Charge	
Mileage	

 X Signature	Tax
	Discount
	Total Charge

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025
Cell 785-324-1041

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

No. 7577

Date	12-7-13	Sec.	6	Twp.	18	Range	14	County	Barber	State	Ks	On Location		Finish	7:15 PM
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Lease: Maurice Nordman
Well No.: 1
Location: 281 + 4 St, 3W to 70 Rd, 1 1/2 S
Owner: W Hinto

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

Hole Size	7 7/8"	T.D.	3580'	Charge To	RTM Company
Csg. New	15.50	5 1/2"	Depth	3579'	Street

Tbg. Size		Depth		City	State
Tool		Depth		The above was done to satisfaction and supervision of owner agent or contractor.	

Cement Left in Csg.	42.47	Shoe Joint	42.47'	Cement Amount Ordered	1805x Common 10% Salt
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Meas Line		Displace	84 BCS	5 1/2 Gills nitrite - 500 gal mud clear 48
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EQUIPMENT			Common
Pumptrk	16	No. Cementer/Helper	Poz. Mix
Bulktrk	14	No. Driver	Gel.
Bulktrk	14	No. Driver	Calcium

JOB SERVICES & REMARKS			Hulls
Remarks:			Salt

Rat Hole		Flowseal
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Mouse Hole		Kol-Seal
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Centralizers	1-9	Mud CLR 48
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Baskets	2+6	CFL-117 or CD110 CAF 38
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D/V or Port Collar		Sand
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		Handling
--	--	----------

		Mileage
--	--	---------

		FLOAT EQUIPMENT
--	--	-----------------

		Guide Shoe
--	--	------------

		Centralizer
--	--	-------------

		Baskets
--	--	---------

		AFU Inserts
--	--	-------------

		Float Shoe
--	--	------------

		Latch Down
--	--	------------

		Rotating head Assy
--	--	--------------------

		Pumptrk Charge
		Mileage

		Tax
		Discount
		Total Charge

X Signature: [Handwritten Signature]



DRILL STEM TEST REPORT

Prepared For: **RJM Company**

Po Box 256 Claflin KS 67525+0256

ATTN: Jim Musgrove

Maurice Nordman #1

6-18s-14w Barton

Start Date: 2013.12.04 @ 03:54:00

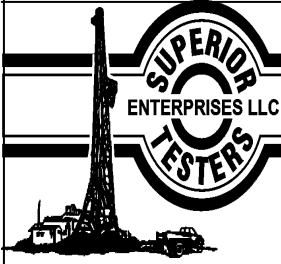
End Date: 2013.12.04 @ 10:20:00

Job Ticket #: 18468 DST #: 1

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

Printed: 2013.12.04 @ 10:36:52

RJM Company
6-18s-14w Barton
Maurice Nordman #1
DST # 1
Lansing A zone
2013.12.04



DRILL STEM TEST REPORT

RJM Company
 Po Box 256 Claflin KS 67525+0256
 ATTN: Jim Musgrove

6-18s-14w Barton
Maurice Nordman #1
 Job Ticket: 18468 **DST#: 1**
 Test Start: 2013.12.04 @ 03:54:00

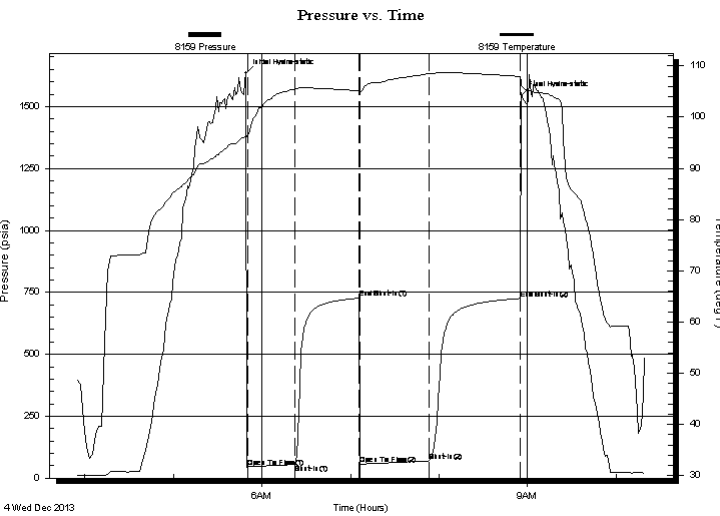
GENERAL INFORMATION:

Formation: **Lansing A zone**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 05:50:00 Tester: Jared Scheck
 Time Test Ended: 10:20:00 Unit No: 3320-Great Bend-45
 Interval: **3262.00 ft (KB) To 3279.00 ft (KB) (TVD)** Reference Elevations: 1991.00 ft (KB)
 Total Depth: 3279.00 ft (KB) (TVD) 1984.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 7.00 ft

Serial #: 8159

Press@RunDepth: 69.73 psia @ ft (KB) Capacity: 5000.00 psia
 Start Date: 2013.12.04 End Date: 2013.12.04 Last Calib.: 2013.12.04
 Start Time: 03:54:00 End Time: 10:20:00 Time On Btm: 2013.12.04 @ 05:49:00
 Time Off Btm: 2013.12.04 @ 08:56:00

TEST COMMENT: 1st Opening 30 Minutes-Weak blow built 3 1/2 inches into bucket w ater in 30 minutes
 1st Shut-in 45 Minutes-No blow back
 2nd Opening 45 Minutes-Weak blow built 2 1/2 inches into bucket w ater in 45 minutes
 2nd Shut-in 60 Minutes-No blow back



PRESSURE SUMMARY

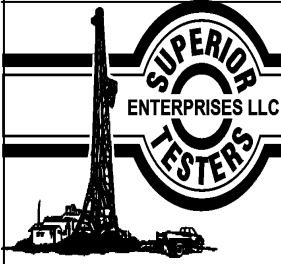
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1634.74	96.25	Initial Hydro-static
1	45.21	96.46	Open To Flow (1)
33	55.10	105.43	Shut-In(1)
77	726.64	105.17	End Shut-In(1)
78	56.00	104.82	Open To Flow (2)
124	69.73	108.47	Shut-In(2)
186	725.10	107.94	End Shut-In(2)
187	1545.61	106.32	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
50.00	mud w ater 20% mud 80% w ater	0.70
0.00	Chlorides 28,000 resistivity .15@65 degr	0.00

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

RJM Company
 Po Box 256 Claflin KS 67525+0256
 A T T N : Jim Musgrove

6-18s-14w Barton
Maurice Nordman #1
 Job Ticket: 18468 **DST#: 1**
 Test Start: 2013.12.04 @ 03:54:00

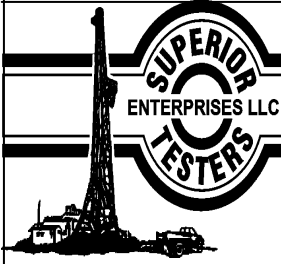
Tool Information

Drill Pipe:	Length: 3254.00 ft	Diameter: 3.80 inches	Volume: 45.65 bbl	Tool Weight:	1000.00 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:	57000.00 lb
			<u>Total Volume: 45.65 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial	47000.00 lb
Depth to Top Packer:	3262.00 ft			Final	47000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	17.00 ft				
Tool Length:	37.00 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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Shut-In Tool	5.00			3247.00	
Hydraulic Tool	5.00			3252.00	
Packer	5.00			3257.00	20.00 Bottom Of Top Packer
Packer	5.00			3262.00	
Anchor	12.00			3274.00	
Recorder	1.00	6731	Inside	3275.00	
Recorder	1.00	8159	Outside	3276.00	
Bullnose	3.00			3279.00	17.00 Bottom Packers & Anchor

Total Tool Length: 37.00



DRILL STEM TEST REPORT

FLUID SUMMARY

RJM Company
Po Box 256 Claflin KS 67525+0256
ATTN: Jim Musgrove

6-18s-14w Barton
Maurice Nordman #1
Job Ticket: 18468 **DST#: 1**
Test Start: 2013.12.04 @ 03:54:00

Mud and Cushion Information

Mud Type:	Invert	Cushion Type:		Oil API:	deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	51.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	8.00 in ³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psia		
Salinity:	400.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
50.00	mud w ater 20% mud 80% w ater	0.701
0.00	Chlorides 28,000 resistivity .15@65 degr	0.000

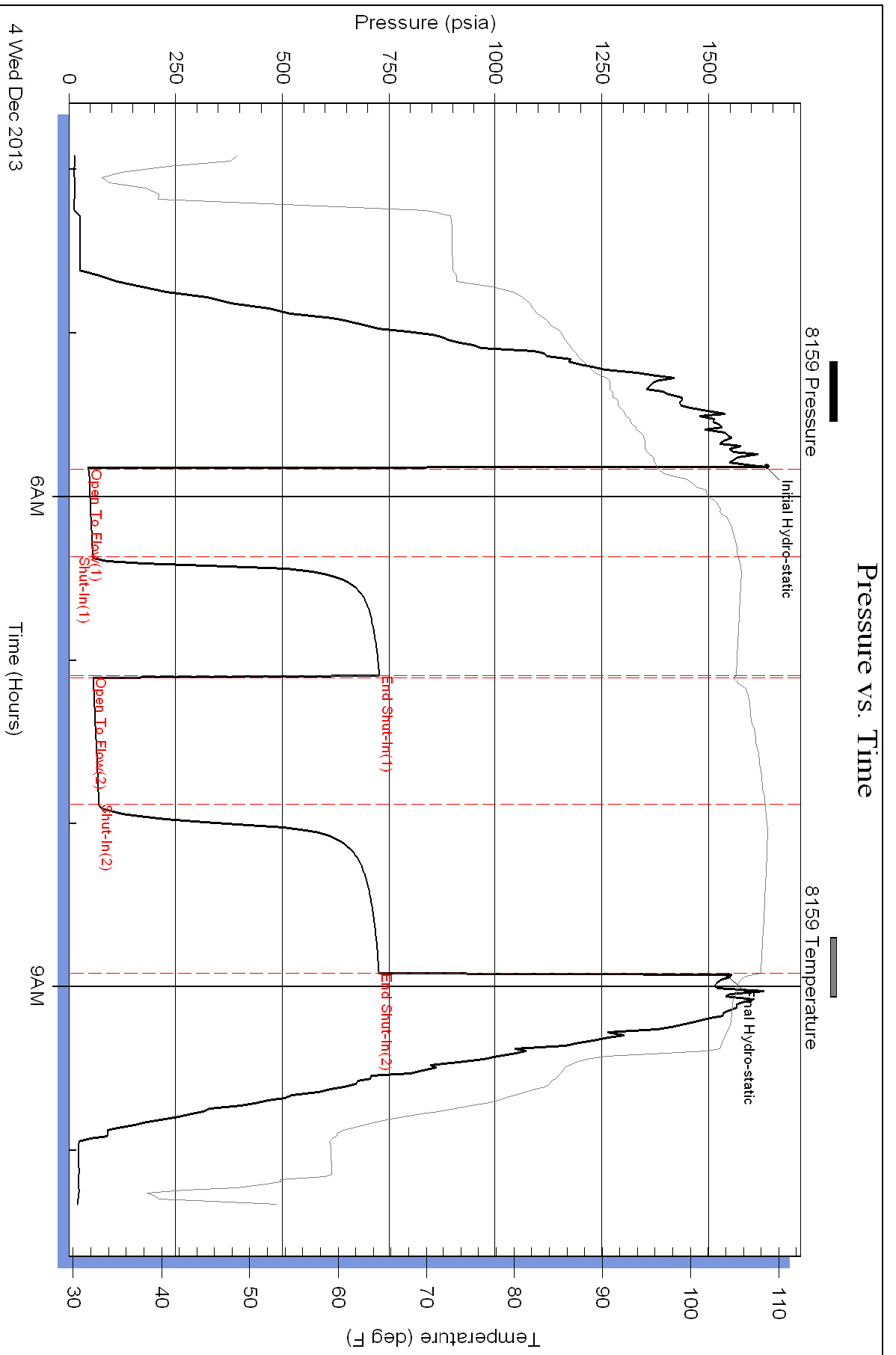
Total Length: 50.00 ft Total Volume: 0.701 bbl

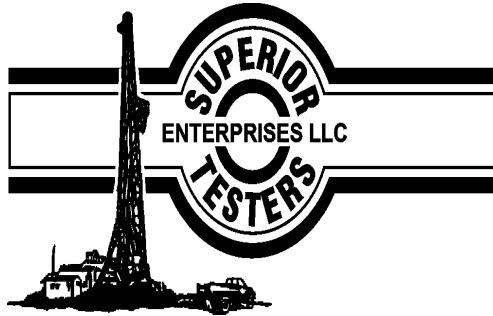
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **RJM Company**

Po Box 256 Claflin KS 67525+0256

ATTN: Jim Musgrove

Maurice Nordman #1

6-18s-14w Barton

Start Date: 2013.12.04 @ 20:45:00

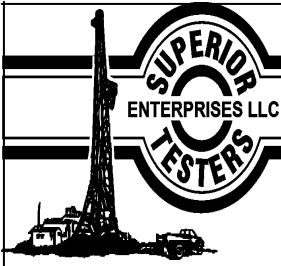
End Date: 2013.12.05 @ 01:40:30

Job Ticket #: 18469 DST #: 2

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

Printed: 2013.12.05 @ 02:00:10

RJM Company
6-18s-14w Barton
Maurice Nordman #1
DST # 2
Lansing E-F zones
2013.12.04



DRILL STEM TEST REPORT

RJM Company
 Po Box 256 Claflin KS 67525+0256
 ATTN: Jim Musgrove

6-18s-14w Barton
Maurice Nordman #1
 Job Ticket: 18469 **DST#:2**
 Test Start: 2013.12.04 @ 20:45:00

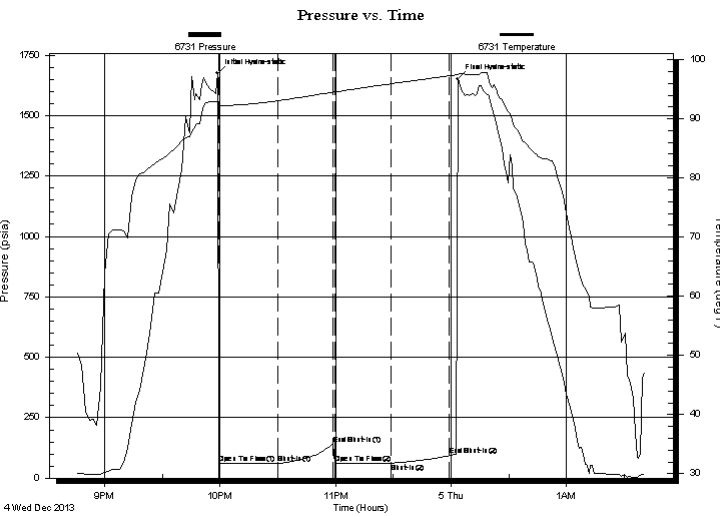
GENERAL INFORMATION:

Formation: **Lansing E-F zones**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 21:59:30
 Time Test Ended: 01:40:30
 Interval: **3306.00 ft (KB) To 3360.00 ft (KB) (TVD)**
 Total Depth: 3360.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Jared Scheck
 Unit No: 3320 -Great Bend-45
 Reference Elevations: 1991.00 ft (KB)
 1984.00 ft (CF)
 KB to GR/CF: 7.00 ft

Serial #: 6731

Press@RunDepth: 62.85 psia @ ft (KB) Capacity: 5000.00 psia
 Start Date: 2013.12.04 End Date: 2013.12.05 Last Calib.: 2013.12.05
 Start Time: 20:45:00 End Time: 01:40:30 Time On Btm: 2013.12.04 @ 21:58:30
 Time Off Btm: 2013.12.05 @ 00:03:30

TEST COMMENT: 1st Opening 30 Minutes-Weak blow built 3/4 inch into bucket w ater in 30 minutes
 1st Shut-in 30 Minutes-No blow back
 2nd Opening 30 Minutes-Weak blow built 1/2 inch into w ater in 30 minutes
 2nd Shut-in 30 Minutes-No blow back



PRESSURE SUMMARY

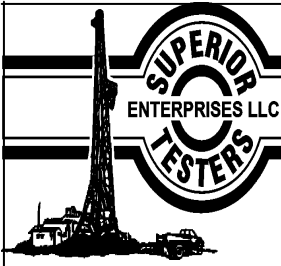
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1675.03	92.72	Initial Hydro-static
1	60.46	92.29	Open To Flow (1)
32	61.41	93.04	Shut-In(1)
60	141.95	94.47	End Shut-In(1)
61	62.25	94.50	Open To Flow (2)
90	62.85	95.90	Shut-In(2)
121	92.93	97.25	End Shut-In(2)
125	1652.75	97.46	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	mud	0.21

Gas Rates

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



DRILL STEM TEST REPORT

RJM Company
 Po Box 256 Claflin KS 67525+0256
 ATTN: Jim Musgrove

6-18s-14w Barton
Maurice Nordman #1
 Job Ticket: 18469 **DST#:2**
 Test Start: 2013.12.04 @ 20:45:00

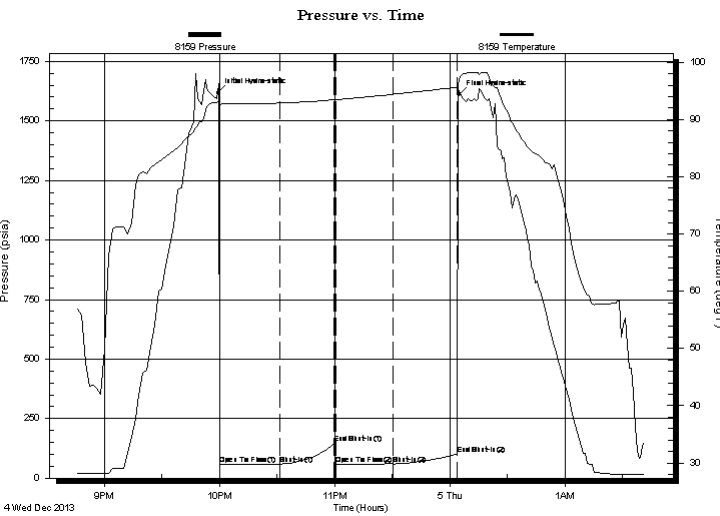
GENERAL INFORMATION:

Formation: **Lansing E-F zones**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 21:59:30
 Time Test Ended: 01:40:30
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Jared Scheck
 Unit No: 3320 -Great Bend-45
 Interval: **3306.00 ft (KB) To 3360.00 ft (KB) (TVD)**
 Reference Elevations: 1991.00 ft (KB)
 Total Depth: 3360.00 ft (KB) (TVD) 1984.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 7.00 ft

Serial #: 8159

Press@RunDepth: 101.25 psia @ ft (KB) Capacity: 5000.00 psia
 Start Date: 2013.12.04 End Date: 2013.12.05 Last Calib.: 2013.12.05
 Start Time: 20:45:00 End Time: 01:42:00 Time On Btm: 2013.12.04 @ 21:59:00
 Time Off Btm: 2013.12.05 @ 00:05:00

TEST COMMENT: 1st Opening 30 Minutes-Weak blow built 3/4 inch into bucket w ater in 30 minutes
 1st Shut-in 30 Minutes-No blow back
 2nd Opening 30 Minutes-Weak blow built 1/2 inch into w ater in 30 minutes
 2nd Shut-in 30 Minutes-No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1617.33	93.06	Initial Hydro-static
1	57.11	92.43	Open To Flow (1)
33	59.38	92.87	Shut-In(1)
61	144.69	93.45	End Shut-In(1)
62	59.52	93.45	Open To Flow (2)
92	60.01	94.40	Shut-In(2)
125	101.25	95.60	End Shut-In(2)
126	1609.56	96.90	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	mud	0.21

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

RJM Company
 Po Box 256 Claflin KS 67525+0256
 A T T N : Jim Musgrove

6-18s-14w Barton
Maurice Nordman #1
 Job Ticket: 18469 **DST#:2**
 Test Start: 2013.12.04 @ 20:45:00

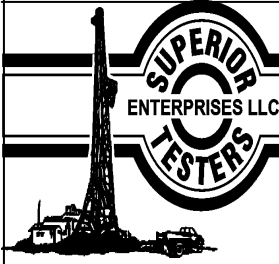
Tool Information

Drill Pipe:	Length: 3316.00 ft	Diameter: 3.80 inches	Volume: 46.51 bbl	Tool Weight:	1000.00 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:	55000.00 lb
			<u>Total Volume: 46.51 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial	50000.00 lb
Depth to Top Packer:	3306.00 ft			Final	50000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	54.00 ft				
Tool Length:	74.00 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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Shut-In Tool	5.00			3291.00	
Hydraulic Tool	5.00			3296.00	
Packer	5.00			3301.00	20.00 Bottom Of Top Packer
Packer	5.00			3306.00	
Anchor	0.00			3306.00	
Change Over Sub	0.75			3306.75	
Drill Pipe	31.50			3338.25	
Change Over Sub	0.75			3339.00	
Anchor	16.00			3355.00	
Recorder	1.00	6731	Inside	3356.00	
Recorder	1.00	8400	Outside	3357.00	
Bullnose	3.00			3360.00	54.00 Bottom Packers & Anchor

Total Tool Length: 74.00



DRILL STEM TEST REPORT

FLUID SUMMARY

RJM Company
Po Box 256 Claflin KS 67525+0256
ATTN: Jim Musgrove

6-18s-14w Barton
Maurice Nordman #1
Job Ticket: 18469 **DST#:2**
Test Start: 2013.12.04 @ 20:45:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	51.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	8.00 in ³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psia		
Salinity:	4000.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
15.00	mud	0.210

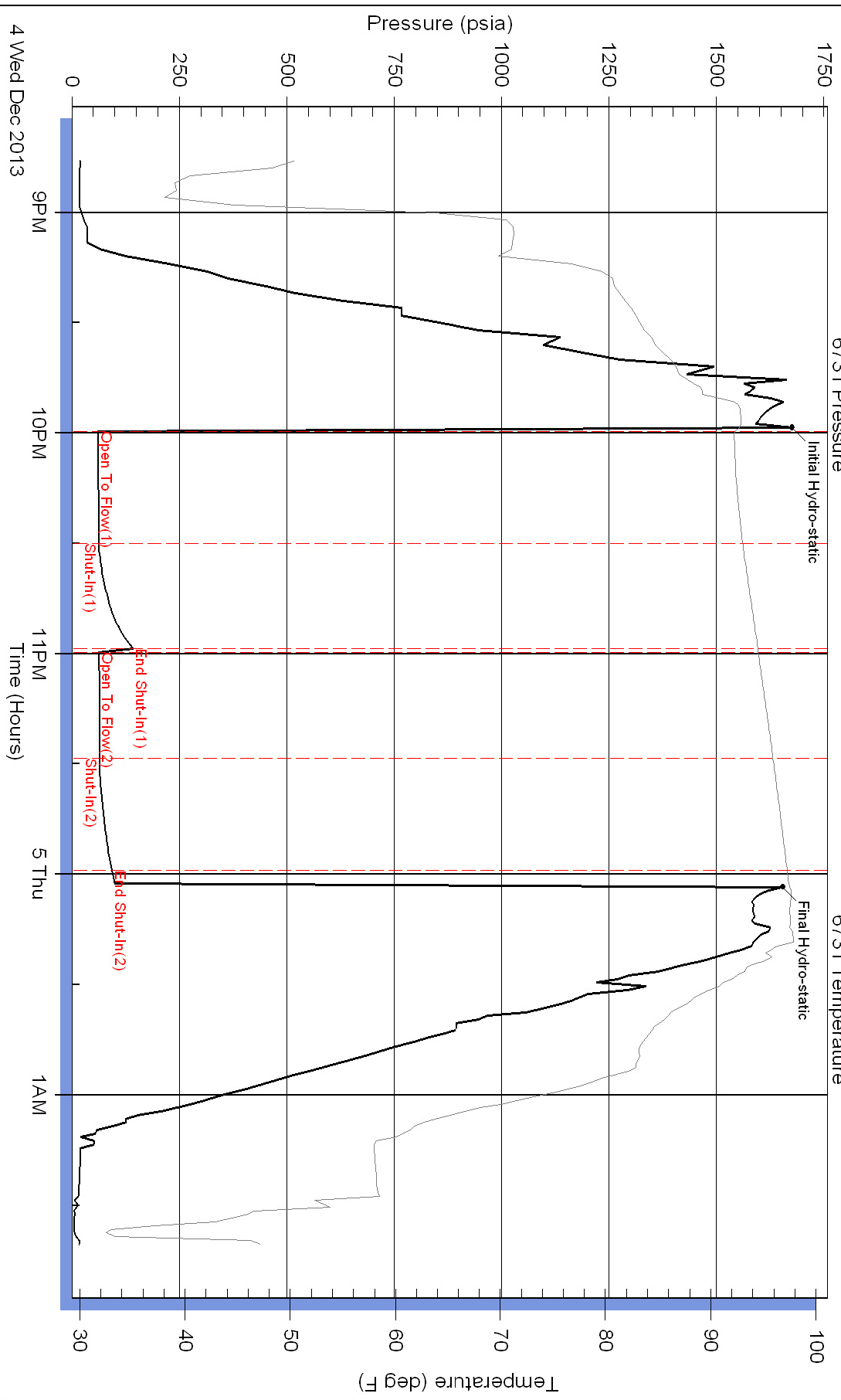
Total Length: 15.00 ft Total Volume: 0.210 bbl

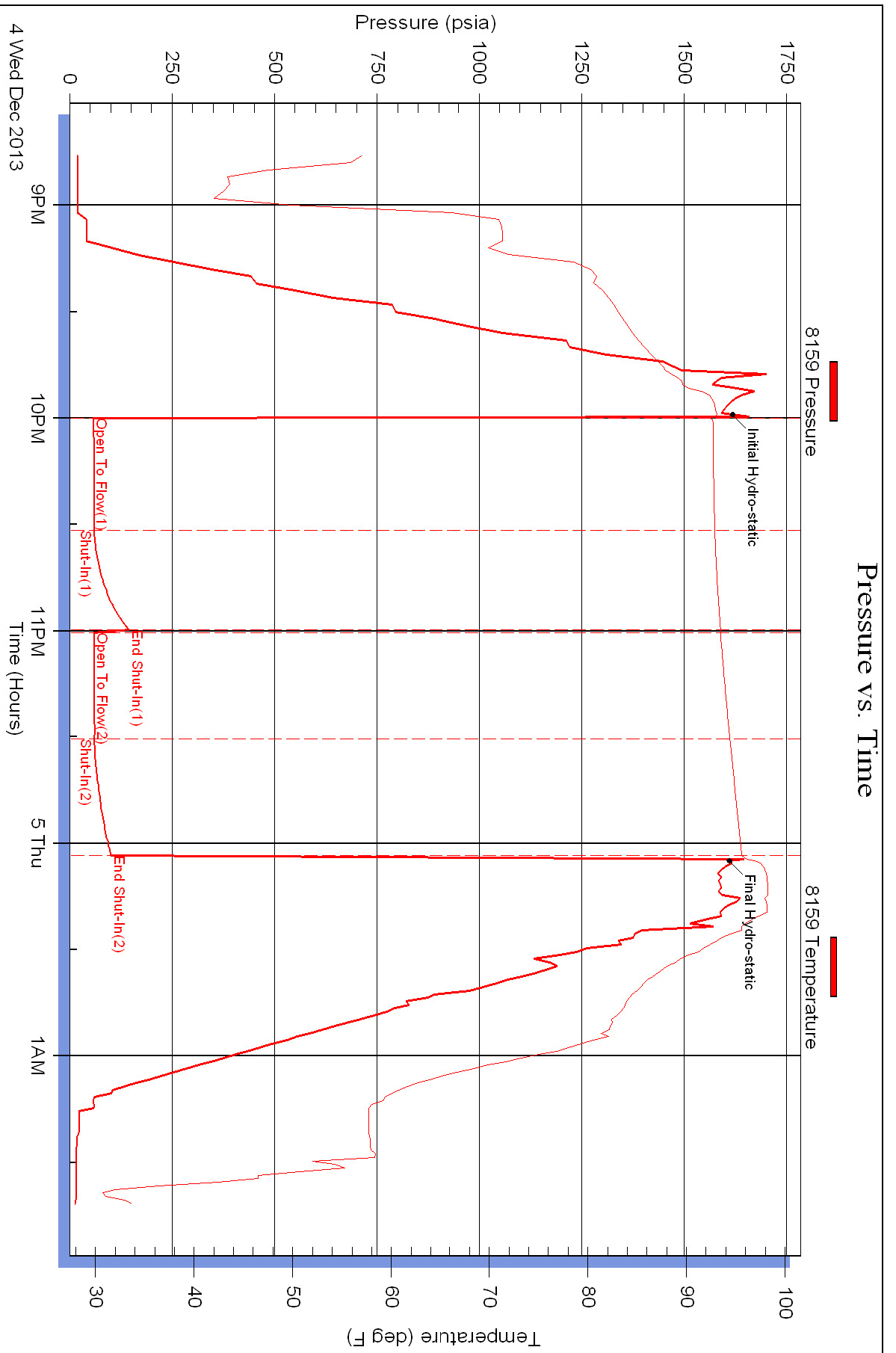
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

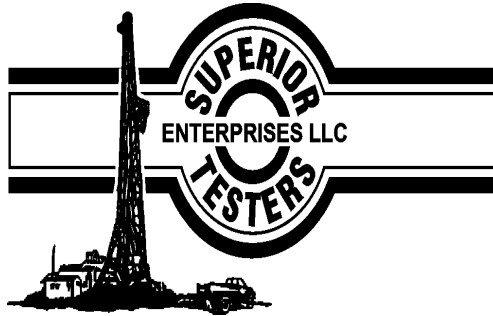
Laboratory Name: Laboratory Location:

Recovery Comments:

Pressure vs. Time







DRILL STEM TEST REPORT

Prepared For: **RJM Company**

Po Box 256 Claflin KS 67525+0256

ATTN: Jim Musgrove

Maurice Nordman #1

6-18s-14w Barton

Start Date: 2013.12.05 @ 17:00:00

End Date: 2013.12.05 @ 23:49:30

Job Ticket #: 18470 DST #: 3

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

Printed: 2013.12.06 @ 00:16:48



DRILL STEM TEST REPORT

RJM Company
 Po Box 256 Claflin KS 67525+0256
 ATTN: Jim Musgrove

6-18s-14w Barton
Maurice Nordman #1
 Job Ticket: 18470 **DST#: 3**
 Test Start: 2013.12.05 @ 17:00:00

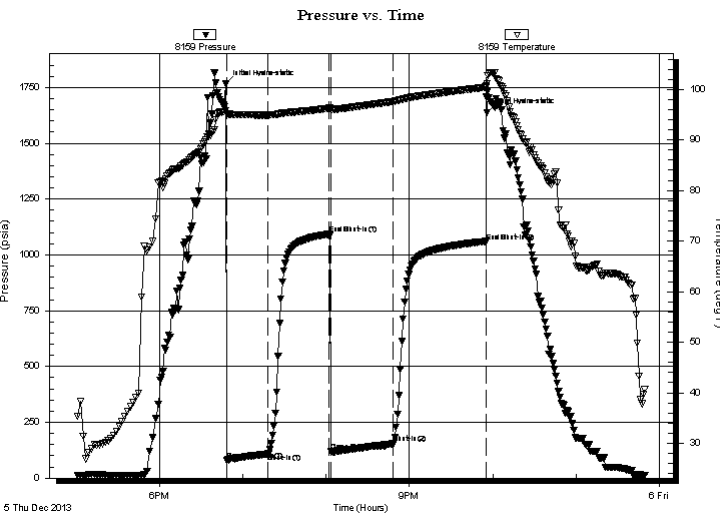
GENERAL INFORMATION:

Formation: **Lansing HI J zones**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 18:48:30
 Time Test Ended: 23:49:30
 Interval: **3400.00 ft (KB) To 3490.00 ft (KB) (TVD)**
 Total Depth: 3490.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Jared Scheck
 Unit No: 3320-Great Bend-45
 Reference Elevations: 1991.00 ft (KB)
 1984.00 ft (CF)
 KB to GR/CF: 7.00 ft

Serial #: 8159

Press@RunDepth: 153.91 psia @ ft (KB) Capacity: 5000.00 psia
 Start Date: 2013.12.05 End Date: 2013.12.05 Last Calib.: 2013.12.06
 Start Time: 17:00:00 End Time: 23:49:30 Time On Btm: 2013.12.05 @ 18:47:30
 Time Off Btm: 2013.12.05 @ 21:56:00

TEST COMMENT: 1st Opening 30 Minutes-Strong blow built bottom of bucket in 2 minutes
 1st Shut-in 45 Minutes-1 inch blow back
 2nd Opening 45 Minutes-Strong blow built bottom of bucket in 2 minutes
 2nd Shut-in 60 Minutes-1inch blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1765.12	95.73	Initial Hydro-static
1	80.94	95.17	Open To Flow (1)
31	109.15	94.92	Shut-In(1)
75	1092.87	96.26	End Shut-In(1)
76	118.28	96.02	Open To Flow (2)
121	153.91	97.63	Shut-In(2)
188	1060.61	100.44	End Shut-In(2)
189	1636.88	101.14	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
240.00	gas mud cut oil 10%g 60%o 30%m	3.37
10.00	10%gas 90%oil	0.14

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

RJM Company
 Po Box 256 Claflin KS 67525+0256
 A T T N : Jim Musgrove

6-18s-14w Barton
Maurice Nordman #1
 Job Ticket: 18470 **DST#: 3**
 Test Start: 2013.12.05 @ 17:00:00

Tool Information

Drill Pipe:	Length: 3410.00 ft	Diameter: 3.80 inches	Volume: 47.83 bbl	Tool Weight:	1000.00 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:	55000.00 lb
			<u>Total Volume: 47.83 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial	50000.00 lb
Depth to Top Packer:	3400.00 ft			Final	50000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	90.00 ft				
Tool Length:	110.00 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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Shut-In Tool	5.00			3385.00	
Hydraulic Tool	5.00			3390.00	
Packer	5.00			3395.00	20.00 Bottom Of Top Packer
Packer	5.00			3400.00	
Anchor	0.00			3400.00	
Change Over Sub	0.75			3400.75	
Drill Pipe	63.50			3464.25	
Change Over Sub	0.75			3465.00	
Anchor	20.00			3485.00	
Recorder	1.00	6731	Inside	3486.00	
Recorder	1.00	8400	Outside	3487.00	
Bullnose	3.00			3490.00	90.00 Bottom Packers & Anchor

Total Tool Length: 110.00



DRILL STEM TEST REPORT

FLUID SUMMARY

RJM Company
Po Box 256 Claflin KS 67525+0256
ATTN: Jim Musgrove

6-18s-14w Barton
Maurice Nordman #1
Job Ticket: 18470 **DST#: 3**
Test Start: 2013.12.05 @ 17:00:00

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:	52.00 sec/qt	Cushion Volume:	bbbl		
Water Loss:	8.80 in ³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psia		
Salinity:	5000.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

Recovery Table

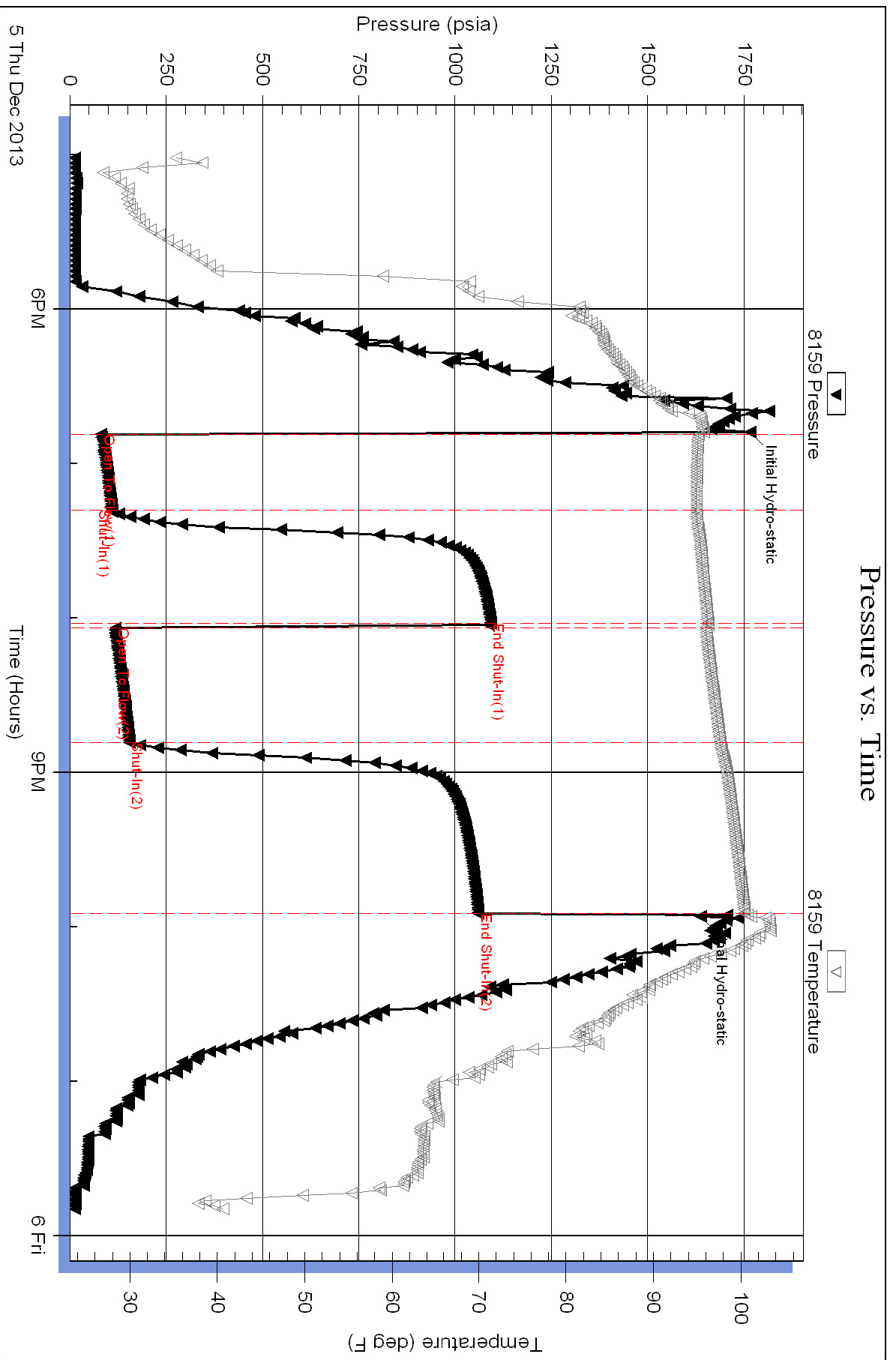
Length ft	Description	Volume bbbl
240.00	gas mud cut oil 10%g 60%o 30%m	3.367
10.00	10%gas 90%oil	0.140

Total Length: 250.00 ft Total Volume: 3.507 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments:





DRILL STEM TEST REPORT

Prepared For: **RJM Company**

Po Box 256 Claflin KS 67525+0256

ATTN: Jim Musgrove

Maurice Nordman #1

6-18s-14w Barton

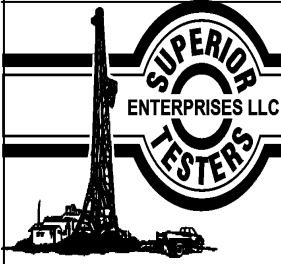
Start Date: 2013.12.06 @ 10:45:00

End Date: 2013.12.06 @ 17:34:30

Job Ticket #: 18471 DST #: 4

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

Printed: 2013.12.06 @ 17:49:49



DRILL STEM TEST REPORT

RJM Company
 Po Box 256 Claflin KS 67525+0256
 ATTN: Jim Musgrove

6-18s-14w Barton
Maurice Nordman #1
 Job Ticket: 18471 **DST#: 4**
 Test Start: 2013.12.06 @ 10:45:00

GENERAL INFORMATION:

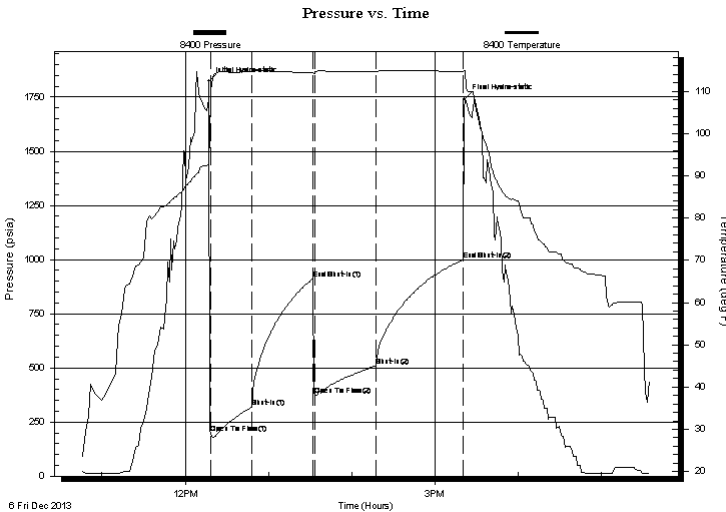
Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 12:18:30 Tester: Jared Scheck
 Time Test Ended: 17:34:30 Unit No: 3320-Great Bend-45
 Interval: **3484.00 ft (KB) To 3535.00 ft (KB) (TVD)** Reference Elevations: 1991.00 ft (KB)
 Total Depth: 3535.00 ft (KB) (TVD) 1984.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 7.00 ft

Serial #: 8400

Press@RunDepth: 509.81 psia @ ft (KB) Capacity: 5000.00 psia
 Start Date: 2013.12.06 End Date: 2013.12.06 Last Calib.: 2013.12.06
 Start Time: 10:45:00 End Time: 17:34:30 Time On Btm: 2013.12.06 @ 12:17:00
 Time Off Btm: 2013.12.06 @ 15:21:30

TEST COMMENT: 1st Opening 30 Minutes-Strong blow built bottom of bucket in 2 minutes
 1st Shut-in 45 Minutes-No blow back
 2nd Opeing 45 Minutes-Strong blow builtr bottom oc bucket in 3 minutes
 2ndf Shut-in 60 Minutes-No blow back

PRESSURE SUMMARY



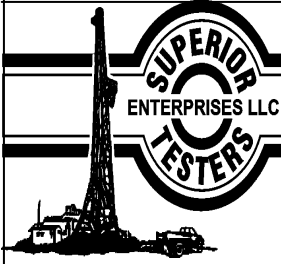
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1822.02	94.52	Initial Hydro-static
2	199.09	110.52	Open To Flow (1)
31	319.07	114.78	Shut-In(1)
75	912.05	114.50	End Shut-In(1)
76	373.43	114.34	Open To Flow (2)
121	509.81	114.78	Shut-In(2)
183	997.82	114.76	End Shut-In(2)
185	1741.29	114.97	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
240.00	w ater cut mud 40%w ater 60%mud	3.37
730.00	spot oil mud w ater 5%oil40%mud 55%w t	10.24
0.00	chlorides 23,000	0.00

Gas Rates

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



DRILL STEM TEST REPORT

RJM Company
 Po Box 256 Claflin KS 67525+0256
 ATTN: Jim Musgrove

6-18s-14w Barton
Maurice Nordman #1
 Job Ticket: 18471 **DST#: 4**
 Test Start: 2013.12.06 @ 10:45:00

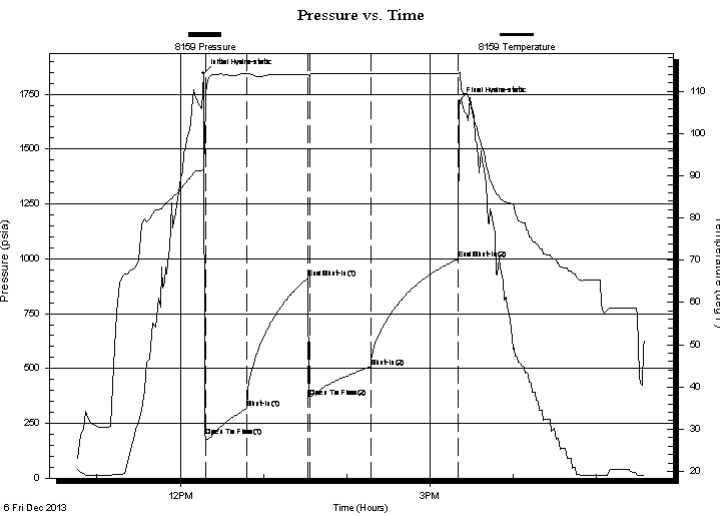
GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 12:18:30 Tester: Jared Scheck
 Time Test Ended: 17:34:30 Unit No: 3320-Great Bend-45
 Interval: **3484.00 ft (KB) To 3535.00 ft (KB) (TVD)** Reference Elevations: 1991.00 ft (KB)
 Total Depth: 3535.00 ft (KB) (TVD) 1984.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 7.00 ft

Serial #: 8159

Press@RunDepth: 997.82 psia @ ft (KB) Capacity: 5000.00 psia
 Start Date: 2013.12.06 End Date: 2013.12.06 Last Calib.: 2013.12.06
 Start Time: 10:45:00 End Time: 17:34:30 Time On Btm: 2013.12.06 @ 12:16:30
 Time Off Btm: 2013.12.06 @ 15:21:00

TEST COMMENT: 1st Opening 30 Minutes-Strong blow built bottom of bucket in 2 minutes
 1st Shut-in 45 Minutes-No blow back
 2nd Opeing 45 Minutes-Strong blow builtr bottom oc bucket in 3 minutes
 2ndf Shut-in 60 Minutes-No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1846.01	91.51	Initial Hydro-static
2	190.24	106.93	Open To Flow (1)
32	318.44	114.25	Shut-In(1)
76	912.20	113.96	End Shut-In(1)
77	370.45	113.61	Open To Flow (2)
121	507.76	114.27	Shut-In(2)
184	997.82	114.28	End Shut-In(2)
185	1718.27	114.54	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
240.00	w ater cut mud 40%w ater 60%mud	3.37
730.00	spot oil mud w ater 5%oil40%mud 55%w t	10.24
0.00	chlorides 23,000	0.00

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

RJM Company
 Po Box 256 Claflin KS 67525+0256
 A T T N : Jim Musgrove

6-18s-14w Barton
Maurice Nordman #1
 Job Ticket: 18471 **DST#: 4**
 Test Start: 2013.12.06 @ 10:45:00

Tool Information

Drill Pipe:	Length: 3476.00 ft	Diameter: 3.80 inches	Volume: 48.76 bbl	Tool Weight:	1000.00 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: 48.76 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial	53000.00 lb
Depth to Top Packer:	3484.00 ft			Final	60000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	51.00 ft				
Tool Length:	71.00 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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Shut-In Tool	5.00			3469.00	
Hydraulic Tool	5.00			3474.00	
Packer	5.00			3479.00	20.00 Bottom Of Top Packer
Packer	5.00			3484.00	
Anchor	46.00			3530.00	
Recorder	1.00		Inside	3531.00	
Recorder	1.00		Outside	3532.00	
Bullnose	3.00			3535.00	51.00 Bottom Packers & Anchor

Total Tool Length: 71.00



DRILL STEM TEST REPORT

FLUID SUMMARY

RJM Company
Po Box 256 Claflin KS 67525+0256
ATTN: Jim Musgrove

6-18s-14w Barton
Maurice Nordman #1
Job Ticket: 18471 **DST#: 4**
Test Start: 2013.12.06 @ 10:45:00

Mud and Cushion Information

Mud Type:		Cushion Type:		Oil API:	deg API
Mud Weight:	lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	sec/qt	Cushion Volume:	bbl		
Water Loss:	in ³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psia		
Salinity:	ppm				
Filter Cake:	inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
240.00	w ater cut mud 40%w ater 60%mud	3.367
730.00	spot oil mud w ater 5%oil40%mud 55%w ater	10.240
0.00	chlorides 23,000	0.000

Total Length: 970.00 ft Total Volume: 13.607 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments:

Pressure vs. Time

